Piedras Negras: Proskouriakoff 1936-1937: original "Measurement" sheets

General Remarks:

Palaces of Acropolis (other?). And see "album" of Palace reconstructions (PS 1973)

The system of numbering points is independent for each sketch except where otherwise noted. Survey pts, however usually retain their letters for each building.

When there are several sketches on a page, the columns of readings referred to a sketch is usually either directly under or at the side of the sketch or separated by a line from the others.

Correction - distance.

1936 - 3 types of tape correction.

1) +.08 1st 10 m.; +.04 2nd ten m., usually sufficiently accurate to add +.01 per meter. This is due to a stretching tape.
2) -4.00 and -8.00 steel tape used, broken at 4.00 meters later at 8.00 m.
3) .01 per 4 m. L.S. tape of the same season from calculations of 8-13 checked survey a correction of +.007 for all measurements seems to be sufficiently accurate.

1937 - correction = +.05

Steel tape, beginning .05 beyond 0 pt. Metre-stick measurements are usually marked (m). In a few cases measurements on plan are meter measurements & in columns tape; and the fact is noted on sketch.

Points are given in columns - followed by distance and pt from which measured - and so on.

Angles read right unless marked "L."

Levels - Levels read down unless marked "up."

T.P. = turning point, separate system for each building.

PIEDRAS NEGRAS 4/10/36 193 STR.

OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS Observation on Polaris

Declination of Polaris

May 1, 1936 — 88° 57.63'

15, 1936 — 88° 57.57'

.06'

2/3 x .06' = .04'

May 10, 1936 = 88° 57.59'

Polar distance of Polaris, May 10, 1936. =

89° 60.00'

− 88° 57.59'

1° 02.41'

Determination of Latitude

Vert. ∠ reading at lower culmination (approx.) = 16° 13'

16° 13.00'

Correction 3.28'

16° 9.72'

1° 02.41

17° 12.13' = Latitude.

Correction

16° = 3' 20"

17° = 3' 08"

13/60 x 12" = 2 3/5" = 3"

= 3' 17" = 3.28'

17 (60) 17.000 — 38 — 120 — 300

Determination of true north hr.

Observation on on Polaris at Eastern elongation.

Sine. azimuth = sine 1° .02.41' / cosine 17° 12.13'

log sin. 1° 02.41 = 18.25894 -20

log cos 17° 12.13 = 9.98012 -10

log sine azimuth 8.27882 -10

log cos 1°,02 = 8.25609

" " 1°.03 = 8.26304

695

695

2780

2084.85

8.25609

285

8.25894

log cos. 17° 12' = 9.98013

" " 17° 13' = 9.99009

4

13

52

Azimuth of Polaris = 1° 05.33'

8.27882 − 8.27661 = 221

221 / 663 = .33

221.000 — 1989 — 2210

17° 12.13 = 9.98012

log sin 1°,05' = 8.27661

1°.06' = 8.28324

663

Harg ∠ from B_1 = 86° 18
86° 15
.03
average = 86° 16.50
+ azimuth = 1° 05.33
97° 21.83'
- bearing 79° 24'
7° 57.83

86° 81.83
79° 24'
7° 57.83

9 70
7 58
18'

True bearing $x - B_1$ = 87° 21.83' E
63° 22'
150° 43.83

179° 60.00
150° 43.83
29° 16.17

True bearing $Y - Z$ = S. 29° 16.17' E.

PIEDRAS NEGRAS May 9 193 [illegible]

CT. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS

Long. 91° 15'
Lat. 17° 10'

Calculations for Time of culmination of Polaris.
Lower culmination at Greenwich May 15 = 10 05.7 P.M.

15 ⟌ 91 6 / 90 — 15

.16 m.
6
.96 m.
.97 m.

10 05.7
.97
4.73

On May 15 10 − 04.73. P.M.
= 9 64.73
− 23.52
On May 9 − 9 41.21

At 9: 41.21 P.M.

Calculations for Time of elongation of Polaris May 10.

May 15 Gr. = 4: 12.1 P.M. − East elongation
3. 72.1
19.60
3 52.37 P.M. East elong. May 10,
.97
3 51.53 correction for long.
−2.1
3 49.43 corrected for Lat

Court I

① – Plan of Court I – J2 at rt., J 7 sub, upper left.
A = stake near center near J-2
B = stake near large tree - trunk left of J-6 stair.
(correction = +.05 to all horiz. meas.)

② – Plan of Court I. – J-6 stairway upper left indicating sections shown on p. ③. Blue letters indicate points used for sections on p. ③. J-7 terrace with corner of J-7 stair appear in center – I-J is terrace wall immediately above J-7. At rt. is detail of J-6 stairway l. corner & sloping block at side.

③ – Levels of points shown on p. ② – Column of figures at right refers to section of east face J-6 stairway shown at upper left. Lower center are side & front elevations of feature on ~~right~~ left side of J-6 stairway. pt. 9 being corner of sloping block & I-2 the J-6 terrace.

See also J-4 ⑪

Key Hts. — 0 = pt. 33 of J-2 substr. top of lowest row of panels.

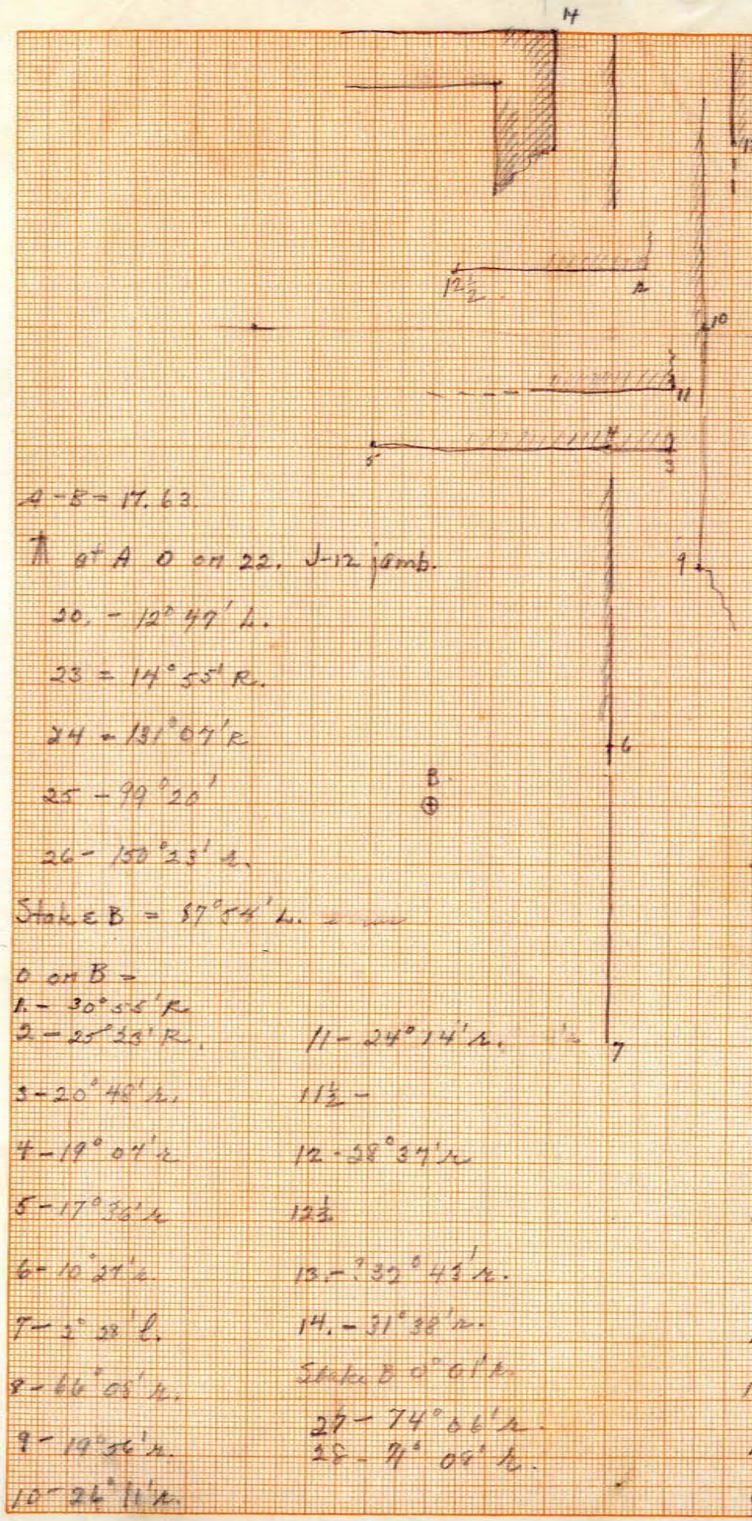
1. Plinth J-7 sub = +3.22.
2. Plaster floor covering remains of J-7 sub plinth at intersection of its edge with J-7 stair (latest.) = +3.10
3. Lowest point of J-7 sub terrace = –.51
4. " " " J-6 terrace at center = +3.75
5. J-7 terrace left of stair – bottom = +2.85
top = +5.54 (maybe .08 lower)
6. Lowest pt. of terrace on top of J-7 = 6.20

PIEDRAS NEGRAS Apr 193 7 STR. Court I

OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS Add .05 to all measurements



2 - 8 = 17.62

℄ of A 0 on 22. J-12 jamb.

20. - 12° 49' L.

23 = 14° 55' R.

24 = 131° 07' R.

25 - 99° 20'

26 - 150° 23' L.

Stake B = 57° 54' L.

0 on B =

1. - 30° 55' R.

2. - 25° 23' R.

3 - 20° 48' R.

4 - 19° 07' R.

5 - 17° 38' R.

6 - 10° 21' R.

7 - 2° 33' L.

8 - 66° 05' R.

9 - 19° 56' R.

10 - 24° 11' R.

11 - 24° 14' R.

11½ -

12 - 58° 37' R.

12½

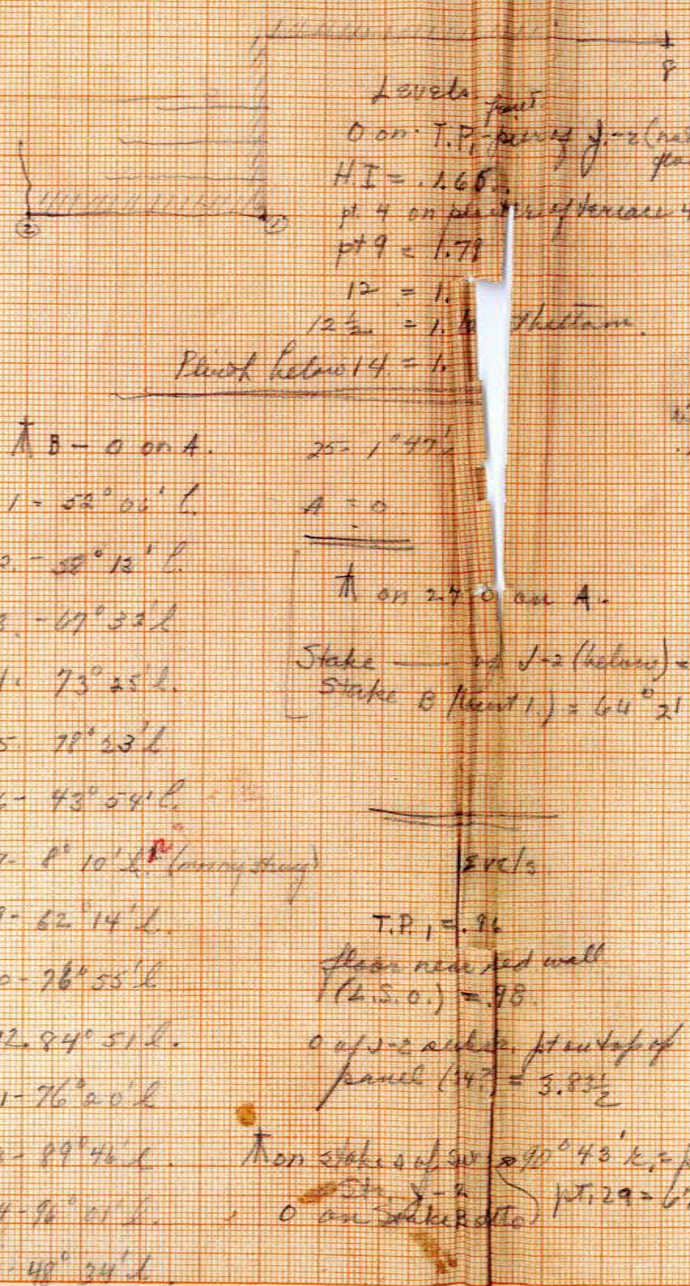
13 - 133° 43' R.

14. - 31° 38' R.

Stake B 0° 01' R.

27 - 74° 61' R.

28 - 7° 04' L.



℄ B - 0 on A.

1 - 52° 04' L.

2. - 58° 13' L.

3. - 67° 32' L.

4. 73° 25' L.

5. 78° 23' L.

6 - 43° 54' L.

7 - 8° 10' L. (corner stone)

9 - 62° 14' L.

10 - 76° 55' L.

12. 84° 51' L.

11 - 76° 20' L.

13 - 89° 42' L.

14 - 94° 21' L.

8 - 48° 34' L.

15½ = 94° 34' L

25 = 1° 47½'

A = 0

℄ on 27 0 on A.

Stake — to J-2 (below) = 129° 31' L.

Stake B (Sight 1.) = 64° 21' R.

Levels

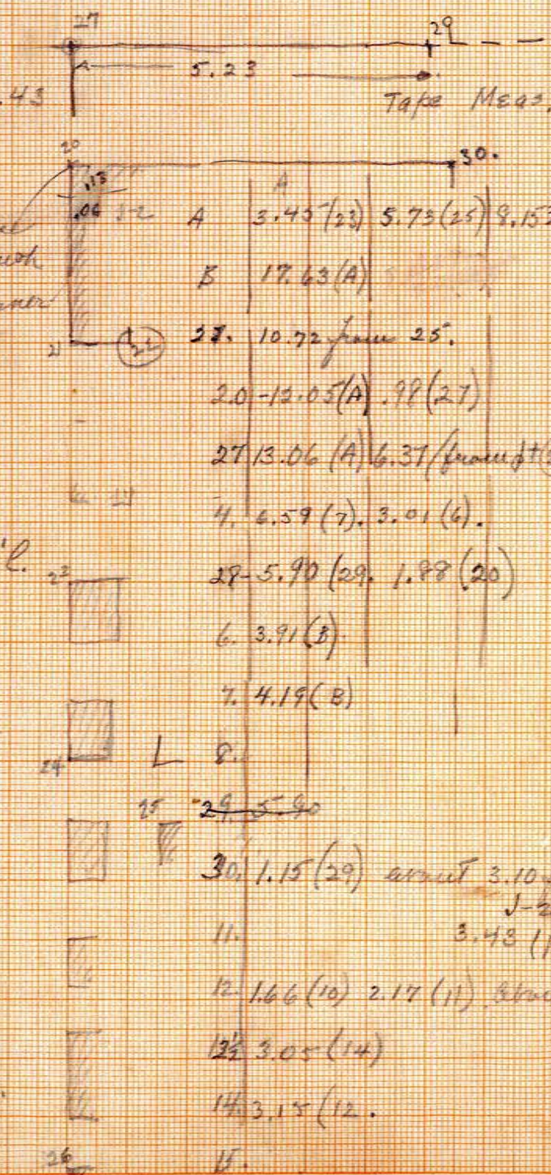
T.P. 1 = .94

Floor next to wall (L.S.O.) = .98

0 of J-2 above front top of panel (14?) = 3.85½

℄ on Stake 0 of Sur = 90° 43' R. = pt 27

0 on Stake B of J-2 pt 29 = 67° 31' R.



	A	B
	3.45 (23)	5.73 (25)
	17.63 (A)	8.15½ (22)
28.	10.72 from 25.	16.73½ approx
20	-12.05 (A)	.98 (27)
27	13.06 (A)	6.37 from pt (23) of J-2 terrace
4.	6.59 (7).	3.01 (4).
28	5.90 (29)	1.88 (20)
6.	3.91 (8)	
7.	4.19 (8)	
8.		
29	~~5.90~~	
30.	1.15 (29)	about 3.10 from pt 23 of J-2 Substr.
11.		3.48 (pt 24 of J-2 Substr.)
12.	1.66 (10)	2.17 (11) about 3.70 (9)
12½	3.05 (14)	
14	3.15 (12.	
15.		

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Court I ①

Court I
plans & levels.
J-Y auth.

PIEDRAS NEGRAS June 25 193 7 STR. Sheet 5

C.P. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS

8 141°38' 2.12 (A) 17- 161°30 3.29(A)

9 145°56' 3.05 (A) 18 34°47' - 2.36 (A)

10 127°15' 1.93(A) K - 1°44' 9.50½(A)

11 141°5-2 3.60(A) L - 323°17' - 11.54 (A)

12 - 136°17 2.93(A)

13

14 - 124°46' 4.37 (A)

15 - 132°15' 4.03(A)

16 -

K at A, 0 on B, read at.

1) higher slope of terrace appears cut 89°08'

Pt E (see section) - 279°46' 6.76 (A)

Pt F (see section) - 272°43' 8.41 (A)

Pt G = 297° 26' (10.37 (A)

Pt H = 297° 19'

2 - 31 54° 40 (bearing) 16.95(A) 7.58(G)

3 - 314° 19' (bearing) 7.19(G)

I = 270° 65'

J - 279° 42'

4 - Edge of pt. - 9°30' 5.50(A)

5 - 348° 9.25(A)

6 - 321°30' 8.82(A)

K at 5, 0 on A read at.

I = 52° 12'

J = 62° 02'

3 -

2 -

E - 22°05'

F - 26°04'

1 - 328°44'

10 = 1.94 (A)

.51 (A)

Maple corner but not particularly perfect & good with live fork corner

K at 0 and read at.

m = 37°55'

K at 2, 0 on A read at

m = 359°13'

Detail at N

1-2 plaster goes behind 3-4 which is secondary. base of 1-2 is .10 below base of 3-4.

2 - 3 = .59 (m), 2 = .44 above base of 3-4.

3 - 5.56 (A) 2.54 (I)

.65

.87

Terrace 3-1

Drain seems to turn parallel to river wall of J-2 & continues at least 200 m.

-1.53

G - 1.96 (H)

(Corner is not dug out to bottom)

KEUFFEL & ESSER CO., N. Y. NO. 359-141 Millimeters, MADE IN U.S.A.

(2) C1

Court I

PIEDRAS NEGRAS June 25 1937 STR. Court I

OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS 3 setting (see other sheet)

A - B

Lafe means add .03'

Plinth = 3.0.

about 6.60

3.17

7.20

Lowest stone in ext. chamber pass point (lowest step)

Small excavation made unintentionally in attempt to locate step about 1.20 ft below

2 - highest pt. of J-6 cubic. wall = 1.81

Top of J-7 cubic = Plinth #23

3 - Measured ref pt on J-6 cubic wall = 3.33.

I_1 - 1.66.

I_4 = 2.58

J = .73

Step

Small buttress (the adjacent part built contemporary)

1.78

(26 short steps)

Small buttress (the adjacent part built contemporary)

C - D

Step not more than .05 per .46 appears almost vertical

Elevation

Sill

Sill

Sill

(3) cI

Court I

PIEDRAS NEGRAS _____ 193_ STR. _____

OP. No. _____ MUSEUM CAT. _____

SCALE _____ SEE PHOTO Nos. _____

REMARKS _____

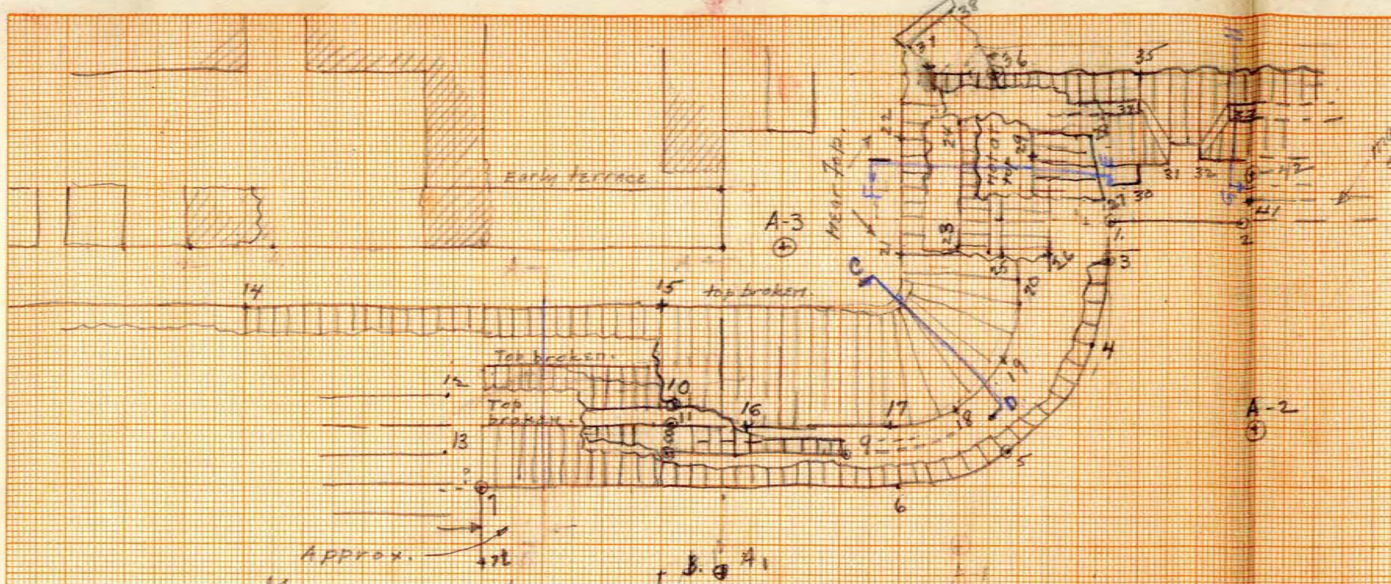
J-2

① - Plan of substructure - left side. Sloping surfaces are hatched. 3-4-5-6-7 = base of latest terrace wall.
16-17-18-19-20 = base of earlier " "
Note that pt. 33 on top of lowest panel is later used as 0 for J-4 & Court I levels.
(Correction +.05 to horiz. meas.) — all pts ② for checks on same plan pts.

② - Sections of J-2 substructure. HI = above Pt 33.
Upper left - plan showing location of sections below. Pts are numbered as on sheet ①
Right - plan of mte section with panelled terrace showing location of sections below - at right is section E-F. (N.B pt 33 is incorrectly no. 34)
Lower right - plan measurements checking pts ①

Key levels. - pt. 33 top of lowest row of panels on terrace at left of J-2 substructure = 0.

1. Base of latest terrace of J-2 at intersection with stair = -1.19.; 2.50 left = -1.08.
2. Base of early J-2 terrace = -.64 (2.50 left of l. side stair)
3. Top " " " " = +2.24 (1.50 rt. of l. side stair)
4. " " " " " = +2.09 (2.50 l. of l. side stair)
5. L.S. zero of J-2 on floor near center door of medial wall = +2.85


Early terrace
top broken
Top broken
Top broken
Approx.
A-3
A-2
Mean App.
Mean App.
Rock face
Rock face
Rock face

J-2 ①

J-2 substr. plan

PIEDRAS NEGRAS May 193 7 STR. 1-2

CD No. MUSEUM CAT.

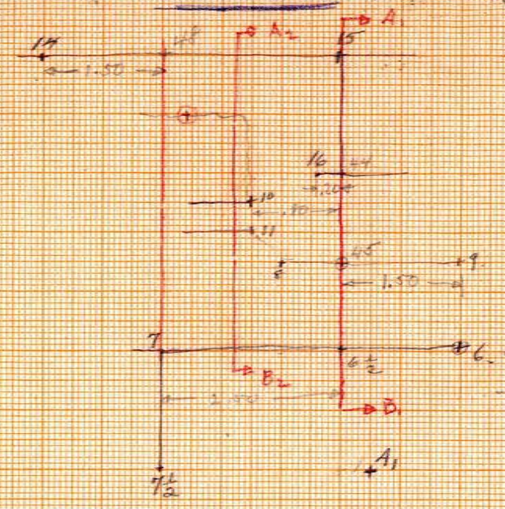
SCALE SEE PHOTO Nos.

REMARKS Lef corner of terrace joining ? 3-4

ADD .05 to readings

0 = Pt. 33 of plan.

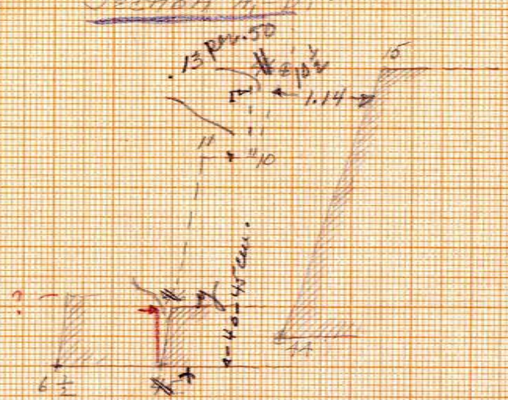
Section A-B - Location.



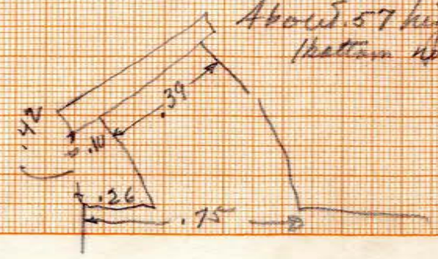
H.I =	1.61.
6½ -	2.69.
X -	2.52.
y -	2.06.
44	2.25
H.I =	1.63

H.I	.44
3 -	1.57
20 -	1.08
7	1.63.

Section A1-B1

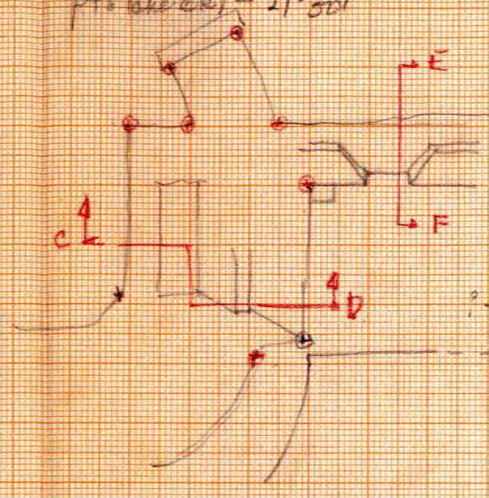


Drain - opening - About .57 high (bottom not clear)



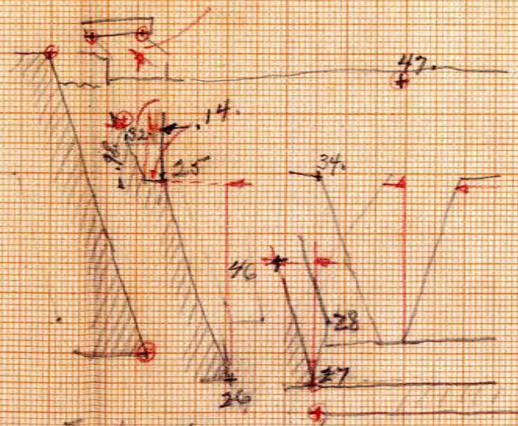
Head and pier 8-L 5.57 (14) 9.19 (15)

Top A2 - on A1 Left corner - end pier from left — Rt. 38° 45' pts (the 26) — 21° 50'



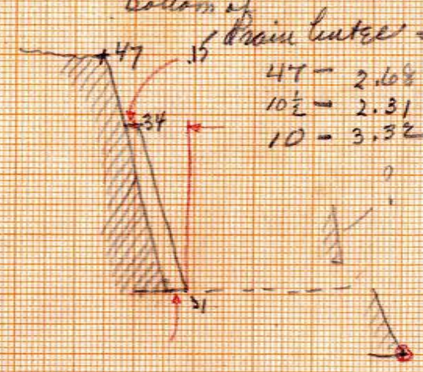
H.I	1.63.	31 -	2.90
45 -	2.62½	34 -	1.61
27 -	2.44	47 -	.43.
28 -	2.15		
46 -	1.00	H.I =	3.88
25 -	1.26	15 -	1.79
26 -	1.93	14 -	1.64
		25 -	2.32
		4½ -	2.25 ? Check.

Section C-D.



Bottom of drain tube = 2.30

47 -	2.68½
10½ -	2.31
10 -	3.32



47 = 1.12 (36) 1.74 (46)

A3 in line - 2.21½ - A1

Checks - P = 2.37 - A1, 2.30 - A3

6½ - 1.67 - 8, 1.09 - A1

46 - .94 - 27, 1.17 - 42

41 - .75 (42) - 1.27 (1)

Check on 15 perhaps hot cam H. 2.57 (A2)

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J-2 (2)

J-2 Subst.

Section.

① - Original survey and plan of bldg. to be checked with sheet ④ where same measurements are made with steel tape. (correction +.08 for 1st 10 m. +.05 for 2nd 10 m. or between .01 & .005 per m.)

