



161

6th January

5

5

To,

The Chairman & Members of
the Works Committee.

Gentlemen,

I have the honour to inform you that the original design and estimate of the Museum provides for kapchas & lime plaster to the wall above the circular lintel carrying the dome.

In a monumental building like the museum, kapcha work at a place like this will appear incongruous. I therefore propose to change this item into dressed stone on both the sides with circles in relief as shown in the accompanying blue print marked A.

For similar reasons I also propose to change Animar dressed on one side & plaster inside to fine dressed masonry dressed on both the sides from roof to main cornice of dome base.

The proposed changes will entail an excess expenditure of Rs.10 as per estimate attached herewith.

Will the members be good enough to record their approval or otherwise to these changes.

N a m e s.	For	Against.
Haji Abdoola Haroon, Esq., M.L.C., Chairman.		
M. Misquita., Esq.,		
W. B. Hossack, Esq.,		
Sir Mahomed Baloch., 2y		
Dr. P. V. Tharani.,		

S. 6/1/25.

6
7/1/25
Executive Engineer
Karachi Municipality

Museum Building

Sir,

The detail Plan and Estimate showing

The deference of Cast in additional
 works proposed shown in Red on the Plan
 as desired. The of deference in all works
 is attached herewith for favour of approval.

Yours Sd

To

The Chairman & members of
 the Works Committee

A. J. Nair
 41/25 (H)

Gentlemen.

I have the honor to ~~request~~ the
~~favours of you~~ inform you that the original
 design & estimate of the museum provides for
 Karpelias and lime plaster to the wall above
 the circular lintel carrying the dome.

111-2

In a monumental building like the
Museum ~~the~~ with Kapcha work at a
place like this will ~~be~~ appear incongruous.
The undersigned therefore propose
~~that the~~ to change the them into dressed
stone on both the sides with circle
in relief as shown in the accompanying
~~draw~~ blue print marked A.

~~Similar~~

I also

For similar reasons ~~the~~ I also propose to
change animal dressed on one side
& plaster inside to imbedded masonry
dressed on both the sides from roof to main
cornice of dome base.

The proposed change will entail an ^{excess} expenditure
of Rs. 1037/- ^{as per estimate attached herewith.}
will the members be good enough to record their
approval or otherwise to these
change ^{fund} ^{name} ^{for} ^{against} Rs. 6/1/25

KARACHI, 7th January 1925.

You were informed on various occasions regarding delay on your works vide telegrams sent to you in July and also -- letter No. E/7732 of 14th November 1924. You also admitted -- that the work was ~~admitted~~ delayed for over two months on -- account of want of stones for capitals & rings of the columns as stated by you to the Executive Engineer. The Managing - Committee have also under resolution No.209 of 22nd December 1924 expedited you. In the face of all this, it is too much for you to say that the Executive Engineer is forestalling - your claims for delay. You are therefore ^{requested} that you should note that the conditions of the contract in all respects will be -



(2)

adhered to and that the condition of daily charge of -
Rs.25/- will be enforced.

Yours faithfully

sd. Dipchand Chandumal

AG. LEGAL ADVISER

KARACHI MUNICIPALITY

N.G.V.

No. E. 15 of 1925.

Forwarded to the Executive Engineer, Karachi Municipality
with reference to his reference No. E.103 of 1925 dated -
3/5th January 1925.

The original letter addressed to Messrs. Charry & Co. duly
signed is also herewith forwarded for despatch on Messrs.
Charry & Co.

D/ 7th January 1925.

Dipchand Chandumal

ACTING LEGAL ADVISER

KARACHI MUNICIPALITY

NGV

123

5th January

5

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M e m o:-

Messrs. Charry & Coy., Contractors of New Museum are requested to clear all building materials from the ground which is being filled up by the Horticulturist in Burns Garden.

Executive Engineer.,

S. 5/1/25.

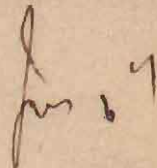
Karachi Municipality.

