DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36 0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

518

HOOGES-DAM-STRENGTHENING
FEDERAL WORKS PROJECT Nº 1223-R-CALIF.
FE BRACHMANN
E+C + laborers Insp.

VELO-TOP-ANCHORAG—
SAN-900-LBS.

3/4"- 427-LBS.

1/4"- 808-LBS.

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HODGES DAM STRENGTHENING

April 2nd 1936 Hodges Dam

1 Supt. Tomlinson Working Rd. a.m. 4-H

1-Time keeper Excavation

3- laborers Bay 15-16 5 yds } 4 hrs. P.M.

TOTAL 10-YDS Bay 13-14 5 yds

April 3-1936 Bay 11-12 16 yds

Equipment delivered

1- Supt

1- time keeper

2- laborers

1-Ingersoll Rand small compr.

1- POWDER-MAN

1- Gardner Denver (on truck) yellow

7-ni hammer 1- Grind Gun.

1- chipper gun.

1- Supt

1-Time keeper.

3-laborers.

April 4th 7.5 hrs. Excavation

1- Supt. Spillway Protection

2- drillers (Sub contractor Poindexter)

2 lab 2- compressor

1- powder man 2- Jack Hammer

1- time keeper

7-CU. YDS EXCAV

April 6th Spillway Protection

Supt.	Driller	Powder M	Lab	Sub-contractor Poindexter
	2	1	4-A-M 5 P.M	Excavation

2 - Air Compressor

(8 Lab) 2 - " Hammer. 20-CU.YDS

Received - 4 - boxes 60 % Hercules powder

1 - 2½" Wiser centrifugal pump & Mo

April 7 -

Supt	Lab	Driller	Powder M	TIME KEEPER
1	5-A.M. 6A.M	2	1	1

2-air Compr. 2-Air Hammers

1-PUMP-M. (12 labor)

April 8-36

Excav-Bay 19-20 = 20 CU.YDS

" Spillway ?

Supt	Drillers	Powder M	Lab	Pump X MAN	TIME KEEPER
1	1-MAN 4 hrs.	8 hrs.	84 HRS.	8	8

1 Air Compr. 4 hrs (12 Labor)

1 Air Hammer 4 hrs.

Officials out on job photos taken.

April 9th 1936

Labor	Driller	Powder MAN	Supt	TIME KEEPER	Carpenter
12	1	1	1	1	5 - 8 HRS 1 - 5 HR

Excavating Spillway apron

Carpenters building ladder to cat walks.

" plant construction. 1-Carp 1 lab - for U.S. Ins.

1 - air Compr. 1 Air hammer.

April 10 - 1936 Excavation Spillway +

Laborers	Carpenter	Driller	Powder M	Time. Kp	TOTAL
12	5	1	1	1	20-MEN

1 Carp + lab building office for U.S. Insp.

4 Carp build cat walk (plant) up buttress

Equipment 1-air Compr. 1 air hammer.

April 11th 1936 Spillway Excav

Labors	Carpenter	Driller	Powder M	Time K
11	5	1	1	1

8 lab on spillway excav

3 lab + 4 Carpenters on cat walk (plant)

1 - carpenter on office for U. Inspector

1 - air Compr. 1 air hammer

April 13-1936

Labor	Carpenter	Driller	Powder M.	Time K.	Electrician
12	5	2	1	1	1

Spillway excav 64-laborers
Helping electrician 1-lab 8 hrs
4 Carpenters on cat walk 8 hrs
Helper carpenters Laborers 20 hrs
1 Carpenter on office for R. Inspect.
1 Laborer help " " 4 hrs.
1 driller 8 hrs 1 driller 6 hrs.
1 electrician 8 hrs.
1 air compressor 8 hrs.

April 14th	Carpenter	Driller	Powder M	Time K.	Electrician
12	5	3	1	1	1

Laborers working in spillway
8 " " " 8 hrs = 64
1 " " " 4 = 4
1 " with electrician 8
2 " " carpenter 16
92-11
Carpenters
2- working on cat-walk 4-hrs = 8 hrs
2 " on forms spillway 4 hrs. = 8 hrs
2 " " walk on spillway 16
1 " on office for R.P.A. 8 = 40 hrs.

2-air hammers
3-air hammers

Contractor cautioned about shooting below the dam (2 P.M. April 15-36)

April 16th-1936 1 Bulldozer opr.

Laborers	Carpenters	Drillers	Powder M	Time K	Electrician
12	5	3	1	1	1

common labor hrs. spillway 80 hrs.
helping carpenters " 8
" electrician 8 = 96-HRS.
Carpenter hours 20 hrs. a.m.
" " catwalk 4 hrs.
" " spillway 4 hrs.
" office P.W.A. + power light 12 hrs. 20-HRS.
Driller hours spillway 24 hrs =
Bulldozer hrs. road below dam 8 hrs.
Powder man " " " 8 hrs.

Equipment
1-Bulldozer
2-Air Compressors
3-Jack Hammers

4-16-36 + 1 Bulldozer operator

Laborers	Carpenter	Driller	Powder M	Electrician	Time K
12	5	3	1	1	1

Carpenter on trestle back of lift 40 HRS.
Driller on spillway 24 hrs.
Powder man road = 8 hrs
Bulldozer opr road = 8 hrs.

9 laborers on spillway cut off wall 72 hrs.
2 " helping carpenter 16
1 " " electrician 8
96 HR

Equipment
2-Air compressors
3-Air hammers
1-Bulldozer

4-17-36

LABORERS	Drillers	Powder M	Electrician	Bulldozer Opr.	Time K
11	3	1	1	1	1

8 lab on cut off wall — 2-air comp
3-Driller " "
1 lab help electrician — 3-A-HAM
2 lab loading cement.
1-Bulldozer opr. road — 1-Bulldozer
1-Powder man " — Delivered-
1-Electrician 1-Slateman Air comp.

1-carpenter on cut off wall.

4-18-1936

Laborers	Carpenter	Driller	Powder M	Time K.	Bulldozer operator
11-A.M. 10 P.M.	1	3	1	1	1

Carpenter on forms cut off wall 1 = 8 hrs.
Driller on cut off wall 3 = 24 hrs
Laborers on cut off wall 84 hrs.
Bulldozer + Powder man on road { 8, 8

2-Air Compressor
3-Air hammers
1-Bulldozer

(Forte road paver delivered at 1^{45} P.M.)

4-20-1936

Laborers	Carpenters	Drillers	Powder M	Bulldozer Opr.	Time K / Electrician
16	4	3	1	1	1

Excavating Bay 19-20 9 laborers } 4 Carpenter cut off wall
" spillway 7 laborers } 3 Driller anchor holes
Bulldozer on road.
Excavation Bay 19-20 — 50 yds
17 anchor holes drilled + grouted
5-3.7 feet anchor hole
1 sack cement used.

(moved into bottom of bay (dirty))

4-21-36

Laborers	Carpenter	Drillers	Time K	Electrician	Tomlinson Cornet Supt
9	1	3	1	1	2

Bay (11-12) 2-men
EXCAV. " (9-10) 3 men
" (21-22) 4 men 25± cu yds.
building ramp for mixer P.M. 6-lab
excavating drains P.M. 3 - "

1- Supt - 2 laborers assembling compressor plant for chipping buttress
1- Carpenter (plant)
Equipment 2-air Comps.
2-air Hammers
3- Driller on anchor holes spillway
1-sack cement grout anchors

4-22-36

Supt	Carpenter	Driller	Electrician	Time K	Laborers
2	0	3	1	1	11

Supt. Cornet.
2 -laborers on air compressor (plant)
9 - " on drains + excavation spillway
grouting anchors 1/2 sack cement

9 holes grouted.
1- Driller chipping + cleaning 8 hrs.
+ large portable air compressor on truck taken away at end of the day.

4-23-36 SUPT-	Carpenter	Driller	labor	Time K.	Electrician
2	1-4 hrs 1-8 hrs	2		1	1

~~4 lab - taking water cut off wall 3-hrs.~~
2 " plant (air chipping) 8 hrs.
7 " cleaning up spillway 8 hrs.
1 steel foreman
1 - steel worker
1/2 sack cement used on anchors.
17- lab on spillway concreting cut off wall

4-24-36 concreting floor slab-spillway

1-Supt. on (plant) air liner

1-Laborer " " "

1-Steel foreman

1- " man

4-25-36

concreting floor slab spillway

1-Steel foreman

7-men bending steel

4-27-36

BAY		
9-10	4-LAB. SET-A-B	
12-13	1-MAN	
11-12	2-MEN	
10-11	1-MAN	11-LAB = 1-FOREMAN

TOTAL-61-HRS-EXCAV.

2-Lab on plant (air & fuel)

1-Steel foreman

1-Steel worker

1-Carpenter

1-Electrician (plant)

4-28-36 Excavation in buttress

BUTTRES- 11-12

2-DRILLERS-ON-STRUT-FD.

2-LAB-EXCAV.

13-14 -2 LAB-16-2-DRILLERS

1-DRILLER-ON-STRUT-FOUR

2-LAB " " "

9-10 2-LAB 16 HR-1 LAB 1 HR.

Equipment 1-STATIONARY-AIR-COMPR.

1-SINGLE-SYLINDER-WATER-PUMP.

4-AIR-HAMMERS

BAY

11-12 3-LAB-24-H

1-DRILLER

TOTAL-10 LAB-3-DRILLERS.

1-LABOR-FOREMAN

1-PUMPCRETE-MAN

1-ELECTRICIAN

4-29-36 EXCAVATION

BAY 13-14 STRUT-FOUNDATION

" 12-13 " "

" 11-12 " "

" 9-10 " "

" 15-16 " "

LABOR EXCAV.

1-LABOR-FOREMAN 8 hrs.

9-LABORERS-A.M.

8- " -P.M. 68 hrs.

3-DRILLERS-EXCAV. FOOTING 23 hrs.

2- " -DRILLING-ANCHORS 4 hrs.

1-ELECTRICIAN (PLANT)

1-PUMPCRETE-MAN-8 HRS

EQUIPMENT

1-AIR-COMPR

4-AIR-HAMMERS

1-WATER-PUMP

BAY 13-14 SET-B-FOUNDATION O.K.

DRILLING-STARTED

4-30-36. EXCAVATION

BAY-13-14 CHIP-BUTTRESS

SET A-B DRILL-ANCHORS

2-DRILLERS

BAY 11-12 A-B

SET A-B CHIP-BUTTRESS

BUTTRESS 13-14-CHIPPING-DIAGONAL

1-DRILLER

1-LAB-FOREMAN

8-LAB-EXCAV 11-12 STRUT FOOTING

13-14

1-ELECTRICIAN 15-16

AIR-COMPR 12-13 DIACONAL

3-AIR-HAM.

5'-LINEAL-FEET ANCHOR-HOLES BUTTRESS-13-14 SET-B

40'-LINEAL-FEET-VERTICAL-CHIPPING-BUTTRES (11-12)-(13-14) SET-A, B,

5-1-36 EXCAVATE-STRUT-FOOTING

Bay	SET	SET	SET	SET.
11-12			C	D
13-14				D
15-16				D

15-16 DIAGONAL-EXCAV.

CHIP-DIAGONAL
E W
13-14

DRILL ANCHOR-HOLES

13-14 B

LABOR-

1-FOREMAN

8-LABORERS

3-DRILLERS

1-TOOL DRESSER

5-2-36 EXCAVATION-STRUT FOOTINGS.

EXCAV-DIAGONAL 13-WEST = 1-DRILLER

17-18 18-19 19-20

CHIP DIAGONAL

13- 11-

DRILL-ANCHOR-HOLES-COLUMN

13-14 SET-B = 1 DRILLER

LABOR
1-CARPENTER- LINING-11P
1-LAB COLUMN-LINES
2-DRILLERS, CHIP
1- " EXCAV.
1-FOREMA
15-LAB
1-DRILLER ANCHOR-HOLES
WATER-PUMP-17-18

5-4-36 EXCAVTE

11-12 STRUTS PUMP

12- WEST-DIAG.

15-16 STRUTS PUMP

17-18 STRUTS FOUNDATION - PRACTICALLY OK.

LABOR

1- FOREMAN

15- LABORERS.

1- CARPENTER (plant)

2- DRILLERS

1- TIME-KEEPER,

2- WATER-PUMPS.

5-6-36

EXCAVATION

BAY 12-13 DIAGONAL - WEST-S-13

" 17-18 " STRUTS

CHIPPING

BAY- 15-16 A-B BUTTRES

BAY 11-12 DIAGONAL

DRILLING - ANCHOR-HOLES

BAY 13-14 SET B.

LABOR

1- FOREMAN

3- CARPENTERS.

3- DRILLERS.

1- TOOL-DRESSER

13- LABORERS.

5-7-36 EXCAVATION

BAY 11-12 EXCAVATE-STRUTS

" 15-16 " "

" " " DIAGONAL-16'-EAST

" 13-14 " "

CHIPPING

BAY 11-12 DIAGONAL-12'-WEST

" 17-18 CARPENTERS-FORMS

LABOR

1-FOREMAN

4-CARPENTERS

4-DRILLERS

1-BLACKSMITH

15-LABORERS

DRILLING-ANCHOR-HOLES

" -BUTTRESS-BAY-13-14

EQUIPMENT

1-AIR-COMPR.

5-AIR-HAMMERS

5-8-36 2-WATER-PUMPS

EXCAVATION-" LABOR

BAY 11-12 STRUTS-B-C 1-FOREMAN

" 13-14 " A-D 13-LABORERS

" 15-16 " -A 2-CARPENTERS

" 13-14 DIAGONAL 5-DRILLERS

1-BLACKSMITH

" 14-15 " 1-TOOL DRESSER

1-RIGGER

CHIPPING

BAY 11-12 BUTTRESS-"-SET-D

17-18 "

" 15-16 DIAGONAL-E. SIDE-15'

DRILLING

BAY 17-18 ANCHOR-HOLES-SET-B

" 13-14 STRUT-ROCK-EXCAV.-A-D

CARPENTERS BUILDING-FORMS

BAY 13-14 15-16 17-18

ERECTING-PIPE-SCAFFOLD

BAY 17-18 SET C-D.

5-9-36 EXCAVATION

BAY 11-12 15-16 — 8-LAB, 1-FOREMAN, 1-DRILLER

CARPENTERS

BAY 13-14 — 2-CARPS

DRILLING-ANCHOR-HOLES

BAY 17-18 - SET-C = — 1-DRILLERS, 1-LABORER

CHIPPING

BAY 17-18 DIAGONAL-18 — 1-DRILLER

ERECTING-PIPE-SCAFFOLD

BAY -17-18 — 1-RIGGER, 1-PUMP C.M, 1-LAB, 1-BLACKSMITH, 1-DRILL-SHAR

20-MEN

FORM-SET-BEFOR O.K.

5-11-36 EXCAY-15-16 SET-A-REMOVE ROCK

EXCAVATION

BAYS - 9-10
10-11
" 11-12 STRUTS & FORMS
13-14 " D
" 15-16 PIPE-SCAFFOLD
" 17-18 CHIP-VERTICAL
" 17-18 DRILL-ANCHORS

LABOR

1-FOREMAN

2-CARPENTERS

SCAFFOLD: 1-RIGGER, 1-PUMP-CRETE-MAN, 1-LABORER

E.M.S.Co.: 4-DRILLERS, 1-BLACKSMITH, 1-DRILL-SHARPENER, ~~1-HELPER~~, 1-MIXER-MAN, 15-LABORERS = 23-MEN

TOTAL-ON-WORK 38
BOWER = 11-MEN

5-12-36 EXCAVATION

BAY 15-16 SET-A - FORM-REMOVED

11-12 - ECAV-ROCK-D-C

19-20 - EXCAV-A-B-D. PUMP-WATER

DRILLING-ANCHORS

BAY-17-18-B- PUMP-WATER

CHIP-BUTTRESS

BAY 17-18 - 17-DIAGONAL

ERECT-PIPE-SCAFFOLD

BAY 13-14

BAY 17-18 CHIP-DIAG
" " " PIPE-SCAF-DIAG-18
" 15-16 SET-A. O.K.

2-CARPENTER-11-12-SET-B-0-HR

LABOR 1-FOREMAN
2-CARPENTERS
1-RIGGER
1-PUMP-CRETE-MAN
4-DRILLERS 27-MEN
1-BLACK-SMITH
1-DRILL-SHARPENER
1-MIXER-MAN
13-LABORERS

17-18-SET-C-1-HOLE
" -SET-D-6- "

5-13-36 EXCAVATE

BAY 11-12 - D - PUMP-WATER
" 19-20 - EXCAT DRILL - ROCK
12-13 - " DIAG

" 15-16 A-FORMS.
1- 7-ANCHOR-HOLES
BAY 17-18 D-DRILL-ANCHOR-HOLE
4-HOLES-THR-
" 17-18 DRILL-BUTTRESS-18

ERECT-PIPE-S
BAY 17-18 -
BAY 11-12

CHIP-BUTTRESS
BAY - 15-16 SET - A -

LABOR
1-FOREMAN
4-CARPENTERS-STRIST-FORMS
4-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-MIXER-MAN.
1-RIGGER
1-PUMP-CRETE-MAN
14-LABORERS 28-MEN

5-14-36 EXCAVATE

C-D
BAY - 11-12 & PIPE - SCAFFOLD-B
19-20 - DIAGONAL - SET-A
9-10 "

PUMP-WATER
DRILL-ROCK

CHIP - BAY
15-16 - VERTICAL - B

CROWTING - ANCHORS = 1-SACK-CEMENT
BAY - 17-18 SET - C - D

DRILL - BAY -
17-18 - SET-D

PUMP
WATER

10 30 A.M. COMPR - SHUT - DOWN
2 - P.M " WORKING

PIPE - SCAFFOLD
BAY 11-12
" 15-16

1 - FOREMAN
4 - CARPENTERS - 4 - HRS
1 - BLACKSMITH 2.5 HRS
4 - DRILLERS - 2.5 HRS.
1 - DRILL - SHARPN 2.5 HRS.
1 - RIGGER 8 "
1 - PUMP-CRETE-MAN 8 "
1 - MIX - MAN 8 "
9 - LABORERS 8 "

23 - MEN

5-10-36

EXCAVATE

BAY - 9-10 DIAGONALS, 10
10-11 " 4-DRILLER
11-12 STRUT - C - D.