② Bldg. Plan & section of substructure. N.B. 4.00 m. is to be subtracted from linear measurements.

③ Bldg. Plan and section of substructure. - slopes of upper terrace. In these sections. the different in heights of apron - cornices at rear appears to be .23. This is incorrect, probably because sections taken are best slopes and not contiguous. Later measurement (see 4.) indicate this difference = .41 checked by later direct measurement = .42.

④ - Check on terrace (cor. -4.00 m.)
Upper right - section of terrace at right back of front outset - Marked E-F on p. 3. Hts. of plinth pts.
Lower right - section of terrace at left - rear looking toward center. - Correct relation of apron - cornices.

⑤ - Measured detail of small plaster "plinth" just back of outset on rt. side of bldg. A = large stone, remained exposing section A-B. Upper rt. sketch of reconstruction.

⑥ - Plan of same & measured levels of pts.

⑦ - Plan of out-set of bldg. platform showing original and secondary walls. A is previous pt. 81.
Below - sketch of 2 lowest panelled terraces at intersection with J-4 stairway.

(8) - General plan of J-4 pyramid - right side. Stairway - wall of upper terraces is shown in line with block of lower terrace - This is incorrect - measurements show it to be in line with stairway wall below.

(9) - General section of pyramid near intersection with rt. stairway wall. p2 is top of panel on 1st panelled terrace. Pts. 5 & 11 on corners of block. Pt. 32 is probably top of terrace whose lowest pt. is 25 & should appear in line Though here measured at center of bldg. pt. 34 is on stone B shown on p.5 & may not represent a definite level. Pt. 35 is on level below stone A of p.5 & is probable top of terrace to rear of outset. Pts. 19, 22 & 24 are on ledges below Apron cornices of inset corners near intersection with front panels. Levels refer to same 0 as J-2 substructure.

(10) → Right front - outset (?) of bldg. Front & (below) rear views. Shows fallen plinth (pts. 6 & 5) Plaster "plinth" is destroyed & not shown. Pt. 3 = stone B of p.5.

(11) - Sketch of J-4 outset same as p.10 has no relation to notes on this page. Lower left. - rough sketch of intersection of J-6 & J-4 terrace (plan) showing location of pt. 3 on plinth & location of measured pt. of intersection.

Upper-left - readings on intersection of J-7 & J-6 and variances Court II & Court I points from point A of p.7, same as pt 81 of p.2

Center - Court one pts. read from pt. A Court I ① & Intersection J-6 J-4

Rt. - Pts read from pt. B Court I ① & sketch of left side J-6 stairway showing location of pts 1), 2), 3), 4), 5).

Below - level of intersection 0 = pt 3 on sketch at left.

Levels J-4.

0 = top of lowest row of panels adjoining J-2 substructure - pt. 33 J-2 ①. Terraces numbered up from 1st to 5th terrace.

+1.35 – top of upper tier of panels, 1st panelled terrace near J-4 stairway.

+1.69 – bottom of lower tier of panels of 2nd panelled terrace

+5.45 – highest pt. of ~~2nd tier of panels~~, 2nd panelled terrace, .85 above top of 2nd tier of panels.

+5.58 – bottom of 3rd terrace

+9.34 – bottom of 4th terrace (1st inset-corner terrace)

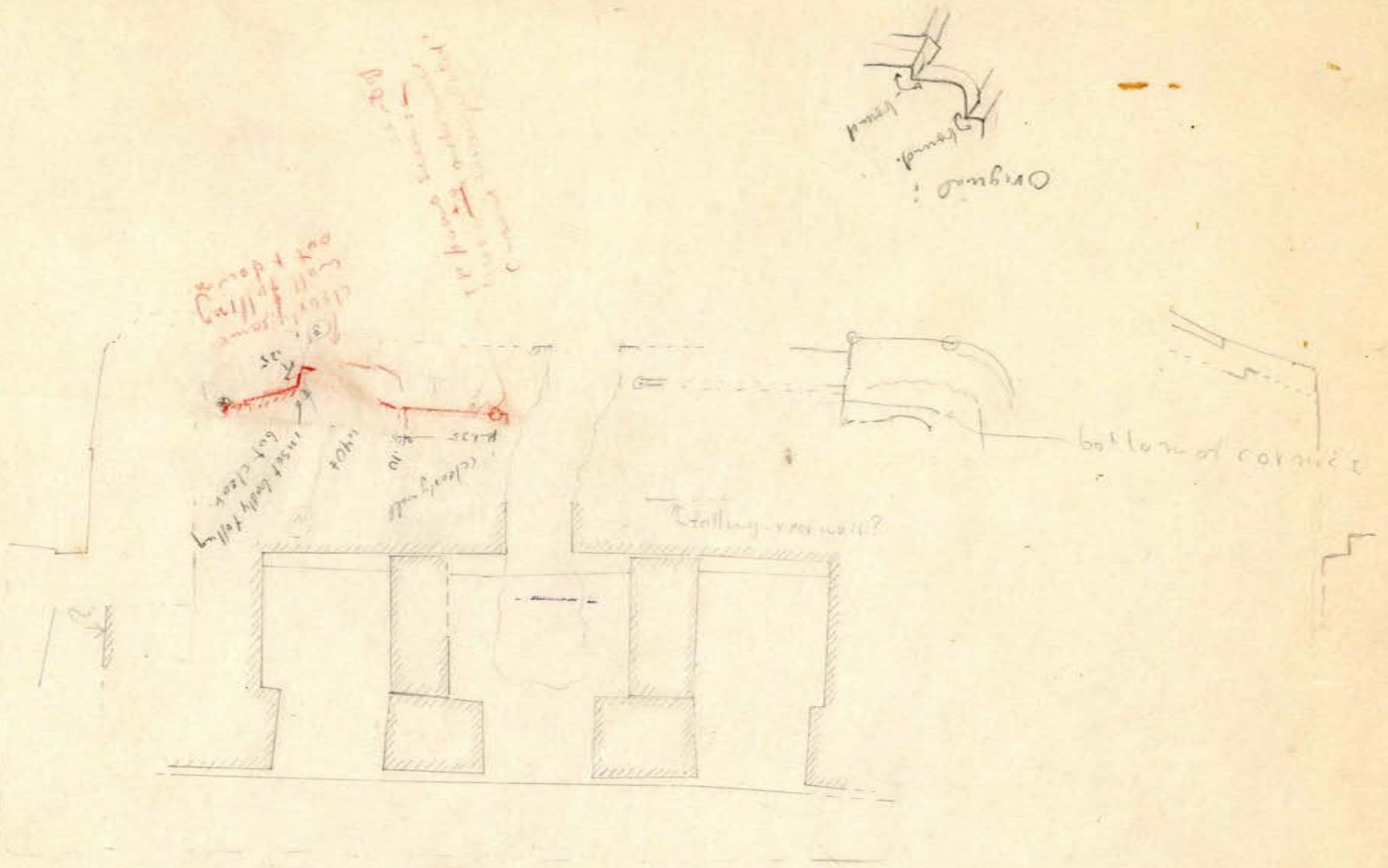
+12.30 – bottom 2nd inset-corner terrace

+15.27 – " 3rd " " "

+18.06 – base of bldg. platform.

+18.60 – floor at base of bldg. platform (probably late)

+20.73 – plinth in center door.



J-4 - Plan

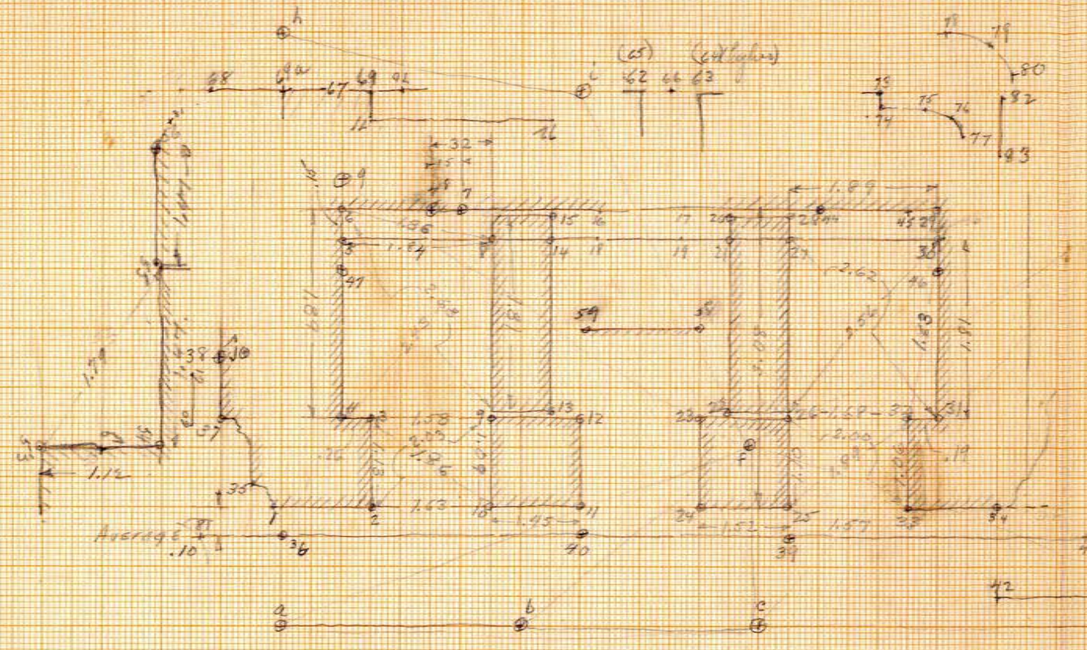
S45 4

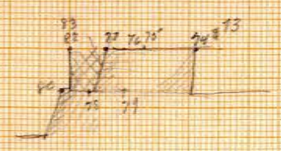
KEUFFEL & ESSER CO., N. Y. NO. 359-14L Millimeters

1.60
1.52

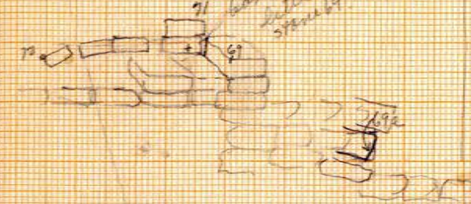
486
403

P-6 05





Detail 75-83



5/11/26

Structure I-H

Tape measurement

Correct -.08 first 10 m.
" .2nd 10 m.

Auxiliary pts.

a f - 2.88 f - 6.79
b c - 3.04 f - 4.71 g - 6.66
c a - 5.85 e - 7.27 g - 8.18
d c - 7.55
e d - 6.39 g - 9.51
f c - 8.02 d - 7.58 e - 4.71
g f - 6.71 a - 5.52
h i - 4.25 g - 3.84
i f - 7.75 g - 3.74
j g - 3.46. a - 4.19

1	a - 1.71	b - 4.44	g - 4.63	
2	a - 1.85	b - 3.20	c - 3.88	g - 4.27
3	a - 2.37	b - 3.96	c - 6.29	g - 3.15
4	a - 3.37	b - 4.15	g - 3.14	
5	a - 4.13	b - 5.60	g - 1.45	
6	a - 4.07	b - 5.75	g - 1.32	
7	a - 4.62			
8	a - 4.55	40 - 45		
9	a - 5.06			
10	a - 3.30.	b - 2.26	c - 4.44	
11	a - 3.58	b - 2.15	c - 3.21	
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23	a - 5.48			

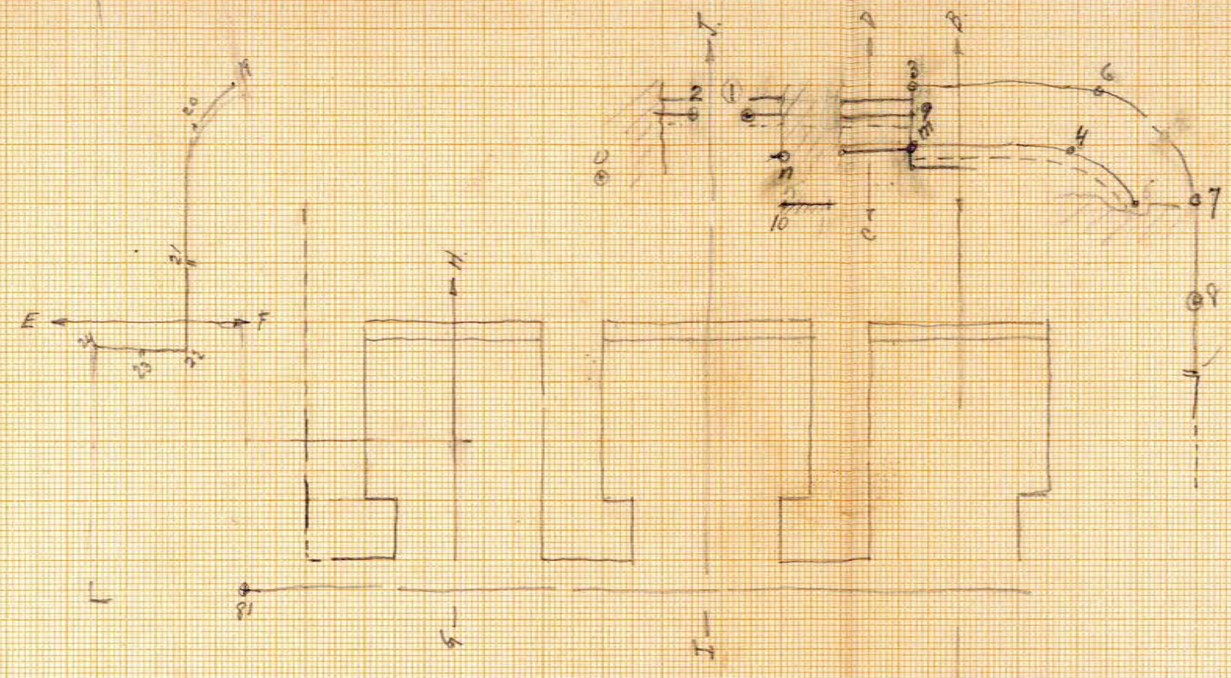
Accurate to front of wall, bench 15 to 17 wide - 20 from wall, center

24	a - 5.06	b - 2.95	c - 3.22.		
25	a - 6.56.	b - 4.26	c - 2.22		
26					
27					
28	##-.14				
29	c - 5.77	45 - 41			
30	c - 5.64				
31	b - 6.34	c - 4.02		f - 5.72 ε - 2.27	(corner of sm. pt. on side wall 1.05 from face at pier
32	b - 6.13	c - 3.84			
33	a - 9.09	b - 5.61	c - 3.00	ε - 7.24 d - 4.94	
34	a - 8.68	b - 6.14	c - 3.47	ε - 4.12	
35	a - 2.02.	36 - 36.			
36	a - 1.54	g - 4.69			
37	a - 3.43	g - 4.01.			
38	a - 4.08	g - 3.44	37 - 84.		
39	a - 6.52	b - 7.11	c - 2.10		
40	b - 3.02.	c - 3.12			
41	b - 4.90	c - 3.53	ε - 4.17		d - 4.75
42	b - 3.44	ε - 5.23	## - 5.21		
43	b - 6.46.	ε - 4.92	d - 4.19		
44	f - 2.20	## - 1.58			Plate about .11 wide. .10 from lower edge of 63 rail.
45	c - 5.64.	f - 4.73	ε - 5.21 ε = 2.08		
46	c - 5.46	46 - .87	f - 2.47	d - 6.47	

47	g - 1.60				
48	g - 1.46	e - 4.58.	b - 1.43		
49	f - 2.40				
50	ε - 5.20	d - 3.92			
53	j - 1.05	b - 4.96			
55	j - 2.14	h - 3.28.			.03 from face of wall
56	j - 3.62.	h - (1.89?)			
57	59 - .46	55 - 1.59			
58	b - 4.95	f - 2.38.			
59	b - 4.74	f - 2.93.			
60	a - 3.86	g - 7.03	4.86		
61	a - 4.50	g - 4.26	4.33		
62	58 - 3.64	i - 1.57.			
63	59 - 3.93	62 - 1.00.			
64	59 - 3.67	65 - .95			
65	58 - 3.65	i - 1.46			
66	i - 1.97	59 - 3.83.	63 - .57.		
67	i - 1.60	g - 2.15	h - 3.20		
68	i - 2.52	g - 1.60	h - 2.59	49	
69	b - 4.20	f - 6.13	i - 1.60	h - 2.92	i - 2.27
70	h - 4.31	f - 5.98	i - 1.55		
71	b - 2.92	b - 4.41	f - 5.76	i - 2.02	
72	i - 5.55	f - 4.95	i - 2.16		

73	i - 5.57	ε - 2.56	
74	i - 5.64	ε - 3.29	
75	i - 6.33	ε - 1.20	
76	i - 6.65	ε - 1.67	
77	i - 6.95	ε - 1.43	d - 7.68
78	i - 7.60	77 - 1.30	d - 8.29
79	i - 7.92	77 - 1.21	d - 7.87
80	i - 8.06	79 - .30	d - 7.58
81	a - 2.06,	g - 5.05.	e - 7.20 d - 15.09
82	d - 7.78	i - 7.62	
83	d - 7.21.	i - 7.83	
84			
85			

J-4



E-F.

1 - 6.76 (o) 6.40 (i) 4.56 (n)

2 - 5.23 (h) 6.01 (o) 4.80 (l)

3 - 7.12 (n) 4.60 (m)

4 - 5.47 (m) 5.61 (ε)

5 - 6.45 (4) 10.06 (n)

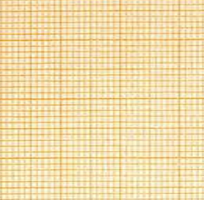
6 - 6.08 (m) 5.15 (4) 5.33 (5)

7 - 5.69 (5) 5.20 (4)

8 - 6.13 (5) 6.69 (n)

9 - 5.33 (4) 4.43 (3)

10 - 5.70 (n) 2.07 (m)

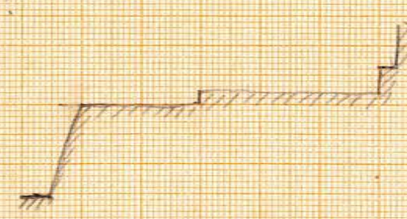


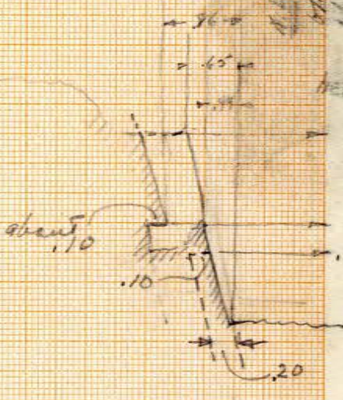
(B) (auxiliary pt on rock) 6/9/36

J-4.

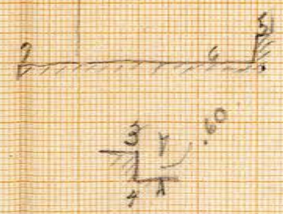
Use ear mean argument of 8 observations.

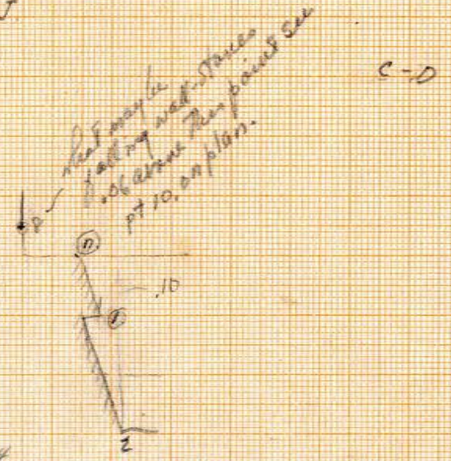
A-B





Section I-J





H.I = 6 on pt. 81) - 1.64

n - 1.53

1 - 2.93

2 - 3.61

3 - 3.57

4 -

5 - 1.17

6 - 1.40 - on plan.

7 - 1.38 -

8 - .87

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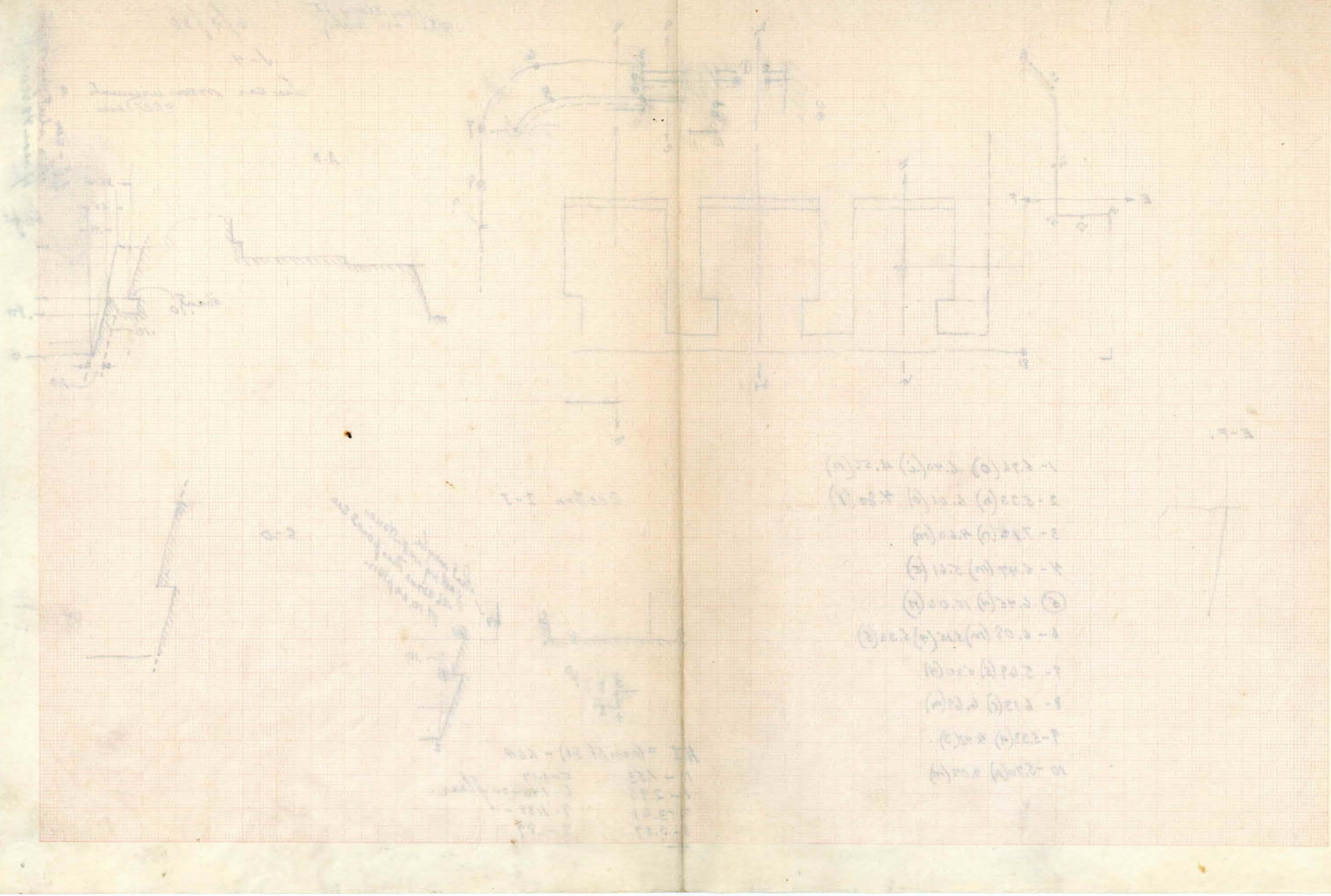
J-4



6/19/36 J-4.

Rough measurements of
ruins of rear wall

Legend: (1) Measure (a) & Level ✓
(2) Measure dc (level if any) ✓
(3) Elevate a hgt at rear & measure directly
(4) Check at rear right & level.

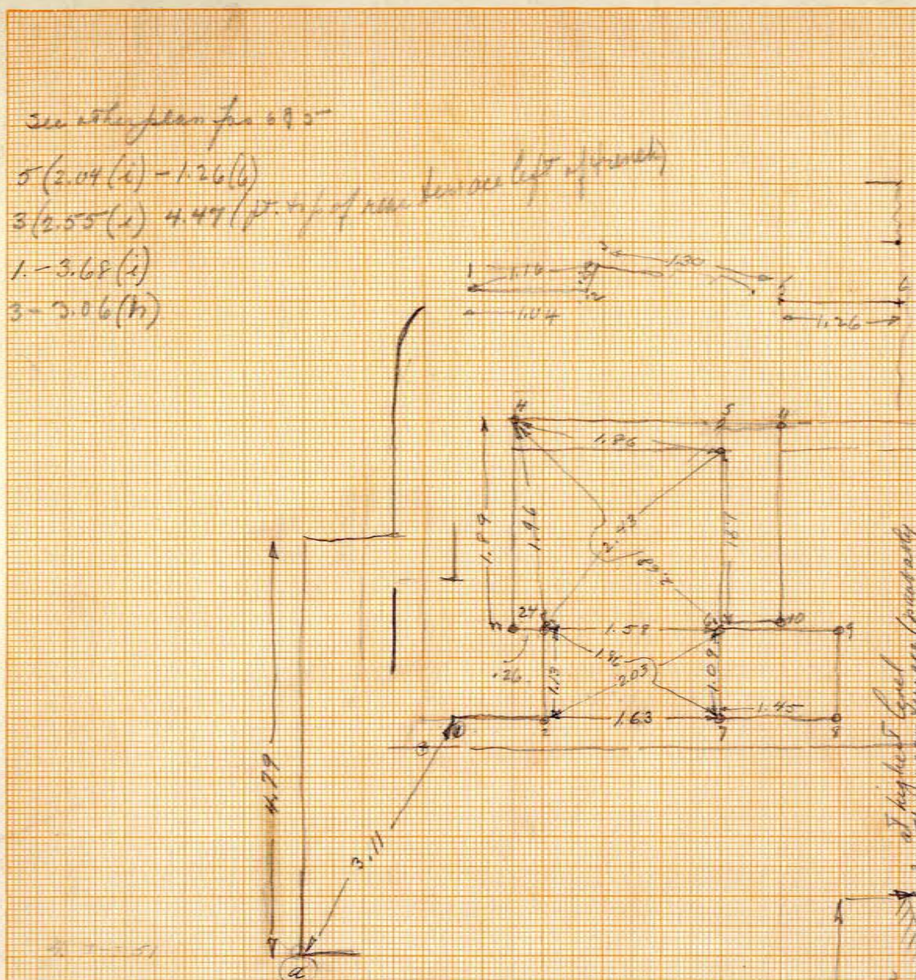
See other plan for 695

5 (2.04 (a) - 1.26 (b)

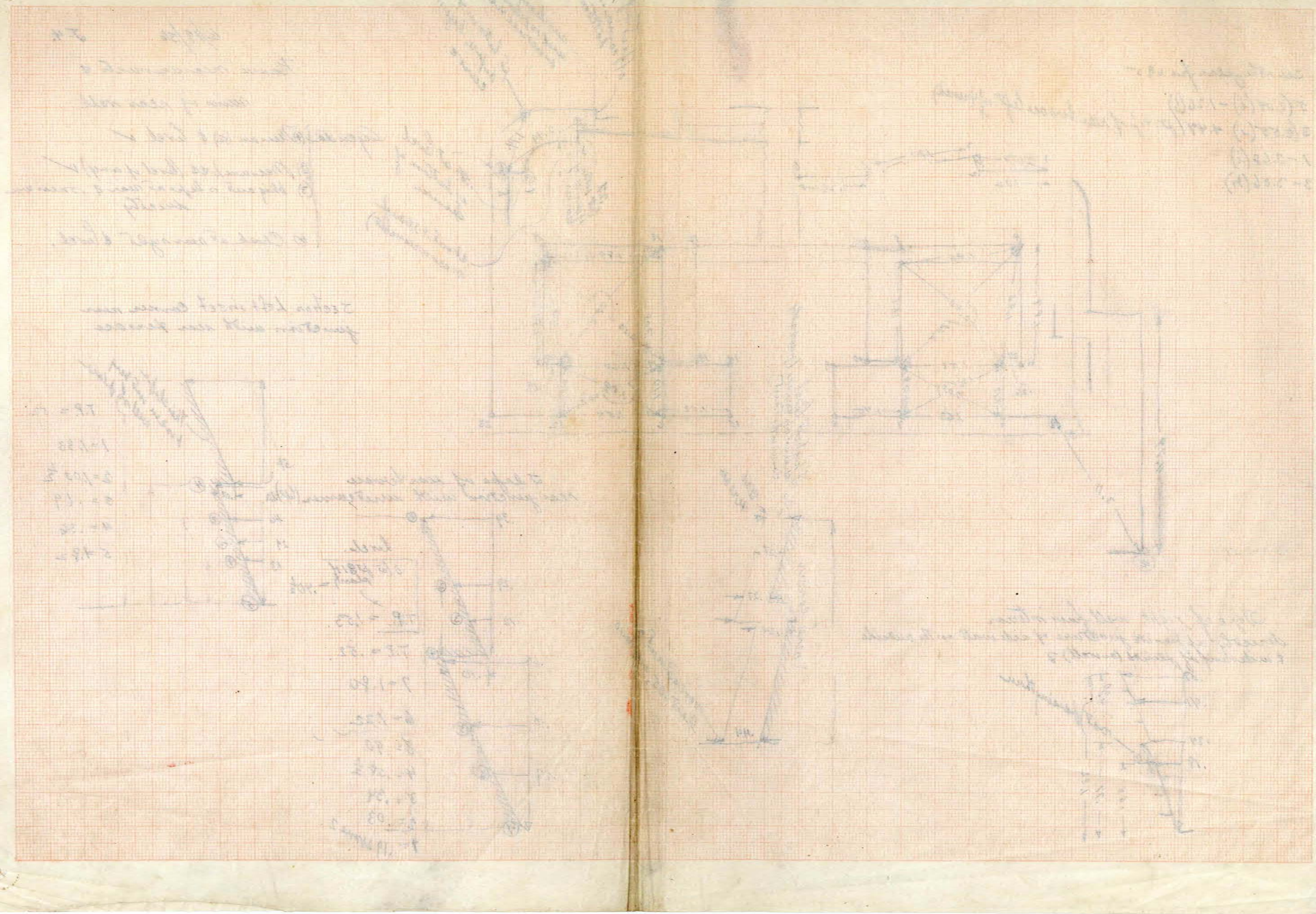
3 (2.55 (c) 4.49 (pt. on top of rear terrace left of fireplace)

1. - 3.68 (i)

3 - 3.06 (h)


1.26
1.84
1.89
1.59
1.63
1.45
1.60
1.57
1.52
3.11
1.10
1.89
1.91
1.84
1.91
1.89
1.84
1.91
1.89
1.84
1.91
1.89

2-9.