No.E/ 124 of 1925.

Municipal Office,

Karachi, 5th January 1925.

Copy forwarded to the Horticulturist for information in reference to his endorsement of the 3rd instant on Contractor Eshaq Sakhi - mahomed's letter.



Executive Engineer.,

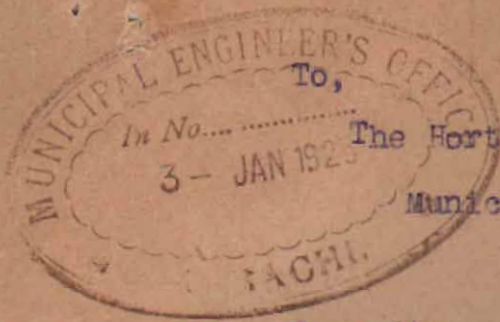
S. 5/1/25.

Karachi Municipality.





Karachi, 3rd January 1925.



To,
The Horticulturist & Supdt.,
Municipal Gardens & Sewage Farms,
Karachi.

Dear Sir,

With reference to my contract for filling earth in the Burns Garden, I find that a large portion of the area to be filled up has been covered with materials of the Museum Contractors and I am therefore unable to do anything until these materials are removed. Please note that if this is not immediately attended to I shall not be responsible for the completion of the work in time.

1820

3-JAN 1924

Forwarded with Compliments
to Mr. E. E. to please order
the Contractor to remove
the materials at once
and clear the garden area
and also the whole work
will be determined.

I beg to remain,

Dear Sir,

Your most obedient servant,

E. E. Sakhimahomed
i.e. Eshaq Sakhimahomed.

E. E.
3.1.25

We have to clear the
in to remove his materials
clear of the ground
being filled by
the Horticulturist.

for E. E.
to Horticulturist.

83

2nd January

8

3

4

To,

Messrs Charry & Co.,
Karachi.

Dear Sirs,

Re: Museum.

With reference to your letter dated 18th December
1924, I have to inform you to please see me in the office.

Yours faithfully,

Executive Engineer,

Karachi Municipality.

U.C.P.

Kus

Burns Garden
18th Decr 24.

The Executive Engineer
Public Works Department
Kachin.

In No.

18 DEC

Re: Museum

We beg to say that we are carrying out the work of re-inforced Concrete lintels + terrace floors of the Museum Buildings as per your amended plans + details, both as to the quantity of steel + thickness of slabs; but we submit that the design + Calculations we sent to you, were based on the report of the joint Committee, + were designed by a firm of qualified architects of some reputation both locally and in Bombay -

As our agreed rates are for Super area of finished roof (4½" thick floors all over except the Central Hall where it is 6") - any extra quantity of steel or Concrete at once

affection and we shall be highly
obliged if you will please let us
have a copy of your Calculations
and data assumed.

yours faithfully.

Cherry to

Call Hunt^r to me.
Jan 29/12

~~insert~~

URGENT

8306

5th December

4

Messrs. Charry & Co.,Re. Lumsden Building

Please note that in ^{reference.} ring No.7232 dated 30th
October 1924 the rate for R.C.Lintel is Re.1/2-, which is the rate
of your tender and not Re.1/8-, which is a mistake.

S. 5/XII/24.

Ld. 6/12/24
Executive Engineer.,

Karachi Municipality.

8231.

2nd December

4

320

4

To,

Messrs. Charry & Coy.,
K a r a c h i.

Dear Sirs,

Reference your letter of 22nd ultimo, re - New Museum, I
have to state that the rate is the same as in tender.

Yours faithfully,



Executive Engineer.,

Karachi Municipality.

S. 2/XII/24.



Burns Garden
22^a Nov 24.

The Executive Engineer
Municipality
Karachi.

24 NOV 1924
Dear Sir.

New Museum.

Referring to the detailed drawing for Circular Cement Concrete lintel with double reinforcement, (under the door) we are starting on the Centring pending your decision re rates for this class of circular beams.