ERECT - SCAFFOLD = 3-MEN

14-15

CHIP - VERTICAL
BAY 15-16 SET - B - C 2-DRILLS
" " DIAGONAL - NO-15
" 13-14 SET - D

DRILLING - ANCHORS
BAY - 17-18 SET - B - A - = 1-DRILLERS
1-HELPE.

CARPENTERS - FORMS - STRUT = 2 - MEN
BAY - 17-18 SETS - C - D - BOWER

CROUTING - ANCHORS - 17-18 - SET - B.

1 - FOREMAN 1/2 SACK-CEMENT
4 - DRILLERS
9 - LABORERS
1 - PUMP-CRETE-MAN
1 - MIXER-MAN.
1 - RIGGER
1 - BLACKSMITH
1 - DRILL-SHARP 19 - MEN

TOTAL - 29.5 MEN

5-16-36 EXCAVATE

8-9- #9-DIAGONA 3-LAB,
11-12- -C-D-DRILL-ROCK-C-

CHIP
15-16 DIAGONALS

DRILL-ANCHORS
17-18 - SET-A 1-DRILLER
1-HELP

GROUTING-ANCHORS
BAY
17-18 SET-A 1/2 SACK CEMENT

1-FOREMAN
1-FOREMAN-LABOR
8-LABORERS
1-CARPENTER
1-BLACKSMITH
1-DRILL-SHARP
1-MIX-MAN
1-PUMPCRETE-MAN 4-HRS
1-RIGGER 4-HRS
4-DRILLERS

28
TITAL

BOWER
10-M

5-18-36 EXCAVATE
BAY- 8-9- PUMP-WAT
BAY- 11-12 SET-C- 3-MEN.
" - 12-13-DIAGONAL 1-DRILLER
1-LAB
1-MIX-MAN
BAY- 19-20 SET-C-ROCK-DRILL

PUMP-WATER-BAY-17-18-A.

DRILL-ANCHOR-HOLES
1-DRILLER
BAY - 16-16 SET-D 1-HELP.

DRILL-BIT TRESS-DIAGONAL
A.M. + P.M.
BAY 16-17 No 17.

1-FOREMAN
1-LABOR-FOREMAN
4-DRILLER
1-MIXER-MAN
3-LABORERS-EXCAVATING
1-LABORER. HELP-DRILLER
1-BLACKSMITH
1-DRILL-SHARPENER

BRACHMAN 13-MEN.
BOWER 20-MEN.
TOTAL- 33-MEN

5-19-36 EXCAVATION — 4-LABORERS

BAY - 8-9 - DIAGONAL #9
11-12 SET - C -
BAY - 19-20 SET - C -
1-DRILLER
1-MIX-MAN
LARGE-RACK

DRILL-ANCHOR-HOLES
1-DRILLER
1-HELPER

BAY - 15-16 - SET-C

ERECT-PIPE-SCAFFOLD
1-RIGGER
1-PUMPCRETE
1-LABORER

BAY - 16-17

GROUT -
BAY - 15-16 - SET-D - 1/2 SACK CEMENT

CHIPPING -

BAY - 16-17 #17 - DIAGONAL — 1-DRILLER
BAY - 13-14 - VERTICAL - 1-DRILLER

1-FOREMAN
1-LABOR-FOREMAN
6-LABORERS
4-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-MIXER-MAN
1-PUMPCRETE-MAN
1-RIGGER

BOWER-15
BRACHMAN 1

5-20-36 EXCAVATION
BAY - 11-12 #16-
BAY - 16-17 - TEAR-ON T-STAIRWAY
BAY - 9-10 - C

CHIPPING
BAY - 13-14

PIPE-SCAFFOLD

BAY - 12-13

DRILLING-ANCHORS

BAY - 15-16 - C — RUMP

GROUTING-ANCHORS

BAY 15-16 - SET-C
1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
6-LABORERS
4-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-MIXER-MAN
1-PUMPCRETE-MAN
1-RIGGER
1-CARPENTER

BRACHMAN 19-MEN
BOWER 16-MEN
TOTAL-35 MEN

5-21-36 EXCAVATION
BAY - 11-12 -
BAY - 8-9

WATER
1-DRILLER

ERECT-PIPE-SCAFFOLD
BAY - 12-13
BAY 11-12

1-RIGGER
1-LAB
1-PUMP-CRETE-MAN

DRILL-ANCHOR-HOLES
BAY - 15-16 -A-B-

4-DRILLERS

LAYING-OUT-DIAGONAL 1-CARP.

BAY - 12-13
BAY - 14-15

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
5-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP.
1-RIGGER
1-PUMPCRETE-MAN
1-MIX-MAN
1-CARPENTER
4-LABORERS

BRACHMANN - 18-MEN
BOWER - 16-MEN
TOTAL - 34-MEN

5-22-36 EXCAVATE
BAY -9-10 -B-C-D.
BAY 11-12 SET-C-ROCK-1-DRILL

DRILLING
BAY - 15-16 -SET -A-B

CHIPPING
BAY -16-17 #17-DIAGONAL

LAY-OUT-DIAGONAL -1-CARP
6-HRS.
BAY - 14-15
BAY 18-19

1-SUPT.
1-FOREMAN
1-LABOR-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-CARPENTER
7-LABORERS

GROUT-ANCHORS - 15-16-13 1/2 Sack Cement

13 BOWER 20
13 BRACHMANN 17
TOTAL-37

5-23-36 EXCAVATION
BAY-8-9 3-MEN
BAY-9-10 2-MEN

DRILL-ANCHORS
BAY-13-14-C 4-MEN

CHIP-DIAGONAL
BAY-16-17 #16

GROUTING ANCHORS

BAY-15-16-SET-A 1-SACK-CEMENT

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
1-BLACKSMITH
1-DRILLSHARP
5-LABURERS
5-DRILLERS E.M.S.CO. = 8-MEN.

BOWER-17
TOTAL-32-MEN

5-23-36 EXCAVATION
BAY-8-9-#9-DIAGONAL-3-
BAY-11-12 C-D 1-DRILL-1-PUMP

DRILL-ANCHOR-HOLES
BAY-13-14

ERECT-PIPE-SCAFFOLD 1-RIGGER
1-LAB-4.H

BAY-13-14

CHIP-BUTTRESS
BAY-15-16-#15-SET-C
BAY-17-18 #18-DIAGONAL
GROUTING-BAY-13-14
SET B-C-
1-SACK-CEMENT

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
1-BLACKSMITH
1-DRILL-SHARP
2-LAB-EXCAV.
4-DRILLERS-3-AM. 4-P.M.
2-LAB-HELP-DRILL
1-RIGGER-SCAFFOLD (E.M.S.Co) 9-MEN

BRACHM 18
BOWER-17.
TOTAL-34

5-26-36 EXCAVATION
BAY- 8-9-#9-DIAG-3-MEN
BAY 11-12 SET-C-D - PUMP-
BAY 9-10 SET-D-ROCK DRILL

DRILL-ANCHOR-HOLES 2-DRILLS
BAY-13-14-SET-A-
BAY-11-12-SET-A- 2-HELP.

CHIPPING
BAY-17-18-~~7-18~~-DIAGONAL-1-DRILL

ERECT-PIPE-SCAFFOLD 1-RIGGER
BAY-16-17 1-PUMPCRT
1-LAB.

GROUT-
BAY-13-14 SET-D-A 1-SACK
CEMENT

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN.
5-DRILLERS
2-LABORERS-HELP-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
~~1-RIGGER~~
~~1-LABOR-HELP-RIGGER~~
5-LABORERS

BRACHMAN 19-
BOWER 16-
TOTAL-34

5-27-36 EXCAVATION
BAY-11-12-C-D PUMP-W
" CARP-SHORING-D, 1-DRILLER

DRILL-ANCHOR-HOLES 2-DRILLERS
BAY-11-12-A-B

CHIPPING
BAY-17-18-DIAGONALS. 2-DRILLERS

ERECT-PIPE-SCAFFOLD 1-RIGGER
BAY-16-17 1-PUMP-CRETE-M
1-LABORER

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
5-DRILLERS
2-LABORERS-HELP-DRILL-ANCHORS
1-BLACKSMITH
1-DRILL-SHARP.
5-LABORERS-
1-RIGGER
1-LABORER-PIPE-SCAFFOLD

BRACHMAN. 19
BOWER 13
TOTAL 32

5-28-36 EXCAVATION
BAY-11-12-SET-D-
BAY 19-20

DRILLING-ANCHOR-HOLES
BAY- 11-12-SET-B-C

BAY -17-18-#18-DIAGONAL

CHIP 17-18-№18-DIAGONAL

ERECT-PIPE-SCAFFOLD

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
5-DRILLERS
2-LABORERS-HELP. DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
4-LABORERS-EXCAVATION

BRACHMAN 16
BOWER 18
TOTAL 34

5-29-36 EXCAVATION
BAY- 11-12 SET-D
BAY- 19-20 SET-C

DRILLING
BAY 11-12 ANCHOR-HOLES.
BAY 16-17 #16-DIAGONAL
BAY 17-18 #18- "

CHIPPING

ERECTING-PIPE-SCAFFOLD
16-17
17-18 TAKE-DOWN

GROUTING-ANCHOR-HOLES.
BAY-11-12-SETS-A-B-C- 2-SACKS CEMENT

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
5-DRILLERS
1 BLACKSMITH
1 DRILL-SHARP
0-LABORERS. HELP-DRILLERS
3-LABORERS-EXCAVATION
1-RIGGER
1-PUMP CRETE-MAN

BRACHMAN-17
BOWER-16
TOTAL-33

6-1-36 EXCAVATION
BAY - 19-20 - SET-C-

DRILLING-ANCHORS
BAY - 11-12 - SET-D-
BAY - 16-17 - #16 - DIAGONAL
BAY - 14-15 - #15 - DIAGONAL
CHIPPING
BAY - 16-17 - BOTH-DIAGONALS
CHIP
BAY - 11-12 - SET-A-B-

GROUTING-ANCHORS
BAY - 11-12 - SET-D - 1-SACK-CEMENT

LAY-OUT-DIAG
BAY - 11-12 - 1-CARP,
BAY - 10-11

1-SUPT-
1-FOREMAN
1-LABOR-FOREMAN
6 DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-CARPENTER-LAY-OUT-WORK
1-LAB-HELP-DRILLER
4-LAB- EXCAVATE.

BRACHMAN 17
BOWER 15
TOTAL 32

6-2-36 EXCAVATION
BAY - 19-20 (4-MEN) PUMP-W 1-DRILLER
BAY - 18-19 - #18-DIAGONAL-ROCK

DRILLING
BAY - 14-15 - #14-DIAGONAL 1-DRILLER 1-HELPER

CHIPPING
BAY - 11-12 - SET-D-C- 2-DRILLS
BAY - 16-17 - #16-DIAGONAL (2-DRILLS
BAY - 11-12 - #11-DIAGONAL

LAYING-OUT-DIAGONALS.
BAY 11-12 - 12-13 - 19-20

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
6-DRILLERS
1-LAB-HELP-DRILL
1-BLACKSMITH
1-DRILL-SHARP
1-CARPENTER-LAY-OUT-DIAG
6-LABORERS-EXCAVATE

BRACHMAN 19
BOWER 11
TOTAL 30

GOLDEN
29-

6-3-1936 EXCAVATE
BAY - 19-20 -A-B-C-D- 8-MEN

CHIPPING
BAY - 11-12 -DIAGONALS
BAY - 15-16 -BOTH " "

DRILLING - BUTTRESS-DIAGONALS
BAY - 12-13 - #12 - #13

LAYING-OUT-WORK.

3-WATER-PUMPS.
BAY - 13-13 1-RIGGER

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
3-DRILLERS -
1- " 4-HRS
1-BLACKSMITH
1-DRILL-SHARP
1-LABOR-HELP-DRILL
6-LABOR-EXCAVATE-
1-MIX-MAN

BRACHMAN 7
BOWER-20.5
39.5

6-4-1936 EXCAVATE 6-LAB.
BAY - 19-20 1-DRILL

DRILLING
BAY - 12-13 - DIAGONALS. 1-DRILL 1-HELP
BAY - 10-11 "
BAY - 9-10 - START ANGLE "

CHIPPING
BAY - 11-12 - DIAGONALS 2-DRILLS
BAY - 15-16 " 2-DRILLS
BAY - 14-15 "

LAY-OUT-WORK.

1-SUPT.
1-FOREMAN
1-LABOR-FOREMAN
6-DRILLERS -
1-BLACKSMITH
1-DRILL-SHARP
1-LABORER-HELP-DRILL
1-MIXER-MAN
7-LABORERS
1-CARPENTER

BRACHMAN 21
BOWER 15
TOTAL 36

6-5-36 EXCAVATION

BAY - 19-20 — 1-PUMP, 7-LAB

BAY - 8-9-#9-DIAGONAL

BAY - 9-10-#10- "

DRILLING-DIAGONALS — 1-DRILL, 1-HELP

BAY - 11-12 — 1-DRILL

BAY - 19-20 #20-DIAGONAL — 1-HELP

BAY - 10-11-#10- "

CHIPPING-DIAGONALS

BAY - 11-12 — 2-DRILLS

12-13

BAY - 14-15 — 2-DRILLS

LAY-OUT-WORK

BAY - 13-14 -15-16 - VERTICAL

BAY - 10-11 - DIAGONAL

PLACING-DIAGONAL-BOLTS-2" BAY-16-17 — 1-LAB, 4-HRS.

1-SUPT.
1-FOREMAN
1-LABOR-FOREMAN
6-DRILLERS
2-LABORERS-HELP-DRILL
~~1-PUMPCRETE-MAN-SCAFFOLD-14-15~~
~~1-RIGGER~~
~~1-ELECTRICIAN~~ " "
1-BLACKSMITH " "
1-DRILL-SHARP
1-MIX-MAN
1-CARPENTER
7-LABORERS

BRACHMAN 22

BOWER 14

TOTAL 36

6-6-36 EXCAVATION

BAY - 19-20-A-B-C-D - — 1-DRILL

DRILLING

BAY - 13-14 - VERTICAL-TIE-RODS

BAY - 15-16 " "

BAY - 9-10 - ANCHOR-HOLES

CHIPPING

BAY - 12-13-

BAY - 14-15-

PLACING-DIAGONAL-2" BOLTS-BAY-16-17
#16-

LAYING-OUT-WORK

BAY - 9-10- 19-20

THOS. L. DAVIES-DEL-MAR

9-A-M. DR. ARRIVED - 9[40] A.M. (FELL 7-FEET & RAIL-BELOW)

WITNESS-V-GUTHRIE

MAN-INJURED-FRANK-BURNS

FELL-FROM-SCAFFOLD-BAY-16-17

ABOUT-13' FROM-GROUND — EL-213- CENTER BOLT

STRUCK-LOWER-PIPE-ON-STOMACHE

PLACING-2"-DIAGONAL-BOLTS.

CONTUSION-OF-CHEST-FELL-7' feet

1-SUPT-
1-FOREMAN
1-LABOR-FOREMAN
6-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-MIX-MAN
1-CARPENTER
1-LABOR-HELP-DRILL-ANCHOR-H
4-LABOR-EXCAVATION

18-MEN

6-8-36 EXCAVATION
BAY - 9-10 - STRUTS + DIAGONAL

DRILLING - ANCHORS
BAY - 9-10 - ANCHOR-HOLES
BAY - 9-10 #9 - DIAGONAL

CHIPPING
BAY - 12-13
BAY - 13-14

DISMANTLE - PIPE - SCAFFOLD
BAY - 11-12

LAYING - OUT - WORK
BAY - 19-20 - VERTICALS

1 - SUPT
1 - FOREMAN
1 - LABOR-FOREMAN
5 - DRILLERS
1 - BLACKSMITH
1 - DRILL-SHARP
1 - CARPENTER
1 - LABORER-HELP-DRILL
3 - LAB - 8 HRS - 1 - LAB - 4 - HRS
1 - RIGGER - 4 HRS.

16 - MEN

98-H

6-9-36 EXCAVATION
9-10 - 1 - LAB - 4 - HRS.
19-20

DRILLING
BAY - 9-10 - #10 - BUTTRESS, #9 -

CHIPPING
BAY 12-13 DIAGONAL
BAY 13-14 "
BAY 9-10 - VERTICAL + DIAGONAL

ERECT - PIPE - SCAFFOLD - 1 - RIGGER
BAY - 9-10 1 - CARP
BAY - 10-11 2 - LAB - 4 - HRS

1 - LABOR - FOREMAN - 4 - H
1 - SUPT -
1 - FOREMAN
5 - DRILLERS
1 - LABORER - HELP - DRILL.
1 - BLACKSMITH
1 - DRILL - SHARPENER
1 - CARPENTER - 4 - H.
1 - RIGGER -
1 - MIX - MAN - 4 HRS
4 - LAB - 4 - HRS - EXCAV

20 - MEN

6-10-36 EXCAVATION

BAY- 9-10 -SET-C
BAY 19-20 SET-B

1-PUMP
3-LAB

DRILLING.
BAY- 9-10 - ANCHOR-B
BAY -9-10- " -DIAGONAL

CHIPPING
BAY- 9-10 DIAGONALS
BAY- 10-11 DIAGONALS

ERECT-PIPE-SCAFFOLD
BAY - 10-11

HR. 4- 1-PUMPCRETE
1-RIGGER
HR. 4- 1-LAB-8

LAY-OUT-WORK-1-CARPENTER
BUTTRESS-16-HOLES-VERTICALS.