Traverse - reciprocal measured with steel tape - Subtract 4.00 m.

Levels. g=91 c=36 — (k-31 / l-1.91 / b=61 / a-10-
a=31-
b=47-
h=77-

a - 9.53m+4(g) 4.89(b)

b - 10.69(g)

c - 12.22½)(g) 9.89(a)

k - 2.95(c) 5.79(g)

l - 9.35(a) 5.98(k)

h - 8.74(l)

e - 13.55(g) 11.32(c)

f -

n - 12.16(b), 8.97(e) 6.88(l)

m - 9.49(i) 6.84(m) 6.65(E)

i - 8.27(h) 5.60(o)

o - 8.28(h) 6.29(g) - 11.86(E) 7.04(n)

* pt e1 on plinth
0 on C.
a = 111°46' r.
h = 100° L.
g = 75°54' L.
y = 21°25' L.

F-4.

Check of traverse,
substructure & sections.

Levels

Pt e1 on plinth at left corner. = 0.

H.I = 1.66.

① 1.75

③ - 3.68

② - 3.50

④ (pt C) 2.19

⑤ - 3.22

6 - 1.36

7 - 1.28½

8 - 1.38½

9 - 1.37½

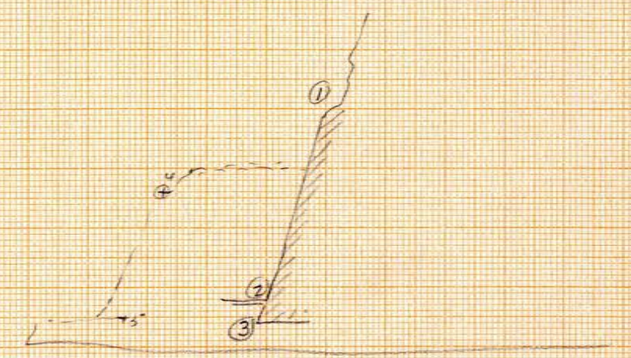
10 - 1.36

11 - 1.45½

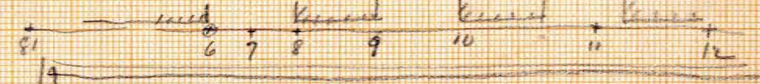
12 - 1.64

Section at center.

Section right terrace



Pts along plinth



H.I = 1.40

② 2.82

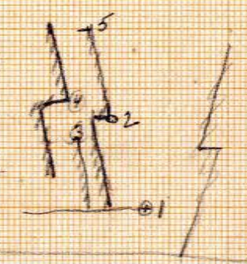
① 3.47

③ 2.69

④ 2.41

5 - 1.68

Section at left thru rear terrace



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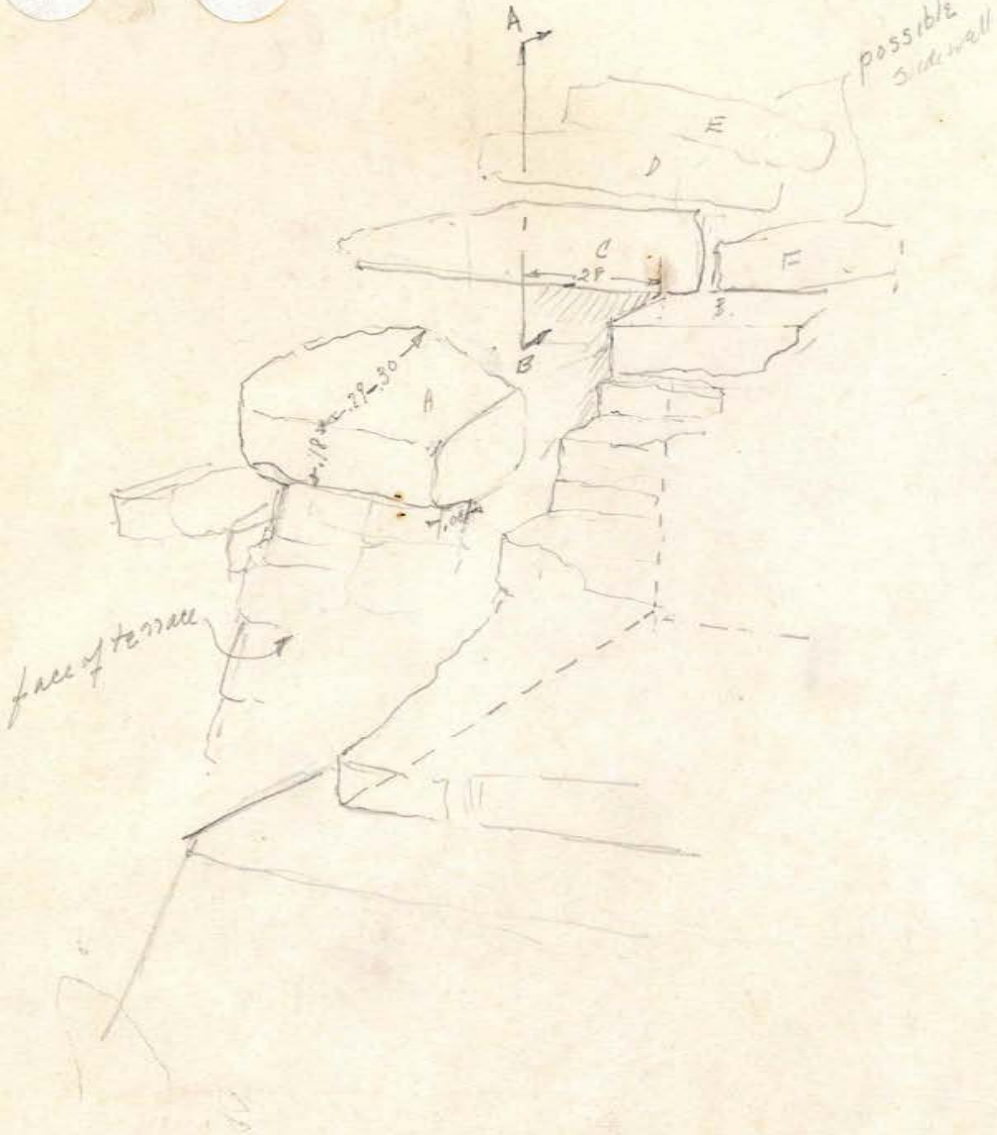
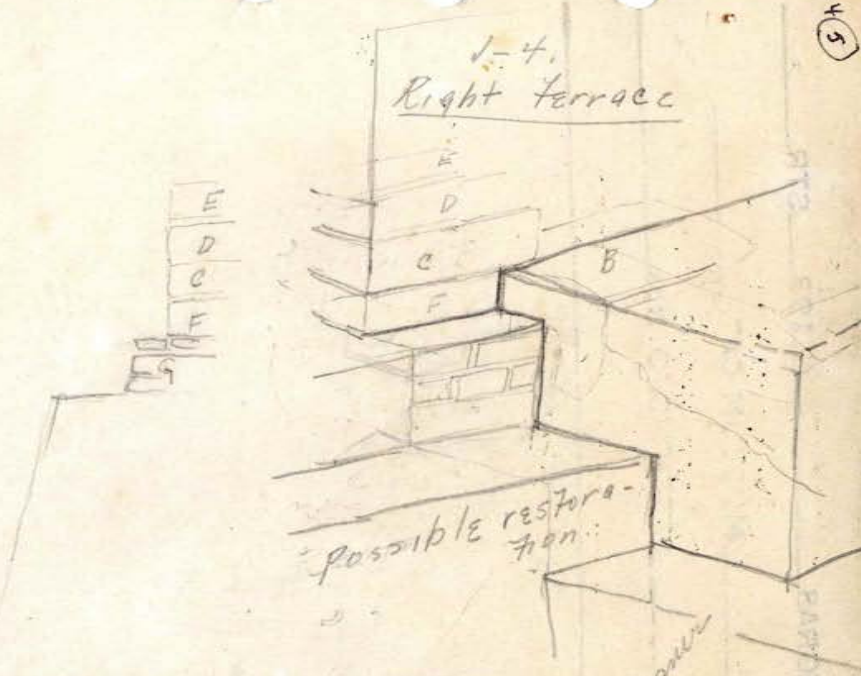
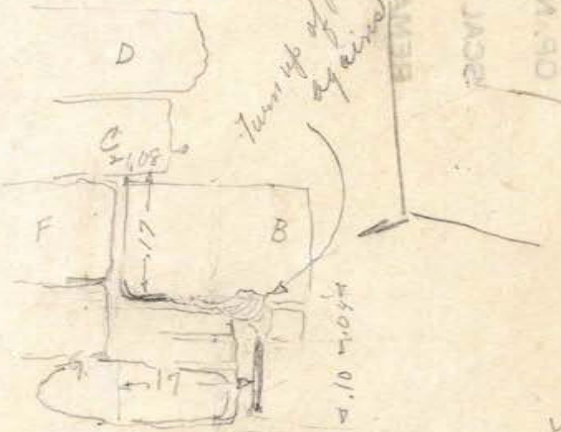
J-4.

J-4
Sections


A
possible sidewall
E
D
C
F
B
A
face of terrace


J-4.
Right terrace
E
D
C
F
B
possible restoration

E
D
C
F
G


D
C
F
B
Turn up of plate to against B at corner
Section A.B.
Terrace

J-4 (6)

6/17/36
Structure J-4.

⊕A

Location of side-wall on right

Gt A - see J-4 plan

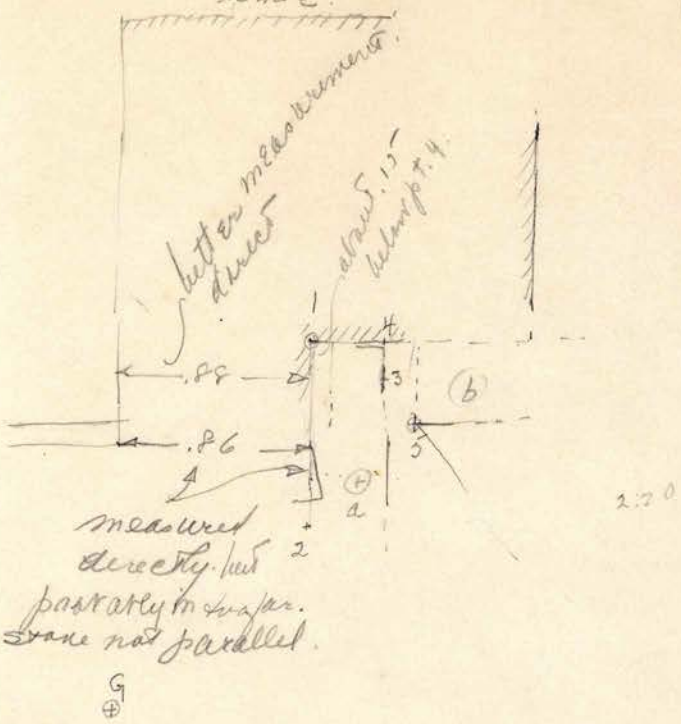
1 –

2 –

3 –

4 – 2.67 (9) 3.80 (A)

5 –



Level.

0 pt - i.e. pt 81 of floor has fallen; ergo!

1.21 = pt at rt jamb of right doorway.

1.24 = pt at left jamb of right

pt 4 = .74

a = 1.17 (?)

b = 1.40 ½

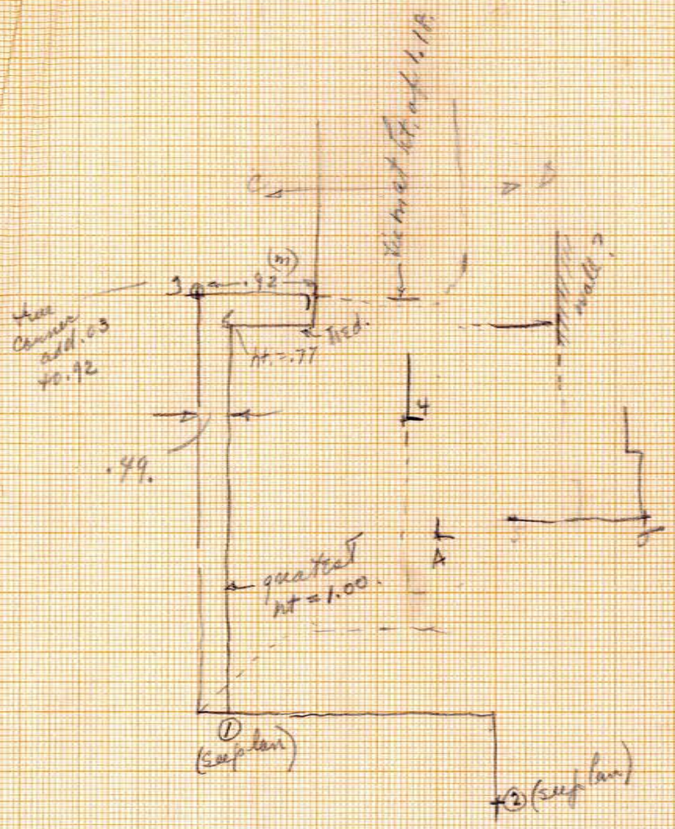
Jk J-4
May 20th, 1937.
Add .05 to long tape.

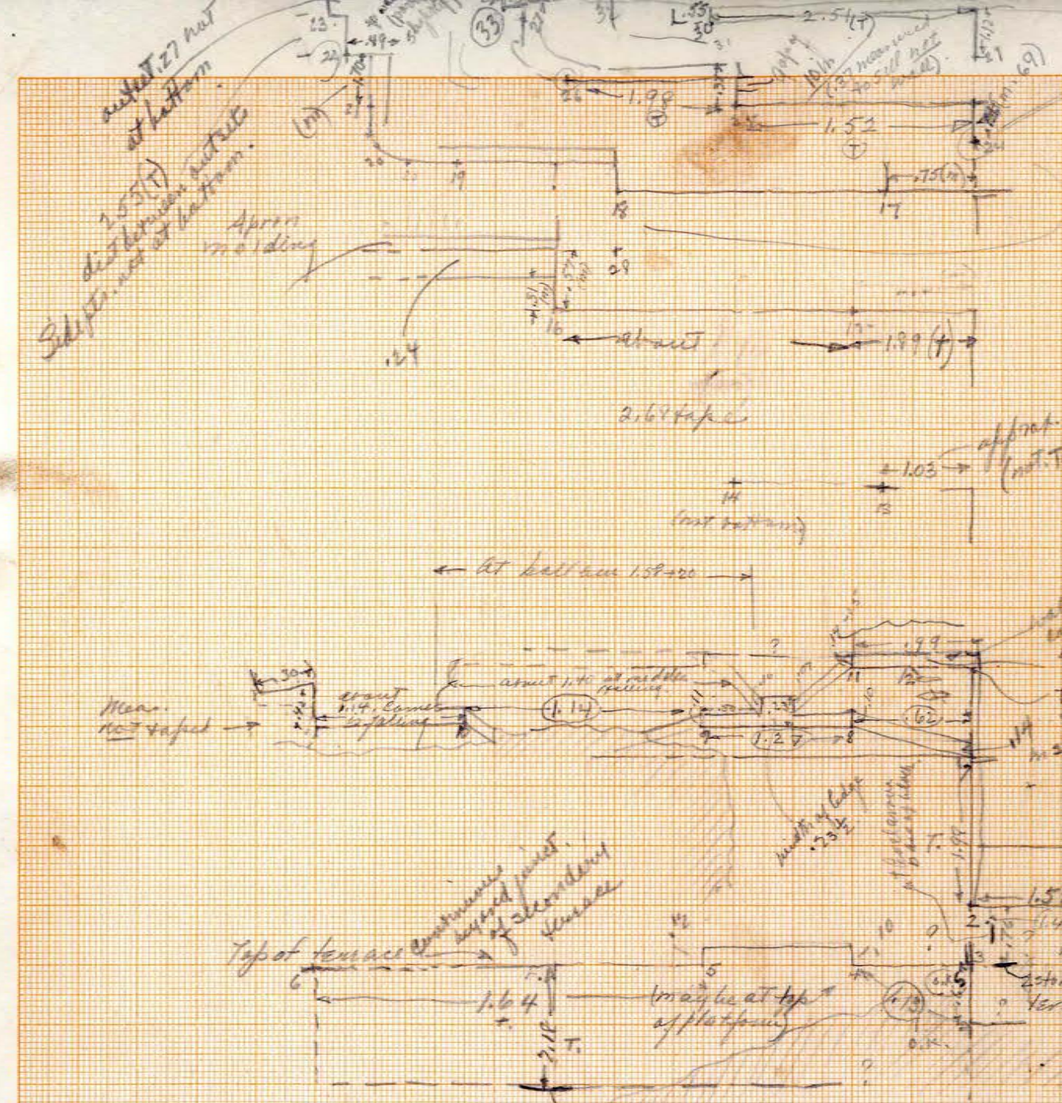
Pt A = 2.09 (1).
2.55½ (2)
3 - 2.00 prism (4)
5 - .55½ (3)(m)
mean 4 (A.)

From pt A to pt 2

pt 1	67° 29'	
3	191° 42'	
5	176° 13'	
4	184° 10'	
last sight pt 5	285° 30	2.02
6.	6 - 287° 30'	5.11

West prism (tape) A
1.54.


Hub
Hub
Hub



outset. 30 to sill.

Tape meas.
17 = 1.03' (28), 2.12 (T).
17 = 22.37 (28)
19 = 2.30 (18)
29 = 2.60 (30)

May 20th, 1937
Sta. J-4
Pyramid from Mag. stairway
Add .05 to tape.

A = Stake at point left corner I-2 substructure
B = Stake " " center I-2 subst.

At A, 0 on B. read right.

C = 228° 06' (also D) and E)

Pt 7	185° 33'
Pt 2	194° 15'
Pt 11	185° 58'
Pt 12	186° 42'
Pt 13	181° 41'
Pt 14	180° 27'

At D, 0 on A read rt.

Pt 11	119° 26'
12	120° 49'
9	117° 25'
8	120° 48'
7	122° 55'
2	129° 44'
5	128° 14'
4	130° 15'
3	132° 43'
14	114° 24'

At C on A read right

3	76° 45'
4	66° 40'
5	62° 06'

At C on A read right

30	75° 37'
29	(clear on)
32	70° 34'
31	71° 35'
(24)	(not rec)
25	73° 47'
26	69° 17'
27	68° 40'
(33)	69° 01'
32	65° 50
15	107° 51'
16	106° 42'
17	107° 17'
28	102° 30'
17	96° 15'
20	97° 32'
22	95° 40'
23	
24	106° 55'
26	(not rec)
27	96° 17
25	103° 12'
(33)	95° 0'
32	97° 36' (on fill wall (steel)
31	99° 14' (on fill wall)
30	100° 25'
29	105° 30'

At C on A read right

21	62° 55'
20	63° 16.
20	63° 17
19	64° 25
28	68° 5' 3
17	75° 26'
15	71° 35'
16	64° 20
13	24° 12'
14	70° 29'
11	66° 36'
12	70° 39'
8	69° 06'
9	63° 48'
10	59° 05'
7	70° 55'
2	71° 30'

At E, 0 on A.

30	65° 52
33	57° 46'
58	0° 0'
25	61° 55'
17.	62° 18'
28	56° 09'

24 — 64° 51 good

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J-4 (8)

J-4

Section at right of Stairway

6 cm top of panel adjoining J-2 Sub-structure = 3.90.

1 = 2.96½
2 - 2.55
3 - 2.64
4 - 2.36
5 - 2.35
6 - 2.34
8 - .86.
9 - .70 up - not quite Load - rods.
10 - about 1.55 up.
11 - .20.
12 - read 1.70 - 1.62½ too near trench line (front abby. st. bridge).
13 - .48.

T.P. 7 = 2.97.
36 - 3.69.
37 - 3.30
34 - .73.
31 - 1.13 (in right door)
30 - 1.17 (in Center door
1.43 (near left - most point)
32 - 1.61 (not certainly up
on Stem wall
35 - Appt. of side terrace in place
1.31.

T.P. 5 = 3.25
23 = 1.25½

T.P. 6 = .86 = pt. 24.

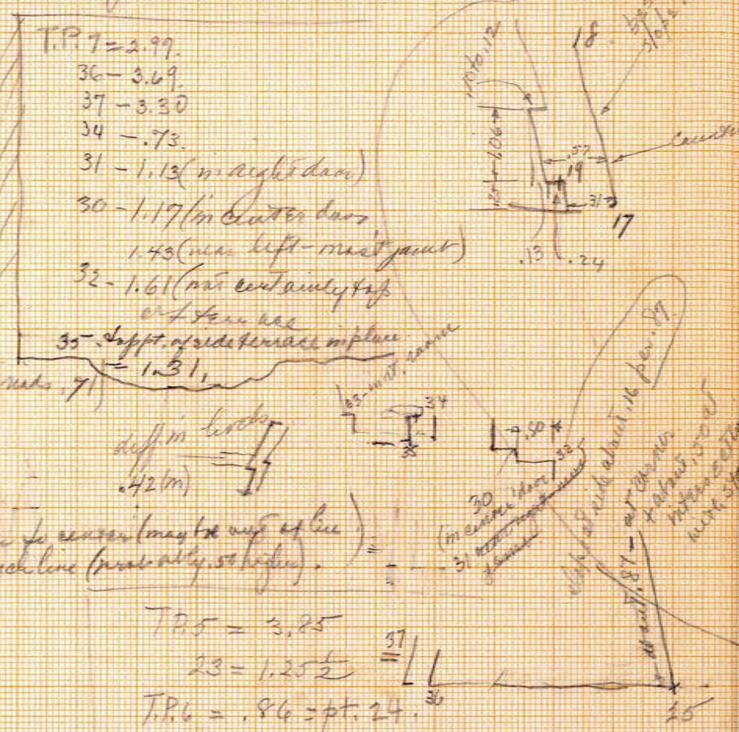
T.P. 6 = 3.17.
2 (about 100# below H.I at front
about .50 at side
25 = .77
T.P. 7 = .10 up.

T.P. 2 = 2.41
19 = 1.05½

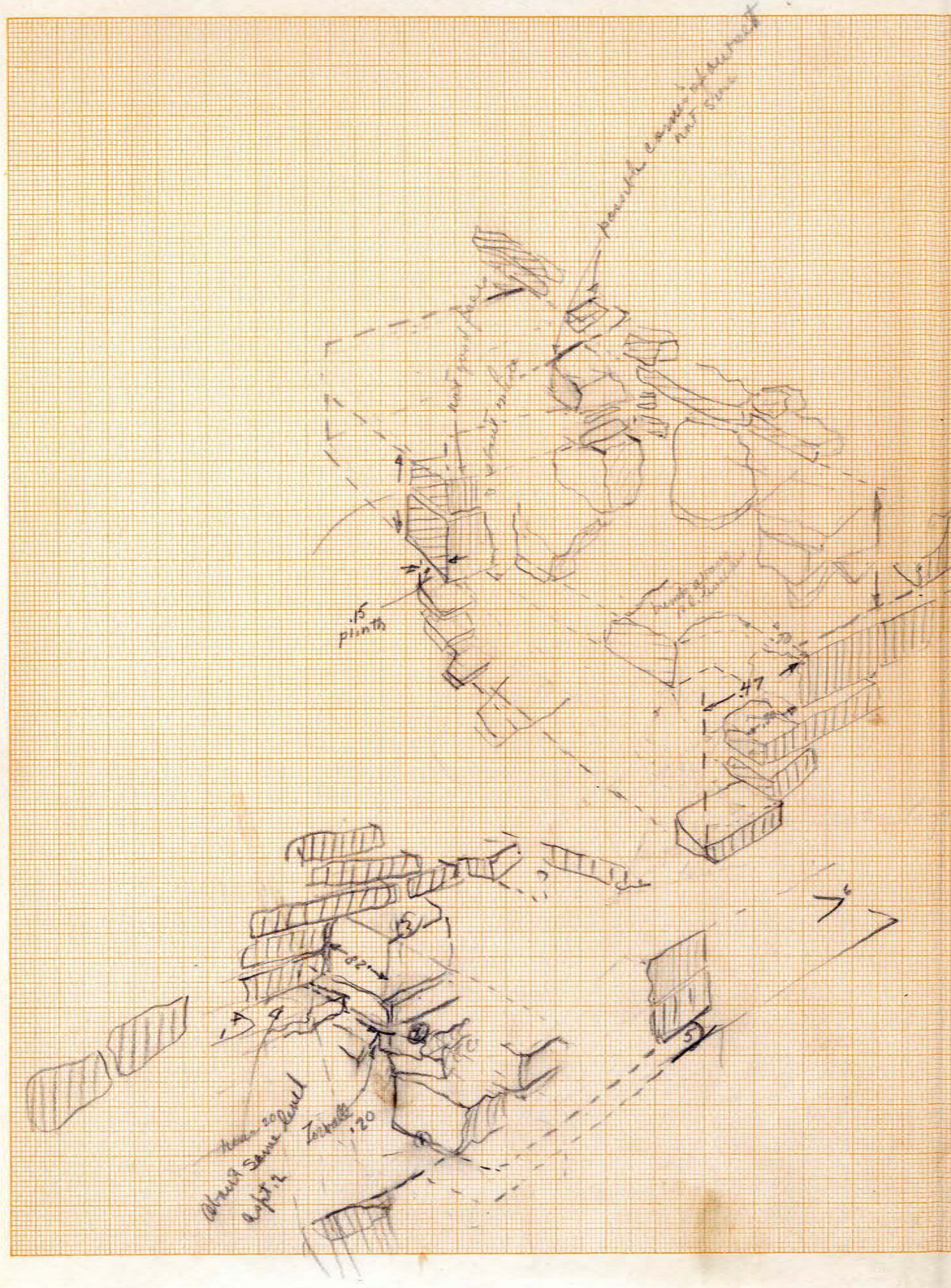
T.P. 3 one pt. 19 = 1.13.
17 - 1.36.
18 - 1.43 up.
T.P. 4 = .29 up. (Bt. of stairwall at intersection

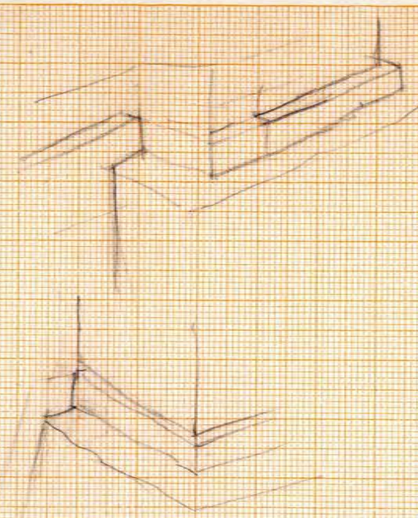
T.P. 3 = 3.38 (pt. 19)
20 = .45
21 - 1.57 up.
22 - .21
T.P. 5 = .28 on ledge at side near corner.

T.P. about pt. 9 = about 2.75 — T.P.
15 = 1.77½
x - .38 up - last pt of wall.
T.P. 2 = .86 up.



KEUFFEL & ESSER CO., N. Y. NO. 359-141 Millimeters.