Awaiting your further commands

Yours fff
Chamby B

Atty Per to the
Mr. 11/



To E 7929 of 1924 122

Exec Engineer's Office
20th November 1924
21

The Superintendent of the activity
is requested to allow Messrs
Roy to remove about 4000 cft
of coal cinders for the flooring
work of New bazaar.

Ex.
Mr. Chaff
is to be

22/11/24

File No.

Executive Engineer,
Karachi Municipality

To E 7930 of 1924

Copied to Messrs Chaff Roy for
information.

Executive Engineer,
Karachi Municipality

burning site

A/E
Mr. Chaff
is to be



Karachi 17th Nov 11

The Executive Engineer

Karachi Municipality
Karachi

Dear Sir,

Will you please permit us
to remove about 40000 of Cal
binders for the flooring work of the
new museum, from the Municipal
workshop.

Yours faithfully
Cherry



He will write to the
S.D. Mr
this
order to
from w
10



124
7873

18th November

20

4

4

To,

Messrs Charry & Co.,

Karachi.

Dear Sirs,

With reference to your letter dated 15th instant.

I have to inform you that the design is correct.

Yours faithfully,

Executive Engineer,

Karachi Municipality. *S.D.*

Burns Garden

17th Nov 24The Executive Engineer
Municipality
Karachi.

Re: new Museum

Dear Sir,

as per your verbal instructions this morning we are arranging to leave the concrete lintel ^{resting} over a foot concrete pillar to be filled over the square pillar at the junction of the wings and central hall.

Will you please confirm the same.

Yours ffs
Charreyro

see file



Burns Garden.
15th Nov 24



We beg to place on record that the contour C. Concrete lintel on the rear walls of the museum are entirely of Cement Concrete as per your original instructions & as passed by you. Whereas a detailed drawing since received, referring to the lintel on the front walls & porch shows a Rampatani stone facing hanging on to Concrete backing.

Rebby
The
is
correct
for 17

Yours faithfully
Cherry Sw



15th November

4

7765 4

Messrs Charry & Co.,

Please note that I had previously ordered you to provide proper scaffolding throughout the building work to give access ^{to the} for proper inspection of the work and for the safety of the workmen. Undersigned invites reference to Clause 18 of the conditions of the Contract, where the Contractor is bound to provide proper scaffolding to the satisfaction of the Engineer. Since the safety of the workmen in working at such a height is very necessary, please note, I have this morning ordered you to stop all the construction work of the building, until proper scaffolding is provided by you within three days failing which the same will be done at your risk & cost by the Municipality after the expiry of the period.

Executive Engineer,

Karachi Municipality.

7766

Copy to an President for information

URGENT

7731

14th November

4

4

Managing Committee.

In continuation of my No.6038 dated 12th September 1924, undersigned has the honour to request that there is practically no work being done on the New Museum for the last month.

The Legal Adviser has already served the notice to the Contractor.

Undersigned has interviewed the Contractor and he has told me that he could not get stones for the columns for a long time and still 20 stones are not yet received.

Undersigned places this letter on record for -
Managing Committee's information.

*The paper on the subject is
herewith sent.*

Executive Engineer,
Karachi Municipality.

.....
No.E 7732 of 1924

Karachi 14th November 1924

Copy forwarded to Messrs Charry & Co., with reference to my personal exhortation to hurry up the progress and his verbal explanation in this office today.

[Signature]
Executive Engineer,
Karachi Municipality.

[Signature]



KARACHI MUNICIPALITY.

Extract from the Proceedings of the Managing Committee Meeting of the
Karachi Municipality held on the 20 FEB. 1925

SUBJECT—

70 Submitted with reference to Managing Committee's Resolution No. 371 dated 14th February 1925, Memo No. 962 dated 17th February 1925, from the Executive Engineer requesting sanction to the following rates agreed to by the Contractor Messrs. Charry & Co., in connection with alteration proposed to be made in the Specification for the construction of the New Museum Building.