1-SUPT
1-FOREMAN
1-LABOR-FOREMAN
5-DRILLERS
1-LABORER-HELP-DRILL
1-BLACKSMITH
1-DRILL-SHARP
1-RIGGER
1-PUMP-CRETE-
~~1-MIXERMAN~~
1-CARPENTER
5-LABORERS-EXCAV

F.F.B. 19
BOWER-15
TOTAL-33

6-11-36 EXCAVATION

DRILLING
BUTTRESS- #15-C-D EL. 217.5"
BUTTRESS- #14-C-D -EL. 217.5"
BUTTRESS- #17-D- EL. 217.5"
" #16-D- " "

CHIPPING
BAY 10-11 BOTH-DIAGONALS

LAY-OUT-WORK
BAY-10-11

PLACING-TIE-BOLTS
BAY-15-16- SET-A-EL-217.5"

ERECT-PIPE-SCAFFOLD
BAY-16-17 1-CARP-1-RIGGER

1-SUPT.
1-FOREMAN
3-DRILLERS
1-LABORER-HELP-DRILL
1-BLACKSMITH
1-DRILL-SHARP.
1-RIGGER
1-CARPENTER

6-12-36

DRILLING-BUTTRES-
BAY - 16-17=#16-EL.217.5-SET-C-
#17-EL:217.5-SET-C-8-

ERECT-SCAFFOLD
BAY - 16-17- 1-RIGGER
BAY -18-19- 1-CARPENTER
2-LABORERS-4-HR.

1-SUPT

1-FOREMAN 4-HRS
1-DRILLER -4-HRS.
1-RIGGER
1-LABORER-HELP-DRILL-4-HRS.
1-CARPENTER
2-LABORERS-4-HRS.

6-13-36

ERECT-PIPE-SCAFFOLD
BAY-18-19 1-RIGGER
BAY- 12-13 1-CARPENTER
2-LABORER

1-AIR-COMPRESSOR-VIBRATOR-4H

PLACING-BUTTRESS-BOLTS
BUTTRESS
14-15- 1-STEEL-FOREMAN
1- " MAN

1-SUPT-
1-FOREMAN- 4-HRS.
1-DRILLER - 4-HRS.
1-RIGGER - 8-HRS
1-CARPENTER 8-HRS.
2-LABORERS 8-HRS - PIPE-SCAFFOLD
1-STEEL-FOREMAN - BUTTRESS-BOLTS
1- " MAN -

EL. 217.3

6-15-36 DRILLING - BUTTRESS #13 - TIEBARS
" #18 "

ERECT - PIPE - SCAFFOLD

BAY - 12-13
18-19
9-10

PLACING - TIE-BARS

BAY - 17-18
BAY - 12-13 - BOLTS.

CHIPPING

BAY - 18-19 # - DIAGONAL

LAY-OUT - WORK

BAY 18-19 #19 - DIAGONAL

1-SUPT.
1-FOREMAN
3-DRILLERS
1-LABORER-HELP-DRILL
1-RIGGER -
1-CARPENTER
2-LABORERS - PIPE-SCAFFOLD
1- DRILL-SHARP
1- STEEL - FOREMAN
1- " MAN

13-Men.

6-16-36

DRILLING
BAY - 10-11 #11-DIAGONAL

CHIPPING
BAY - 18-19

ERECT - PIPE - SCAFFOLD
BAY - 9-10

PLACING - TIE-BARS
BAY - 17-18

1-SUPT
1-FOREMAN
3-DRILLERS
1-LABORER-HELP-DRILL
1-RIGGER 4-HRS
1-CARPENTER 4-HRS
1-DRILL-SHARP.
1-STEEL-FOREMAN
1- " "
1-ELECTRICIAN "

19-MEN.

6-17-36

DRILLING
BAY- 9-10 #9-DIAGONAL 2-HRS,

CHIPPING
BAY- 18-19

PUMP-WATER
BAY - 11-12-C-D

LAYING-OUT-WORK
BAY- 19-20 #20-DIAGONAL

PREPARING-GROUT-MACHINE

E.M.S.CO. LAID-OFF AT-10-A.M.

1-SUPT.
1-FOREMAN
3-DRILLERS
1-LABORER-HELP-DRILL
1-DRILL-SHARP
1-CARPENTER
2-STEEL-MEN-

10-MEN

6-18-36

DRILLING
BUTTRESS-#15-RE-DRILL
" #18-EL.217.5=D.C.

CHIPPING

PLACING-TIE-BARS
BAY -13-14 -15-16 = EL.217.5

ERECT-SCAFFOLD
BAY- 17-18-

1-SUPT
1-FOREMAN
1-DRILLER
1-RIGGER
1-CARPENTER
2-STEEL-WORKERS.

6-19-36

PUMP-WATER-BAY-19-20
2-LAB-4-HRS

CHIPPING
BAY-18-19=#18-DIAGONAL
1-DRILLER-4-HRS-

6-20-36

PUMP-WATER
BAY-19-20-

PLACING-DIAGONAL BOLTS
ASSEMBLE-GROUT-MACHINE
1-STEEL-FOREMAN
1-STEEL-WORKER

6-22-36

DRILLING BUTTRESS #19 DIAGONAL

GROUT-BUTTRESS-BOLTS
BUT # 17-4 bolts holes.
PUMP-WATER BAY-9-10-19-20-

1-SUPT
1-FOREMAN
1-DRILLER
1-" HELPER
1-STEEL-FOREMAN
2-MEN-GROUTING

1-SACK-CEMENT

6-23-36 DRILLING
BAY-18-19

PUMP-WATER-BAY-19-20

GROUTING-DIAGONAL-BOLTS-

BUTTRESS #17 5-bolts
ELEV, 213,0=3-218=2
BUT # 16=213=2-218=2

3-SACKS-CEMENT

6-24-36 CHIP-DIAGONAL
BUTTRESS #10 #9
4 #10-VERTICAL

ANCHOR-DRILLING-BAY-9-10-C-
" -19-20-A " 19-20-#20-DIAGONAL
EXCAVATION-BAY-19-20

1-SUPT
1-FOREMAN
3-DRILLERS
2-LABOR-HELP-DRILL
1-DRILL-SHARP
2-LAB-3-HRS-GROUT-ANCHORS
9-10

GROUT-ANCHOR
BAY-9-10
5½ sacks

5-LOWER-HOLES-#20

6-25-36

DRILLING-ANCHOR-HOLES
BAY-19-20-B-D

CHIPPING-DIAGONAL
BAY-8-9 #9-DIAGONAL
BAY-9-10-VERTICAL +
BAY-11-12-VERTICAL. +

PLACING-TIE-BARS

BUTTRESS #18-

ERECT-PIPE-SCAFFOLD
BAY-17-18-

GROUTING-DIAGONAL-BOLTS #16

1-SUPT.
1-FOREMAN
5-DRILLERS
1-LABORER
1-DRILL-SHARP
1-BLACKSMITH
1-RIGGER-PIPE-SCAFFOLD
1-LABORER-HELP. "
4-HRS 1-STEEL-FOREMAN
4-HRS 3- " MEN

6-26-36

DRILLING-
BAY-19-20-D-C
BAY 9-10-A-

CHIPPING VERTICAL
BAY-9-10 "
BAY-11-12 "
BAY-17-18 "
BAY-19-20 DIAGONAL

ERECT-PIPE-SCAFFOLD
BAY-17-18-

GROUT-BNT #15-DIAG-BOLTS-
#14-" "
EXCAVATE (3-SACKS-CEMENT)
BAY-9-16
BAY 19-20

1-SUPT.
1-FOREMAN
4-DRILLERS
1-LABOR-HELP-DRILL-1-4-HRS.
1-BLACKSMITH
1-DRILL-SHARP
1-RIGGER-PIPE-SCAFFOLD
1-LABORER- "
4-LABORERS-EXCAVATE
1-CEMENT-FINISHER-4-HRS-GROUT-BOLT
1-MIX-MAN 4-HRS "
1-LABORER-GROUT-8-HRS

6-27-36

GROUT-DIAGINAL-BOLTS,
BLT #12 #13 #10-#11 = 33-GROUTED
5=SACKS-CEMENT

ERECT-PIPE-SCAFFOLD
BAY-17-18

3-LABORERS.
1-SUPT
1-RIGGER
1-CEMENT-FINISHER

6-29-36

DRILLING-ANCHORS
BAY-9-10

GROUT-DIAGONAL
BLT #18 (3-sacks cement
GROUT-ANCHORS-9-10

CHIP-
BAY-17-18-VERTICAL
BAY-19-20-DIAGONAL

1-SUPT
1-FOREMAN
4-DRILLERS
1-LABORER-HELP-DRILL
1-RIGGER
2-LAB-HELP-PIPE SCAFFOLD.
1-BLACKSMITH
1-DRILL-SHARP.
4-H- 1-CEMENT-FINISHER 14-MEN
1-LABORER

6-30-36

DRILLING-ANCHOR-HOLES
BAY-9-10-A-21-22-A-B.
BAY-20-21-#21-DIAGONAL
1-HOLE. 224.5'

CHIP-BUTTRES
BAY-19-20-VERTICAL
BAY-21-22 "

LABOR
1-SUPT-
1-FOREMAN
4-DRILLERS
1-LABORER-HELP-DRILL
1-BLACKSMITH
1-LABOR-EXCAVATE
EXCAVATE
BAY-20-21 #21-DIAGONAL
21-22-STRUTS. B-C
GROUT-ANCHORS
BAY-9-10-SET-A (2-SACKS-CEMENT)

7-1-36

ERECT-PIPE-SCAFFOLD
BAY-17-18

1-RIGGER
1-PUMPCRETE-MAN
2-LABORERS
4-LABORERS EXCAVATE BAY 21-22
1-MIX-MAN " "

7-2-36

ERECT-PIPE-SCAFFOLD
BAY-17-18.

CHIP-BUTTRESS
BAY-17-18-VERTICAL
BAY 15-16 "

EXCAVATE
#21-DIAGONAL
BAY-21-22-SET-A-B-C
" 19-20- "-C-

DRILL-ANCHORS
BAY-21-22

1-SUPT
1-FOREMAN
2-DRILLERS
1-DRILL-SHARP
1-RIGGER
1-JUMP-CRETE-MAN
1-MIX-MAN
6-LABORERS-EXCAV
2- " PIPE-SCAFFOLD

7-3-36

ERECT-PIPE-SCAFFOLD 17-18
1-RIGGER
2-LABORERS

DRILLING
BAY-19-20-ANCHORS
BAY-20-21-#21-DIAGONAL

GROUTING-ANCHORS
BAY-21-22 4-A-4-B
BAY-19-20 SET-A-B. 4-SACKS CEMENT

CHIPPING-
BAY-15-16-VERTICALS

1-SUPT
1-FOREMAN
3-DRILLERS
1-BLACKSMITH
1-DRILL-SHARP
1-LAB-HELP-DRILL
3-H 1-CEMENT-FINSHER-GROUT-ANCHO
3-H 1-LAB " "

J.L.MOYE, LABORER-INJURED-10 a.m.
WORKING-ON-VIBRATOR-
LEFT-SIDE-HEAD-CUT-LEFT-SHOULDER

7-6-36

DRILLING-ANCHOR-HOLES
BAY- 19-20- B-
BAY- 16-17 #16-DIAG.
#17-DIAG.

CHIP-
BAY- 15-16 -VERTICAL
BAY- 20-21-#21-DIAGONAL

ERECT-PIPE-SCAFFOLD
BAY- 18-19

LAY-OUT-WORK
BAY- 16-17-DIAGONAL
BAY- 18-19 "

1-SUPT.
1-FOREMAN
1-CARP-FOREMAN
4-DRILLERS
1-RIGGER
1-PUMPCRETE-MAN
1-LABORER-HELP-DRILL
1-DRILL-SHARP
1-BLACKSMITH
1-LABOR-PIPE-SCAFFOLD
1-CARPENTER
2-LABOR EXCAVATE
1-MIX-MAN- 4-H

7-7-36

DRILLING
BAY- 16-17- DIAGONALS
BAY- 19-20- ANCHOR-HOLES.

CHIPPING
BAY- 16-17- DIAGONAL

GROUTING #13-BUT EL. 217.5'-B,
1-SACK-CEMENT

ERECT-PIPE-SCAFFOLD
BAY- 15-16

EXCAVATION
BAY- 19-20 -STRUT
BAY- 19-20- DIAGONAL

SETTING-PLATES-TIE-BARS
BNTTRESS #13- EL. 217.5'= 4

1-SUPT
1-FOREMAN
4-DRILLERS- 1- 4-HRS EXCAV
1-RIGGER
1-BLACKSMITH
1-DRILL-SHARP

7-LABORERS-EXCAVATION
2-LAB- PIPE-SCAFFOLD
1-MIX-MAN- 4-HRS- EXCAV.
1-PUMPCRETE-MAN-4-HRS-SCAFFOLD

7-8-36

DRILLING -
BAY - 19-20 - C - D.

CHIP
BAY - 16-17 - DIAG
BAY - 18-19 - DIAG

3½ sacks

GROUT - ANCHORS
BAY - 19-20 - B-4 - C-4 - D-4
GROUT - BUT #13 - TIE - EL. 217.5 - C
" TIE-BAR-PLATES - BUT #14 - 217.5

EXCAVATE -
BAY - 21-22 - SET - C - ROCK

ERECT - PIPE-SCAFFOLD.
BAY - 17-18
1 - SUPT
1 - FOREMAN
5 - DRILLERS
1 - CEMENT-FINISHER
1 - LABORER
½ - DRILL-SHARP
1 - BLACKSMITH
1 - RIGGER
1 - LABORER
3 - LABORERS - EXCAV 21-22

7-9-36

DRILLING
BAY - 9-10 - EL - 237.5 - TIE-BARS.

1-SACK-CEMENT

GROUT - TIE-BAR-PLATES #14, 217.5
" " " " #15 - 217.5
" " " " #16 - 217.5

CHIP - DIAGONAL
BAY - 16-17
BAY - 18-19
BAY - 13-14 - VERTICAL
BAY - 17-18 "

PIPE-SCAFFOLD
BAY - 15-16
" 12-13

EXCAVATE
BAY - 19-20 SET-D - #19 - DIAG

1 - SUPT
1 - FOREMAN
5 - DRILLERS
1 - DRILL-SHARP
1 - BLACKSMITH
1 - RIGGER
1 - CEMENT-FINISHER - 4 - HRS
1 - LAB " 4 - HRS.
1 - LAB-HELP-RIGGER.
3 - LAB-EXCAVATION

7-10-36

CHIP- BAY- 13-14 VERTICAL
BAY- 17-18 DIAG

EXCAVATE
BAY- 21-22

ERECT-PIPE-SCAFFOLD
BAY- 14-15 -13-14

1-SUPT
1-FOREMAN
5 DRILLERS
1-RIGGER-SCAFFOLD
2-LAB "
1-BLACKSMITH "
1- DRILL-SHARP
5-LAB-EXCAVATE

7-11-36 DRILLING
BAY- 19-20-ANCHOR-HOLES
BAY- 21-22 " SET-C

EXCAVATION
BAY- 21-22-19-20-STRUT
5-LABORERS-EXCAVATION= 4-HRS
3- " " 4-HRS
1-SUPT
1-DRILLER
1-LABORER-HELP-DRILL
1-FOREMAN
5-LAB-EXCAV.
1-RIGGER
2-LAB - PIPE-SCAFFOLD
GROUT-ANCHORS
BAY- 19-20 - C - D. 15 SACK-CEMENT

ERECT-SCAFFOLD
BAY -13-14

CHIP- VERTICAL
BAY- 19-20

TOTAL-MEN
GOLDEN-47
BOWER - 40
BRACHMAN -

7-13-36

CHIPPING
BAY - 14-15 - DIAG
BAY - 17-18 - DIAG
BUT #13 - DIAG

DRILLING
BAY - 14-15 #14-DIAG
#15 - DIAG

EXCAVATE
BAY - 16-19 = #18 - DIAG #13-DIAG
BAY - 21-22 — 19-20 #10-DIAG

GROUT - DIAG - BOLTS
BUT #17 EL 238 = 1 - 233 = 1 - 228 = 1

PLACE - DIAG - BOLTS -

1 - SUPT.
1 - FOREMAN
3 - DRILLERS
1 - LABOR - HELP - DRILL
~~2 CARPENTERS LAY OUT WORK.~~
6 - LABOR - EXCAVATION
1 - MIX - MAN - "
1 - BLACKSMITH
1 - DRILL - SHARP
1 - RIGGER
1 - LABORER - HELP - RIGGER

TOTAL
GOLDEN = 24

GOLDEN - 44
BOWER 39

7-14-36 DRILLING
BUTTRESS #13 - DIAG -

CHIPPING
BUT #13 - WEST - DIAG
BAY - 13-14 - VERTICALS
BAY - 17-18 - DIAG
BAY - 14-15 - 15T - 16 - DIAG

PLACE - DIAG - BOLTS. 17
BUT #13

GROUT - DIAG - BOLTS -
BUT - NO - 17 - (1 - SACK - CEMENT)
EL. 223 = 1 - 228 = 1 = 238 = 1
BUT #13 = 207 = 3 - BOTTOM

1 - SUPT
1 - FOREMAN
5 - DRILLERS
1 - LAB - HELP
1 - BLACKSMITH
1 - RIGGER - PACE - BOLTS
2 - LAB " "
2 - LAB - EXCAV -

BOWER 48 GOLDEN TOTAL 52-MEN

7-15-36

CHIP-
BAY-13-14-DIAG
BAY-14-15 "
BAY-15-16 "