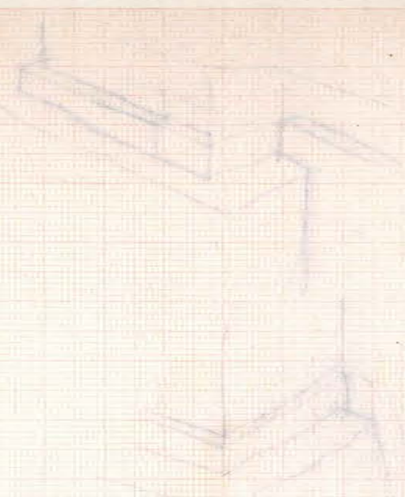


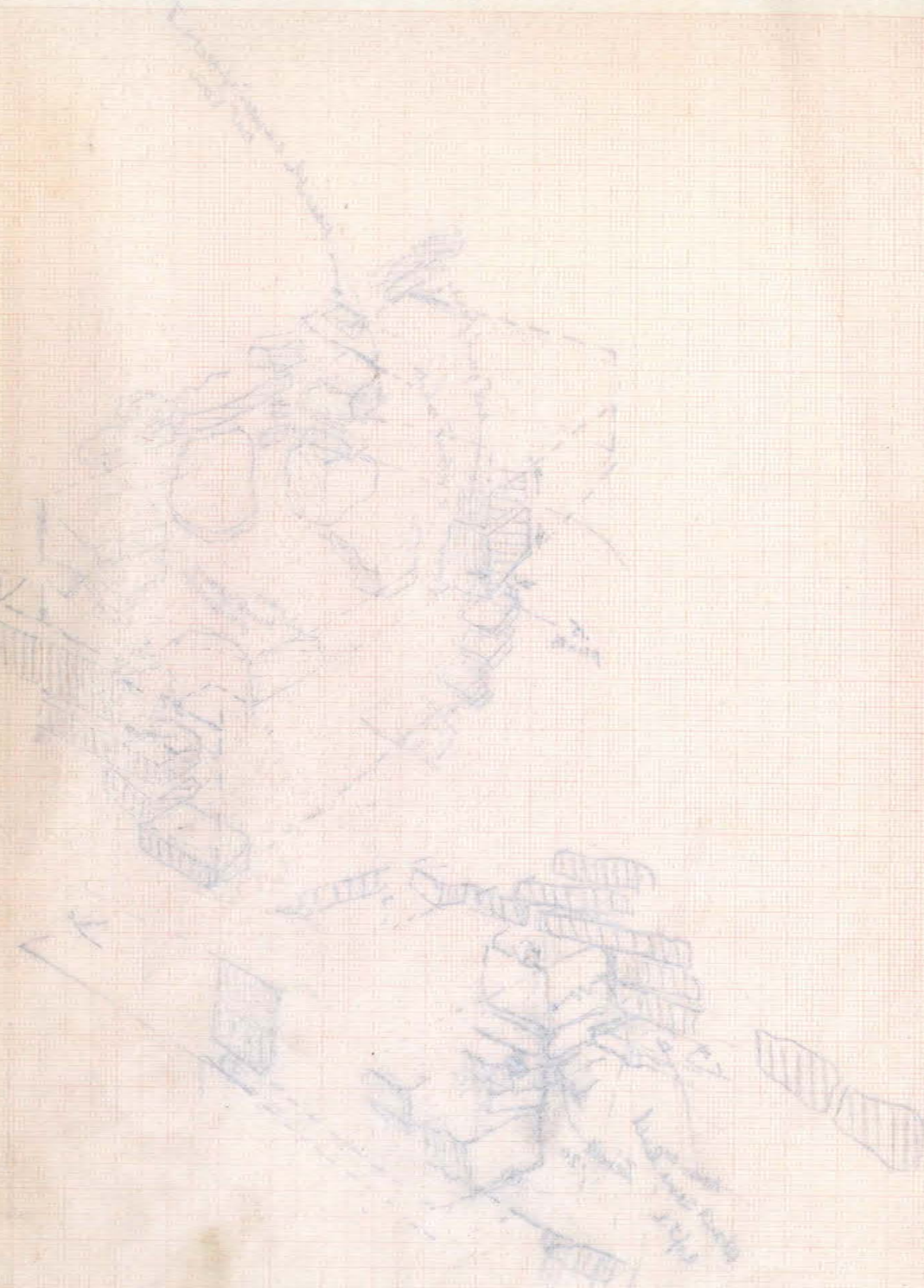
Str. J-4
Right Side

428
31
3

Levels - Right S. door pl. -.86
Center door - plinth -.89½
1) 1.09½
2) .69
3) -.46
4)
5) -1.28.
6 = 1.16 - last pt. on plinth
Ballance pt at corner .52 + below 6.

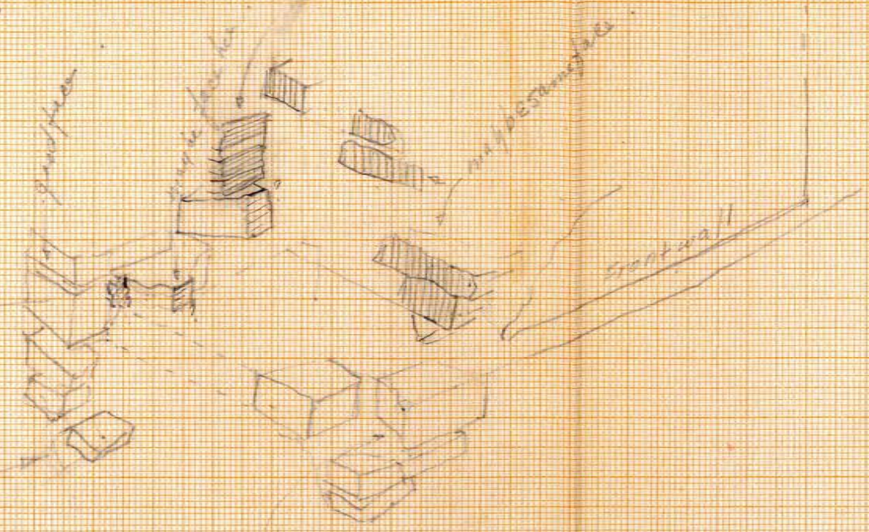
KEUFFEL & ESSER CO., N. Y. NO. 360-14L
Millimeters.





Juncts. J-4, J-6 & pts. on J-6 (1)

A on St. mon't pt. Juncts J.-4.
O on Stake near true front of J-6 road a right
1st. stake below J.-4 on Slate Terrace (stake C') = 296°
Pt. intersection J-6 & J-4 = 24°44'
Pt. 3 plumb J-6. -17°53'
Pt. 1) Corner stairway J-6 - 355°
Furthest corner J-4 not at bottom - 15°16'
Nearest point J-12 - 55°48'


Slate Terrace
Slate Terrace
Slate Terrace

J-4 (11)

J-4- J-6

Court II

① & ② – Check with Parris pts. A, & B, are Parris pts. A, is in end door of J-21, B, opposite center of J-12 as shown on p. 3. Δ 1 is on terrace of J-22. Results show discrepancy with Parris observation in distance A-B of .55 min. Angles of triangle A-1-B give perfect check. Distances are read by stadia measurements.

③ – Sketch of traverse pts. Court II

④ – Measurements of pts. used in measuring court II bldgs. Tape error is .08 for 1st 10 m. & .04 for 2nd 10 meters. Since ≠ in accuracy of tape was discovered after pts. were measured and measurement of pts. was not made at the same time same accuracy in distances is to be expected. Drawing of court II has been made with the above correction and is practically as nearly accurate as possible with these measurements.

⑤ – Embatido walls below court II level (plan only)

⑥ – Plan of upper part of stairway back of J-11 leading up to J-22.
Right – width of alley back of J-11
Below – Checks on Court II points

⑦ – Plan of stairway back of J-11 with section at lower left. Section is composite taken at pts. but preserved ≠ numbers refer to plan pts.

For levels – see individual bldgs.

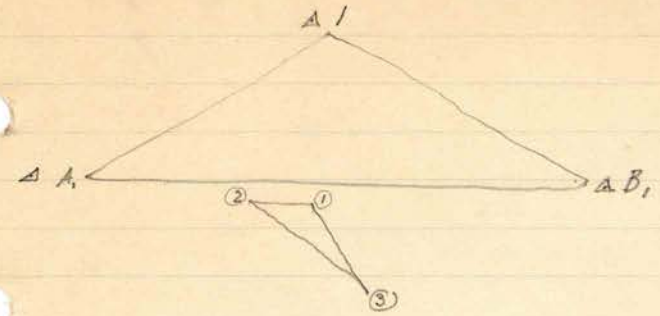
(H E 1)

PIEDRAS NEGRAS 4/32 193 6 STR. Court 2

OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS Calculations for pts. see p. 10 Survey Bk



At A Stadia on B. Formula:

1.535
1.000
.535 x 100 = 53.5

Horiz dist = 100 x Rod read. x cos² vert ∠ + .3 Cos vert ∠.

A1 B1 = 53.5 x cos² 11°5' + .3 cos 11°5'

= 51.52 + .2944.

AB = 51.81

log cos 11°5' = 9.99180 -10

log cos² 11°5' = 19.98360 -20

log 53.5 = 11.72835 -10

31.71195 -30

log cos ∠ 9.99180 -10

log .3 9.47712 -10

19.46892 -20.

Slide rule 53.5 + .3 = 53.8

1.98+

51.82

51.52
.2944
51.814

Porro obs. 1.688 ∠ = 10°57'
1.160
.528 x 100 = 52.8

A1B1 = 50.88 + .2945

.29

51.17 - Porro result

log cos 10°57' = 9.99197 -10

log cos² " = 19.98394 -20

log 52.8 = 1.72263

21.70657 -20

log cos ∠ 9.99197 -10

log .3 = 9.47712 -10

19.46909 -20

$\perp$ $\triangle$ 1 to B, $\frac{.920}{.600}$ $\angle = 13°17'$

$\frac{.320}{.920} \times 100 = 32.$ $\underline{B\text{-}1} = 30.31 + .292$

$\log \cos 13°17' = 9.98822 - 10$ $\qquad .292$

$\log \cos^2 \angle = 19.97644 - 20$ $\qquad 30.602$

$\log 32 = 1.50575$

$21.48159 - 20$

$\log \cos \angle \quad 9.98822 - 10$

$\log .3 = 9.47712 - 10$

$19.46534 - 20$

$\perp$ $\triangle$ 1 to A, $\frac{1.304}{1.000}$ $\angle = 5°32'$

$\frac{.304}{1.304} \times 100 = 30.4$ $\underline{A\text{-}1} = 30.12$

$\log \cos \angle = 9.99797 - 10$ $\qquad + .2986$

$\log \cos^2 \angle = 19.99594 - 20$ $\qquad 30.42$

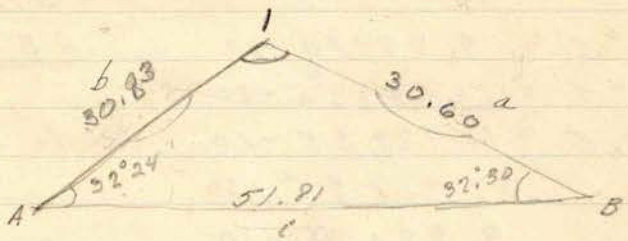
$\log 30.4 = 1.48287$

$21.47881 - 20$

$\log \cos \angle = 9.99797 - 10$

$\log .3 = 9.47712 - 10$

$19.47509 - 20$



$\angle B = 180° - \angle A - \angle 1$

$\angle 1 = 115°.6'$ $\qquad 179\ 60$

$\angle A = 32°24'$ $\qquad 147\ 30$

$147.30'$ $\qquad 32°30$

$\angle B = 32°30'$.

Formula. $\quad b = \frac{30.60}{\sin 32°24'} \sin 115°6'$

$\log 30.60 = 1.48572$ $\qquad b = 51.72$

$\log \sin \triangle 1 = 9.95692 - 10$

$11.44264 - 10$

$\log \sin A = 9.72902 - 10$

1.71362

Check for $\angle A$

$\tan \frac{1}{2}(A-B) = \frac{30.60 - 30.12}{30.60 + 30.12} \tan \frac{1}{2}\ 64°54'$

$\log .48 = 9.68124 - 10$ $\qquad = \frac{.48}{60.72} \tan 32°27'$

$\log \tan \angle = 9.80385 - 10$

$19.48459 - 20$

$\log 60.72 \quad 1.78333$

$17.70126 - 20$

$\log \tan \frac{1}{2}(A-B) = 7.70126 - 10$

$\frac{1}{2}(A-B) = 17'$

$A - B = 34'$

$A + B = 64°54$

$A - B = 34'$

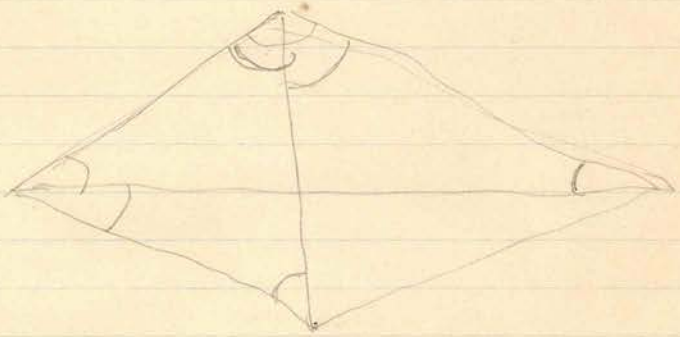
$2A = 64°88'$

$A = 32°44'$

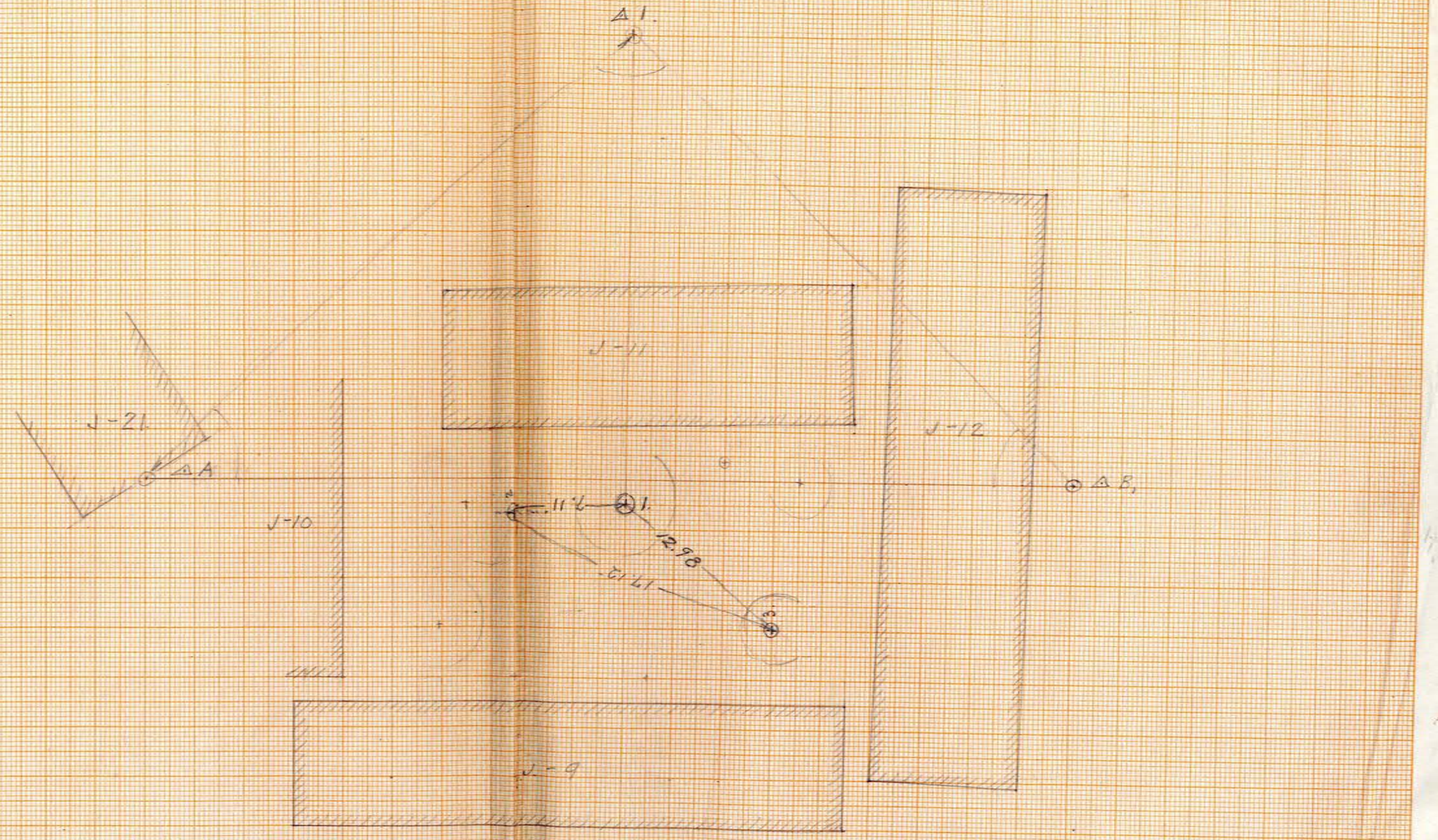
a, c - 5.86 , b - 2.87 , g - 5.51

g c - 8.18 , b - 6.66 , f - 6.72

f c - 3.02 , a - 6.76



Cour I II



KEUFFEL & ESSER CO., N. Y. NO. 359-14L
Millimeters

Ct II #3

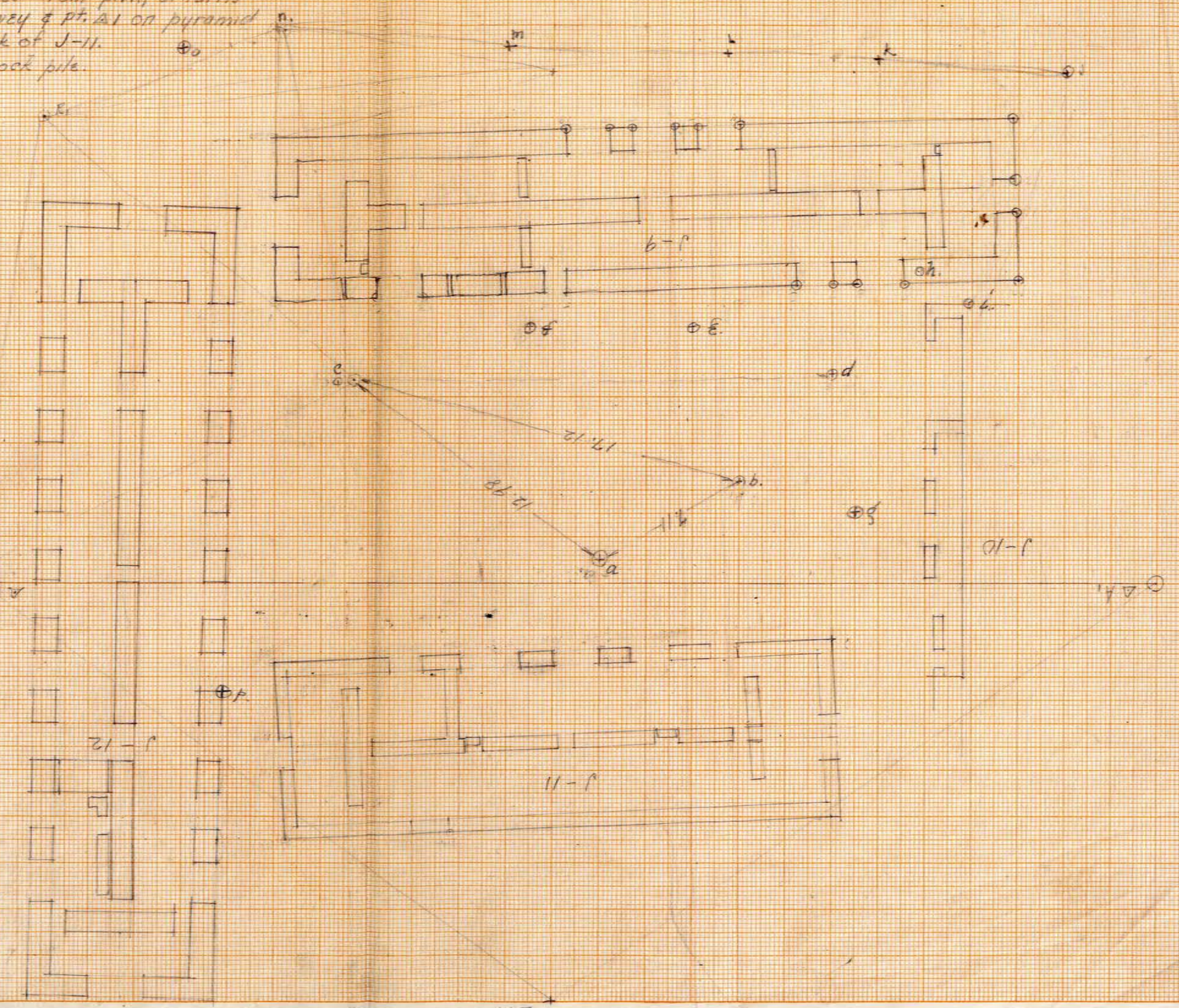
Count II

Base pts for taper-measurement of bldgs.
on court II. Jeep. -p of Survey bk no , 1936.

Court II

Elev. Elev. +.08 feet to no. +. o-k 2nd floor.

a	b - 7.11	c - 12.98	on rock-pile, center.
b	a - 7.11	c - 17.12	on edge of rock-pile
c	a - 12.98	b - 17.12	on stump
d	c - 20.42	b - 5.54	a - 12.46 (98) on edge of rock pile.
e	a - 8.32	b - 5.82	on peak: on stump.
f	a - 8.62	c - 7.32	ε - 5.54 on pole
g	c - 16.77	b - 12.89	p - good measurement.
h	c - 16.60 approx 68	p - 11.19	
i	b - 4.79	d - 6.46	on peak of rock pile
k	d - 4.30	(ε - 11.44)	on tree trunk
l	b - 11.12	(p - 13.11) h - 5.07	a - 16.77 g - 8.42 on base of tree
j	h - 12.92	i - 11.02	
k	j - 11.30	k - 8.45 (4.01)	in line
l	j - 17.35	ε - 6.05	with j-k.
m	j - 27.88	L - 10.52	n - 7.48.
n	p - 11.99	o - 9.67	
o	c - 12.49	R - 7.81	
p	a - 14.86	c - 13.25	
q	g - 9.82	g - 5.39	i - 2.21
r	q - 4.52	a - 12.82	
s	a - 15.45	v - 2.75	
t	a - 14.81	v - 2.05	
u	a - 16.51	h - 12.10	q - 8.99 (on chichen tree)
v	a - 10.54	u - 8.89	q - 10.76 (over j-u doorway)
w	b - 11.75	t - 16.36	s - 11.40 v - 13.28
	p - 8.64	c - 15.37	a - 11.32 (on j-u wall)



Ch II (4)

Caust II
For instrument Checks
on Caust II See J-11
& J-13, sheets

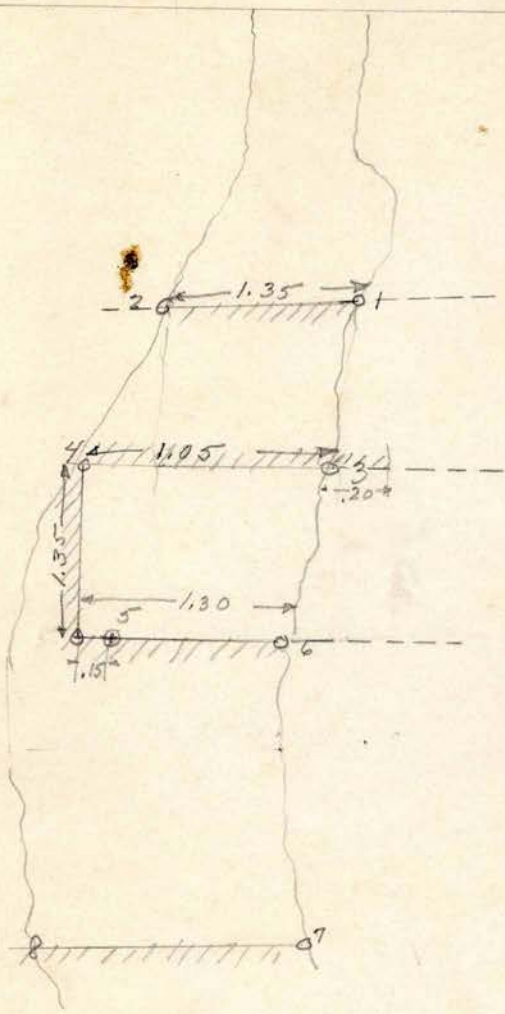
Court II (5)

PIEDRAS NEGRAS 4/9/26 193 STR.

OP. No. MUSEUM CAT. Court II

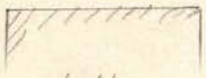
SCALE SEE PHOTO Nos.

REMARKS Rough embatido walls
correct .08 per 1st 10 m.
.04 " 2nd 10 m.



1,	b	- 8.04	a 5.38
2,		- 8.20	6.02
3,		-9.70	5.55
4,		9.92.	6.39 or 6.49 ? see 3
5		-11.12	6.10
6,		- 10.93.	5.50
7,		- -14.30	6.30
8,		- - 14.58	7.42

⊕ a = pt. a of plan of court II



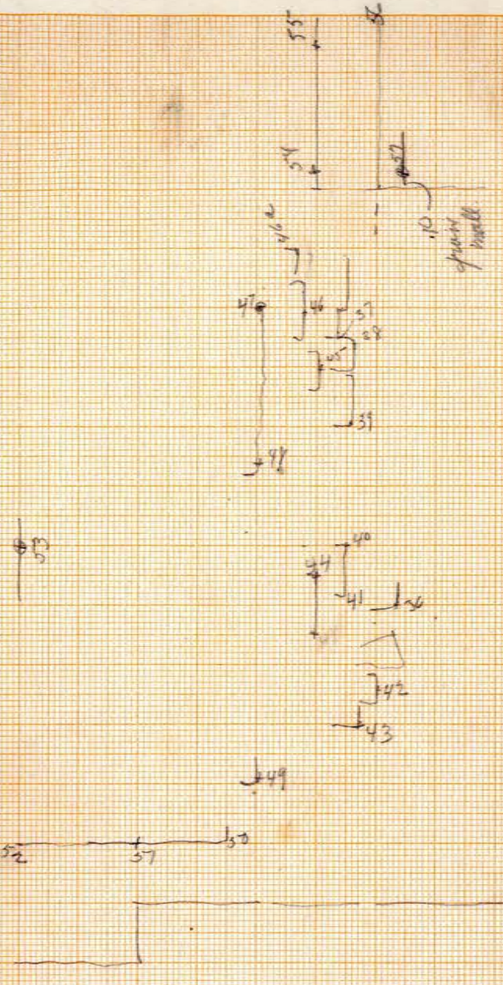
J-11
1st pier
from left.

PIEDRAS NEGRAS 6/16 1936 STR.

OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS See other sheet for sketch of sta.
Stair back of J-11.
Connection at pin 4m.



40 - .65 (39) 1.38 (34)

41 - 1.10 (39) 1.53 (34)

42 - 1.44 (34) 2.08 (4)

43 - 2.02 (4) 2.86 (34)

44 - .21 (41) .51 (40)

45 - 1.72 (34) 2.49 (6)

46 - 2.05 (34) 2.08 (6)

46a - 1.64 (6) 1.92 (35)

47 - 1.92 (6) 1.50 (39) .83 (38)

48 - .66 (39) 1.09 (41)

49 - (permanent corner of upper terrace)
1.18 (I) 2.41 (J)

50 -

51 - 1.64 (K) 1.56 (J)

52 - 1.57 (K) 1.53 (L)

53 - 2.21 (39) (3.62 (35) - not very good

54 - 2.78 (I) 2.83 (A of J-13)

55 - 2.97 (L) 1.98 (A of J-13) 1.72 (I)

56 - 2.60 (I) 2.28 (A of J-13) good. 1.41 (6)

57 - 1.98 (I).

(I) - 1.48 A of J-13 (not so good)
5.98 (39 of J-13)

(6) - 3.70 A of J-13 - (good)

(15) - 10.57 (A of J-13)

(H) - 10.73 (A of J-13) good.

(10) - 8.24 (L)

Widths of alleyway at rear of J-11

at H - 5 feet
at I -
at J - .90.
at K - .88
at L - .86
at M - .82
at N - .73.

Checks on reverse pts of count II,
triangulation from J-11.