- | | | |
|---|--|------------------------------|
| 1 | Fine dressed masonry in Ghizree Stone with panelling on both the sides | ... Rs. 175/- per 100 C. ft. |
| 2 | Fine dressed ashlai masonry dises | ... „ 5/- each. |
| 3 | Animar dressed on both the sides in circular wall under dome | ... „ 125/- per 100 C. ft. |

RESOLUTION No. 455. To be submitted to the Municipality

No.

455
70

OF 1925

Municipal Office.

Karachi,

27 Feb 1925

MEMO:

True extract forwarded to the

Chief Clerk for
submission to the Municipality with F.C.

Diatherdash
For Chief Officer,
Karachi Municipality.

1,009-12-11 1924

KARACHI MUNICIPALITY.

TELEPHONE No. 6.

J. N. SETNA,

B. Sc. (GLAS.) ETC.,

EXECUTIVE ENGINEER.

MUNICIPAL OFFICE,

KARACHI.

Dated 17th February 1925.REFERENCE No E 962 of 1925.

To,

The Managing Committee.

Gentlemen,

I have the honour to refer you to my Office No. ⁴²³~~256~~, dated **20th** January 1925 and to inform you that Mr. Charry has agreed to the rates given below, which are very reasonable. I therefore request the favour of sanction to carry out the works at these rates :-

- 2288
17/2
1. Fine dressed masonry in Gizree Stone with panelling on both the sides. ... Rs.175/- per 100 C.ft.
 2. Fine dressed ashlar masonry dises. ... " 5/- each.
 3. Animar dressed on both the sides in circular wall under dome. ... " 125/- per 100 C.Ft.

I have the honour to be,

Sir,

Your most obedient servant,

Executive Engineer,

Karachi Municipality.

V.M.S.
16.2.25.

423. 27-20th Jan 1925

Chief Officer

URGENT

131

Please place before the
the to be held on Friday, &
forward to corporation with the
other papers already decided
by the meeting. There were in the
first meeting of the corporation.

10/16/24

EX: Corporation

KARACHI MUNICIPALITY.

Extract from the Proceedings of the Managing Committee Meeting of the
Karachi Municipality held on the 14th February 1925

SUBJECT—

35 Submitted Memo No. 423, dated 20th January 1925, from the Executive Engineer, requesting sanction to make certain alterations as described in his No. E. 161, dated 6th January 1925, in the specification for the construction of the new Museum Building involving an increased expenditure of Rs. 1,037/- the proposed alterations having been approved by the Works Committee.

RESOLUTION No. 371. To be submitted to the Municipality.

No.

OF 1925

Municipal Office.

Karachi, February 1925

MEMO:

True extract forwarded to Mr. D'Amello for
submission to the Municipality with F.C.

Liattador

For Chief Officer,
Karachi Municipality.

**KARACHI MUNICIPALITY.**

TELEPHONE No. 6.

J. N. SETNA.

B. Sc. (GLAS.) ETC.,

EXECUTIVE ENGINEER.

MUNICIPAL OFFICE,

KARACHI.

Dated 19th January 1925.

REFERENCE No. E 423 of 1925.

Managing Committee.

The undersigned has the honour to submit herewith correspondence ending with this office No.253 of 12th January 1925 for favour of sanction. The changes proposed are described in No.E/161 of 6th January 1925 involving an increased expenditure of Rs. 1,037/- to which all the Members of the Works Committee have given their approval.

The rate of fine dressed ashlar masonry in Ghizree ~~xxx~~ stone and also for making masonry dishes require to be settled with the Contractor and will be reported in due course.

Executive Engineer.,

Karachi Municipality.

S. 1974/25.

For me,

*S. N. Khan**For me
19/1*

KARACHI MUNICIPALITY.

Telephone No. 6.

J. N. SETHNA,

B. Sc. (GLAS), ETC.,

EXECUTIVE ENGINEER.

MUNICIPAL OFFICE,

KARACHI,

Dated, 10th January 1925.