PLACE-TIE-BARS= BAY-9-10

EXCAVATE
BAY-19-20-D
BAY-9-10-DIAG

1-SUPT
1-FOREMAN
5-DRILLERS
1-LAB
1-BLACKSMITE
1-RIGGER - SCAFFOLD
2-LAB - "
15-LAB-EXCAVATE

GOLDEN-51
BOWER 47

7-16-36

PLACE-TIE-BARS.-9-10
DIAC-BOLTS-

CHIP-BUTTRESS
BAY-11-12-VERTICAL
BAY-13-14-DIAG
BAY-14-15-DIAG
BAY-15-16 DIAG
BAY-19-20 DIAG

GROUT-BUT#9-13=3-
BUT #18- 8-BOLTS- } 4-SACKS CEMENT
BUT #16-2-BOLTS- }
BAY-19-20-SET-D
DRILLING-ANCHORS
BAY-19-20=SET-D

1-SUPT.
1-FOREMAN.
5-DRILLERS
1-LAB. HELP-DRILL
1-RIGGER-4 HW. BOLTS-4 SCAFFOLD
2-LAB -4 " " 4- "
1-BLACKSMITH

GOLDEN-48
BOWE-41

7-17-36 CHIPPING
BAY 11-12- VERTICALS
BAY 15-16 " + DIAG
BAY -19-20 #19-DIAG

DRILLING-
BUTTRESS #16-EL. 237.5-
BUTTRESS #15-EL-237.5

GROUT #18-BUTTRSS-DIAG-2-bolts
" #17- " 243.0=1
" #15-233-1-238-2-243.=1
" #10-238=2-243=1
" TIE-BAR-PLATES 2-SACKS-CEMENT
BAY-9-10-17-18

1-SUPT-
1-FOREMAN
5-DRILLERS.
1-BLACKSMITH
1-LABOR-HELP-DRILL
1-RIGGER
2-LABORER-HELP-RIGGER
1-CEMENT-FINISHER
2-LABORERS:

GOLDEN-49

7-18-36

GROUT-

TIE-BAR-PLATES (1-SACK CEMENT)
BAY-17-18-EL. 217.5-
BUTT #19 EL. 205=3-209=1-BOLT

EXCAVATION-
BAY-21-22-STRUTS.
BUTTRESS-DIAGONAL

#18-EAST
#19-EAST

1-SUPT.
1-FOREMAN

3-LAB-EXCAVATE
1-CEMENT-FINISHER
1-LAB-HELP-"

GOLDEN-46
39

7-20-36

COLDEN 41-
EMSCO. 8
49

EXCAVATION
BAY-21-22

CHIPPING
BAY- 13-14 #14-DIAG
BAY 15-16 VERT-DIAG
BAY -19-20 -DIAG

ERECT-SCAFFOLD

DRILL-BUTTRESS

#19-18-DRAIN-WATER

1-SUPT-
1-FOREMAN
5-DRILLERS
1-LAB-
1-BLACKSMITH
1-RIGGER
1-PUMPCRETE-MAN-4-HRS
1-LAB-
1-LAB-EXCAV

7-21-

CHIP
BAY- 13-14-DIAG + VERTICAL
BAY -17-18- "
BAY -19-20-DIAG
GROUT-
BUT #16-EL 238=2-243=1
BUT #14-EL 231=2-238=2-243-1

(1→SACK-CEMENT)

PLACE-TIE-BARS-
BAY- 15-16

EXCAVATE

#18-DIAG-EAST
#21- " EAST

DRILLING
BAY- 13-14 =EL. 237.5 241.5 = TIEBARS

1-SUPT-
1-FOREMAN
5-DRILLERS
1-LABORER
1-BLACKSMITH
1-RIGGER-
2-LAB-HELP-TIE-BARS
3-LAB-EXCAVATION
1-PUMPCRETE-MAN

7-22-36

PLACE-TIE-BARS
BAY- 13-14 - 237.5 - 241.5

DRILL-BUTTRESS
BAY- 17-18-EL-237.0 - 241.5
BAY- 11-12 EL. 237.5 - 241.5

CHIPPING-
BAY- 19-20-DIAG-
BAY- 18-19 #18-DIAG
BAY- 17-18-VERT.

GROUT-BUT #18-EL. 202.=3

1-SUPT
1-FOREMAN
5-DRILLERS
1-LAB
1-BLACKSMITH
1-RIGGER
2-LAB

7-23-36

DRILL-
BAY- 11-12-TIE-BARS 237.5 - 241.5
BAY- 19-20 #20-DIAG

CHIP-
BAY- 19-20-DIAG.-VERT.
BAY- 9-10-VERT.
BAY- 13-14-VERT.

PLACE-TIE-BARS
BAY- 17-18-EL-237.5-

GROUT-BUTTRESS-DIAG-BOLTS
EL. 243=1-238=2-233=1-228=2-223=1
EL-218=2=213=3
(2-SACKS-CEMENT)

1-SUPT
1-FOREMAN
5-DRILLERS
1-BLACKSMITH
1-LAB-E.M.S.CO.
1-RIGGER
1-PUMPCRETEMAN
2-LAB.

7-24-36 E.M.S.CO. NOT-WORKING

(E.M.S.CO.)
1-FOREMAN-HELP-CONCRETE

PLACE-TIE-BARS
BAY-11-12-EL. 237.5 — 241.5

1-SUPT-
1-FOROREMAN
1-RIGGER
2-LABORERS-

7-25-36

E.M.S.CO- NOT-WORKING.

GOLDEN-36

7-22-36

DRILLING
BAY-9-10- HOLES-HORIZ-BEAM
DOWELS-FOR-FORMS-

BAY-19-20 #20-DIAG
" " - "TIE-BARS-237.5-241.5"

CHIP
BAY-19-20-VERTICALS-DIAG

PLACING-TIE-BAR-237.5-241.5
BAY-11-12

E.M.S.CO.
1-SUPT
1-FOREMAN
5-DRILLERS
1-BLACKSMITH
1-LABORER.
1-RIGGER
1-LABORER-HELP-RIGGER
1-LABORER-GOLDEN-HELP. DRILL

7-15-36

E.M.S.CO. NOT-WORKING.

GOLDEN-47

7-29-36 GOLDEN-43

DRILLING-
BAY-9-10-HAIR-PINS, +15-16
BUTTRESS #18-EL. 253-
" #19 = EL-253-

CHIP
BAY-19-20-DIAG -EL-253-
BAY-15-15-DIAG
BAY-12-13 DIAG

ERECT-SCAFFOLD
BAY-12-13

E.M.S.CO.
1-SUPT
1-FOREMAN
5-DRILLERS
1-BLACKSMITH
1-LAB-
1-RIGGER-SCAFFOLD
3-LAB- "

7-30-36 E.M.S.CO. NOT-WORKING

ALL-MEN-ON-GOLDEN-PAY-ROLL

GOLDEN-42-

7-31-36 E.M.S.CO. NOT-WORKING

ALL-MEN-ON-GOLDEN-PAY-ROLL
1-RIGGER-SCAFFOLD
2-LAB "

8-1-1936 E.M.S.CO. NOT-WORKING

GROUTING-DIAGONAL-BOLTS.
BUTTRESS #10- ½ SACK-CEMENT
EL. 220 = 3 BOLTS.

8-3-36 GOLDEN 46-

CHIP
BAY-12-13-DIAG #13
BAY-16-17 "

EXCAVATE
BAY-21-22-A-2-LAB.-4-HRS.

DRILLING-BUTT-DIAG-#13-253
BAY-15-16-HOLES-FOR-HAIR-PINS.

1-SUPT
1-FOREMAN
3-DRILLERS 1-4-HRS-1-LAB-4-
1-BLACKSMITH
1-LAB
2-LAB-EXCAVATE

PLACING-TIE-BARS-237.5-241.5-
BAY-19-20

8-4-36 GOLDEN-43

CHIP -
BAY-12-13-DIAG
BAY-17-18 DIAG

DRILL
BAY-21-22-SET-A-ANCHOR-HOLE

PLACE-TIE-BARS
BAY-19-21-2325-2410

ERECT-PIPE-SCAFFOLD
BAY-9-10

~~GROUTING-ANCHORS~~
BAY-21-22-SET-A=4.

1-SUPT-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LAB
1-RIGGER.
2-LAB
1-LAB-EXCAVATION

8-5-36 44

CHIP-
BAY-17-18 DIAG
BAY-19-20 "

DRILL
BUTTRESS-#19-253-259
BUTTRESS-#20-253-259

GROUT-
BAY-21-22-SET-A=4-DOWLS,
1-SACK-CEMENT

ERECT-SCAFFOLD-

EXCAVATE
BAY-21-22-SET-B-

1-SUPT
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LABORER
1-RIGGER
3 LAB
1-LAB-EXCAVATE
1-LAB-HELP-DRILLER

8-6-36

39.5-
MEN

GOLDEN
47-

DRILL -
BAY - 17-18 - HAIR-PINS
BAY - 13-14 " "

CHIP -
BAY - 19-20 - DIAG
BAY - 21-22 - DIAG

EXCAVATE
BAY 21-22 - SET-B

PLACE - DIAG-BOLTS
BLT #12

1-SUPT.
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
2-LAB-HELP-DRILL
2-LAB-EXCAV.

8-7-36

GOLDEN-47

DRILL -
BAY - 13-14 - HAIR-PINS
BAY - 21-22 ANCHORS - B - DIAG - #22
BAY - 15-16 - DIAG

CHIP
BAY - 15-16 - DIAG

GROUT - ANCHORS - DIAG - BOLTS
BAY - 21-22 - SET - B = 4 (1½ sacks cement)

EXCAVATE
BAY - 21-22 - SET - B-C.

ERECT - SCAFFOLD
BAY - 15-16

1-SUPT.
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
2-LAB-HELP-DRILL
3-LAB-EXCAVATE
1-RIGGER
3-LAB-

8-8-36

E.M.S.CO-NOT-WORKING

EXCAVATION
BAY-21-22-SET-C

8-10-36

DRILL-BAY-11-12-HAIR-PINS
BAY-15-16
BAY-21-22-SET-C-ANCHORS

GROUT-DIAGONAL-PLATES
BAY-16-17
BNT #18-19-DIAG-BOLTS-
BAY-21-22-SET-C=8-HOLES

5-1¼" NEW
3-1¼=OLD STEEL
CHIP-
BIT #10
BIT #15

4-SACKS CEMENT

1-SUPT
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-RIGGER
2-LABORERS
1-LAB-EXCAVATE

GOLDEN-45

GOLDEN-45

8-11-36 E.M.S.CO.NOT-WORKING

ERECT-SCAFFOLD
BAY-13-14
1-RIGGER
1-CRANE-OPR
3-LABORERS
1-SUPT-

8-12-36

CHIP-
BAY-13-14-DIAG
BAY-16-17-DIAG

GOLDEN-49
E.M.S.CO-7
TOTAL-56

DRILL-
BAY-11-12-HAIR-PINS-
BAY-13-14-DIAG-14HOLES-259.0=
BIT #9-10-A-25)5

ERECT-SCAFFOLD
BAY-11-12

E.M.S.CO
1-SUPT-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LABORER
1-RIGGER
3-LAB.
1-LAB-HELP-DRILL

8-13-36 E.M.S. CO. NOT-WORKING

EXCAVATE GOLDEN-46-
BAY-7-8-
ERECT-SCAFFOLD
BAY-11-12

1-SUPT
1-RIGGER
2-LABORERS-
3-LABORERS-EXCAVATE-7-8
1-LABORER - " DIAG-20-EAST
2-LAB-EXCAV-DIAG #-21-EAST

GOLDEN 48

8-14-36 CHIP-
BUTT #14-WEST-DIAG
BUTT #17- " "
BUTT #11-WEST-EAST

DRILL-
BAY-9-10-TIEBAR EL. 257.6-262.6
BAY-19-20-HAIR-PINS.

EXCAVATE-20-21-EAST DIAG
BAY-7-8-

1-SUPT-
1-FOREMAN
4-DRILLERS
1-LAB
1-BLACKSMITH
1-RIGGER
2-LAB -
3-LAB -EXCAVATE

GOLDEN-35-

8-15-36 E.M.S. CO. NOT-WORKING

EXCAVATE-BAY-7-18-2-LAB.

GOLDEN-32-

8-17-36 EXCAVATE
BAY-7-8 SET-A-B
BAY-20-21 - DIAGONAL
BAY-21-22- "

CHIP-
BAY-21-22-VERTICALS.
BAY-13-14- DIAG
BAY-11-12- "
BAY-15-16 "

1-SUPT
1-FOREMAN
5-DRILLERS
1-BLACKSMITH
1-LABOR
5-LABOR-EXCAV.

DRILLING
BUTTRESS #12-EL-259.0

GOLDEN-28

8-18-36- DRILLING=
BUT #11-EL-259.0 A-B EL 257.5
BAY-15-16-TIE-BARS-EL C-262.5
BAY-7-8 262.5+

CHIP-
BAY-7-8-VERTICALS
BAY-21-22-DIAG
BAY-11-12 DIAG
EXCAVATE
BUT #20-EAST
~~BAY-7-8-...A-B~~
1-SUPT-
1-FOREMAN
5-DRILLERS
1-BLACKSMITH
1-LAB-
1-LAB-EXCAVATE.

GOLDEN-28

8-19-36 E.M.S.CO. NOT-WORKING

1-MIX-MAN-PLACING-DIAG-PLATE
1-LAB-
BAY-16-17-

GOLDEN-55

8-20-36 DRILL-
BAY-21-22-#21-DIAG

CHIP-
DIAG-#20-EAST
DIAG #21-EAST
BAY-19-20-VERTICAL
~~GROUT-DIAG-PLATES~~
BAY-9-10-DIAG

EXCAVATE
BAY-7-8-A-B

GROUTING-DIAG-PLATES
" DIAG-BOLTS
(5-SACKS-CEMENT-

1-SUPT-
1-FOREMAN
4-DRILLERS-1-EXCAV-7-8
1-BLACKSMITH
1-LABORER E.M.S.CO.
1-CEMENT-FINISHER
2-LABORERS-GROUTING
1-LAB-EXCAV-7-8
1-MIX-MAN-CHIP-DIAG-PLATES

8-21-36 EXCAVATE GOLDEN-48
BAY-7-8-
BNT-#20-WEST-SIDE

CHIP-
BAY-9-10-DIAG
BAY-19-20-VERTICALS
BNT#20-DIAG-EAST
GROUT-DIAG-BOLT-PLATES
(-4-SACKS-CEMENT)

DRILL-BNT 9-10-EL 219-253-263.5

PLACE-TIE-BARS
BAY-15-16-EL-257.5-263.5
BAY-9-10-EL.257.5-263.5

1-SUPT-GOLDEN-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LABORER-E.M.S.CO.
1-CEMENT-FINISHER-4-HRS
1-LABORER-4-HRS.
1-LABORER-(EXCAVATION.)
1-RIGGER-4-HRS
3-LABORERS-4-HRS-TIE-BARS-

8-22-36
GOLDEN-44-
EM.S.CO-NOT-VV.RIVING

GROUT-DIAG-BOLTS-BNT#20
" " " PLATES
1-SUPT- (1-SACK-CEMENT)
1-CEMENT-FINISHER.
2-LAB-
1-RIGGER
3-LAB

8-24-36 EXCAVATE
BAY-7-8-SET-A-13.

DRILLING-
BAY-9-10-263.5-

CHIPPING-
BAY-20-21-#20-DIAG.
BAY-9-10-DIAGONALS
BAY-15-16-VERTICALS.

GROUTING-DIAG-BOLTS.