K at 9, on last step back of J-11, read right
6 on G at end of traverse line back of J-11

Stake R of J-11 - 61° 03'

Stake 9 of count II - 85° 53'

Point K on tree on J-9 - 95° 03'

Point M - on chicken tree - 123° 49'

Point A of Count II traverse - 86° 14'

Pt W on J-11 = 38° 50'

Pt C of Count II = 42° 38'

K at R of J-11 0 on A of J-11 read. left.
Q of J-11 = 121° 08'

Pt 9 of Count II survey = 231° 0'

Pt M on chicken tree - 157° 17'

Pt H of Count II traverse - 244° 40'

K at A of J-11 0 on R of J-11 read rt.
G = 107° 25'

pt E - 92°

Court II

(6)

Stairway back
of S-11

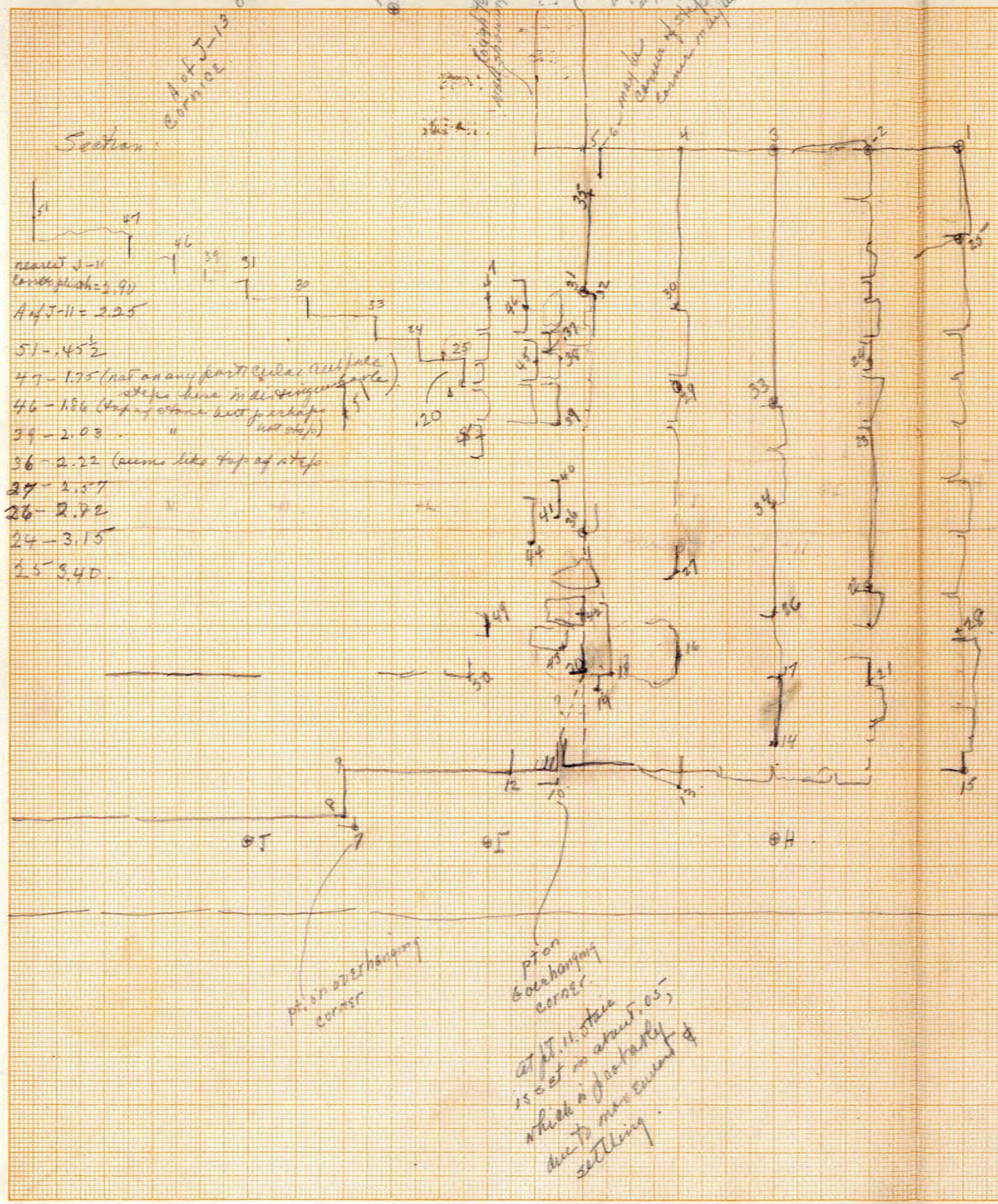
Checks in Court II
Survey

PIEDRAS NEGRAS 4/16/36 193 STR. 1 (Court 2)

CO. NO. MUSEUM CAT.

SCALE 1" = SEE PHOTO Nos.

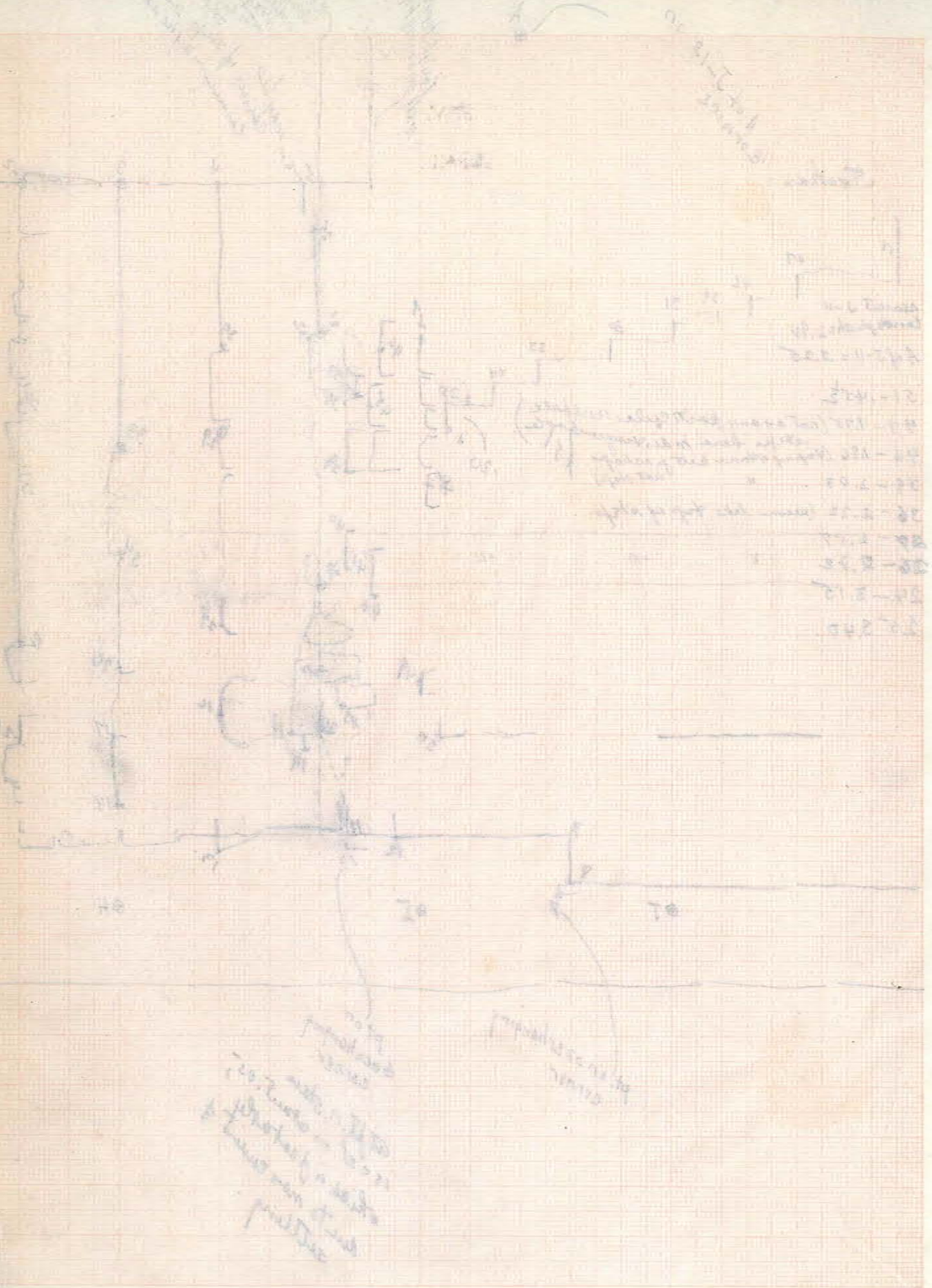
REMARKS Cross, Elev. - .01 per 4.00 m.



Court II

(7)

Stairway back of
J-11



J-9

(1) Plan & section showing J-9 plinth with earlier plinth & embatido wall below.

(2) - Plan J-9 with location of points measured on p. (3) Below note location of pts used for interior measurements e.g. pt. 3 is located in correct position & is corner of pier. When used in locating pt. 56 it is moved to position shown in the lower sketch.

(3) - Measurement of pts. shown on p. (2) see note above.

(4) - Rear Elevation J-9 showing levels of plinth & cornice. Pt 12 & incised cross in doorway used as 0 for court H levels. Pt. 22 in right column of headings is probably pt. 32 on vault spring. Lower left - right Elevation.

(5) - Upper-center - Vault sections at intersection of front & rt. transverse walls. Note that pt. 27 is the same pt. in both sections Below - debris sections - Note that reference pt 23 is clearly shown on sketch at left and corresponds to pt. 25 on p. 4. There is no doubt from my own recollection that the pt. used was pt. 25 of the rear elevation.

(6) - Front Elevation J-9. Below - sections of cornice.

(7) - Details & vault sections. Upper-left - position of glyphs in end door. - Below - curtain holder? Rt. - detail of door. Below - vault section. Note that reference pt. numbered 23 is actually pt. 25 of p. 4 - see also note p (5).

(8) – Plan of end-room facing J-12. At right interior elevations – above: end wall, below – transverse wall showing filled-in doorways.

(9) – ~~Left~~. – plan of central rear room. Rt. – interior elevations of rear & medial walls. Levels in room with reference to level of pt. 14 on J-11 p. (18) plan. (pt. 13 of sections)

(10) – Plans of 2 adjoining rooms containing benches (left of center). Below – sections thru benches – levels on next page.

(11) – Joint plan of the 2 rooms shown on page (10). E of J-11 is pt. on stump shown on ~~pg~~. J-11 p. (2) & (3).
Below – sections of vaults on secondary walls back of benches. Left – rear rm.
Rt. – front room.

(12) – Plan of rear rm. to rt. of center, with section below.
Center – "* at a" read "* at A" – This refers to pt. located in left column of figures from pts. 3 & 4.

(13) – L. – Hts. of standing walls in rear rm. of 2 adjacent bench-rooms. Thickness of wall filling up transverse-wall doorways.
R – Front bench room, showing curtain-holder in medial wall.

J-9 — Levels.

1) Engraved cross in rear doorway = 0. This zero is used for Court II levels & ties with Court III. No relation measured with zero of J-2 substructure used as 0 of Court I and J-4. Approximate relation may be calculated from L.S. notes of ht. of J-9 plinth over J.-6.

2) There is an error of .10 in the relation of this 0 and pt A of J-11, from which many levels are measured. J-9 p. (4), A of J-11 (T.P.1) = 0 + 1.38 on J-11 p. (7), A of J-11 = 0 + 1.50. From calculation 1.40 seems correct & since o reading on J-11 p. (7) also check, the error is probably in reading of T.P.1 = 1.01¾ which should read ~~1.01¾ or 1.12~~. This has been used in calculating heights.

3) −.27 = plinth J-9, left rear corner
+.03 = " " right " "
−.16 = " " approximate center, rear.
−.06 = " " right front corner
−.40 = " " left " "
−.32 = " " front center door.
For cornice & vault hts. see restored drawings.

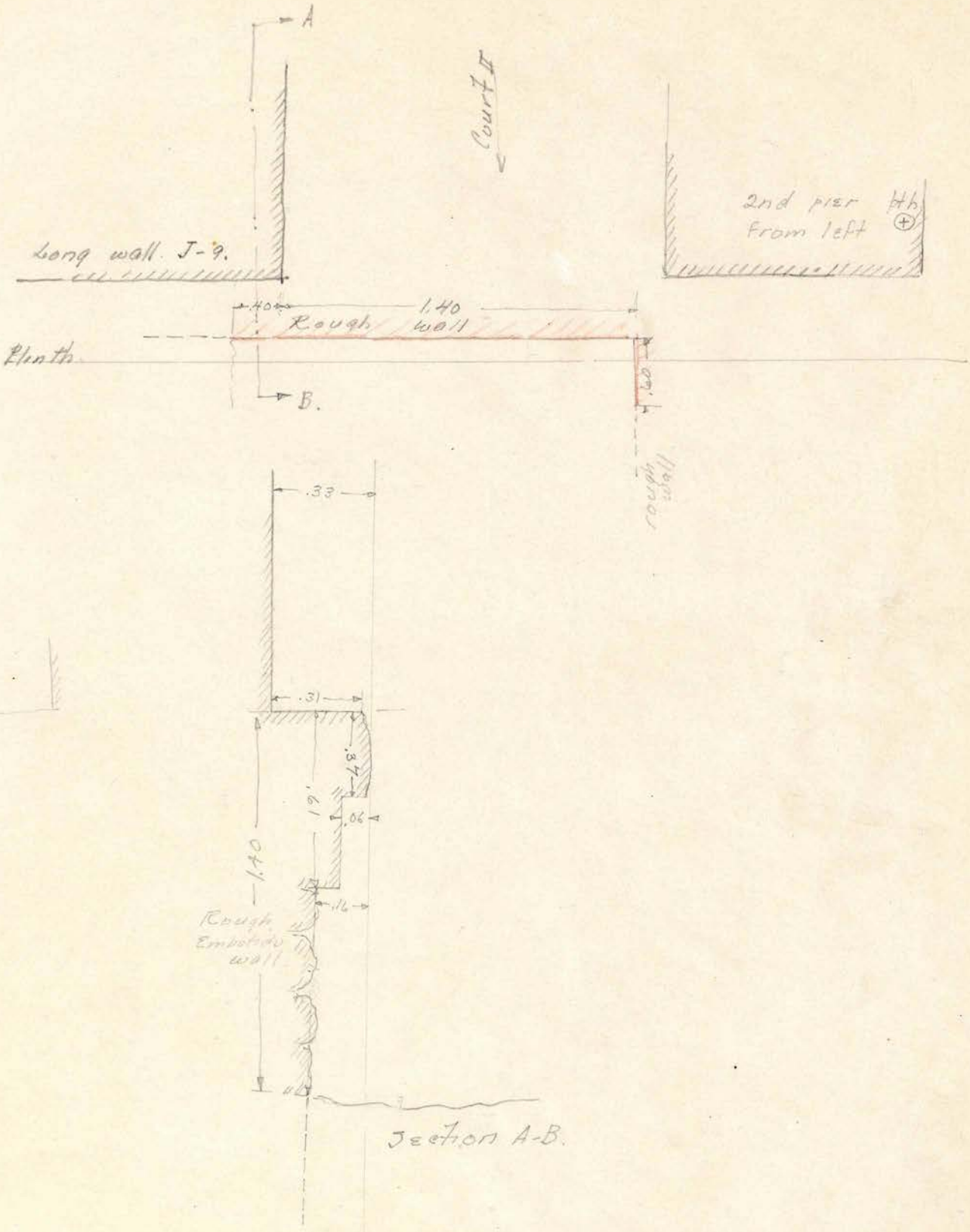
J-9 (1)

PIEDRAS NEGRAS 5/8 1936 STR. J-9

OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS Fill wall under J-9. Court II facade
3rd doorway from left



46 — P-6.80
7 — 7.50

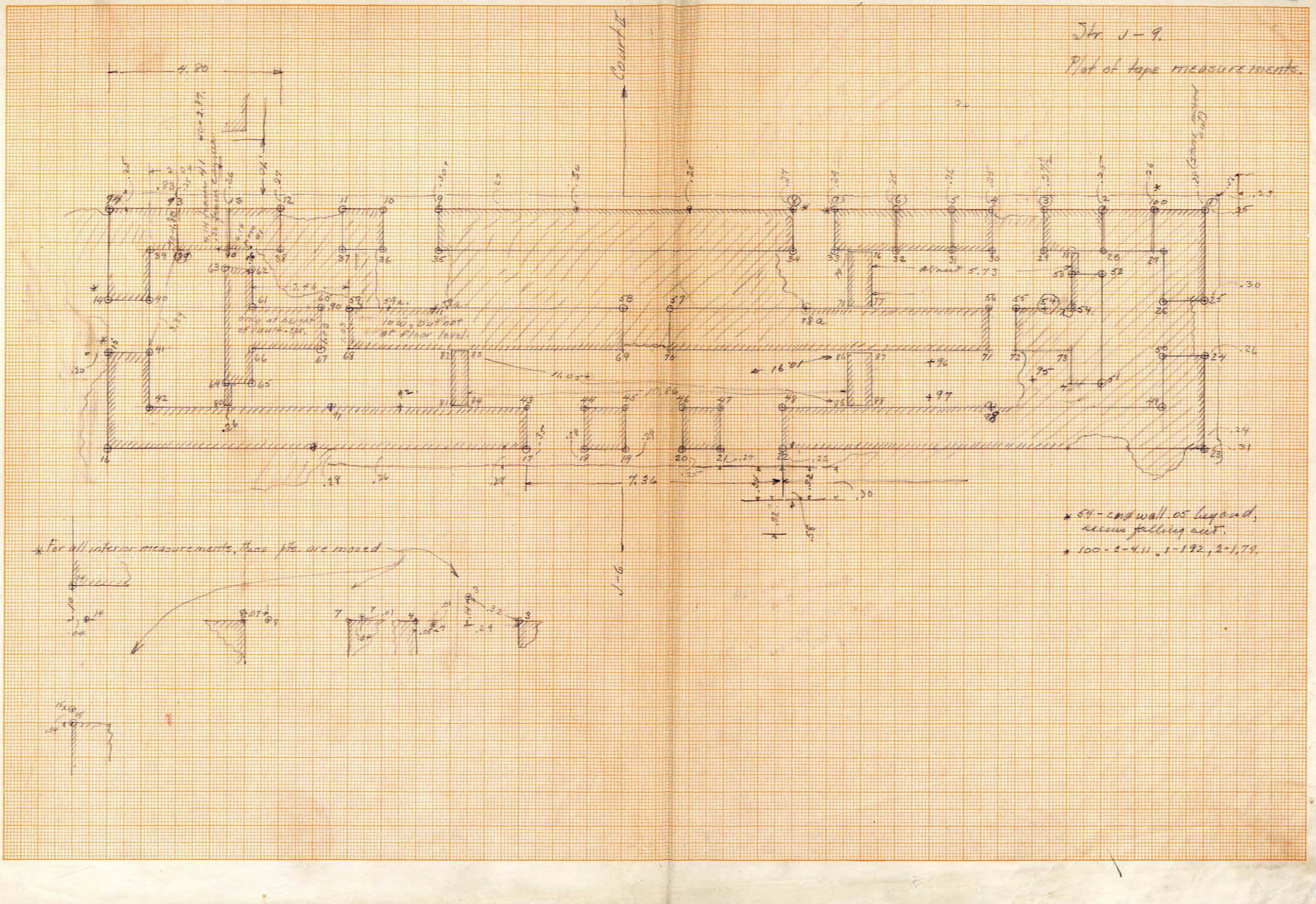
48 — P-5.95
7 — 6.10

137
11

(1) P-6

Str. J — 9.

Plot of tape measurements.



* for all interior measurements, these pts. are moved

* 54 - end wall .05 beyond, recess falling out.

* 100 - e-4.11, 1-192, 2-1,79.

KEUFFEL & ESSER CO., N. Y. NO. 359-14L
Millimeters

J-9 (2)

J-9 plan.

Structure J-9

Tape Measurements

1	c - 4.25	f - 8.98	d - 2.56	45	19 - 1.21	21 - 2.09	49 - 1.20	45 - 1.55		
2	3 - 1.14 +	crack .06	f - 5.85 + .04	44	17 - 2.01	43 - 1.20	(16.86 frame			
3	c - 5.44	f - 4.73		43	17 - 1.16	48 - 2.08				
4	(above)	f - 3.54	e - 9.51							
5	f - 3.10	e - 6.78	e - 3.54	50						
6	c - 9.15	f - 3.18	e - 5.23	51						
7	c - 10.71	6 - 1.70	f - 7.02	52						
8	c - 11.85	7 - 1.20	f - 4.73	53	39 - 1.04	30 - 3.47	57 - 2.78			
9	c - 8.89	d - 8.69	g - 10.07	54	(- 1.82)	4 - 3.66	49 - 1.75	high & approx		
10	e - 10.53	d - 5.38	g - 3.45.	55	4 - 2.99	3 - 3.08 - .09	39 - 1.84.	39 - 1.79.	55 - 1.52	95 - 2.39.
11	e - 11.61	d - 4.46		56	c - 2.78	3 - 3.34	29 - 2.31.	high & approx. 30 - 1.60. (155 - .79)		
12	e - 13.28	d - 5.91	4 - 1.27	57	58 - a bit very little approx. width of well =					
13	d - 6.99	12 - 1.15	g - 1.10 - 2	58	9 - 2.85	14 - 3.17				
14	1 - 4.24	h - 7.38	f - 6.79	59	9 - 3.26.	10 - 2.87				
15	k - (8.32)	j - 8.36	14 - 1.70 - (1.45)	60	12 - 2.99	d - 7.18.	62 - 1.75			
16	j - 4.50.	k - 7.39	15 - 3.58	61	12 - 3.92	d - 8.16				
17	k - 2.49	k - 5.61		62	12 - 2.10 *	61 - .84	59 - 2.82	* 2 cm. in front of frame corner - 63 - .88	90 - .95	d - 7.59.
18	k - 7.06	k - 2.48	m - 10.28	63	(about 4 ft	from 15 - 67	frame access	ft cm wall measured	39 - 2.29	62 - .86
19	k - 8.20	k - 3.09	m - 9.06	64	4 - 5.14)	41 - 2.17	40 - 2.96			
20	k - 4.31	m - 7.53		65	64 - .86.	91 - 2.47	66 - .94	(leaning into room about .03 cm.		
21	k - 5.34	m - 6.46		66	91 - 2.79.	67 - 1.69	(approx.			
22	k - 6.88	m - 5.05	21 - 1.62.	67	60 - 1.04	59 - 1.36	92 - 3.15	91 - 1.78 to 1.80		
23	0 - 2.90	k - 10.29	14 - 4.09	68	60 - 1.42	59 - 1.08	92 - 2.38	91 - 1.68		
24	o - 4.42	k - 10.46	2 - 2.30	69	46 - 3.31	45 - 1.67				
25	o - 5.88	23 - 9.29	24 - .92	70	46 - 1.70	45 - 2.28	48 - 3.37			
26				71	38 - 3.62	39 - 3.16	95 - 1.28	55 - 1.38	56 - 1.12.	(structure in from front line of wall. wall leaning forward outside)
27		(not directly		72	56 - 1.37	55 - 1.11	71 - .82			
28				73	(un excavated					
29	4 - 3.01 +	3 - 1.40 +		74						
30	4 - 1.29	3 - 2.00 th. d	29 - 1.60 - .61	75	29 - .73	30 - 2.32	54 - 1.60			
31		above		76	52 - 3.75	30 - 3.37				
32				77	30 - 3.72	56 - 3.35		(approx. 13.65 shown)		
33	7 - 1.23.	8 - 1.67	a - 11.92	78	8 - 3.39	33 - 1.81 (2)		78 2 7 - 3.92.	33 - 1.75	
34	7 - 1.68	8 - 1.16	33 - 1.16.	79	33 - approx .40 as	like - have	muddy pottery and			
35	4 - 1.15	10 - 2.02		80	41 - 2.41.	41 - 2.42	40 - 3.05	64 - .75		
36	10 - 1.20	9 - 2.04.		81	92 - 1.47 (rough by)		91 - 3.53 (rough)	68 - 3.56 (good)	82 - 1.72	(secondary wall & concave - wall probably face outward.
37	(above	4 debris	(concentrated	82	92 - 2.23	68 - 3.16				
38				86	70 - 3.11	48 - 3.47				
39	40 - 1.47	41 - 3.19	30 - 4.72.	85	48 - 2.23	70 - 5.40	96 - 1.57			
40	14 - 1.31	15 - 2.04		84	49 - 4.46.	43 - 1.20				
41	14 - 2.05	40 - 1.74.	15 - 1.19.	83	49 - 4.21	41 - 2.09	84 - 1.58	70 - 5.14		
42	41 - 1.82	41 - 1.20	90 - 2.20.	87	48 - 1.58.		91 - 1.96.			
43	22 - 1.26	21 - 2.09.		88	96 - 1.84½	97 - 1.05	87 - 1.79.			
44	21 - 1.19	22 - 2.10	43 - 1.72	89	41 - 3.39	40 - 1.77				
46	30 - 1.19	14 - 1.94		90	15 - 5.01.	41 - 4.27	40 - 3.07.	90 to wall - 4.42.		

Correction:
.01 per 1 m. 1st run
.01 per 2 m radius

91 — 64 - 3.32 f - 5.50
92 — f - 5.48 i - 9.17 - 91 - 2.07
93 - 9 - 2.39.
94 - 9 - 4.12 i - 2.18. 16 - 6.82. 15 - 4.26
96 - m - 5.50. n - 9.26 85 - 2.12½. 14 - about 2.54.
97 - m - 4.49 (road also 4.41) n - 8.88 95 - 2.46. 96 - 1.18.
95 - m - 5.59. n - 7.40 4 - 5.24 3 - 5.50
98 - 87 - 3.83 71 - 2.02

* pt. 90 was not in pit but in field in drainage. Corner appears about .06 beyond to the East.

KEUFFEL & ESSER CO., N. Y. NO. 466-141 Millimeters

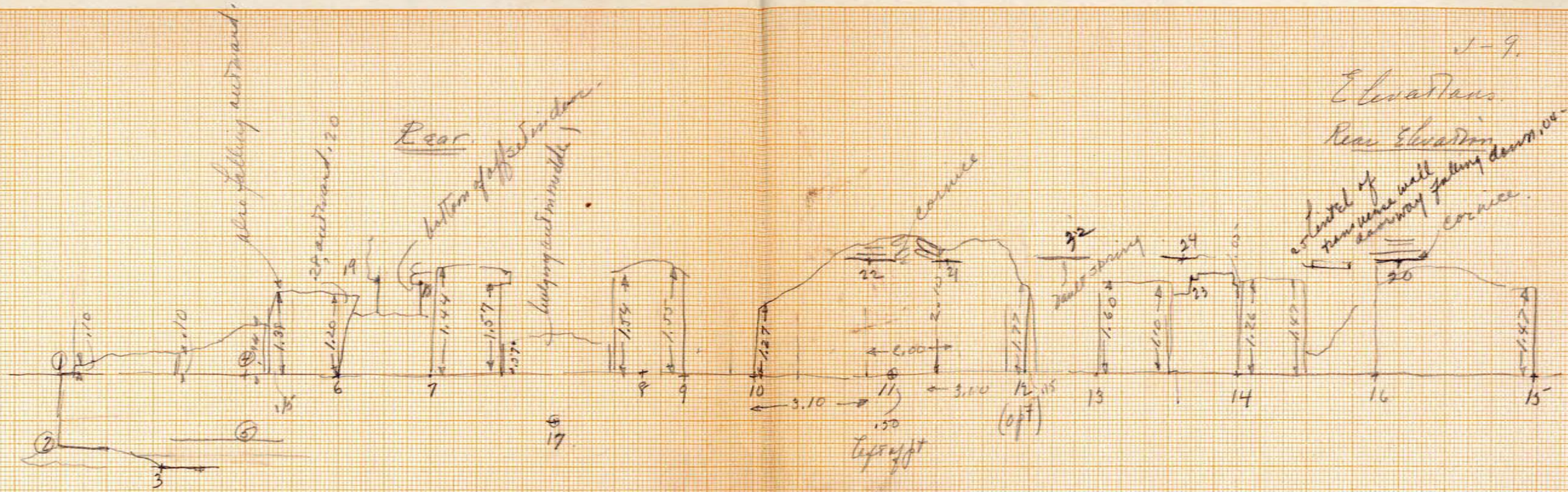
J-9 ③

J-9
plan
measurement

J-9.

Elevations.

Rear Elevation



T.P. - Pt A of J-11 = .66

1 = 2.31

2 = 3.12½

3 - 3.19

4 = 2.28

5 - 2.23

6 - 2.27

7 - 2.27

8 - 2.26½

9 - 2.25½

10 - 2.27

11 - 2.20

12 - 2.04

13 - 2.10

14 - 1.96

16 - 1.99

15 - 1.99.

17 = 2.66.

Check on ft on J-11

② - ft opposite left jamb left doorway - 1.37

③ - ft on left side of trench (right of 3rd ft from left) - 1.26.

18 - .49.

19 - .01 up. Vault of sarg. .31 below this ft.

20 - .17 up.

21 - .03 up - maybe lifted by roots.

22 - .35 down, stone leaning down - this measurement probably .04 low on account

(0 (pt in 3rd right rear doorway incised with cross) = 2.95

~~J-11 facing pt 2 on 4th step from top back of bldg~~ -

2.12 right side of trench in J-11 - near left corner of 1st ft in from right.