12

REFERENCE No. E. 253 of 1925.

To,

The President.,
Karachi Municipality,
Karachi.

Sir,

I have the honour to submit herewith No. E/161 of the 6th instant circulated in the Works Committee along with the estimate and plan for their opinion, whether the changes mentioned therein be carried out. All the members of the Sub-Committee have approved of the alterations. I therefore request the favour of your instructions whether order to carry out the work be issued in anticipation of the sanction of the Municipality.

I have the honour to be,

Sir,

Your most obedient servant,

For President.

Ronce

Executive Engineer.,
Karachi Municipality.

S. 10/1/25.

Amir Engineer
Please refer to Sec 17/1
10/1/25
13/1

SMITH
9/1
13/1

EE
13/1

12/1

1,000-12-11 1924.

KARACHI MUNICIPALITY.

TELEPHONE No. 6.

MUNICIPAL OFFICE,

J. N. SETNA,

KARACHI.

B. SC. (GLAS.) ETC.,

EXECUTIVE ENGINEER.

Dated 6th January 1925

REFERENCE No E 161 of 1925.

To,

The Chairman & Members of
the Works Committee.

Gentlemen,

I have the honour to inform you that the original design and estimate of the Museum provides for kapchas & lime plaster to the wall above the circular lintel carrying the dome.

In a monumental building like the museum, kapcha work at a place like this will appear incongruous. I therefore propose to change this item into dressed stone on both the sides with circles in relief as shown in the accompanying blue print marked A.

For similar reasons I also propose to change Animar dressed on one side & plaster inside to fine dressed masonry dressed on both the sides from roof to main cornice of dome base.

The proposed changes will entail an excess expenditure of Rs.1037 as per estimate attached herewith.

Will the members be good enough to record their approval or otherwise to these changes.

N a m e s.	For	Against.
Haji Abdoola Haroon, Esq., M.L.C., Chairman.		
M. Misquita., Esq.,	M.B.	
W. B. Hossack, Esq.,		
Mir Mahomed Baloch. Esq.		
Dr. P. V. Tharani.,	P.V.T.	

S. 6/1/25.

Executive Engineer.,
Karachi Municipality.



Museum Building.

No: 355
7/1/25

156

As provided in the estimate		Amount Rs	As proposed	Amount Rs	Excess amount.
Masonry from Top of column upto roof level	Kupcha masonry with plaster on both sides.	188	Fine dressed masonry in Shigri Stone with panneling on both sides	938	750
Masonry from roof level to main cornice of dome base	Simmar Dressed on one side + plaster on inside	1526	Fine Dressed masonry on both sides	1813	287
Total excess Rs					✓ 1037

Estimate for Museum Building.

Description of Works.	Quantity.	Rate.	Per.	Amount.	TOTAL.
Fine dressed ashlar masonry in Ghizree stone from top of column upto roof level 100.5 x 2 x 2-6 =	502 cft	175 - -	70	878 - -	
Fine dressed ashlar masonry dishes	12 No.	5 - -	each	60 - -	
					938 - -
<u>Less work provided</u>					
R.R. in lime mortar	502 cft	26 - -	70	130 - -	
Lime plaster	525 sqft	11 - -	"	58 - -	
					- 188 - -
					Net Total
					750 - -
Animas work in Ghizree stone facing, dressed on outer face Plaster	1451 cft	95 - -	70	1372 - -	
	1400 sqft	11 - -	-	154 - -	
					- 1526 - -
Animas masonry on both sides	1451 cft	125 - -	"	1813 - -	
					1813 - -
					Net Total
					287 - -

Karachi, 192

Total Rs....

Contingencies 10 per cent....

Grant Total Rs....

Assistant Engineer,
Karachi Municipality.Executive Engineer,
Karachi Municipality.

Calculations Checked by

Public Works Clerk.

Sub-Engineer,
Karachi Municipality.