PLACE-TIE-BARS-
BNT#18-EL-217.5-A-TIGHT-NJT-

1-SUPT GOLDEN-43-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LABORER-EMS.CO.
1-RIGGER
3-LABORERS-HELP-RIGGER
2-LABORERS-EXCAVATE. 7-8

GOLDEN-51-

8-26-36 EXCAVATE
BAY-7-8- SET-A-B-
CHIPPING
BAY-9-10-DIAGONALS & VERTICALS

DRILLING
BAY-21-22 EL. 257.5"-263.5"
BAY-19-20-HAIR-PINS
BAY-17-18-EL-257.5-263.5"

GROUTING-BUT #20-
(1-SACK-CEMENT)

1-SUPT
1-FOREMAN
3-DRILLERS
1-BLACKSMITH
1-LABORER
1-RIGGER
3-LABORERS
1-LABORER-EXCAVATE
1-LABORER-HELP-DRILLER

8-27-36

E.M.S.CO-NOT-WORKING

EXCAVATION ERECT
BUT #22-EAST-SIDE SCAFFOLD
A-SET-TIE-BAY-257.5"
B SET-TIE-BAR-257.5"
DIAGONAL.
1-SUPT
1-RIGGER
3-LAB-HELP-RIGGER
2-LAB-EXCAVATE

8-28-36 EXCAVATE GOLDEN-53-MEN

CHIP-
BAY-10-11
BAY-12-13
BAY-17-18-VERTICAL
BUT #18-EAST-KEY-257

GROUTING-DIAG PLATES
BUT-#11-EL. (3-SACKS)
19-20-TIE BAR 241.5" CEMENT

DRILL-
BAY-19-20-HAIR-PINS.
BAY-13-14-TIE-BAR-257.5-263.5

1-SUPT-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LABORER.
1-LABORER (GOLDEN) DRILL
1-RIGGER
3-LABORERS-PIPE-SCAFFOLD

8-29-36 GOLDEN-54

GROUT-DIAGONAL-PLATES
" " BOLTS.
1-CEMENT-FINISHER
2-LAB

E.M.S CO. NOT-WORKING

8-31-36 CHIP GOLDEN-47-
BAY-10-11-DIAG
BAY-14-15" "
BAY-20-21 " #21
DRILL-22-23 " #22
BAY-13-14 267.0"-263.5"

PIPE-SCAFFOLD
BAY-14-15-

1-SUPT-
1-FOREMAN
4-DRILLERS
1-LABORER-
1-RIGGER
2-LABORERS-

9-1-36

GROUT-DIAGONAL-BOLTS-253-259-
" " " PLATES

1-SACK-CEMENT

ERECT-PIPE-SCAFFOLD.
1-RIGGER
3-LABORERS-

GOLDEN-52

9-2-36 CHIP-
BAY-14-15" #14-DIAG
BAY-20-21 #21-DIAG
BAY-22-23-#22-DIAG
BAY-21-22 #22-DIAG
DRILL-
BAY-21-22
TIE-BAR-EL-263.5" = 2-HOLES
DIAGONAL #21-22

1-SUPT-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-LABORER
1-RIGGER
3-LABORERS
1-LABORER-PUMP-WATER

TIGHTENING-NUTS-ON-DIAG-PLATE

BUT #17 EAST-SIDE-BOT-TO-EL.243
BUT #18-WEST-BOT-TO EL-238
BUT #18-EAST-205-TO-218-BOTTOM-NOT-ON
BUT #19-WEST-206-223
BUT #16-EAST-206.5-223 ✓ NOT-FINISHED
BUT #17-WEST-206.5-223 ✓ " "

GOLDEN-46

9-3-1936 CHIPPING
BAY-21-22-DIAG
BAY-17-18-VERTICALS,

DRILLING
BAY-11-12-EL-257.0-264.0

EXCAVATE
BAY-22-23 #22-DIAGONAL

1-SUPT-
1-FOREMAN
3-DRILLERS-4-HRS.
1-DRILLER-8-HRS-EXCAVATE
1-BLACKSMITH-8-HRS
1-LABORER-4-HRS
2-LABORERS-EXCAVATE

9-4-36 CHIP GOLDEN-52-
BAY-17-18-VERTICALS
BAY-13-14-VERTICALS
BAY-22-23-#22-DIAG
EXCAVATE-
BAY-7-8-SET-A-B

DRILL-BUT #22-247.0=3
PLACE-TIE-BARS-BAY-15-16-257.5/264.
PLACE-DIAG-PLATES
1-SACK-CEMENT

1-SUPT
1-FOREMAN
3-DRILLERS
1-BLACKSMITH
1-LAB
1-RIGGER
2-LAB-
1-LABOR-EXCAVATE

9-5-36-E.M.S.CO-NOT-WORKING
PETERSON-ON-JOB.
AIR-COMPR-USED-

GOLDEN-54

9-10-36 DRILLING
BAY-19-20-EL-257.5-264.0

CHIP-
BAY-17-18
VERTICALS-B-SET
BAY-15-16-VERTICALS-A
BAY-11-12-"
ERECT-PIPE-SCAFFOLD
BAY-20-21-P-M

EXCAVATE-
BUT-#9-DIAG-WEST-

1-SUPT-
1-FOREMAN
3-DRILLERS
1-LABOR-EXCAVATE
1-RIGGER-PIPE-SCAFFOLD
3-LABORERS-" "

GROUT-DIAG-BOLTS
BUT #22-EL.247.0=3-BOTTOM
EL.253.0-259.0
(1-SACK-CEMENT)

GOLDEN OUT 3:30 P.M.

GOLDEN-43

GOLDEN-44

GOLDEN-53

GOLDEN-OUT-10 30

9-11-36 CHIP-
BAY-11-12-VERTICALS-13
BAY-7-8-VERTICALS-
BAY-19-20-VERTICALS-A-
BAY-21-22-VERTICALS.
ERECT-PIPE-SCAFFOLD
BAY-20-21

1-SUPT-
1-FOREMAN
4-DRILLERS
1-BLACKSMITH
1-RIGGER
1-CRANE-OPR
3-LABORERS

9-12-36 E.M.S.CO. NOT-WORKING

ERECT-PIPE-SCAFFOLD
BAY-20-21-14-15

1-SUPT
1-RIGGER
3-LAB-

PLACING-DIAG-BOLT-PLATES
BAY-19-20-
1-CEMENT-FIN-
3-LAB-
PLACING-TIE-BARS
BAY-7-8-A-B-262.5
GROUT-DIAG-BOLT
BOLT #21-
2-SACKS-CEMENT

9-14-36 CHIP-
BAY-9-10-VERTICALS-A
BAY-20-21-DIAGONALS

ERECT-PIPE-SCAFFOLD
BAY-15-16-10-11

PLACE-DIAG-BOLT-PLATES
BAY-18-19 #18-EAST-BOT-NOT-ON
BAY-16-17-228.0=4 (2-SACKS-CEMENT
BAY-13-14
BAY-20-21-11-12
TIGHTEN-DIAG-NUTS-

1-SUPT
1-FOREMAN
2-DRILLERS-8-HRS-1-4-HRS.
1-BLACKSMITH
1-LAB-
1-CEMENT-FINISHER
4-LAB
1-RIGGER
3-LAB.

9-15-36 BAY-9-10
DRILL-HOLES=EL-264.0 (32 HOLES
2-DRILLERS

ERECT-PIPE-SCAFFOLD
BAY-10-11

CHIP-
BAY-20-21-DIAG

1-SUPT
1-FOREMAN
2-DRILLERS
1-RIGGER
3-LAB.

GOLDEN-45-MEN

9-16-36 DRILLING-DIAGONAL

BAY-11-12

CHIP-
BAY-11-12-DIAG

PLACE-DIAG-BOLT-PLATES
BAY-10-11 — 11 sq. ft. chipping.

ERECT-PIPE-SCAFFOLD.
BAY-12-13-

GROUT-DIAG-BOLTS- BUT #20-253.269
1-SACK-CEMENT

1-SUPT-
1-FOREMAN
2-DRILLERS
4-LABORERS
1-RIGGER

GOLDEN-45

9-17-36 E.M.S.CO-NOT-WORKING

GOLDEN-OUT-A.M.

ERECT-PIPE-SCAFFOLD
BAY-12-13

1-SUPT-
2-CARP-LAY-OUT-WORK
1-RIGGER
3-LAB

GROUT-DIAG-PLATES
BAY-10-11- 12-13

9-18-36 CHIP 45-MEN
BAY-9-10 -DIAG
BAY-12-13- DIAG
DRILL-
BAY-12-13-DIAGONALS-
BY-9-10 DIAGONALS.

1-SUPT-
1-FOREMAN
4-DRILLERS
1-LABORER

GOLDEN-43-

9-19-36 GROUT-DIAG-BOLTS
BUT #10 EL-266-282.
BUT #11 EL-266-282.
BUT #12

E.M.S.CO-NOT-WORKING

DRILL-HAIR-PINS
BAY-11-12-EL. 265.5-
32-HOLES-
BAY-9-10- 3/4" DOWELS-32-HOLES 12"-DEEP

1-SUPT-
1-DRILLER
1-CEMENT-FINISHER
3-LABORERS

GROUT-3/4" ANCHORS.
BAY-9-10-32-HOLES-EL-265.5
2-SACKS-CEMENT

GOLDEN-44

9-21-36 GROUT-
BUT #9-266-282. (1-SACK CEMENT
BAY-11-12-ANCHOR-260.

CHIP
BAY 12-13-DIAG
BAY 11-12-DIAG

DRILL-B
BAY-11-12-ANCHORS-EL-260.3
A 9 B & C = 17 = (34)
BUT #9-EL.266=2-272=1

BAY-9-10-3/4" ANCHORS = (32)
LENGT-3/4" STEEL = 2-7"
DRILL-BUT #11-EL.287 = (2)
DRILL DAY 17-18-263.5 TIE-BAR

1-SUPT
1-FOREMAN
1-CEMENT-FIN-GOLDEN
2-LABORERS, "
2-DRILLERS-8-HRS
1-DRILLER 6.5-HRS
1-DRILLER-3-HRS
1-LABOR-3-HRS.

GOLDEN-~~3-3~~
CEM.S-CO-~~1-3~~
56

9-22-36 DRILL
BAY-13-14 TIE-EL.264 = (36)
BAY-15-16 TIE-EL.264 = (36)

CHIP.
BUT #9-DIAGONAL-WEST

PLACE-TIE-BARS-EL.262.5
BAY-9-10 " "
BAY-11-12 " "
GROUT-TIE-BARS-262.5
BAY-9-10 " "
BAY-11-12 " "
1-SUPT
1-FOREMAN
2-DRILLERS-1-FOR-GOLDEN
3-LAB-GOLDEN
1-BIGGER

DIAG-BOLT-NUTS-TIGHT
BUT #15-EAST-228=TOP
" #16-WEST-228 = "
" #16-EAST-228 = "
" #17-WEST-228 = "
" #18-EAST-BOTTOM-NOT ON-228-TOP
" #19-WEST=228=TOP

BUT #13-EAST-238-TOP
BUT #14-WEST-238-TOP
BUT #14-EAST-223-TOP
BUT #15-WEST-223-TOP

9-23-36 TIGHTEN-DIAG-BOLT-NUTS
BOT-NOT-ON → BUT #19-EAST-238-TOP
BUT #20-WEST-238-TOP
BUT #21-WEST-LOWER-4
BUT #12-EAST-243-TOP
BOT-NOT-ON → BUT #13-WEST-243-TOP
BOT-NOT-ON → BUT #12-WEST-238-TOP
BUT #11-EAST-238-TOP
BUT #10-EAST-243-TOP
BUT #11-WEST-243-TOP

GROUT-DIAG-BOLTS=
BUT #13-266-272-277-282-287
BAY-13-14 TIES-EL. 264-
2-SACKS-CEMENT

1-SUPT-
2-LAB-TIGHTEN-NUTS (GOLDEN 5-4)
1-RIGGER
3-LAB-
7 = 1-CEMENT-FINISHER

9-24-36 DRILL- GOLDEN-52
BAY-15-16-TIE-EL. 264 = 38
BAY-13-14-TIEBAR-262.5 = 2
CHIP-
BAY-13-14-DIAG.
BUT #9-WEST-DIAG
BAY-7-8-VERTICALS

PLACE-TIE-BAR-13-14-262.5
GROUT-TIE-BAR-13-14-262.5
" ANCHORS-15-16-264.0
1-SUP- ERECT-SCAFFOLD
1-FOREMAN BAY-14-15
4-DRILL
1-LAB 1-SACK-CEMENT
(1-RIGGER
3-LAB

GOLDEN-5-4

9-25-36 EM.S.CO-NOT-WORKING
1-RIGGER-PIPE-SCAFFOLD
5-LAB-

9-26-36 DRILLING
BUT #14-EL-266-272.

BUILD-SCAFFOLD-
LAY-GUT-DIAG

1-SUPT
2-CARP
GROUT-DIAG-BOLTS.
BUT #14-EL. 266-272

9-28-36 BAY-17-18-TIE-264 = 38-HOLES.
DRILL 19-20-" 264 = 38 "
BUT #14-278 = 2-282 = 1
BUT #15-266 = 2-272 = 1-278 = 2-282 = 1
BAY-9-10-277.5
BAY-11-12-277.5
CHIP-DIAG-
BAY-15-16-BOTH-DIAGONALS.

1-SUPT GOLDEN-46
(1-FOREMAN
4-DRILLERS
1-LAB
GROUT-3/4" ANCHORS-BAY-17-18-264
1-LAB-HELP-DRILL

(1-SACK-CEMENT)

GOLDEN - OUT - 10-11 A.M

9-29-36 DRILLING
BUTT-#14- EL-287.0-292.5
BAY-19-20-ANCHORS-EL-264.0

CHIP-DIAG
BUT #14 EAST
BUT #15-WEST.
BUT #15-EAST

1-SUPT-
1-FOREMAN
1-DRILLER-8-HRS
3-DRILLERS-4-HRS
1-LAB-8-HRS
1-LAB-HELP-DRILL

GROUT-DIAG-BOLTS
BUT #10-266.0-272.-278-282.0
BAY-19-20-ANCHORS-264.

9-30-36 TIGHTEN-DIAGONAL-BOLTS
BUT #9-EAST-231-TO TOP-260.0
BUT #10-WEST-220-TO TOP-260-0
1243.0-NOT ON

E.M.S. CO. NOT-WORKING
PLACE-DIAG-PLATES
BAY-10-11
BUT #14-EAST-228-231-
BUT #15-WEST-228-233-238.

GOLDEN-46.

GOLDEN-50-

10-1-36 DRILLING
BUTTRESS. #16-266.0-
GROUT BUT #16-266-272
" BUT #17-266-272
CHIPPING
BUTTRESS-DIAGONAL
#16-EAST
#17-WEST

ERECT-PIPE-SCAFFOLD
BAY-16-17

1-SUPT (1-SACK-CEMENT)
1-FOREMAN
2-DRILLERS
1-LAB-
1-RIGGER-
4-LAB-HELP-RIGGER
3-CARPENTERS-LAY-OUT-DIAG
1-PUMP-CRETE-MAN-4-HRS. SCAFFOLD

10-2-36 DRILL-DIAGONAL GOLDEN-54
BUT #17-277-282.-292.5-
BUT #16-277-282.-292.5-
BAY-21-22-TIE-264-38

1-SUPT-
1-FOREMAN
4-DRILLERS
1-LAB.
1-RIGGER
3-LAB-2-CARPS.

CHIP-DIAGONAL
BUT #17-EAST
BUT #18-WEST
BUT #16-EAST-17-WEST
BUT #19-E-20-W-DIAG
ERECT SCAFFOLD
BAY-18-19

DIAG-NUTS-TIGHT
#10-EAST-255-
#11-WEST-253
259-1

PLACE DIAG-PLATE
14-EAST
15-WEST

GOLDEN-47

10-3-36 CHIP
BAY-19-20-BOTH-DIAG
DRILLING
BUT #19 BUT#20 -266-272,0=6
ERECT-PIPE-SCAFFOLD
BAY-18-19
GROUT-DIAG-BOLTS-BUT#18=266
" TIE-BAR-BAY-17-18 262.5
1-SUPT
1-FOREMAN
2-DRILLERS
3-LAB-PIPE-SCAFFOLD
CHIP-BACK
2-PLATES-DIAG
(1-SACK-CEMENT)

GOLDEN-53

10-5-36 E.M.S.CO-NOT-WORKING.
GROUTING-TIE-BAR-BAY-19-20
" DIAG-BOLTS-BUT-19-20=EL-266.0

GOLDEN-50

10-6-36 E.M.S.CO=NOT-WORKING
GROUT-TIE-BAR-21-22-EL,262.5

GOLDEN-52

10-7-36 DRILL-E.M.S.CO-NOT-WORKING.
BAY-21-22-DIAG-266-272
BUT
CHIP-DIAG
BAY-21-22

10-8-36 CHIPPING GOLDEN-53
BAY-21-22-DIAG.
ERECT-PIPE-SCAFFOLD
BAY-18-19-
GROUTING-
BAY-21-22-DIAG-BOLTS-EL,266=4 17 21
PLACING-DIAG-PLATES.
(1-SACK-CEMENT)
1-SUPT
1-FOREMAN
2-DRILLERS
1-RIGGER
3-LAB

GOLDEN-51

10-9-36 18-19-DIAG
DRILLING-BAY-19-20-EL.277.5
BAY-13-14-277.5-TIE-BARS.
15-16-277.5 " "
17-18-277.5 " "
ERECT-PIPE-SCAFFOLD
BAY 16-17
CHIP-
BUT#18-DIAG-EAST
BUT#19-DIAG-WEST
1-SUPT
1-FOREMAN
4-DRILLERS
1-RIGGER
3-LABORERS

10-10-36 PLACE-DIAG-PLATES
BNT #9-WEST-EL. 231-235=4
BNT #10-WEST-203.1=3=BOTTOM
BNT #13-EAST-EL-207.0=BOTTOM
(1-SACK-CEMENT)

1-SUPT
1-CEMENT-FINISHER
4-LAB

10-13-36 DRILLING
BNT #18-298.3
BUT #19-298.3
BAY-9-10-EL. 282.5-TIE-ROD

CHIPPING
BUT-22-DIAG-EAST
BAY-18-19-DIAG
BAY-9-10-VERTICAL
PLACE-DIAG-PLATES
BNT #13-WEST-EL. 207.0=BOT
[illegible]
PLACE-TIE-BARS
BAY-9-10 EL. 277.5
BAY-11-12 EL 277.5

1-SUPT-
1-FOREMAN (1-SACK-CEMENT)
2-DRILLERS
1-LAB-HELP-DRILL
1-CEMENT-FINISHER
2-LAB-HELP "
1-RIGGER-
3-LABORERS GOLDEN-54

10-14-36 PLACE-TIE-BARS-EL. 277.5
BAY-15-16

TIGHTEN-DIAG-NUTS.

CHIP
BNT #22-EAST-SIDE
ERECT-PIPE-SCAFFOLD
BAY-9-10
1-SUPT-
1-FOREMAN
2-DRILLERS-1-HR
1-RIGGER
3-LAB.

9-10 PLACE-TIE-BARS-282.5 GOLDEN-57
10-15-36 PLACE-DIAG-PLATES
BUT #10-EAST
BNT #11-WEST

DRILL
BAY-13-14-TIE-BAR-EL. 282.5
BAY-15-16 " " 11-A.M-TO-

ERECT-PIPE-SCAFFOLD
BAY-9-10-

CHIP-BUT-#14-WEST-VERT

1-SUPT-
1-RIGGER
3-LABORERS

10-16-36 TAKE-DOWN-PIPE-SCAFFOLD

1-PUMP-CRETE-MAN
1-CRANE-OPR
2-LABORERS.

TIGHTEN-DIAG-NUTS
10-17-36 BUT #19-LEAST-26"-ONLY

GOLDEN-54 PLACE-TIE-BAR-BAY-13-14-EL. 282.5"
" " " " 15-16 EL-282.5"

1-SUPT-
1-RIGGER
1-CRANE-OPR
3-LAB.