0 ft in J-11 near medial wall - 1.95

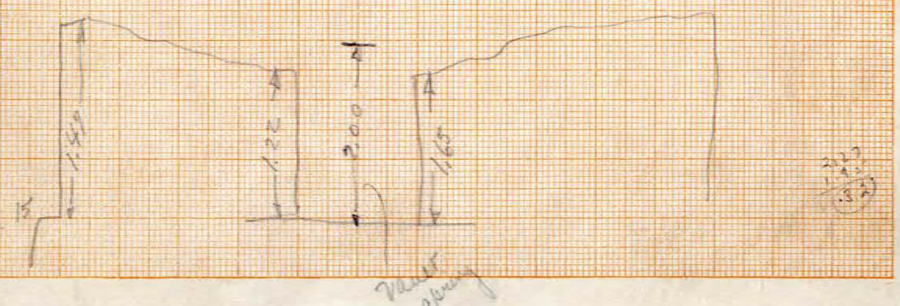
22 - .94

23 - 1.28

24 = .50

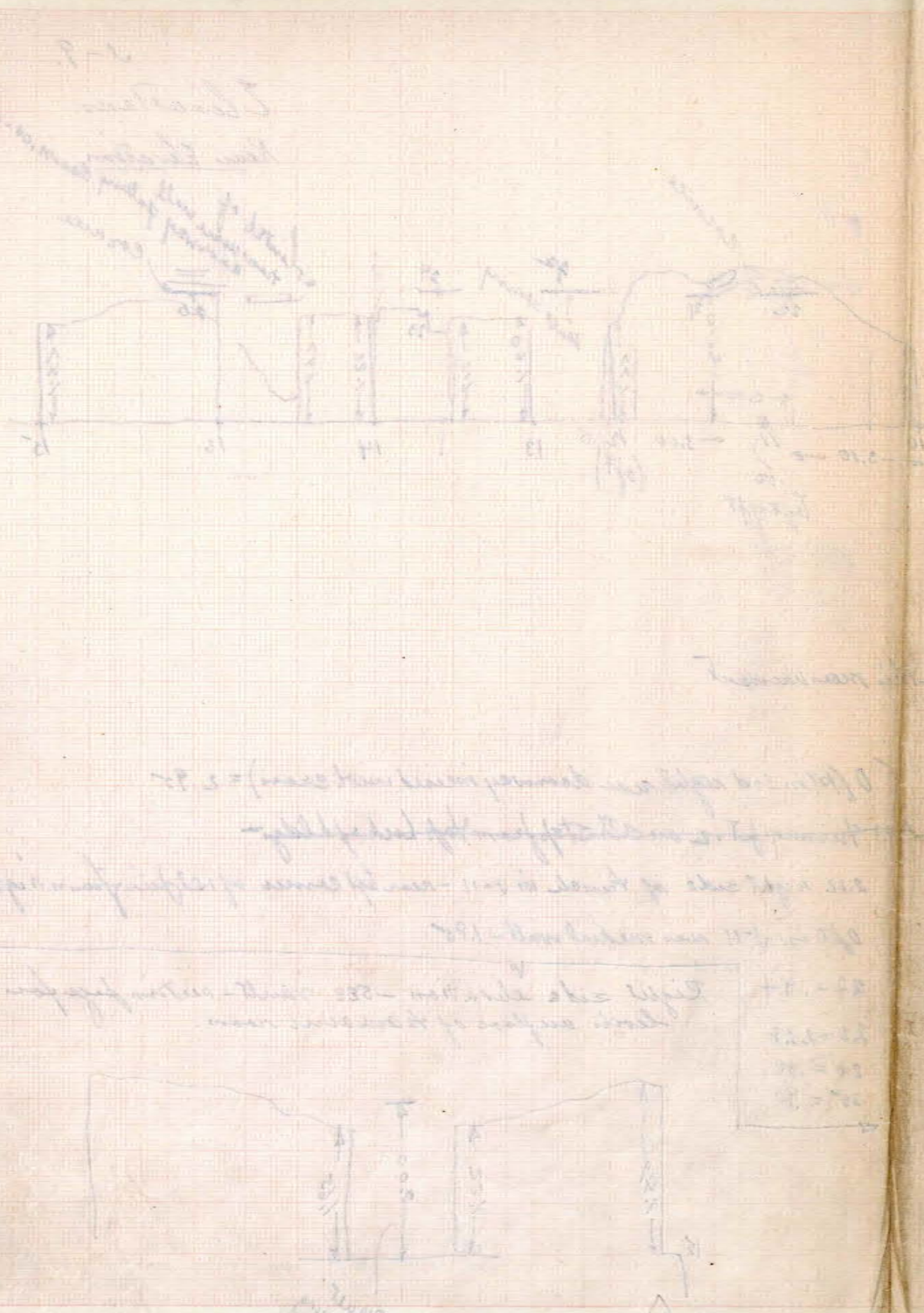
25 = .90

Right side elevation - See vault-section page for levels on plane of transverse room.



V-9 (4)

V-9
Sections



probably cap stone with
N of vault at bottom

(2) P-6

J-9

Medial wall

Stone in semi-pendent
swell also in
pendent but broken

disappearing
outcrop

Vault section from front wall near
right transverse wall
from center

Reference pt 13 - right transverse wall near
doorway = 2.63

1 - 2.71	21 - 1.55
2 - 1.39	22 - 2.90
3 - 1.24	23 - 2.78
4 - 1.29	24 - 2.32
5 - 3.05	25 - 1.41
6 - 2.99	26 - 3.33 (center of left transverse wall)
7 - 2.22	27 - 1.41½ (reference pt for next section)
8 - 3.33	
9 - 3.37	
10 - 2.90	
11 - 3.00	
12 - 1.47	
13 - 2.00	
14 - 2.61	
15 - 2.10	
16 - 2.93	
17 - 2.06	
18 - 2.22	
19 - 1.46	
20 - 2.31	

Right transverse wall

Section at
doorway
thru medial wall.

Coors - Section thru right
secondary wall

Coors - section thru
near center room (left
of door)

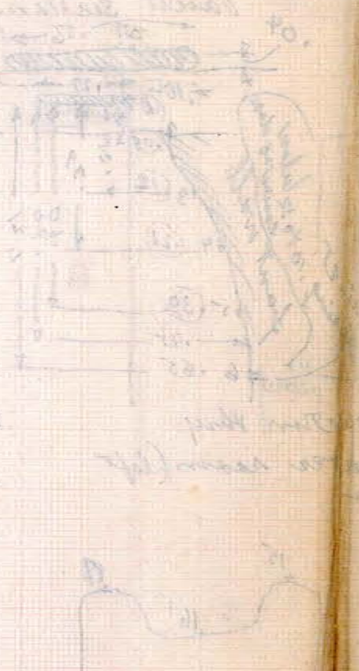
Section thru secondary
wall at left.

Left transverse wall.

KEUFFEL & ESSER CO., N. Y. NO. 306-14L
Millimeters.

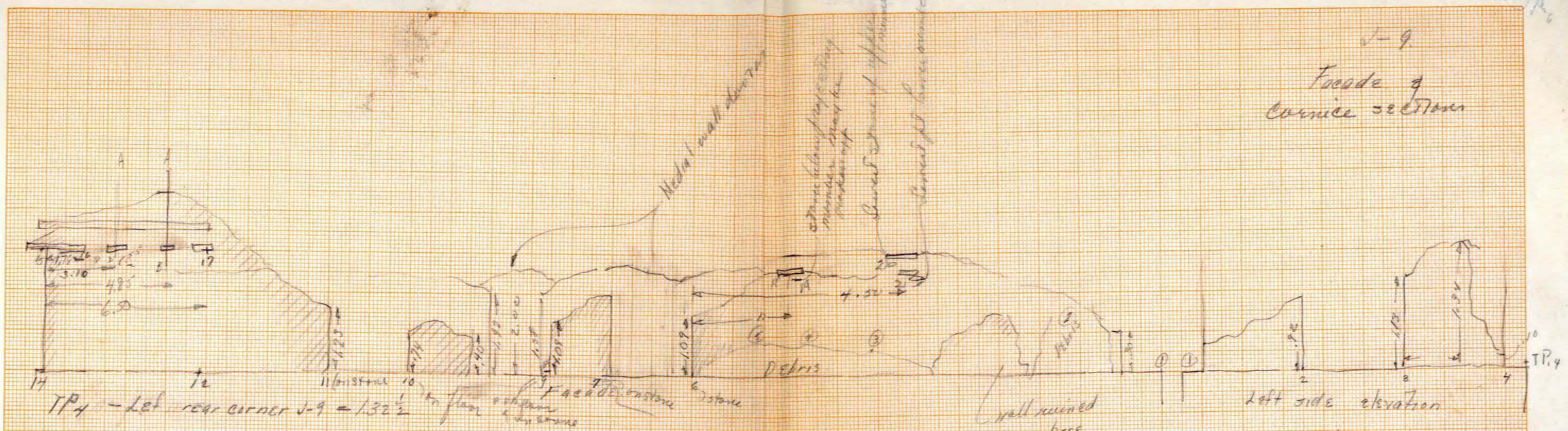
J-9 (5)

J-9
3 Sections



J-9

Facade 9
Cornice sections



TP4 – Left rear corner J-9 = 132½

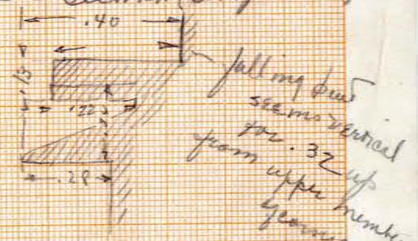
1 – 1.45
2 – 41½
3 – 82½
4 – 84
5 – .91
6 – 1.39
7 – 1.41½
8 – 1.29½
9 – 1.37
10 – 1.23
11 – (not visible from this pt
12 – 1.27
13 – 1.54 (on step behind 789)
14 – 1.11
15 – .98 up
16 – .95 up
17 – .95 up
18 – .69 up
19 – .60 up
20 – .97 up
21 – .63 up

T.P4 = 132½

3 – 1.34½
2 – 1.37
1 – 1.45

Section of cornice A-8
Composite of both sections

Cornice at right
front corner right
side – section (composite)



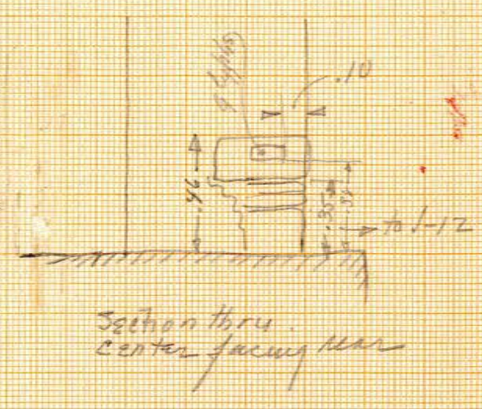
1.11

J-9
See Diary

J-9
5/29/30

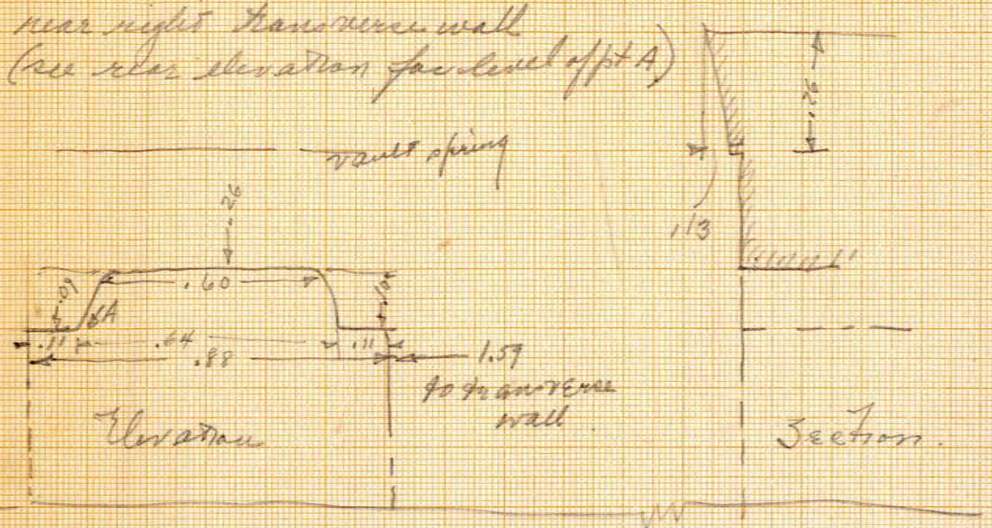
195
128
167

Section of slope-block on
near jamb of left-end doorway

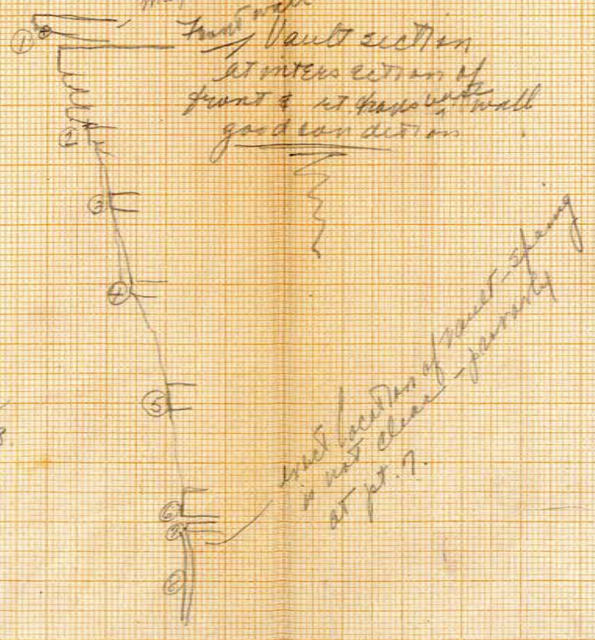


Section thru
center facing rear

Doorway in Medial wall
near right transverse wall
(see also elevation facing sht A)



The two cantilever in
right transverse rooms on front wall
1.52 from jamb of front
right-hand corner
of room



Heights

pt 23 on lintel of transverse wall near doorway
(shown on resp. elevation at Ht. 1.67)
pt 23 = 39½ up

①	= 131½ up.	9	= 109
②	= 114½ up	10	= 100
③	= 95½ up	11	= 87
④	= 80 up	12	= 75
⑤	= 56½ up	13	= 56
⑥	= 35 up.	14	= 37½
⑦	= 24½ up	15	= 39½

Level on floor near front
front of arch doorway = 1.62
Level on floor near
transverse wall = 162½

Section at
door sill
transverse
wall
near front wall
transverse
wall
near rear wall

Horizontal distances

from 1 — ②	= .07	from 9 — 0	
3	= .21	10	= .08
4	= .31	11	= .18
5	= .42	12	= .23
6	} = .50	13	= .31
7		14	= .35
8	= .51	15	= .41

KEUFFEL & ESSER CO., N. Y. NO. 358-141
Millimeters.

J-9 (1)

J-9
Electrons.

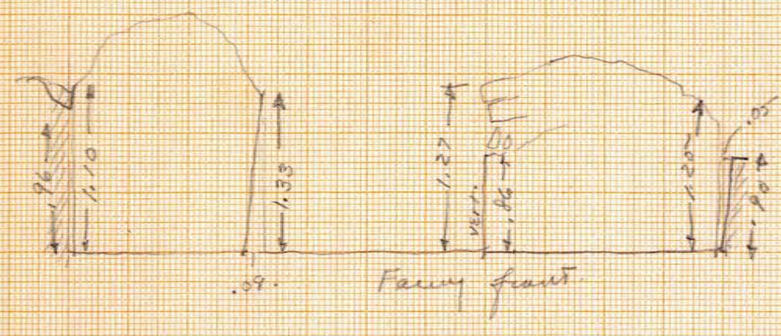
PIEDRAS NEGRAS June 1st 1937 STR. J-9

OP. No. MUSEUM CAT.

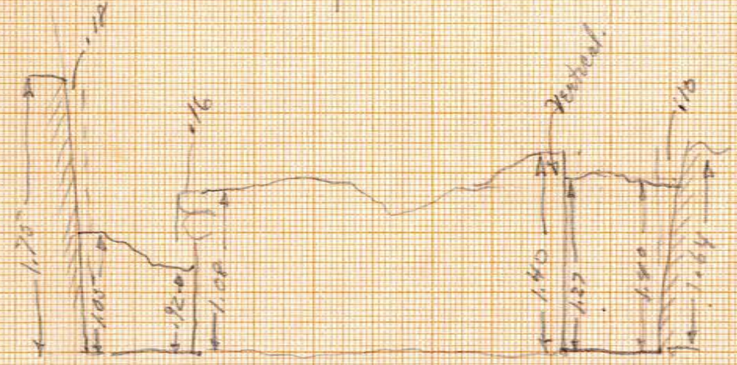
SCALE SEE PHOTO Nos.

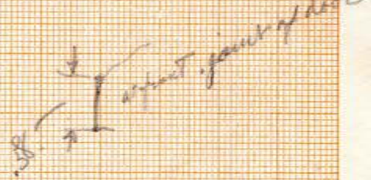
REMARKS Cont. .05 to mesa cut marked ma.

End room facing J-12.

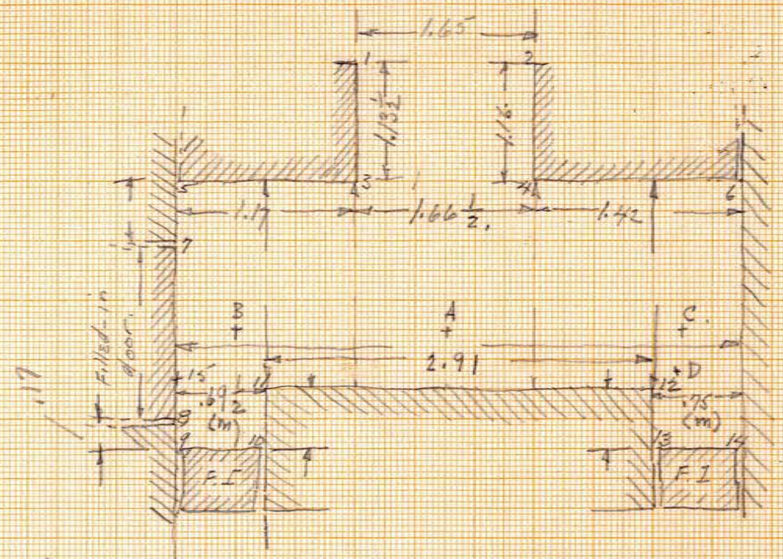


Facing rear





Tafel



A - 2.95½ (1) 1.86½ (3) 1.78 (4)

B - 1.87½ (A). 1.84½ (3) 3.08½ (4)

C - 1.84 (4) 2.06 (A)

D - 2.13 (7.) 1.74½ (A). 41 (C).

1 - 2.03 (4) } 1.72 (A).

2 - 2.03 (3.

3 - ——

4 - ——

5 - 1.57½ (B). 69 (7) 2.41 (8).

6 - 1.33 (C). 2.46½ (14).

7 - .86½ (B) 1.20 (3).

8 - .80 (11) .38 (15) m)

9 - .65 (15) .95 (11) (m)

10 - .60 (11) (m)

11 - 2.06 (2) - 1.57 (A) 3.46 (C)

12 - .79 (C) 1.60 (A)

13 - .49½ (12) m) .75 (14 m)

14 - .91 (12) m)

15 - .65½ (11). .44½ (B).

KEUFFEL & ESSER CO., N. Y. NO. 359-14L Millimeters.

J-9 (9)

J-9

PIEDRAS NEGRAS _____ 193__ STA. _____

OP. No. _____ MUSEUM CAT. _____

SCALE: _____ SEE PHOTO Nos. _____

REMARKS: _____

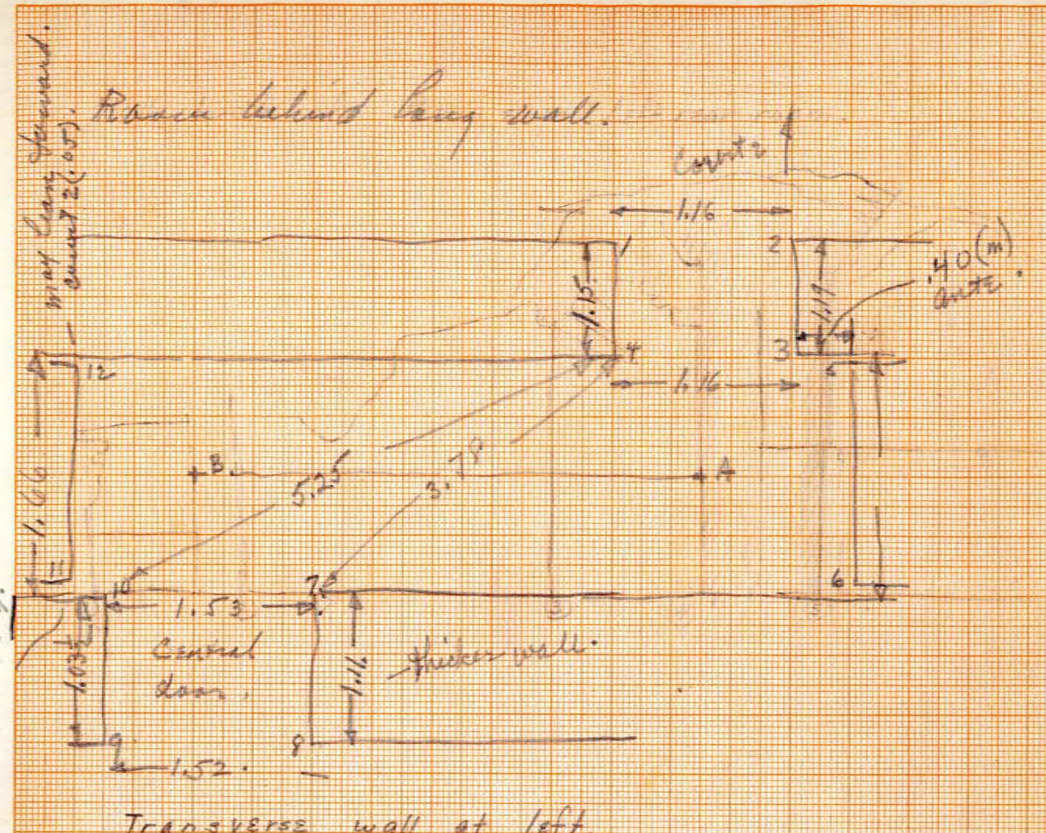
PIEDRAS NEGRAS April 193 7 STR. J-9

CAT. No. MUSEUM CAT.

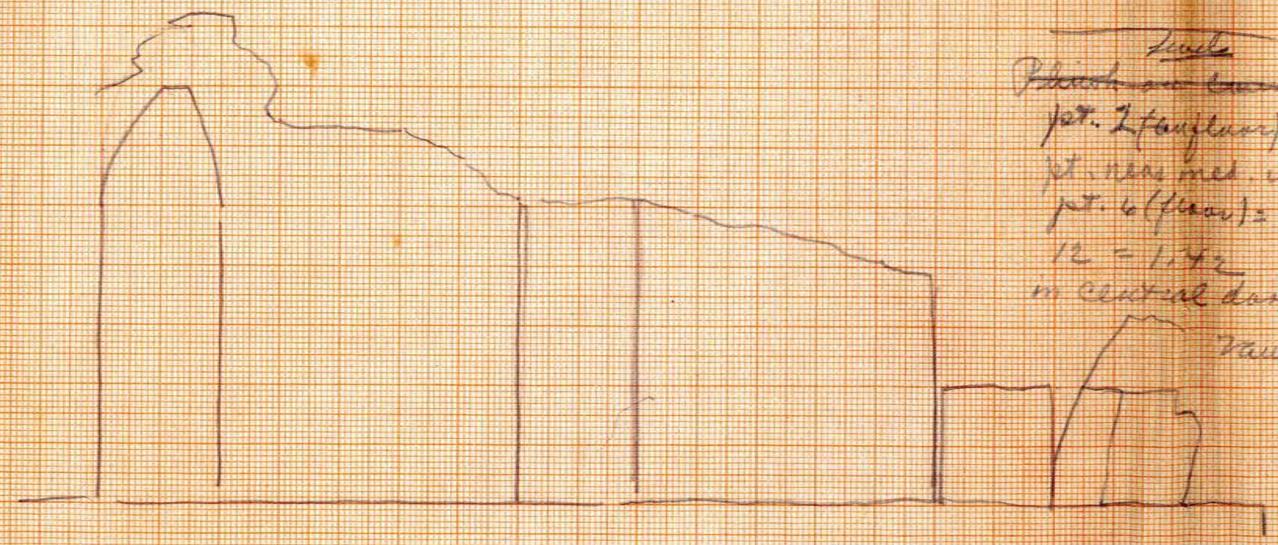
SCALE SEE PHOTO Nos.

REMARKS See Hand & Elevations

Room behind long wall.



Transverse wall at left.



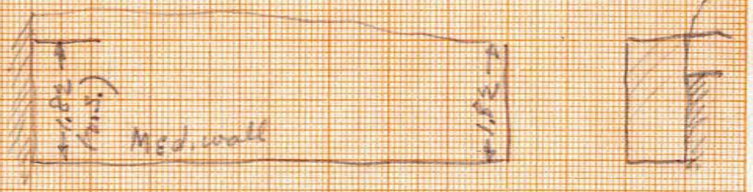
1 - 1.71 (3).
2 - 1.63 (4).
A = 1.14 (3) 1.21½ (4).
8 - 1.85 (10)
7 - 1.90 (9)
12 (1.70-10, 75 2 (7) 5.30 (4)
7.74 (6)
11 = 7.01 (2) 7.19 (5).
6 = 4.9[illegible] (7) 1.72 (3).
5 = 1.64 (6).

Vault

~~Block on [illegible] 32 lines~~

pt. 2 (vaulture) = 1.68
pt. near med. wall 9-11 = .53.
pt. 6 (floor) = 1.54
12 = 1.42
in central doorway = 1.47

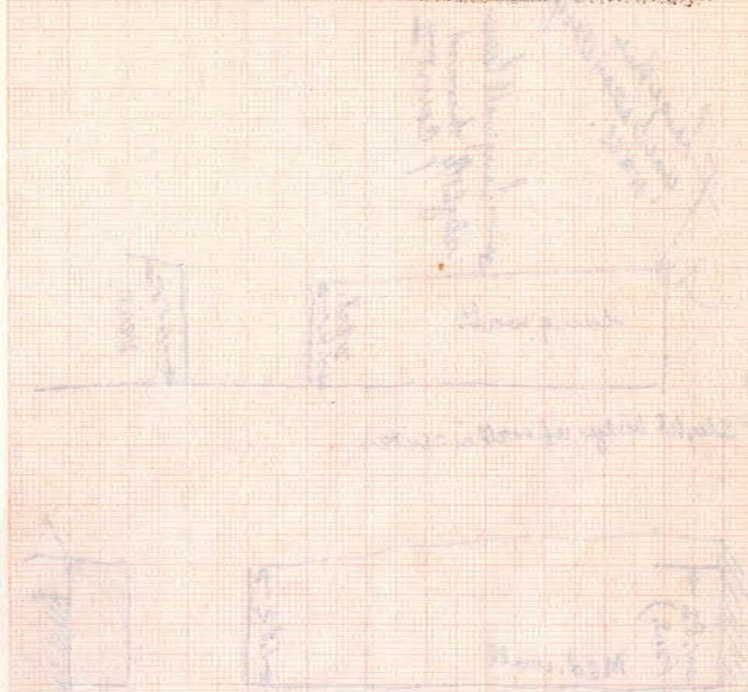
Vault springs near 12 = .55 up.
.36 up in

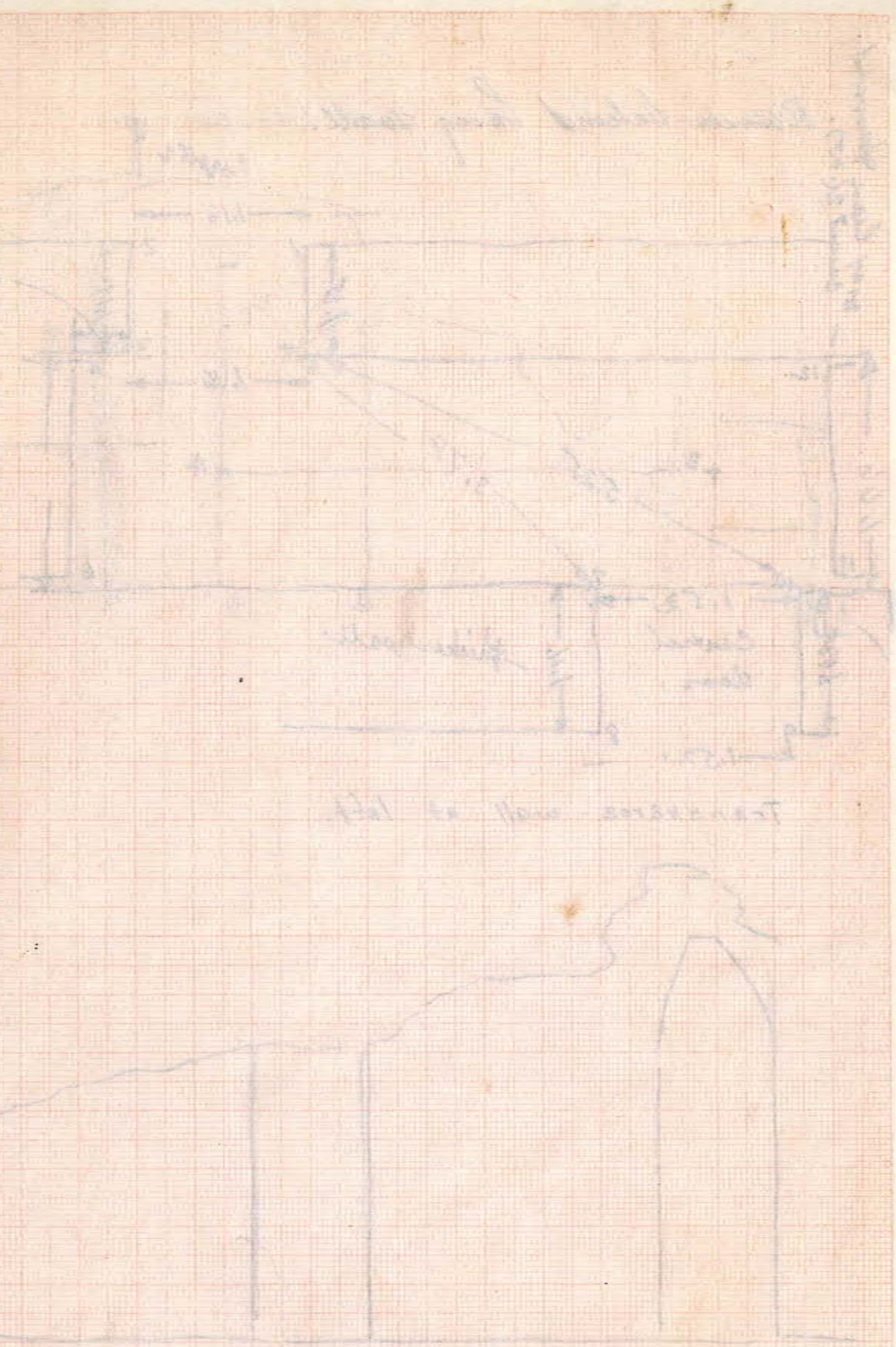


KEUFFEL & ESSER CO., N. Y. NO. 359-146
Millimeters
MADE IN U. S. A.

J-9 (9)

J-9





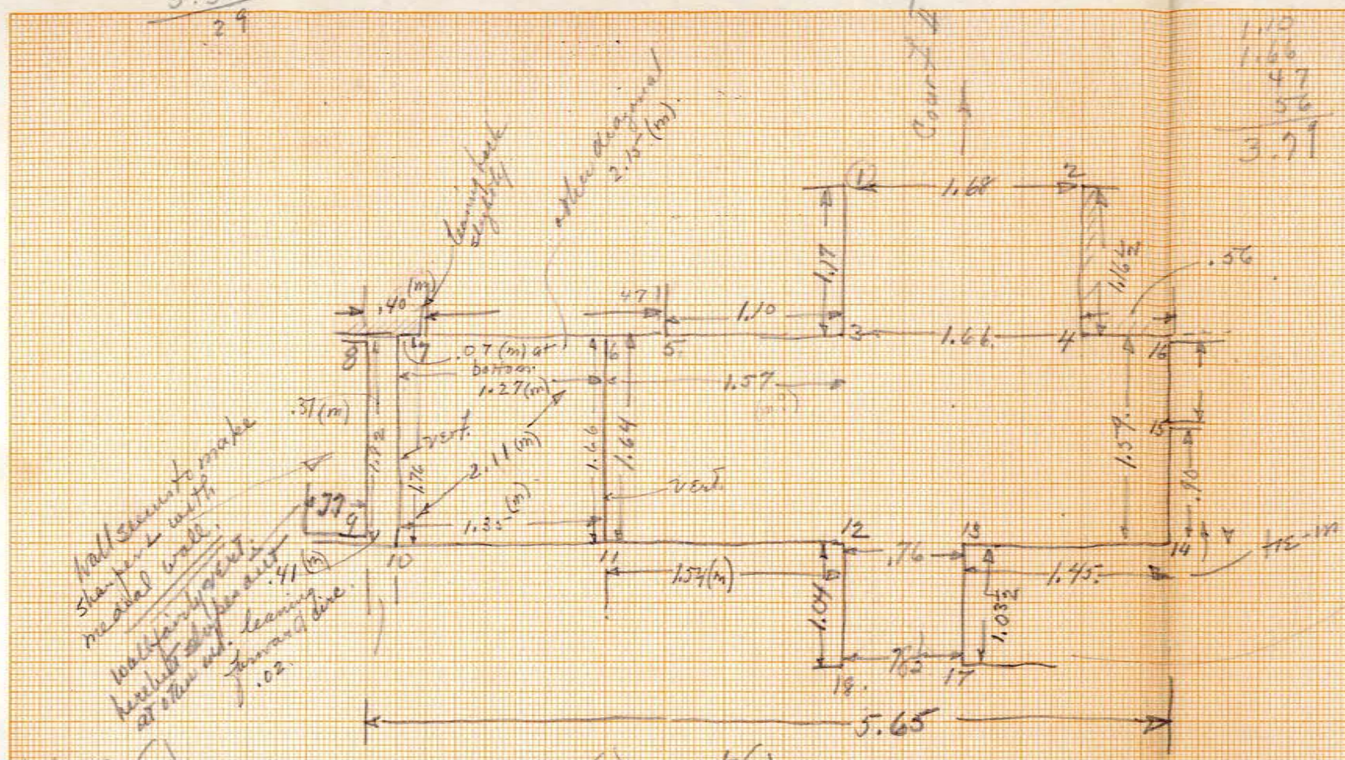
5.65
5.36
.29

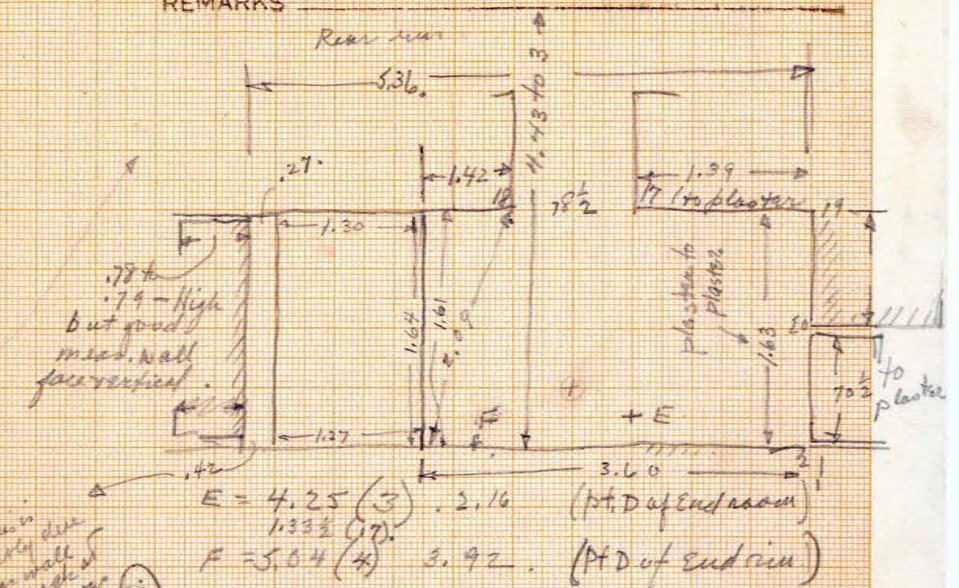
PIEDRAS NEGRAS June 10 193 7 STR J-9

OP. No. MUSEUM CAT.

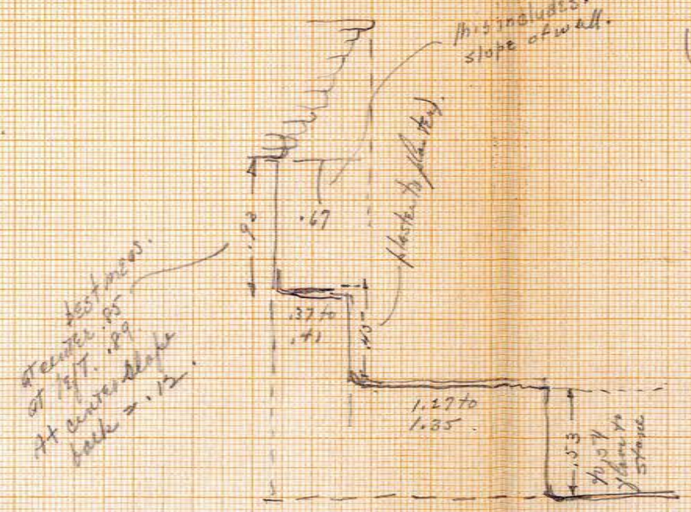
SCALE SEE PHOTO Nos.

REMARKS

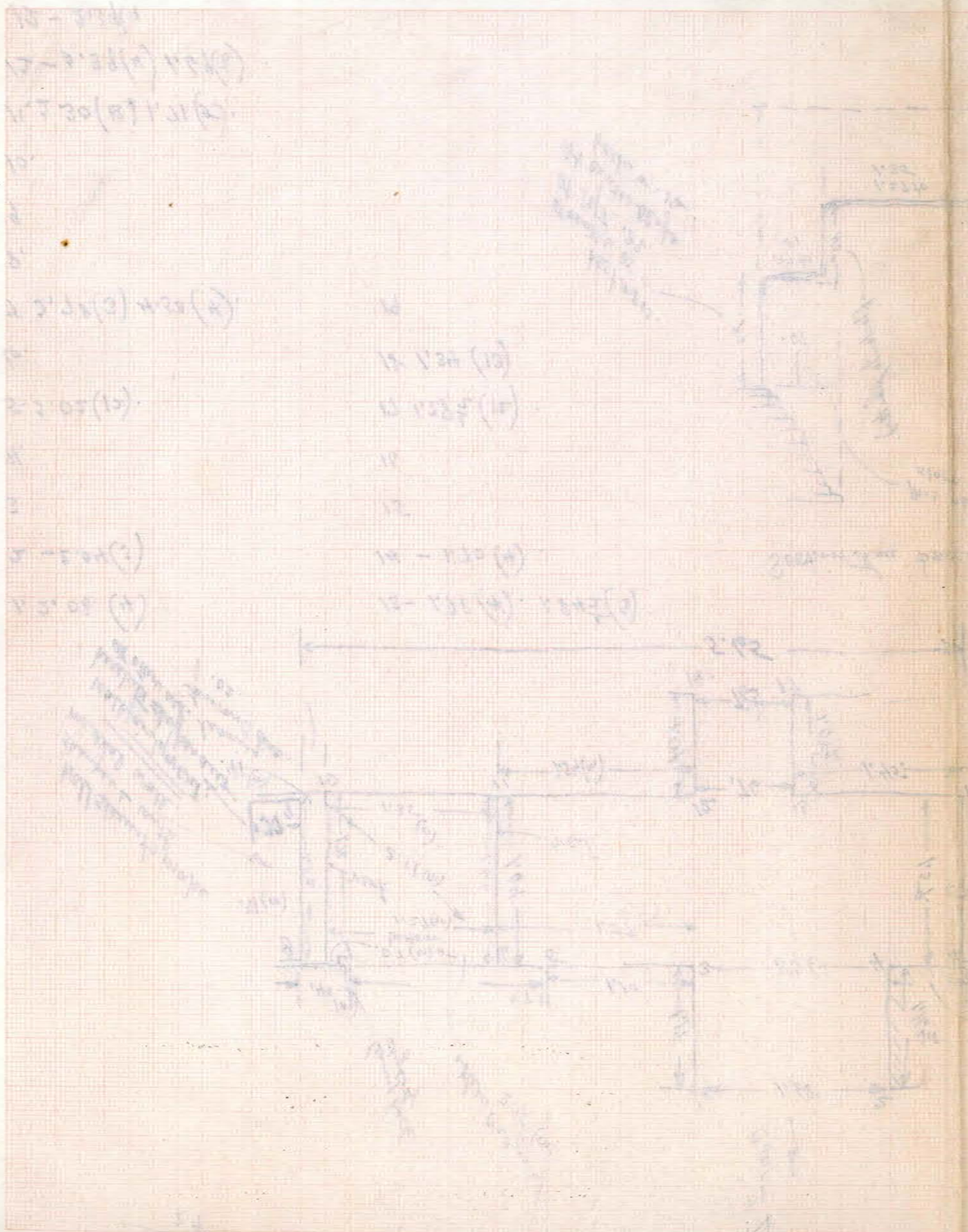


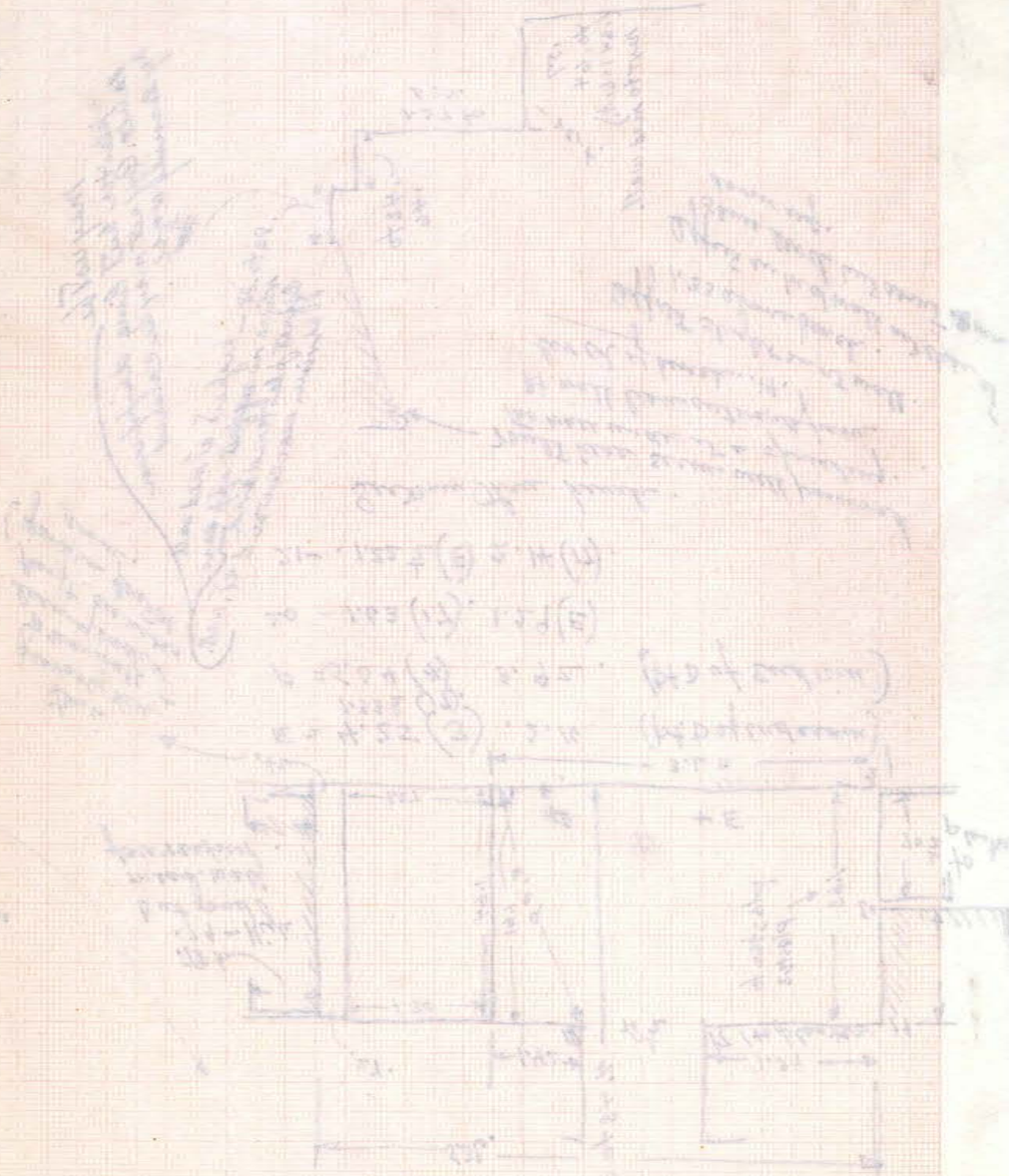


1. 2.02 (4)
2. -2.64(3)
3.
4.
5. 2.02(12).
6.
7. 2.78(3) 4.50(4).
8.
9.
10.
11. 2.30(12) 1.71(5).
12 - 2.39(4) 1.67(3)
13 - 1.88(4). 1.84½(3)
14 - 1.70(4).
15
16
17 1.28½(12).
18 1.34 (13)
19



KEUFFEL & ESSER CO., N. Y. NO. 350-14L Millimeters.





PIEDRAS NEGRAS 193 STR. J-9

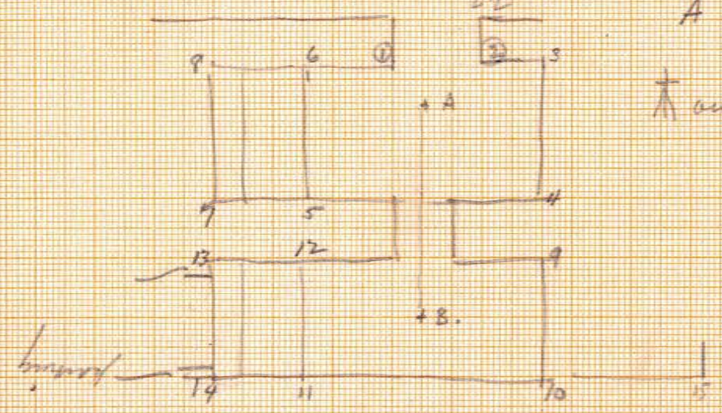
OP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

REMARKS Add. data to key plan

Break rooms - Instrument check on floor.

Court A



A = .93 (1) 1.46 (2) ~~2.84~~

↑ on A to ea stake with left corner of J-11 i.e. stake E of J-11.

2½ = 29° 07' r. Rt from A.

3 = 63° 52'	2.00	4 = 1.97.
7 = 253° 40	3.89	
8 = 280° 16	3.81.	
5 = 244° 30'	2.14½	
6 = 289° 01	2.11.	

B = 180° 24' = 2.84½ (A.

Levels

Pl. near Red wall of J-11 on floor at jam of doorway in wall makes with transverse wall = .40.

15 = 1.51

6 = 1.51½

7 = 151

8 = .49½

Level of Sill = 1.51½.

9 = 1.48.

4 =

1.21 3/4 up. 1.21 3/4 = height of M.4 vault.

At 8 near side wall = 1.50

.34 up

1.21 3/4 up.

↑ on B to E of J-11

9 = 60° 46'	2.09
10 = 107° 49'	1.99.
11 = 244° 39'	1.83½
12 = 293° 05'	1.99.
13 = 271° 10'	3.57
14 = 253° 20'	3.51.
15 = abt. 296° 05'	

Levels.

Plinth = 1.49.

9 = 1.47

11 = 1.45

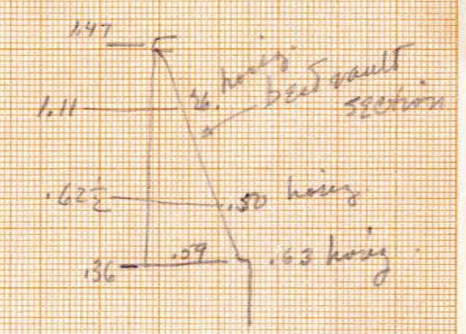
12 = 1.46.

13 = .44

14 = .48.

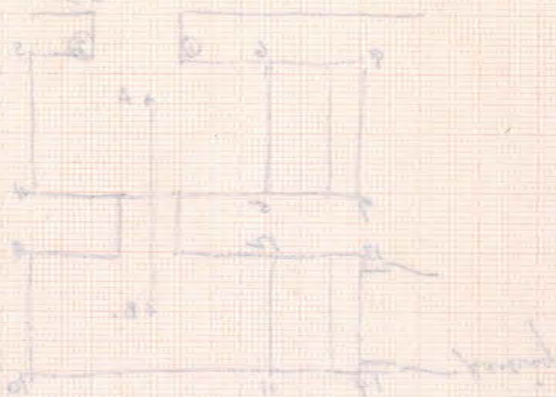
1.47 up = Lo Stone of vault back of door.

Ht.



1. spring = .36 up

KEUFFEL & ESSER CO., N. Y. NO. 359-141. Millimeters.



J-9 (12)

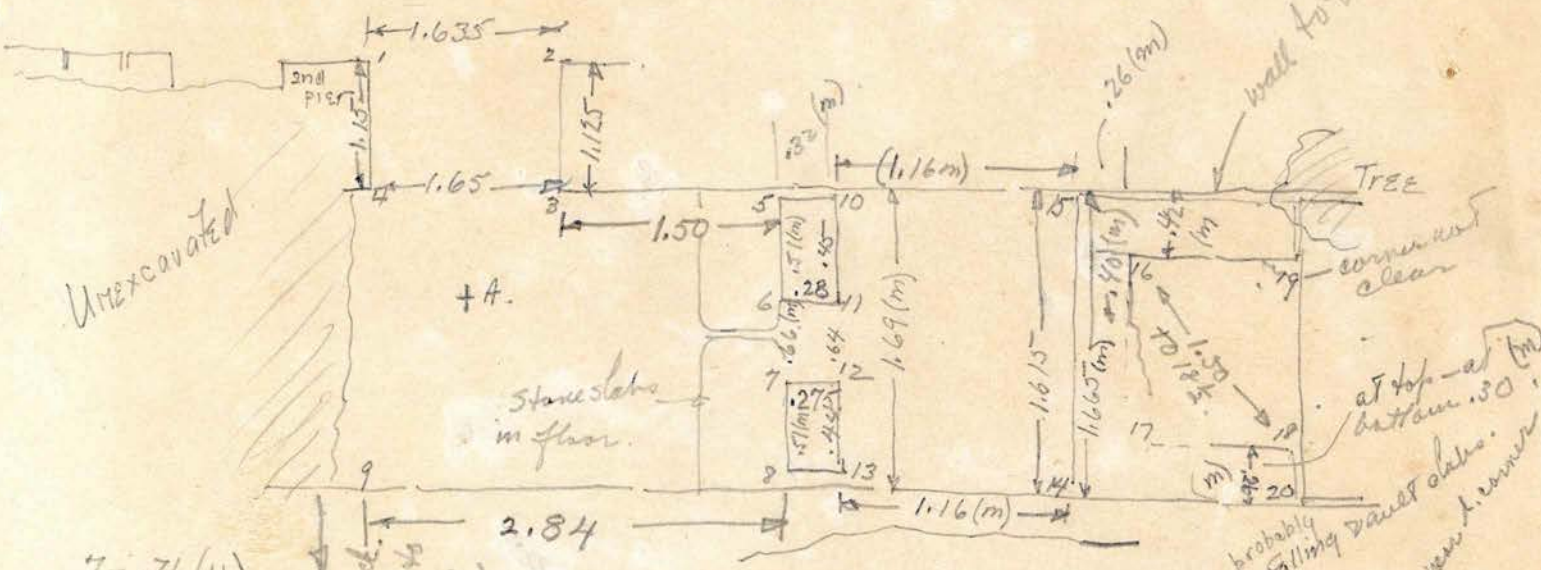
PIEDRAS NEGRAS June 11 1934 STR. J-9

OP. No. ..... MUSEUM CAT. .....

SCALE 1 meter ..... SEE PHOTO Nos. .....

REMARKS Tape meas. add .05
meter stick marked (m)

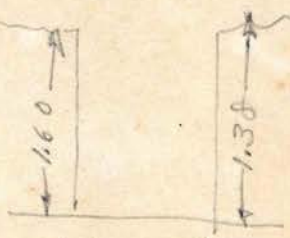
court E



7 - .76 (11)
6 - .75 (12)
2 - 2.05 (4)
1 = 1.98 (3)
A = 1.25 (4) 1.29 (3).
5 = 1.50 (3) subtract for curve of wall
6 = 1.60 (3) 2.43 (4).
7 = 1.90 (3) 2.36 (A).
8 = 2.225 (3) 2.84 (9)
20 = 2.50 (13).
18 = 5.25 (A).
18½ - 5.24 (A).
15 - 1.92 (18½) 1.65 (12)
10 - 2.82 + .82 (18½)
~~11 - 1.65 (10)~~
14 - 1.55½ (11) 1.20 (12) 1.36 (18½).
9 - 2.91 (7) .86 (A) 2.83 (1) - check.
19
16

Wall
Usual back
Standing 45
.50 above 2
Spring near
14 (1m) 3.30 to
.10 above 45
Sharp ends to
2.50 at 8.

Rot @ corrected. 0 on 2
pt 18 = 71° 55'
pt 6 = 56° 35'
7 - 72° 08
8 -
5 -
9 -
Pt 18½ - 72° 38



ht. of door jamb.
1.91 = ht. vault

Level
Engraved cross in flint = 1.475
near 3 floor = 1.45.
near 8 - slab = 1.47.
Near 15 floor = 1.43
" 16 " = 1.44
near 14 " = 1.47
" " vaultspring = .41 up.
near 9 floor = this too near.

1.47 / 1.88
41 / 1.47 / 1.89

PIEDRAS NEGRAS 193 STR. 1-9

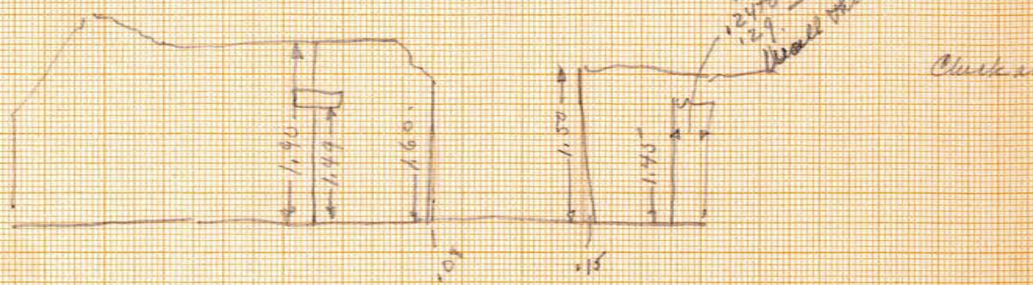
CP. No. MUSEUM CAT.

SCALE SEE PHOTO Nos.

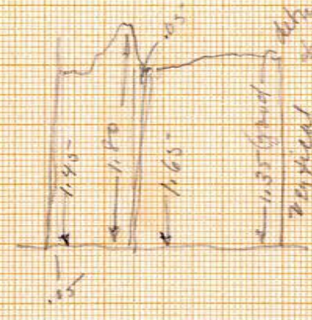
REMARKS Add .05 to horiz. meas.

Bench rm. Standing ht. of walls.

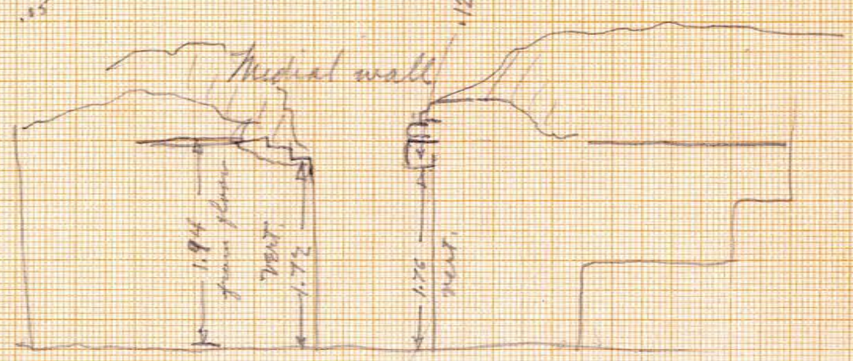
Court II wall.



Back wall.

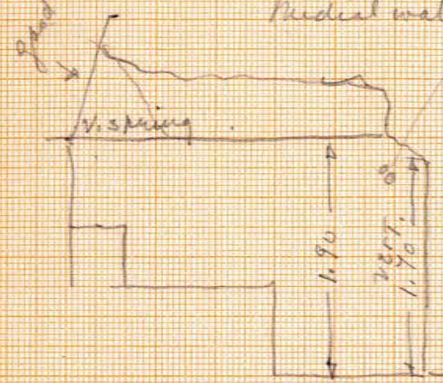


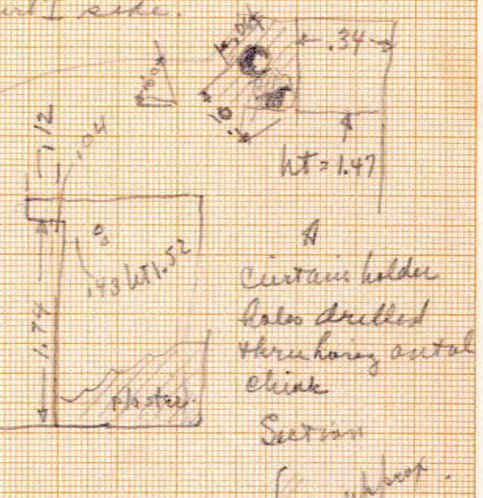
Medial wall.



Bench rm. Court I side.

Medial wall.