GOLDEN-43-MEN

10-19-36 DRILL-
BAY-7-8 - A-282.5" - B=282.5"
BAY-17-18-SET-B-282.5"
BAY-19-20-SET-B-282.5"
BAY-21-22-SET-B-282.5"
CHIP-21#22-SET-A-277.5

BUT #17-B-VERT-COMPLETE
BUT #18-B-VERT-COMPETE
BUT #19-B-VERT-COMPL.
BUT #20-B-VERT-COMPL

ERECT-PIPE-SCAFFOLD
BAY-11-12 (1-SACK-CEMENT)
1-SUPT-
1-FOREMAN
2-DRILLERS
1-LABORER
1-RIGGER
3-LAB-

GOLDEN-47

10-20-36 E.M.S.CO-NOT-WORKING (2-SACKS-CEMENT)

GROUT-DIAG-BOLTS-
BUT #14-13-12-11-10-

TIGHTEN-DIAG-NUTS
BAY-19-20 BET-C-D-

GOLDEN-45

10-21-36 PLACE-DIAG-PLATES-
BAY-16-17-

ERECT-PIPE-SCAFFOLD
BAY-20-21

1-SUPT-
1-RIGGER
1-CRANE-OPR
5-LAB

GOLDEN-44

10-22-36 DRILL BAY-9-10-TIE-BAR-297.6
BUT-#20-#21-DIAG
BAY-9-10-DIAG-ANCHORS EL-292.=(16)
CHIP-
BAY-20-21-DIAG.

TIGHTEN-DIAG-NUTS
BAY-16-17=272.=TO 1

TEARING-OUT-STRUT-
BAY-9-10-EL. 297.6

1-SUPT
1-FOREMAN
2-DRILLERS
1-LAB
1-RIGGER
5-LAB

10-23-36 TAKING-OUT-STRUT-
BAY-9-10-EL-297.0

PLACING-TIE-BAR-PLATES

ERECT-PIPE-SCAFFOLD
BAY-13-14

DRILL-
BAY-11-12-ANCHORS-292.0

E.M.S.CO-WORKING-A-M
R.M. MOVE-AIR-LINE TO-TOP

GROUT-TIE-BARS-EL 297.0
GROUT-DIAG-BOLTS (2-SACKS CEMENT)

1-SUPT
1-FOREMAN
2-DRILLERS
1-LAB.
1-CEMENT-FINISHER
3-LABORERS
1-RIGGER
3-LAB.

10-24-36 E.M.S.CO-NOT-WORKING

PLACE-DIAG-PLATES-20-21-BUT

GROUT-DIAG-BOLTS-(1-SACK-CEMENT)
1-CEMENT-FINISHER
3-LAB.

GOLDEN-38-

10-26-36

CHIPPING
BAY-9-10-SET-A-VERTICAL

ERECT-PIPE-SCAFFOLD
1-SUPT-
1-FOREMAN
1-DRILLER
1-RIGGER
4-LAB.

GOLDEN-37

10-27-36

PLACE-DIAG-BOLT-PLATES-

TIGHTEN-DIAG-BOLTS
BUT #20-EAST-266. 228-1-ONLY
BUT #21-WEST-266.

GROUTING-DIAG-BOLTS
(1-SACK-CEMENT)

ERECT-PIPE-SCAFFOLD-10-11

10-28-36 DRILLING
BAY-11-12-TIE-BAR-297.6
TIRING-OUT-STRUT-EL-297.0

PLACE-DIAG-PLATES-
1-SUPT
1-FOREMAN
1-DRILLER-4-HRS
1-LAB-4-HRS
1-RIGGER
2-LAB

Golden 37

GOLDEN-42

10-29-36 DRILLING
BAY-13-14 - SET-A-TIE-BAR 297.6
BAY-15-16 - ANCHORS-TIE-292. = (16)
TAKING-OUT-STRUT-EL-297-13-14
DRILL-
BIT# 10-298.3-303.3-308.2-313.2
BIT# 11-298.3-303.3-308.2-313.2

CHIP-BAY-11-12-SET-A-

GROUT-ANCHORS-EL.292.0
BAY-13-14
BAY-15-16 (2-SACKS-CEMENT)
1-SUPT.
1-FOREMAN
2-DRILLER
1-LABORER
1-RIGGER
3-LAB.

GOLDEN-38

10-30-36 DRILL
BAY-15-16-TIE-BAR-EL. 297.6
BAY-17-18-ANCHORS-292.0-TIE.
BIT# 9-UP-TO-313.2
ERECT-PIPE-SCAFFOLD
BAY-9-10
1-SUPT.
1-FOREMAN
2-DRILLERS
1-RIGGER
2-LAB.

10-31-36 DRILL-BAY-17-18-TIE-EL-297.6
TAKE-OUT-STRUT-EL. 297.
CHIP-VERTICAL-15-16-A
GROUT-DIAG-BUT-#9 #10-313.2
(1-SACK-CEMENT)

GOLDEN-33-

GOLDEN-47

11-2-36 GROUT-TIEBARS & TIGHTEN

EL-237.5 BUTTRESS #9-10-11-12-13-14-15-16
17-18-19-20-

PLACE-DIAG-PLATES-
PLACE-TIE-BAR "

1-SUPT (4-SACKS-CEMENT)
1-CEMENT-FINISHER
5-LABORERS

11-4-36 DRILL- GOLDEN-44
BIT#12-DIAG
BIT#13-DIAG

CHIP-VERT-SET-A
BAY-17-18-EL.307.0

PLACE-DIAG-PLATES-BAY-16-17
GROUT-TIE-BARS-217.5
TIGHTEN-TIE-" NUT-217.5-237.5
PLACE-DIAG-BOLTS-BUT#11-BUT#19
" TIE-BARS-A-297.5

(2-Sacks Cement)

11-5-36 GROUT-DIAG BOLT-#21
PLACE-TIE-PLATES-
ERECT-PIPE-SCAFFOLD-18-19
PLACE-TIE-BARS-BAY-13-14

(1-SACK-CEMENT) GOLDEN-48

GOLDEN-46

11-6-36 GROUT-DIAG-BOLTS-14-15=16-17-18
PLACE-TIE-BARS-29)6-15-16
ERECT-SCAFFOLD-14-15

11-7-36 (GOLDEN-41)
DRILLING-TIE-BARS
BUT #14-EL. 317.5'
BUT #15' EL. 317.5'
PAINT-DIAG-PLATES-2ND COAT
BUT #21-WEST-BOT-70-266.0

11-9-36 GOLDEN-45'
DRILLING
BUT #15-TIE-BAR EL. 317.2'
BUT #14-15'-DIAG

CHIPPING
BAY-9-10-VERTICALS-SET-A
" 11-12 " 15-16
EXCAVATE-1-LAB-
BUT #23-EAST-DIAG

CUT-OPENING-BUTTRESS
#9 WEST-SIDE-EL 310.0
PLACE-DIAG-PLATES
BAY-11-12

1-SUPT (1-SACK-CEMENT)
1-FOREMAN
2-DRILLERS-5-HRS
1-LAB-5-HRS.
1-RIGGER
1-CEMENT-FIN
4-LABS

GOLDEN-46

11-10-36 ERECT-PIPE-SCAFFOLD-16-17

PLACE-DIAG-PLATES-

TIGHTEN-PAINT-DIAG-NUTS-

EXCAVATE-EAST-DIAG-23'
1-MAN-5'-HRS-

PLACE-TIE-BAR-PLATES-BUT #10-11
" " " " EL-257-282.5'
" " " " BUT-12-13-257.-282.5'
1-SUPT
1-CEMENT-FINISHER 14-15-282.5'
4-LAB (1-SACK-CEMENT)
GLDEN-46

11-12-36 DRILL-BUT #16-317.5'
BUT #16-17-313.2 TOP-DIAG

PLACE-TIE-BAR-PLATES
GROUT-TIE-BARS-EL, 282.5'
TIGHTEN-PAINT-DIAG-BOLTS
(2-SACKS-CEMENT)

1-SUPT-
1-FOREMAN-
1-CEMENT-FINISHER
3-LAB
1-RIGGER
2-LABORERS

11-13-36 GROUT-DIAG-BUTS GOLDE 46
PLACE-" PLATES-BAY-14-15-16=16

CHIP-BUT # 9-WEST-TOP

1-SUP- 1-DRILLER
1-FOREMAN SCAFFOLD-13-14
1-CEMENT-FIN
1-RIGGER
3-LABS 1-SACK-CEMENT

GOLDEN-OUT-A.M.
44-MEN.

11-14-36 GROUT-DIAG-BOLTS
BNT # 14- (3-SACK-CEMENT)
TIGHTEN-DIAG-NUTS-13-14
CONCRETE-BAY-16-17-DIAG
ERECT-PIPE-SCAFFOLD-13-14-

GOLDEN-39- 14-15-

11-16-36 PLACE-DIAG-PLATES (10-11-12-13) 16-17 18-19
ERECT-PIPE-SCAFFOLD-21-22

DRILL-BNT #21-22-DIAG #22

GROUT-DIAG-BOLT-22 (2-SACKS-CEMENT)

D-SUPT-
1-FOREMAN
1-CEMENT-FINISHER
1-DRILLER-2 HRS
1-RIGGER
3-LAB-

11-17-36 PAINT-DIAG-BOLTS-2ND-COAT
BNT-15E-16W-266-287

GOLDEN-40 PLACE-DIAG-PLATES-17-18
ERECT-PIPE-SCAFFOLD-19-20
CONCRETE-DIAG (10-11) (11-12) (12-13) (14-15) (16-17)

CHIP-19-20-DIAG-B-

4-18-36 Steel received 200-1¼"-20'
DRILL-BNT-19-20-TIE-BAR EL. 297.6
" BAY-19-20-ANCHORS-292=24
TAKE-OUT-STRUT-19-20-EL. 297.
ERECT-SCAFFOLD-BNT #11-TOP
GOLDEN-38 CONCRETE-21-22-DIAG-EL-282-
SET-B-280.6

11-19-36 DRILL-BNT #9-10-TIE-BAR-317.5
BNT #11-12- 1-ANCHORS-TOP-BACK 1"
TIGHT CHIP-BNT-#11-TOP-BACK
VERT-SET-A-19-20
287-292 ERECT-SCAFFOLD-BNT #13-
GROUT-ANCHORS-BAY-19-20-EL. 292.=24
(2-SACKS-CEMENT)
PLACE-DIAG-PLATES-19-20-20-1-
(3-SACKS-CEMENT)

CONCRETING-#9-DIAG-WT (13-14) 15-16
11-20-36 DRILL (18-19) (19-20) (19-20-A)
GOLDEN-40 BNT #13-
E.M.S.CO.-4

CHIP-TOP-BNT-BACK-
BNT #11
BNT #12 PATCHING-(1-SACK-CEM.)
13
ERECT-SCAFFOLD-21-22-20-21-

1-SUPT
1-FOREMAN
1-CEMENT-FIN
1-RIGGER
4-LAB-

11-21-36 CHIP-BAY-21-22-EXTRA-AREA
GOLDEN BNT #12-13-TOP-BACK
33 TIGHTEN-DIAG-BOLTS
EMSCO-4 DRILL-BAY-21-22-TIE-BAR-297.6
TAKE-OUT-STRUT-297-
DRILL-ANCHORS-21-22-292=24
" DIAGONALS-22-
GROUT-ANCHORS-21-22-EL.292=24
" DIAG-BOLTS-21-22
(1-SACK-CEMENT)

1-SACK-LOW-HEAT)
1-SACK-VELO)

GOLDEN-40-

11-23-36 GROUT-ANCHORS-
BLT #11-TOP-BACK
BLT #12- " "
BLT #13- " "

CHIP-
BAY-21-22-SET-A-VERT.
PLACE-DIAG-PLATES-(12-13)(10-11)

11-24-36 WELDIAG-TURN-BUCKLES-1 1/4" (1 1/2") S.

GOLDEN-42 ERECT-PIPE-SCAFFOLD
ENIS, CO 5.5 HRS BLT #9- (2-sacks cement low heat)

DRILL + CHIP-
BLT #9-10 TOP-BACK
BLT #18-19-TIE-BAR-317.5-
DIAG-18-19-313.2
1-SUPT
1-FOREMAN
2-DRILLERS-5.5-14 HRS
1- " HELPER-5.5 HRS
1-RIGGER
1-CEMENT-FINISHER
1-WELDER
4-LAB-

1-SACK-LOW-HEAT
1- " QUICK
11-25-36 DRILL-BLT #9-10-TOP

WELDER 3 HRS CHIP-BLT #9-10-13-TOP

ERECT-SCAFFOLD-17-18
GROUT-10-11½"-ANCHORS TOP

GOLDEN-41-
(2 sacks-quick setting)

11-27-36 PLACE-DIAG-PLATES-11-12 19-20 20-21

WELDING-TIP-BARS
TIGHTEN-DIAG-BOLT-PLATES

11-28-36 PLACE-DIAG-PLATES CONCRETE 21-22
GOLDEN-39 BAY-20-21

GROUT-DIAG-BOLTS #19-313.2 17-18 CONCRETE DIAG
1-SUPT-
1-CEMENT-FINISHER
1-RIGGER
1-WELDER
4-LAB-

364-CEMENT ON-HAND

2-sacks cement quick set

GOLDEN-36

11-30-36 CHIP-
BAY-21-22-VERT-SET-A

PIPE-SCAFFOLD-22-23

WELDING-BAY-10-11-DIAG
1-SUPT 1-WELDER-4-LAB
CEMENT-FINISHER-1-RIGGER

12-1-36

CONCRETING-TOP-ANCHORAGE
BLT #9-10-11-12-13-
PLACE-TIGHTEN-TIE-BAR-NUT
BLT #8-282.5-
ERECT-PIPE-SCAFFOLD-
DRILL-BUT-23-DIAG

GOLDEN 35

GOLDEN-37

(2-1acks-CEMENT)

12-2-36 CHIP- #23-EAST
BNT #23-WEST-COMPLETE
CONCRETING-DIAG-#18-19
" COLUMNS-21-22
GROUT-TIE-BARS-BNT-7-8
DIAG-BOLT-#22-23
WELDING-BAY-9-10-DIAG
DRILL-DIAG-BNT-20-21

12-3-36 STEEL-AT-TURN-BUCKLE-BNT-11-12 (11/4)
CHIP-TOP-ANCHORAG-14-15-
GOLDEN 40 DRILL " " 14-15-16
PLACE-DIAG-PLATES-BNT-9-W
E.M.S.CO. 2 TIGHTEN " NUTS- " 9-W
WELD-(11-12)(12-13)(1-each quick set)

12-4-36 CONCRETING-DIAG-9-10-10-11-11-12-BNT
PLACE-DIAG-PLATES
GOLDEN 39 TIGHTEN " " NUTS
CHIP-BNT #17-18
E.M.S.CO.-4 DRILL-BNT #17-18
4-HRS PLACE-TIE-BAR-PLATES
RAIN. GROUT-ANCHORS-TOP-FACE
BNT #15- (2-SACKS-quick set)
SCAFFOLD-22-23
EXCAVATE-DIAG-23-EAST-

12-5-36 CONCRETING-9-10-A-
GOLDEN DRILL-TOP-ANCHORAGE #16-17-18
A.M. 31 CHIP " " #16-17-18-
P.M. 29 GROUT-BNT-#16-TOP #17-18
E.M.S.CO. 3- (2-1acks quick set)

12-7-36 DRILL-TOP-ANCHORAG-
BNT #17-18 (BNT #23-DIAG 22-
GOLDEN-38 CHIP-BNT #17-18-19
PAINT-2ND COAT-DIAG
PLACE-DIAG-PLATES-
22-E-23-W
GROUT-TOP-ANCHORS-#17-18-

EXTRA-WORK--1-LAB-9 30 A.M.-CITY
CONCRETING.
WED-TOP-TURN-BUCKLES-#14-

12-8-36 CONCRETING-BNT-23-E DIAG-23-E
WELD-BNT #14-15-
GOLDEN-43 DRILL-BNT #19-20- TOP-ANCHORS.
PLACE-DIAG-PLATES-BNT #9-10-11
2-SACKS-CEMENT.

12-9-36 CONCRETING-15-16-(17-18) A
" " ANCH 12-14-15-16-17-18
WELDING-16-17-18-
GOLDEN 33 DRILL #21-22
CHIP 20-21-22
E.M.S.CO. 3 1/2-MEN GROUT-BNT #20-21-
(1-SACK-QUICK) 2-SACKS-LOW-HEAT)

12-10-36 CONCRETE-21-22-DIAG
GOLDEN 36 GROUT-BNT #22-TOP
DRILL-#23-TOP
E.M.S.CO-2 CHIP #23-TOP
WELDING-19-20-

2-LABOR-CITY
GILLI-HAMM
16-HRS.

CITY - HAMM - 8 - GOLDEN-36

12-11-36 DRILL-BUT #23 GILL-4½
GOLDEN-37
EMISCO-3
CHIP-BUT #22-23 EXCAV.
WELD-BUT-21-22- 8-HRS.
GROUT-BUT #23-TOP-ANCHOR

12-12-36 CONCRETING-DIAGS. 13-14, 14-15, 15-16, 16-17, 17-18 EXCAVATE CITY HAMM. 8-A.M.-
GOLDEN-32
WELD-BUT-22-23
PAINT-DIAG-PLATES-
2ND-COAT-

12-14-36 CONCRETING HAMM-4½ EXCAV.
GOLDEN-34
BAY-22-23-DIAG PETE DRILL
BAY-23-EAST-DIAG 1-HELPR
GROUT-TIE-BARS
" DIAG-PLATES - 1-sack CEMENT

12-15-36 RAIN-NO-WORK
GOLDEN-30- AIR-COMPR-OFF 3²⁰ P.M.
12-16-36 GROUTING-EAST-ABUTMENT 2½"
TOP
1-10'-0 | CLETUS-GROUTING 8.- HRS
2-6'-6" | 2-LAB-6.5 HRS.
3-10'-7" | 2-LAB-EXCAV. 3.HRS.
4-4'7"+3 | 3-Sacks Cement
5-7'- |
4-6'-8"=1111
20" 8"

12-17-36 CONCRETING BUT #24-15-1
" DIAG-(18-19)(19-20)(20-21)(21-22)(22-23) E23 23-1
PLACE-DIAG-PLATES
PAINT- " (2-sacks cement)

12-18-36 EXCAV-SOUTH-ABUT-2-LAB 8⁰⁰-3 PM CITY EXCAV 4-LAB
GOLDEN-31-
GROUTING-TIE-BARS
PAINT-DIAG-PLATES
CONCRETING-WART- (1-STEEL-MAN-1-HR.)
2-LAB- 6½ hrs. 13-HRS ✓
2- " 8 hrs. 16-HRS 25-1
1- " ... 3-SACKS-CEMENT
29-HRS.