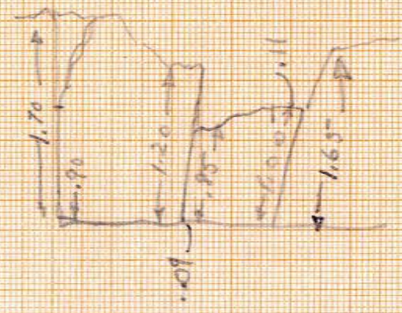
A

Curtain holder holes drilled thru horiz. central chink

Section

Wall

Transverse wall.

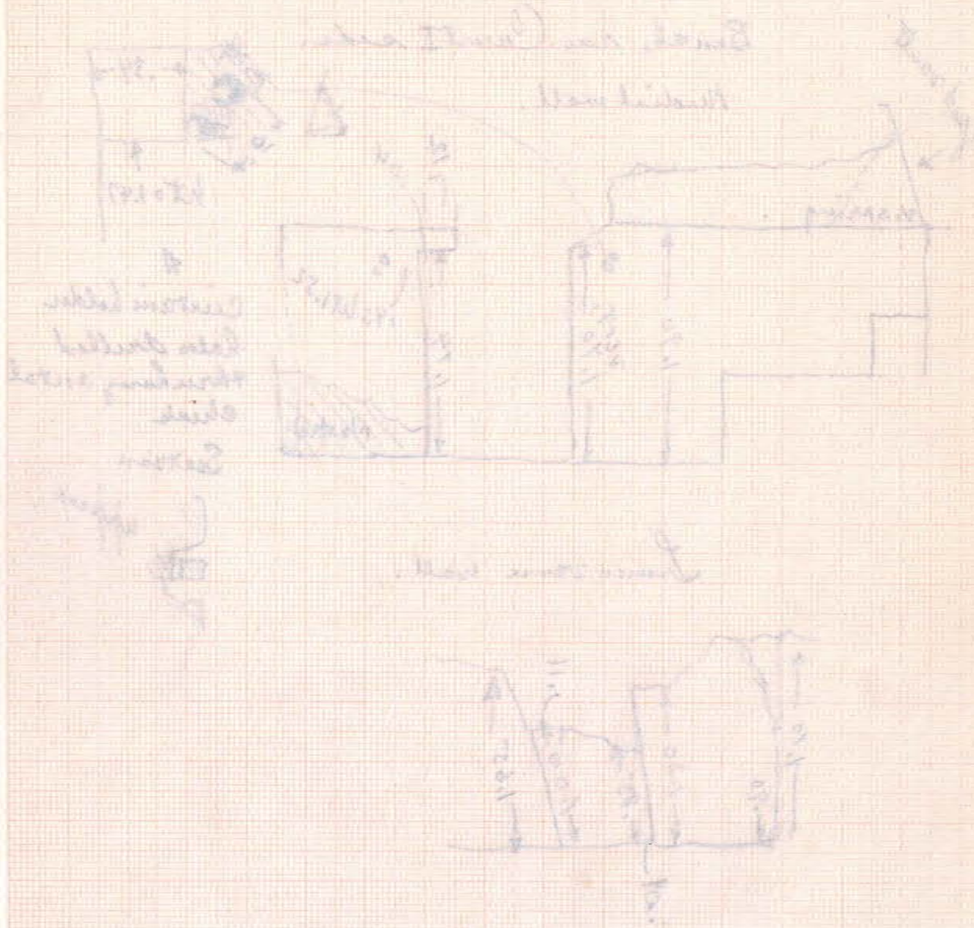


KEUFFEL & ESSER CO., N. Y. NO. 358-14L
Millimeters.

J-9

(13)

J-9



J-10

① Plan and tape measurements. No tape correction is noted, but probably applies for steel-tape measurements are recorded with an excess of +.00 in 1936. ∴ add .08 to 1st 10 m. & .04 to second. — .01 per m. 1st 10 m. — .005 per. m. 2nd ten meters is close enough. N.B. — pt. 23 & 24 are not corners of pier — see later plan.

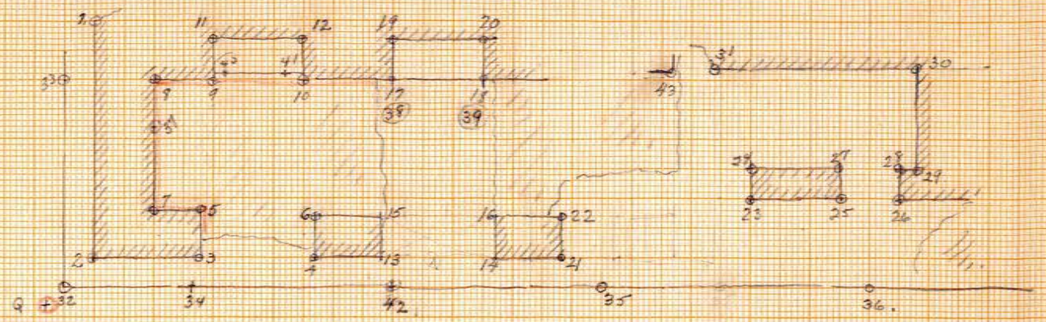
② - Elevation. Lower right elevations & sections of niches - Note that 3rd niche at this time is unexcavated.

③ - Plan with additional measurements - Lower rt. - elevation of left niche

2 Ends — from O = incised cross J-9

Center, near rear wall, latest floor	—	+.72.
Plinth " center	—	+.55
" right corner	—	+.48

St. J-10.
4/28/30.
Plot & tape measurement.



* - Points unexcavated to floor, Measurements taken above.

d

q

1	q - 3.93	1-q wall new x 1.53			
2	6 .69.	1.13			From corner of J-9 plot.
3	q - 1.85	34 - .59.			
4	q - 9.11.	q - 3.61	5 - 1.82		Pier badly decayed - pt maybe 1-3 cm. off true corner
*5	8 - 6.90	35 - 6.68			Leaning outward, wall-thickness about - .58.
6	unexcavated.				
*7	8 - 7.11.	5 - .94	9 - 2.36	37 - .95	
*8	5 - 2.46	9 - 1.69			Leaning out to side (see 37)
9	d - 8.88	35 - 6.94.			
10	d - 8.89.	35 - 5.93.			
11	6 - 1.42	9 - .86			
12	10 - .88	9 - 1.41			
13	15 - .62	q - 4.75	42 - .77.		
14	q - 5.29.	13 - 1.84	16 - .60.		
*15	q - 6.70	14 - 1.38	16 - 1.98		
16	15 - 1.82				
17	d - 9.29.	10 - 1.94			
18	17 - 1.09.	d - 9.69	10 - 8.03		wall about vertical, 18 slightly back.
19	17 - .77	18 - 1.27			
20	18 - .81	17 - 1.37			
*21	23 - 2.88	22 - .62.	35 - .72	14 - 1.23	
22	r - 5.75	28 - 2.65			Plaster remaining on corner pt on plaster 2-3cm. thick.
23	q - 5.63	r - 3.82			
24	q - 6.08	r - 4.21	23 - .51		
25	q - 6.19	28 - 1.35 (approx)			pt not excavated to floor
26	8 - .50	27 - 1.33			
27	q - 6.69	r - 3.55	25 - .56.	24 - 1.66	may be not quite to floor-level.
28	q - 7.37	27 - 1.24.	24 - 2.91	30 - 1.26	
29	28 - .23.	30 - 1.32			
30	24 - 3.36.	31 - 2.62.			
31	q - 7.49	28 - 2.13	24 - 1.46		wall here broken - may be slightly forward of true line
32	q - .08	1.28			plane with pt from corner J-9.
33	plinth	Evergreen. .11 from wall.			
34	d - 5.88	q - 1.81			
*35	q - 4.23	r - 4.87.	24 - 2.75	9 - 8.27	on upper edge of plinth.
36	21 - 2.69	23 - 1.25		9 - 8.23.	on upper edge of plinth.
37	q - 1.79.	5 - 1.50.			on true line of plinth below top stones
38	q - 8.18	10 - 2.06			pt taken where wall seems better than at 8.
39	38 - 1.01.	10 - 3.07	18 - 2.44	18 - 2.99.	pts below 17 & 18 on same wall.
r	q - 4.52.	a - 12.02			
40	d - 8.95	10 - 1.08.			
41	40 - 1.95	d - 2.92.	q - 1.04		
42	d - 5.98.	9 - 4.35			
43	34 - 1.95	28 - 3.49			

(Corner 13 out of line of plinth) wall 30-31 continues. Possible corner - not very clear.

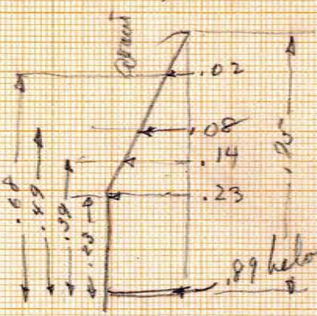
KEUFFEL & ESSER CO., N. Y. NO. 359-141 Millimeters

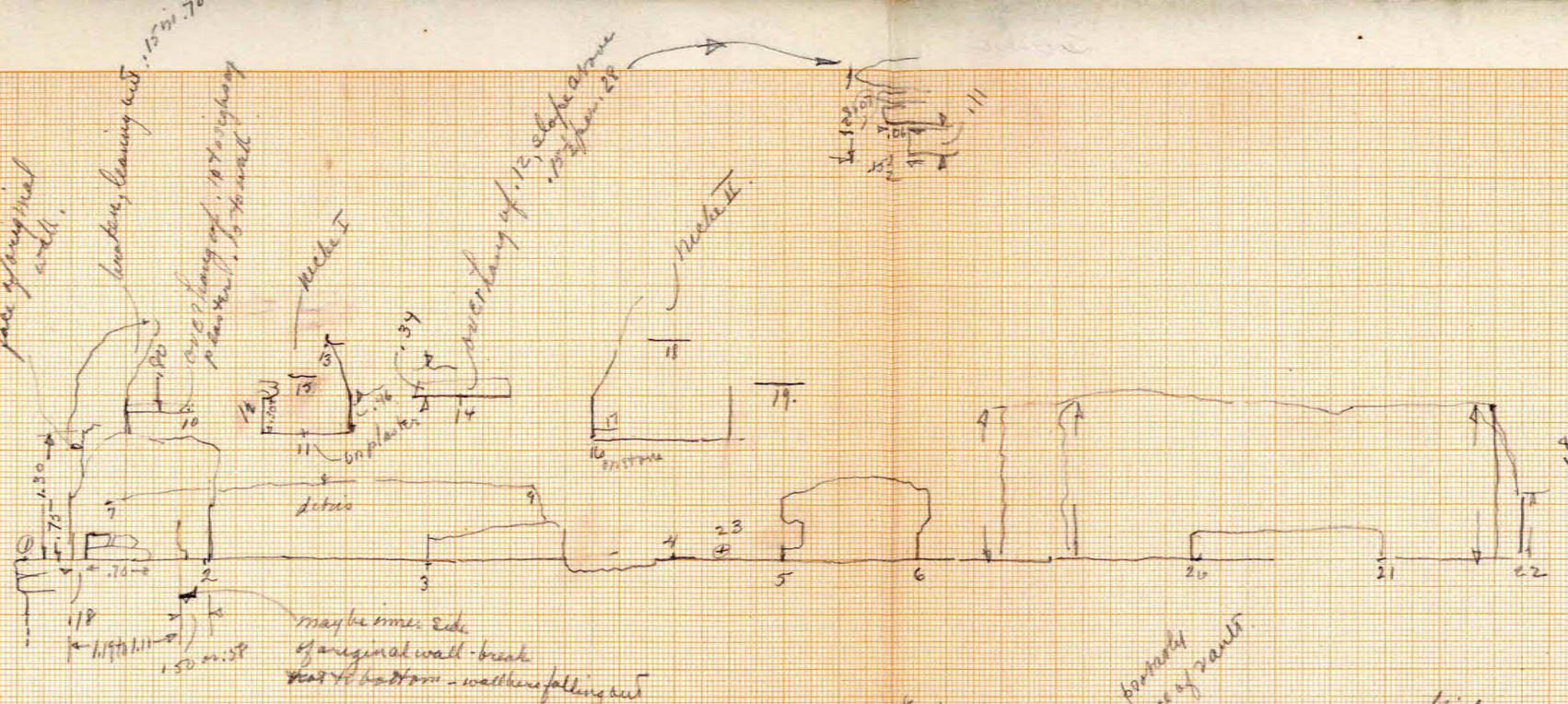
J-10
(1)

J-10
plan

Elevation.

Niche II (right side on plaster (elevation)





Opt 3rd st. near door 5 - 9 (incised cross) - 2.95

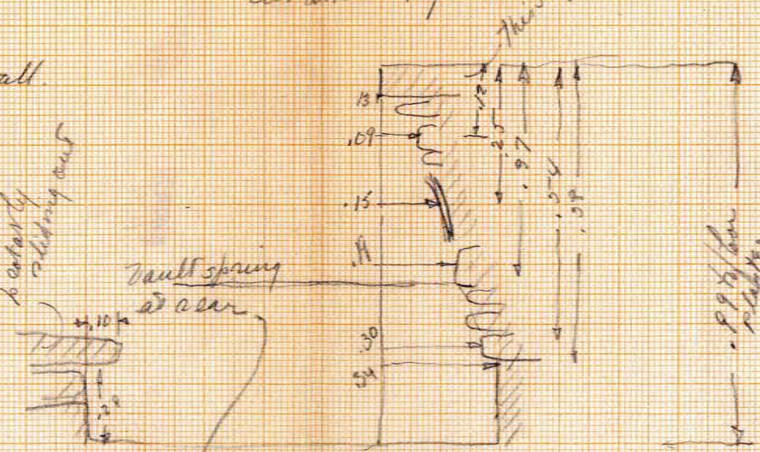
1 = 2.41
2 = 2.44
3 = 2.43½
4 - 2.45½
5 - 2.40
6 - 2.40½
20 - 2.41½
21 - 2.11 (last at bottom by door)
22 - 2.18
10 - .46½
12 - .49
11 - .77½
13 - 23½ up.
14 - .34
16 - .76
18 - .21 up.
17 - .70

19 - .35.

23 = 2.23½ = on floor near rear wall.

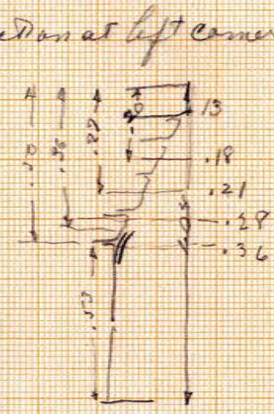
For opt. 7, 8, 9
opt 10 = 2.16½
7 = 2.89
8 = 2.87
9 - 2.86.

Niche I
Elevation left side



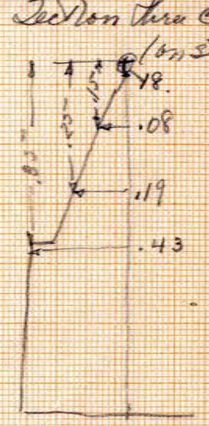
Niche I

Section at left corner.



Niche II

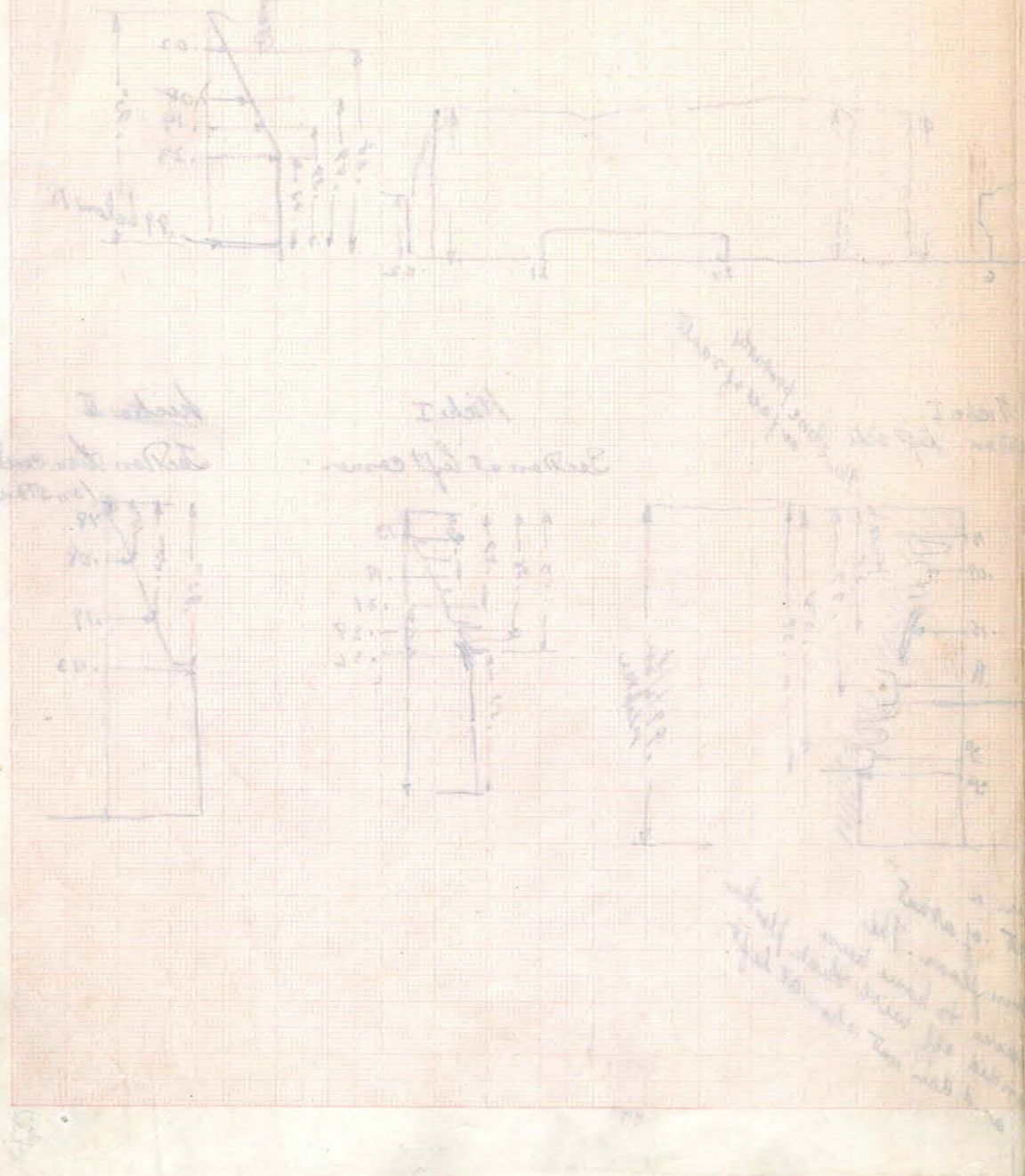
Section thru center. (on stone)



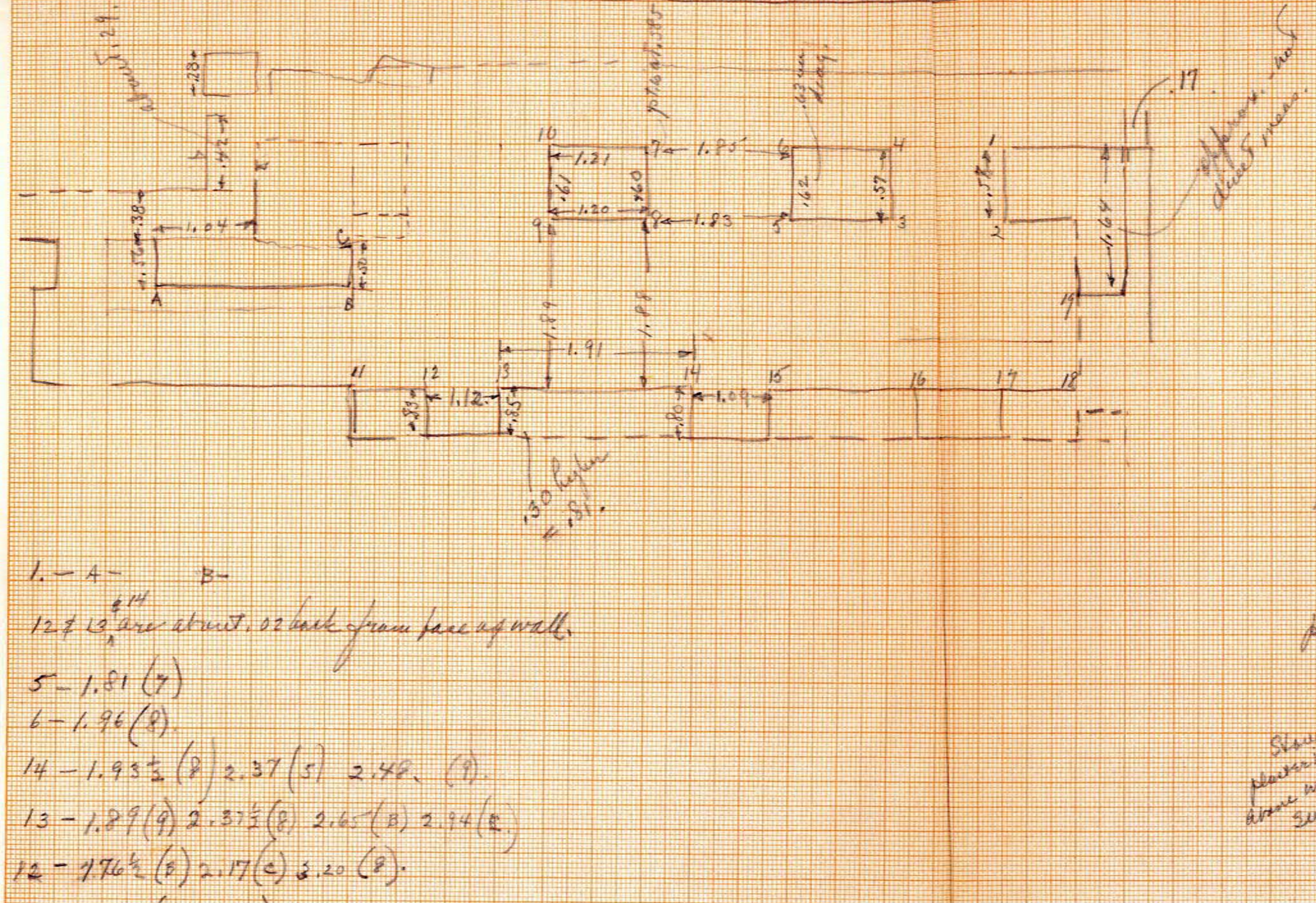
KEUFFEL & ESSER CO., N. Y. NO. 359-14L Millimeters

J-10 (2)

J-10
Section



Too Connections not mean. on plans



June 12 1937.
5th. } -10
Added plan mean.
Correction +.05

~~Section~~
Elevation of left side

1.90
.16
1.64

1.— A— B—

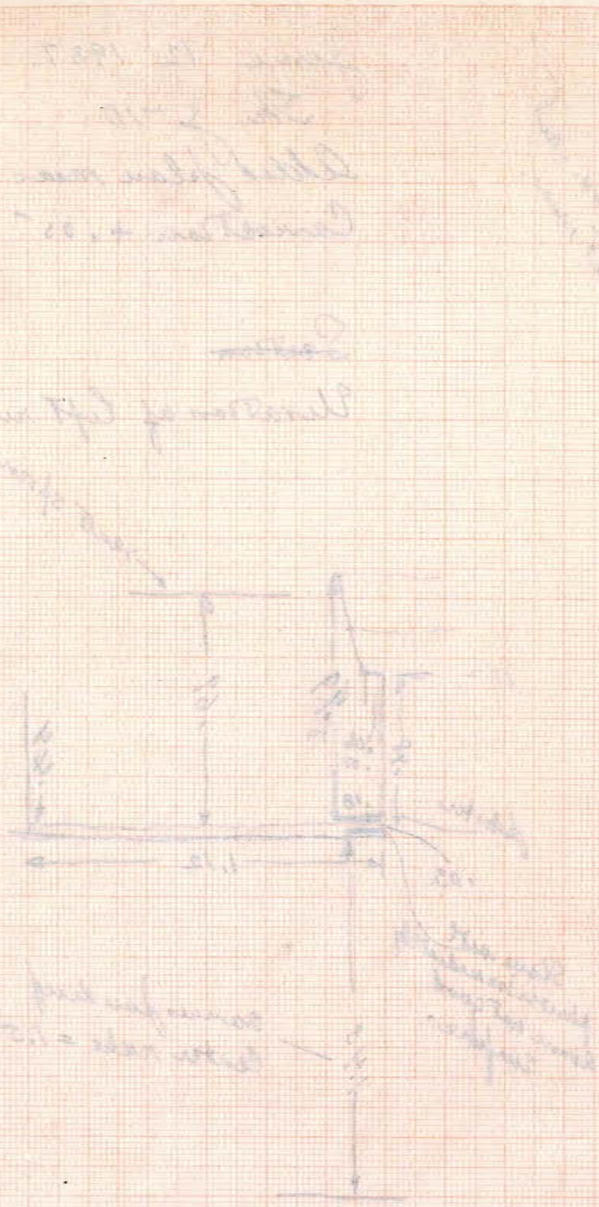
12 ⌀ L3 ⌀ are about .02 back from face of wall.

5 — 1.81 (7)
6 — 1.96 (8).
14 — 1.93½ (8) 2.37 (5) 2.48 (9).
13 — 1.89 (9) 2.37½ (8) 2.65 (8) 2.94 (8)
12 — 1.76½ (6) 2.17 (6) 3.20 (8).
11 — 1.31 (8) 2.96 (9).

KEUFFEL & ESSER CO., N. Y. NO 359-14L
Millimeters.
MADE IN U. S. A.

69
48
27

J-10
(3)



J-11

(1) Plan, showing base lines & principal taping points – note that there are several tape corrections.

(2) Plan – note 2 tape corrections.

(3) Plan – left end & center.

(4) Plan – rear of J-11, showing steps at right

(5) Plan of rear room containing throne, directly above is sketch of elevation of back of throne at right is section thru throne (projected – turn page) N.B. – where no correction is noted, subtract 4.00 m. except for short measurements, which are taken with meter stick.

(6) Plan ~~of~~ terraces at right of J-11, at this time, not completely excavated.

(7) Front elevation, rear elevation, below – left side elevation, & right side elevation (not excavated to floor. Below – ~~rear~~ arch over filled in doorway at left from rear. (in Bench room. Bench at this time not excavated.

N.B. – H.I = 2.52 about which there seems some doubt is probably correct. Change T.P.$_1$ = 1.01 3/4 to T.P.$_1$ = ~~1.02~~ 1.12

(8) ~~Left~~ – elevation and plan of throne in rear room, showing location of niche.
Center – Plan of rear half of right end-room showing location of niches
Right – Elevations of niches.

(9) – Left – Plan of left transverse wall – & elevation of arch over rear doorway.
Below – Hts. of standing walls in front central room.

J-11 (continued)

(9) continued
Upper right - plan of left rear corner of central front room.
Below - Elevations of arches over doors A & B.

(10) - Hebris sections.

(11) - Levels in right end - room.

(12) - Vault sections. Lower rt. - transe elevation and adjoining window. also level of lintel ~~in rt~~ racked in rear-wall doorway.

(13) - Vault - sections and plan showing their location - right end, rear.

(14) - Det ails of cornice at rear. - Upper = diagram showing location of sections.

(15) - Plan, left end room, showing transe.

(16) - Plan of rear room at left, showing bench and position of niche in medial wall. Below, same standing wall kts.
Rt. - Section thru bench & view of medial wall and below, front view of throne. Extreme rt, elevation of arch of filled in door thru medial-wall.

(17) - Plan of rear-central room. At rt. - direct measurements used as checks. Sketch represents right transverse rm. door-width & distance of jamb to rear corner - also all-over measurement of transverse wall.

(18) - Front room (left of center) Plan & wall elevations Pt. 14 of plan (13 of elevations) is pt. near medial wall referred to in late J-9 sections (not to be confused with "o near med. wall" i.e. L.S. 0)

v-11 (continued)

(19) - Right transverse end room plan

(20) - Detail sketch of throne in left end-room. Red shading indicates plaster.

(21) - Levels in left end room and arch-section thru door.

(22) - Checks on plinth levels. Levels in central rear room.

J-11. Levels.

Note. — "A of J-11" = "T.P. of J-11" and is point on stake near left front corner of J-11, on top of small secondary wall. Its ht. in relation to J-9 O (incised cross) is not certain within .10. By calculation, the best correction of the error is ~~reading~~ correcting reading Page (7) J-11 — column 1, T.P. = 1.01 3/4 to T.P. = 1.12
N.B. — When H.I follows T.P it is calculated and should be corrected accordingly. Top of 3rd column HI 2.41 is carried over from first column and should be changed to H.I = 1.31

Hts. from J-9 O, incised cross:
L.S. O on floor near medial wall in central front room near S. doorway = +1.10 (check if possible)
Plinth — central front door, (may be 1.20)
= +.66 (average of 2 pts.)
Plinth (rear transe wall.) = +.~~44~~ +1.10
Plinth (approx. opposite L.S. O = +.84

Plinth — L. end door — +.72.