12-19-36
GOLDEN-32-
CONCRETING-EAST-ABUT- 3-LAB-6 H EXCAV
PAINT-DIAG-PLATES- BUT #13 EAST
PLACE-TIE-BAR-PLATES
(2-Sacks cement) 4-SACKS-CEMENT #9-BUT-WEST
CLETUS-2.5-SEE-JACK.

12-21-36 1-LAB-EXCAV-BUT #23(CITY)
GOLDEN-28
1-LAB-4 TOTAL-20-HRS.
PAINT-TIGHTEN-TIE-BARS
PLACE-TIE-BAR-PLATES
3-SACKS-CEMENT

12-22-36 4-LAB-EXCAV-BUT #23-
GOLDEN-30
GROUT-TIE-BARS

12-23-36 EXCAV-BUT #23 | 3-Sacks Cement
Golden 28
1-LAB-1.5-1 HRS
3-LAB-5.0

GOLDEN-17-

12-24-36- PLACE-DIAG-PLATES
PAINT-DIAG-PLATES

12-26-36 PLACE-DIAG-PLATES
PAINT-TIGHTEN-NUTS
9-MEN CONTRACT-COMPLETED
1-FOREMAN

12-28-36 CLEANING-UP- 17-MEN
12-29-36 CLEANING-UP - 14-MEN
12-30-36 CLENING-UP-13-MEN-BAX 16-17
12-31-36 CLEAN-UP-PAINT-STAIRWAY
12-31-36 -10-MEN-

GROUTING - TIE-BARS + TIGHTEN

BLT #	EL.	EL. 12-14-36	EL. 12-14-36	EL. 12-14-36	
9-A	297.5	297.5	277.5	257.5	237.5
9-B		282.5	252.5		
10-B		282.5	257.5	237.5	
10-A		317.5	297.5	277.5	257.5 237.5
11-A	317.5	297.5	277.5	257.5	237.5
11-B		237.5	207.5	282.5	
12-A	317.5	297.5	277.5	257.5	237.5 ?
12-B	237.5	257.5	282.5		
13-A	317.5	297.5	277.5	252.5	237.5-217.5
13-B	217.5	237.5	257.5	282.5	Comp.
14-A	317.5	297.5	277.5	257.5	237.5-217.5
14-B	217.5	237.5	257.5	282.5	Comp.
15-A	317.5	297.5	277.5	257.5	237.5
15-B	237.5	257.5	282.5		
16-A	237.5	257.5	277.5	297.5	317.5
16-B	237.5	257.5	282.5		
17-B	237.5	257.5	282.5		
17-A	317.5	297.5	277.5	257.5	237.5
18-A	317.5	297.5	277.5	257.5	237.5
18-B	237.5	257.5	282.5		

NEXT PAGE

FORCE ACCOUNT - FRANK - HAMM.

12-7-36	1-LAB	9:30 TO 4:30	6½ HRS.
12-8-36	1-LAB	8 A-M	8-HRS
12-10-36	2-LAB	8-HRS	16-HRS
12-11-36	2-LAB		12½ HRS
12-12-36	1-LAB		8-HRS
12-14-36	1-LAB		4½ HRS
12-16-36	2-LAB	3-HRS = GREEK GEORGE	6-HRS
12-16-36	HAUPT 1-CEMENT-FIN (8.0) EAST-ABUT-2-LAB-5.5 = (13-HRS)		13. HRS 19-HRS

CEMENT-FIN - EXCAV-BUT # 23

12-18-36	2-LAB	BUT #23	16-HRS
12-19-36	3-LAB	BUT-23	24-HRS
12-21-36	2-LAB-8-HRS — 1-LAB-4 =		20-HRS
12-22-36	4-LAB =		32-HRS
12-23-36	3-LAB-5-HRS 1-LAB-1.5-HRS.		16.5 HRS

TIE-BAR-GROUTED - 12-23-36

BLT # 19 - B - 237 - 257 - 282.5
BLT # 20 - B - 237 - 257 - 282.5
BLT # 21 - B - 257 - 282.5
BLT # 22 - B 257 - 282.5
BLT # 22 - A - 257 - 277 - X X
BLT 21 - A - 257 277 - 297 - 317
BLT 19 - A - 237 - 257 - 277 - 297 - 313 ?

20-A
237
257
277
297
317

CEMENT-USED-GROUTING

MONTH

JULY-36

NO-SACKS

7 = 10
8 = 13
9 = 14
11-14 = 16
14-1 = 16

16=4=20

17=2=22

18-1 = 23

21=1=24

23=2=26

August
1st ½
SACK

8-5-1=1½
8-7=1½=3
8-10=4=7
8-20=5=12
8-21-4=16
8-22=1=17
8-26=1=18
8-27=1-19
8-28=3-22
8-29-2-24

August
(24)

SEPT-36

1=1=1
9-4-1=2
9-10-1=3
9-11-2=5
9-14-2=7
9-16-1=8
9-19-2=10
9-21-1=11
9-23-2=13
9-24-1=14
9-29-1=15

OCTOBER

10-1=1=7
10-3-1=2
10-8-1=3
10-10-1=4
10-13-1=5
10-19-1=6
10-20-2=8
10-23-2=10
10-27-1=11
10-29-2=13

NOV.

11-2-4=4
11-4-2=6
11-5-1=7
11-9-1=8
11-10-1=9
11-12-2=11
11-13-1=12
11-14=3=15
11-16-2=17
11-19-3=20
11-20-1=21
11-21-1=22
11-23-1=23
11-24-2=25

11-25-1=26
11-30-1=27

12-8-1=28
12-9-2=30
12-14-1=31
12-16-3-34
12-17-2-36
12-18-3-39
12-19-2-41
12-22-3-44

@NICK-SET-CEMENT
USE-GROUTING

11-23-1
11-25-1
11-26-2
11-28=4
12-2=6
12-3-7
12-4-2=9
12-5-2=11
12-7-1=12
12-8-1=13
12-9-1=14

TIE-BARS-GROUTED-

BUT-NO	SET A	SET B	SET C	SET TIGHTENED D
13	217.5	217.5	217.5	9-10 241.5
9	237.5	237.5	237.5	11-12 241.5
10	237.5	237.5	237.5	13-14 241.5
11			237.5	15-16 241.5
12			237.5	17-18 241.5
14	217.5	217.5	217.5	19-20 241.5
15	217.5	217.5	217.5	217.5
16	217.5	217.5	217.5	217.5
17	217.5	217.5	217.5	217.5
18		217.5	217.5	217.5
19			237.5	
20			237.5	

CHIP-BACK-DIAG-PLATES

10-3=2

282.5-B

282.5-B

282.5-B

282.5-B
D-217.5

282.5-B

282.5-B

282.5-B

282.5-B

ELEVATION AND DIST ON DIAGONALS FOR BOLTS AND KEYS

#9	2-6'-8"	1-6"-2"	1-6'	2-5'-9"	2-5'-7"	1-5'-5"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"
	238.0	245.0	255.0	260.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	
#10	1-6'	2-5'-9"	2-5'-7"	1-5'-5"	2-5'3"	1-5'-3"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"
	255.0	260.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	303.3	308.2	
#11	1-6'2"	1-6'-0"	2-5'-9"	2-5'-7"	1-5'5"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"
	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	303.3	
#12	2-6'-6"	1-6'-2"	1-6'0"	2-5'-9"	2-5'-7"	1-5'-5"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"
	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	
#13	2-6'8"	1-6'-6"	1-6'-2"	2-6'-0"	1-5'-9"-1-6'-0"	1-5'-5"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"
	238.0	243.0	253.0	259.0	②266.0	272.0	②277.0	282.0	287.0	292.5	298.3	
#14	2-6'-8"	1-6'8"-1-6'4"	1-6'-2"	1'-6'-0"	2-6'-0"	2-5'-9"	1-5'-5"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"
	231.0	②238.	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	
#15	1-6'-8"	2-6'-8"	1-6'-2"	1-6'-0"	2-6'-0"	2-5'-9"	1-5'-5"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"
	233.0	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	
#16	1-6'-8"	2-6'-8"	1-6'-2"	1-6'-0"	2-6'-0"	2-5'-9"	1-5'-5"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"
	233.0	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	
#17	1-6'-8"	2-6'-8"	1-6'-2"	1-6'-0"	2-6'-0"	2-5'-9"	1-5'-5"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"
	233.0	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	
#18	2-7'-0"	1-6'-8"	2-6'-8"	1-6'-2"	1-6'-0"	2-6'-0"	2-5'-9"	1-5'-7"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"
	228.0	233.0	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	
#19	1-6'-8"	2-6'-8"	1-6'-2"	1-6'-0"	2-6'-0"	2-5'-9"	J-5'-7"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"
	233.0	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	
#20	2-6'-6"	1-6'-2"	1-6'-0"	2-5'-9"	2-5'-9"	1-5'-7"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"
	238.0	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	
#21	1-6'-0"	2-5'-9"	2-5'-7"	1-5'-5"	2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"
	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	303.3	308.2	
#22 W	BOTTOM 2-6'-8"	1-6'-2"	1-6'-0"	1-5'-9" ② 1-5'-7"	2-5'-7"	1-5'-5"	2-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	
	239	243.0	253.0	259.0	266.0	272.0	277.0	282.0	287.0	292.5	298.3	
#23	BOTTOM 2-5'-5"	1-5'-3"	2-5'-3"	1-5'-3"	1-5'-3"	1-5'-3"	2-5'-3"	1-5'-3"				
	277.0	282.0	287.0	292.5	298.3	303.3	308.2	313.2				
#23=	272=2	277=1	282=1	287=2	292=1	298.3=1	303.3=1	308.2=1	313.2=1			
#11-E BOT=	247.=3	253=1	259=2.									

CEMENT-USED-GROUTING BOLTS

DIAG-BOLT-NUTS-TIGHT DIAGONAL NO-SACKS

BUT #20 WEST-208-233. May 10-

BUT #18-WEST-202.-238. June 18-

BUT #17-EAST-206.-238. July 26-

BUT #14-WEST-208-238 Aug-24-

BUT #13-EAST-213-238-BOT NOT ON SEPT-15

BUT #14-EAST-208-228

BUT #15-WEST-208-223-BOT-NOT-ON

BUT #16-WEST-206.5-228.0

TIE-BAR-NUTS-TIGHT+GROUTED

BUT #8-B-EL, 282.5-262.5

BUT #8-A-EL.282.5-262.5

BUT #9-SET A EL. 277.5-297.5-317.5-257.

BUT #9-SET-B-257.5-282.5

12-21-36-317.5-NO-NUT TIGHT-TIE-BARS

BUT #16-A-Y 297.5-277.5 257.5 237.5

BUT #17-A 317.5-297.5-277.5 257.5 237.5

BUT-18-317.5-297.5-277.5 NO 237.5

BUT-19-317.5-297.5-277.5 NO. 237.5

BUT-20-317.5-297-5

BUT 21-317.5-297-5

DRILLING-BUTTRESS FOR-TIE-RODS-

BUTTRESS NO.	ELEV.	PLATE AN	TIE-BAR GROUTED	DRILLED
9	A-B-C-D 237.5 (241.5) A-B-C-D		241.5	257.5 263.5 ②
10				
11	237.5=3 241.5=1 241.5=1		241.5	
12	237-5=3			
13	A-B-C-D 241.5=1 241.5=1	217.5 237.5=3 237.5=3	B.C. 241.5	
14	A-B-C-D	217.5		
15	A-B-C-D 237.5=3	217.5 241.5=1	241.5	257.5
16	A-B-C-D	217.5		263.5
17	A-B-C-D 217.0	237.5	241.5	
18	A-B-C-D	241.5 237.5	241.5	
19	237.5-	241.5		
20	237.5-	241.5	241.5	
21				
22				

DIAGONAL-DRILLING

BUTTRS	HOLES ELEV. 6-12-36	ELEV. 255=1	ELEV			
#9	248.0	260=2				
	6-12-36	255=1				
#10	243.0	260=2	266=2-272=1-277=2-282=1-287=2			
	6-12-36	253=1				
#11	233.0	259=2	266=2-272=1-277=2-282=1			
	6-12-36	253-1				
#12	233.0	259=2				
	6-12-36	207=2	233.0=1	243.0=1 augment 253-1	259=2	
#13	228.0	228-2	238=2			
	6-12-36	7-13-36	253=1			
#14	228.0=1	243.0	259=2			
	6-12-36	7-13-36	253=1			
#15	228.0	243.0	259=2			
	1-HOLE	7-7-36	253-1			
#16	228.0 ?=1	253.0	259=2			
	1-HOLE	7-7-36	augment 259-2			
#17	228.0 ?=1	253.0				
	6-12-36	6-24-36	7-7-36	253.0=1 augment		
#18	223.0	228=2	243.0	259.0=2	298.3	
		6-24-36	7-7-36	263.0=1		
#19		228=12	243.0	259=2	298.3	
		273=1	223=1	233=1	243.0=1	
#20	208=3	218=3	228=2	238=2	253=1	
					259=2	
#21	221=3	224.5=1	228.6=3	8 pt. 253-259		
#22	239=3	8 pt. 243. 253. 259				

SIZE-TIE-BARS-THROUGH-STRUTS

SET A	ELEV.	DIAM.	PLATE (3 5/16)	SIZE DRILL HOLE	MAXIMUM
	217.5	2½"	1¼"X14"X14"	3"	28'-8½"-3"
	237.5	2¼"	1⅛"X12"X12"	3"	27'-10¼"-3"
	257.5	1⅞"	1"X12"X12"	2½"	27'-3¼"-2¾"
1-ST-HOLE					
BAY-21-22	277.5	1½"	1"X12"X12"	2"	26'-5"-2½"
NOTICE-40.1	297.5	1⅛"	⅞"X12"X12"	1¾"	26'-6"-2"
	317.5	1⅛"	¾"X12"X12"	1¾"	26'-5¾"-2"
SET-B	ELEV.	DIAM.	(2 15/16)	2¾	
	217.5	2⅛"	1⅛"X12"X12"	3"	28'-5½"-3"
1-ST. HOLE					
BAY-9-10-11-12 19-20	237.5	1¾"	1"X12"	2¼"	27'-8½"-2¾"
	257.5	1½"	1"X12"X12"	2"	27'-½"-2½"
1¼"	282.5	1⅛"	¾"X12"X12"	1¾"	26'-5¾"-2"
			(2 9/16)		
SET-C	217.5	2"	1⅛"X12"X12"	2½"	28'-5¼"-3"
	232.5	1⅝"	1"X12"X12"	2¼"	27'-8¼"-2½"
1⅝"	262.5	1¼"	⅞"X12"X12"	1¾"	27'-2"-2"
			(2 5/16)		
SET-D	217.5	1¾"	1"X12"X12"	2¼"	28'-4½"-2½"
	241.5	1⅜"	1"X12"X12"	2"	30'-3½"-2"

GROUTED = ○

# 12	# 13	# 14	# 15	# 16	# 17
ELEV.	ELEV.	ELEV.	ELEV.	ELEV.	ELEV.
					3-LOWER 3
211 = 3	207 = 3	208 = 3	203 = 3	206.5 = 3	206.5 =
216 = 1	213 = 1	213 = 1	208 = 1	209.5 = 1	209.5 = 1
220 = 3	218 = 3	218 = 3⊕	213 = 3	213.0 = 3	213.0 = 3
224 = 1	223 = 1	223 = 2	218 = 2	218.0 = 2	218.0 = 2
228 = 2	228 = 2	228 = 1	223 = 1	223. = 1	June
233 = 1	6-27-36	June	228 = 2	228 = 1	July -
6-27-36	august	July	June	June	223-1
august	233 = 1	231 = 2	July	July	228-2
238 = 2	238 = 2	238 = 2	233-1	228-1	233-1
243 = 1	243 = 1	243 = 1	238 = 2	233-1	238-2
253 = 1	253 = 1	august	243 = 1	238 = 2	243-1
259 = 2	259 = 2	253-1	august	243 = 1	august
SEPT.	266-2	259 = 2	253-1	august	253 = 1
282.0	272 = 1	266 = 2	259 = 2	253 = 1	259 = 2
	277 = 2	272 = 1		259 = 2	
	282 = 1				
	287 = 2.				

# 9	# 10	# 11
ELEV. 7-16-36	ELEV.	ELEV.
231 = 3	220 = 3	215.0 = 3
235 = 1	224.0 = 1	220.0 = 1
238.0 = 2	228.0 = 3	224.0 = 3
243.0 = 1	233.0 = 1	228. = 2
7=16-36	6-27-36	233 = 1
august	July	6-27-36
255 = 1	238 = 2	august
260 = 2	243 = 1	238 = 2
Sept	august	243 = 1
266.0	255. = 1	253 = 1
282.	260 = 2	259 = 2
	SEPT	SEPT
	282.0	282.0

NOTE
6 - 1¼" x 20 bitty steel
used for turn-buckles

PAINT - DIAG - PLATES -
2-ND - COAT

9-W-295-266-292.5-308.2
9 E completed
10-W completed
10-E 262.5 TIE - TO 292. - 313.2 complete
11-W-262.5 - TIE - TO 292. - 313.2 completed
11-EAST - 266 - 287. 3082 - 313. complete
12-WES-266-287.308.2-313 complete
12-E-262.5-TIE-292-308.2 313-COMPL
13-W-262.5-TIE-292.308.2-313. comp
13-EAST-266-287-303-313.2 259 to Bottom
14-WEST-266-287-1 303 313.2 259-to bottom
14 E 287-292-303. 313.2-comp 282-bottom
15 W 287-292-303. 313.2 com. 282-bottom
15 EAST-266-277-287.308.2 313.2 comp
16-WEST-266-277-287-303- 313.2 comp
16 EAST-266-282-298-313.2 comp -
17-WEST-266-282-298 313.2 comp.
17 EAST-266-272-287. 303-308
18-WEST 266.272-287 303.
18-E-262.5 TIE-287-292 308
19-W-262.5-TIE-287-292-308
19-E-266=1-292-308.
20-W-266-292-303.
20-E 266-TO-228=1-266-277-292.308
21-W-266-TO-BOTTOM 266-282-298.308.
21-E 266=1-292-
22-W-266-1-287-292.
22-E 259-262.5-287
23-W 272-287- comp.
23-E complete

(BUT #10 change 253. to 255.0
259. to 260.0)

ELEVATIONS & DIAGONAL-DISTANCES ON AND ALONG BOTTOM OF 6' SLAB.

NO. BUTTRESS	ELEV.	DIST.	ELEV.	DIST.	ELEV.	DIST.	ELEV.	DIST.	ELEV.	DIST.	ELEV.
# 9	1-6-8" ~~2-6'-9"~~ 231.0 ~~232.0~~	5.66 4.95 ~~4.24~~	1-6'-8" 235.0	4.24	2-6'-8" 238.0	1-6'-2" 245.0	1-6' 255.0	2-5'-9" 260.0			
# 10	3 7'-2" 220.0	5.66	1 7'-0" 224.0	5.66	3 6'-10" 228.0	7.07	1 6'-8" 233.0	7.07	2 6'-8" 238.0	7.07	1 6'-6" 243.0
# 11	3 7'-4" 215.0	7.07	1 7'-0" 220.0	5.66	3-7'-0" 224.0	5.66	2-6'-11 228.0	7.07	1-6'-8" 233.0	7.07	2-6'-6" 238.0
# 12	7'-5" 3 7'-6" 211.0	7.07	1 7'-4" 216.0	5.66	3 7'-2" 220.0	5.66	1 7'-0" 224.0	5.66	2 6'-11" 228.0	7.07	1 6'-8" 233.0
# 13	3-7'-8" 207.0	8.48	1-7'-4" 213.0	7.07	3-7'-2" 218.0	7.07	1-7'-0" 223.0	7.07	2-6'-11" 228.0	7.07	1-6'-8" 233.0
# 14	3-7'-7" 208.0	7.07	1 7'-4" 213.0	7.07	(5) (3) 7'-2" 218.0	7.07	(2) 1-7'-0" 7'-2" 223.0	7.07	(1) 2-6'-9" 228.0	4.24	(2) 1-6'-8" 231.0
# 15	3-7'-9" 203.0	7.07	1 7'-7" 208.0	7.07	3 7'-5" 213.0	7.07	7.3" 2 7'-4" 218.0	7.07	1-7'-0" 223.0	7.07	2-6'-11" 228.0 1-6'-9
# 16	3 7'-8" 206.5	4.24	1 7'-6" 209.5	4.75	3 7'-5" 213.0 7.5	7.07	2 7'-3" 218.0	7.07	1-7'-0" 223.0	7.07	2-6'-11" 228.0
# 17	3 7'-8" 206.5	4.24	1-7'-6" 209.5	4.75	3 7'-5" 213.0	7.07	2-7'-3" 218.0	7.07	1-7'-0" 223.0	7.07	2 7'-0" 228.0
# 18	3-7'-9" 202.0	4.95	1 7'-8" 205.5	4.95	3 7'-7" 209.0	6.36	1-7'-4" 213.5	6.36	2-7'-3" 218.0	7.07	1 7.0" 223.0
# 19	3-7'-8" 205.0	5.66	1-7'-7" 209.0	5.66	3-7'-4" 213.0	7.07	2-7'-3" 218.0	7.07	1-7'-0" 223.0	7.07	2-7'-0" 228.0
# 20	3-7'-6" 208.0	7.07	1-7'-5" 213.0	7.07	3-7'-3" 218.0	7.07	1-7-0 223.0	7.07	2-7'-0" 228.0	7.07	1-6'-8" 233.0
# 21	3-7'-2" 221.0	4.95	1-7'-0" 224.5	5.66	3-6'-11" 228.5	6.36	1-6'-8" 233.0	7.07	2-6'-8" 238.0	7.07	1-6'-6" 243.0
# 22	3-6'-8" WEST 239.0										
# 23	EAST 247.0										

from 272 to top all 7' on diagonal

259 = 2 bolts
266 = 2 bolts
272 = 1 bolt
277 = 2 bolts

281 = 1 bolt
287 = 2 "
292.5 = 1 "
298.3 = 1
303.3 = 1 "

308.2 = 1 bolt
313.2 = 1 bolt

228 - all 2 bolts except #14
233 = all 1-bolt
238 = all 2-bolts
CRACK 243 = all 1-bolt
253 = all 1-bolt

DRILL + GROUT - DIAG - BOLT - BUTTRES

BUTTRES #	DRILL EL.	GROUT EL.	VERTIC CHIP	DIAG CHIP	DIAG BOLTS IN
9	313.2	313.2	SET-B A-307.0 COMPLETE	283	313.2
10	313.2	313.2	A-WEST EL. 307.0	283	313.2
11	313.2	313.2	SET-B COMPL.	283	313.2
12	313.2	313.2		283	313.2
13	313.2	313.2	SET-B COMPL.	283	313.2
14	313.2	313.2		283	313.2
15	313.2	313.2	SET-B COMPL.	283	313.2
16	313.2	313.2		283	313.2
17	313.2	313.2		283	313.2
18	313.2	313.2	SET-B COMPL.	283	313.2
19	313.2	313.2	SET-B COMPL	283	313.2
20	313.2	313.2		283	313.2
21	313.2	313.2	SET-B COMPL.	283	313.2
22	313.2	313.2		283	313.2
23	313.2	313.2			313.2

DRILL - FOR - TIE BARS 282.5
9-10 - 11-12 - 13-14 - 15-16 - 17-18
19-20 - 21-22

CEMENT - USED - ANCHORS

	8'-2" STEEL	7'-9" STEEL	STEEL 7'-9"	8'-6" STEEL	
	1¼" STEEL SET A	1⅛" STEEL SET B	1⅛" STEEL SET C (4")	¾" STEEL SET D	NO-SACKS
BAY-17-18			8-9-9"	8-5'-6"	5-14-36 1-SACK
BAY-17-18		8-7'-9"			½ sack 5-15-36 ½-SACK
BAY-17-18	8-10'-				5-16-36 5-19-36 ½ SACK
BAY-15-16				8-5'-8"	CEMENT 5-20-36
BAY-15-16			8-7'-9"		½ SACK 5-22-36
BAY-15-16		8-7'-9"			½ SACK 5-23-36
BAY-15-16	8-8'-2"				1-SACK 5-25-36
BAY-13-14		3-1¼ 8-7'-9	1-1¼" 8-7'-9"		1-SACK 5-26-36
BAY-13-14	8-8'-2"			8-5'-6"	1-SACK 5-29-36
BAY 11-12	1¼" 8-8'-2"	1¼" 8-8'-2"	1¼" 8-8'-9"		2-SACKS 6-1-36
BAY-11-12				¾" 8-5'-6"	1-SACK
BAY-9-10	1¼" 4-4 4 4	1¼" 6-24-36 4 4 4 4	4 4 1⅛" 4 6-24-36 4 4 4 4	3-3 3 3 6-24-36 3-3 3 3	TOTAL 10-SACKS 6-24-36 2½ SACKS June Est
					JULY 1-SACKS ½ SACK 2-SACKS 7-3-36 4-SACKS 7-11-36 1-SACK
BAY-21-22	1-¼" 8'-2" 4 4 4 4	1¼" 8'-3" 4 4 4 4			
BAY-19-20	4 4 7-3- 4 4 4 4	4 4 4 4 4 4 4 4	4 4 4 4 4 4 4 4	3 3 3 3 3 3	

OMIT-DIAGONAL-CHIPPING

#9	BET-	246.0	±	253.0
#10	"	246.0	±	253.0
#11	"	245.0	±	252.0
#12		"		"
#13		"		"
#14		"		"
#15		"		"
#16	BET	244.0	±	251.0
#17	"	"		"
#18	"	"		"
#19	"	"		"
#20	"	"		"
#21	"	245.0	±	252.0

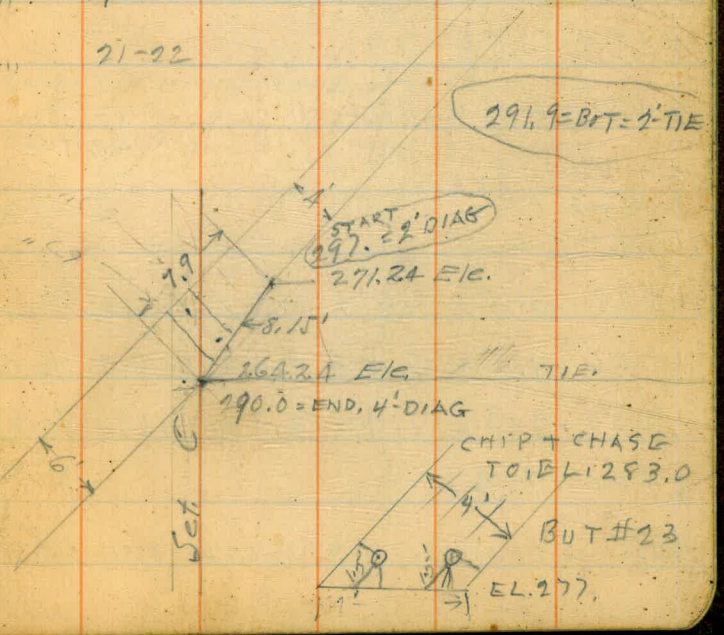
NO-CHIP-OR-CHASE-ABOVE EL. 283.0

NO-KEYS-ABOVE. ELL. 266.0

ANCHOR-HOLES-IN-STRUT-COLUMNS

		8'-2" 1¼" STEEL SET A	7'-9" 1⅛" STEEL SET B	7'-9" 1⅛" STEEL SET C	STEEL 5'-6" ¾" STEEL SET D
Bay	5-6				
"	7-8		1¼"		
"	9-10	4 4 6-24-36 4 4	4 4 4 4 6-24-36 4 4	4 4 6-24-36 4 4	3 3 6-24-36 3 3
"	11-12	4 4 4 4 5-27-36 4 4 4 4	4 4 4 4 5-27-36 4 4 4 4	4 4 4 4 5-28-36 4 4 4 4	3 3 3 3 6-1-36 3 3 3 3
"	13-14	4 4 4 4 5-25-36 4 4 4 4	4 4 4 4 5-25-36 4 4 4 4	4 4 4 4 5-25-36 4 4 4 4	3 3 3 3 1-21-36 3 3 3 3
"	15-16	4 4 4 4 5-23-36 4 4 4 4	4 4 4 4 5-22-36 4 4 4 4	4 4 4 4 5-20-36 4 4 4 4	DRILL-1-18 ALL-3 DEEP GROUT 5-19-36
"	17-18	(4) (4) (4) (4) 5-16-36 (4) (4) (4) (4)	(4) (4) (4) (4) 5-15-36 (4) (4) (4) (4)	(4) (4) (4) (4) 5-14-36 (4) (4) (4) (4)	(3) (3) (3) (3) 5-14-36 (3) (3) (3) (3)
"	19-20				
"	21-22				

291.9 = BET = 2'-TIE



17 holes 1st day = 53.7'
18 " 2-ND DAY 88.9' = 142.6 TOTAL--
15 " 3RD DAY = 33.2 = 174.8 "
10 " 4th day

+ = GROUTED

Anchor holes spillway apron

Station EAST-END	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH
0.0	NO-1	NO-2	NO-3	NO-4	NO-5
	2.2+	2.0 +	2.0 +	3.0 +	2.2 +
0+10	2.2 +	3.5 +	3.6 +	3.8 +	3.8 +
0+20	3.7 +	4-(21) 3.0 +	4.0 +	4.1 +	4.2 +
0+30	3.2 +	3.7 +	4-(21) 4.6 +	4-(21) 4.3 +	4-(21) 4.3 +
0+40	4.0 +	3.6 +	2.7 +	3.4 +	3.8 +
0+50	2.2 +	3.0 +	3.4 +	3.6 +	3.4 +
0+60	2.1 +	2.0 +	3.4 +	3.0 +	3.0 +
0+68	3.9 +	3.9 +	4.0 +		
0+76.	2"	~~0+76~~	~~0+76~~	~~0+76~~	0+76 = 3.7 +
0+82.7	(4.8) +	"	"		
			0+85	0+85 = 4.0 +	0+85 = 4.0 +
0+94.6 =	(4.8) 2" +				
0+95 ~~1+00~~					0+94.6 3.9 +
	4TH-DAY				
1+10	3.5 +	3.4 +	4.2 +	4.2 +	4.5 +
1+20	4.0 +	2.0 +	3.3 +	3.6 +	3.7 +
1+30	2.3 +	1.9 +	2.3 +	3.1 +	3.3 +
1+40	3.2 +				

FRENCH-DRAINS-AT-STA-0+70-0+80-0+90-1+00

14	11	11	11	13

DIAGONAL-BOLTS-TIGHT

	EL TOP				
9 W	235 -	272 -	292 -	308.1 -	
9-E	260	278=1	292.5	313.2	
10-W	260	272	292.5	313.2	
10-E	255	266	282.0	292. 308. 313.2	
11-W	259.1	272	282.6	292. 308. 313.2	
11-E	259.	277	287-292	308. 313	~~298-NO~~
12-W	255	277	287-292	308. 313	~~298-NO~~
12-E	253	277-292-308. - 313.2			
13-W	253	282-292-308. - 313.2			
13-E	259	278	287. 292-303	313.2	
14-W	259	277 1-1	287. 292. 303	313.2	
14-E	253	277-292 303. 313.2			
15-W	253	272. 292 303. 313.2			
15-E	259	277	292-308. 313.2		
16-W	259	277=1	292.-303. 313.2		
16-E	243	272-282-292-298-303-308-313.2			
17-W	243	272-282-292-298-303. 308. 313.2			
17-E	243	277-292-303.	308-313.2		
18-W	259	277-292-303.	308-313.2		
18-E	218	272	287-292-	308-313-2	
19-W	223				
19-E	238	272	282-292	308-313.2	
20-W	238	277 292.5-308			"
		277 292.5 303.			
20-E	266 277.-292-308. 228			313.2 BOTTOM ✗	
21-W	266-282-292. 298. 308.			313-2	
21-E	228-259-277-292.5			4-BOT-NOT ON ✗	
22-W-	247-259-277-292.5				
22-E	247-259-287-				
23-W	272-287				
23-E					

SAND - ABSORPTION

WET 3/4 to 1 GAL. PER-CU. FT.

MODERATELY-WET 1/2 GAL. PER-CU. FT.

MOIST 3/4 GAL. PER. CU. FT.

ROCK

MOIST 1/4 GAL. PER. CU. FT.

COARSE-AGGREGATE- LESS-FREE-WATER

	WET	MODERATE MOIST	
SAND - BULKS -	20%	10%	5%

COARSE-AGGREGATE 6% FINE-MORE

1-CU. FT.

SAND	WEIGHT
WATER	62.5
WET	132.0
MODERATE	121.0
MOIST	115.5
DRY	110.0

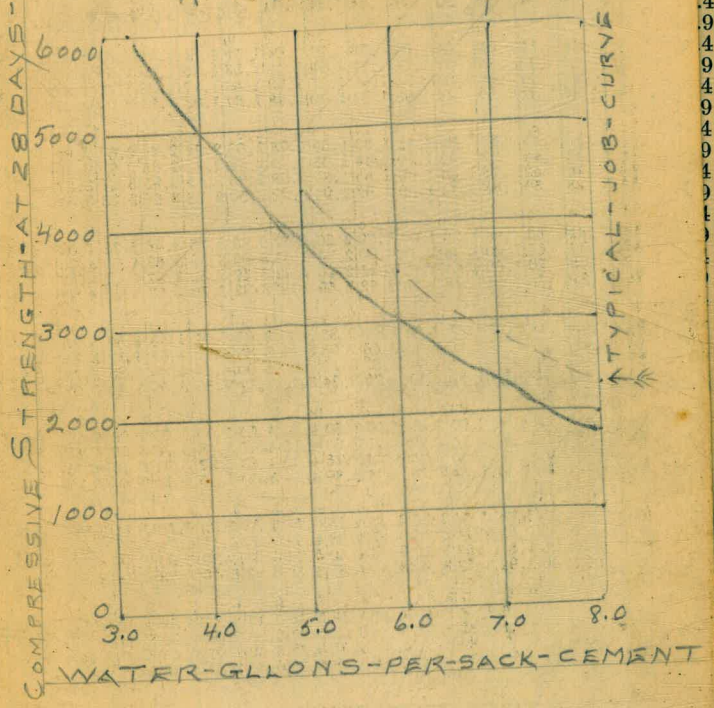
ELEVATIONS - INTERSECTION OF-VERTICAL-AND-DIAGONAL

D - 240.4

C - 263.4

B - 289.2

A - 320.0



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3.9.

Diff. in Ele. X 1.414 = Diag. distance   Hill 8735 - J-Hough

B.M. EL. 315.0

1.41

232.5

Calculation of Earthwork.

Width	Height 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w =16.2 and h =5.3, cu. yds. =1.48+.028+.089 =1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) =h, and ½ the roadbed =w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

Distances from Center of Roadway for Cross-Sectioning.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.