KARACHI MUNICIPALITY

PLAN OF MUSEUM

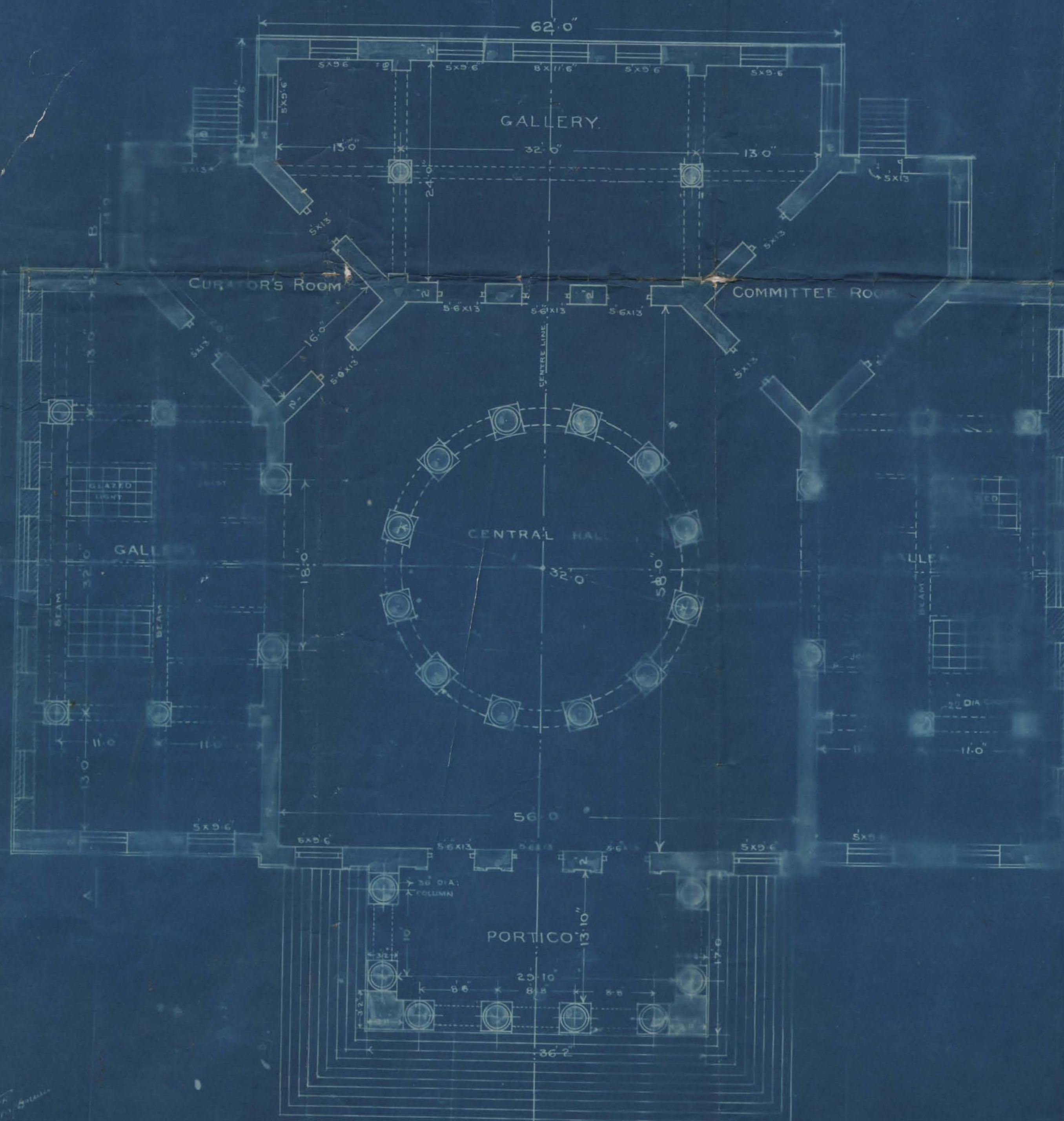
SCALE 8"=AN INCH



— FRONT ELEVATION —



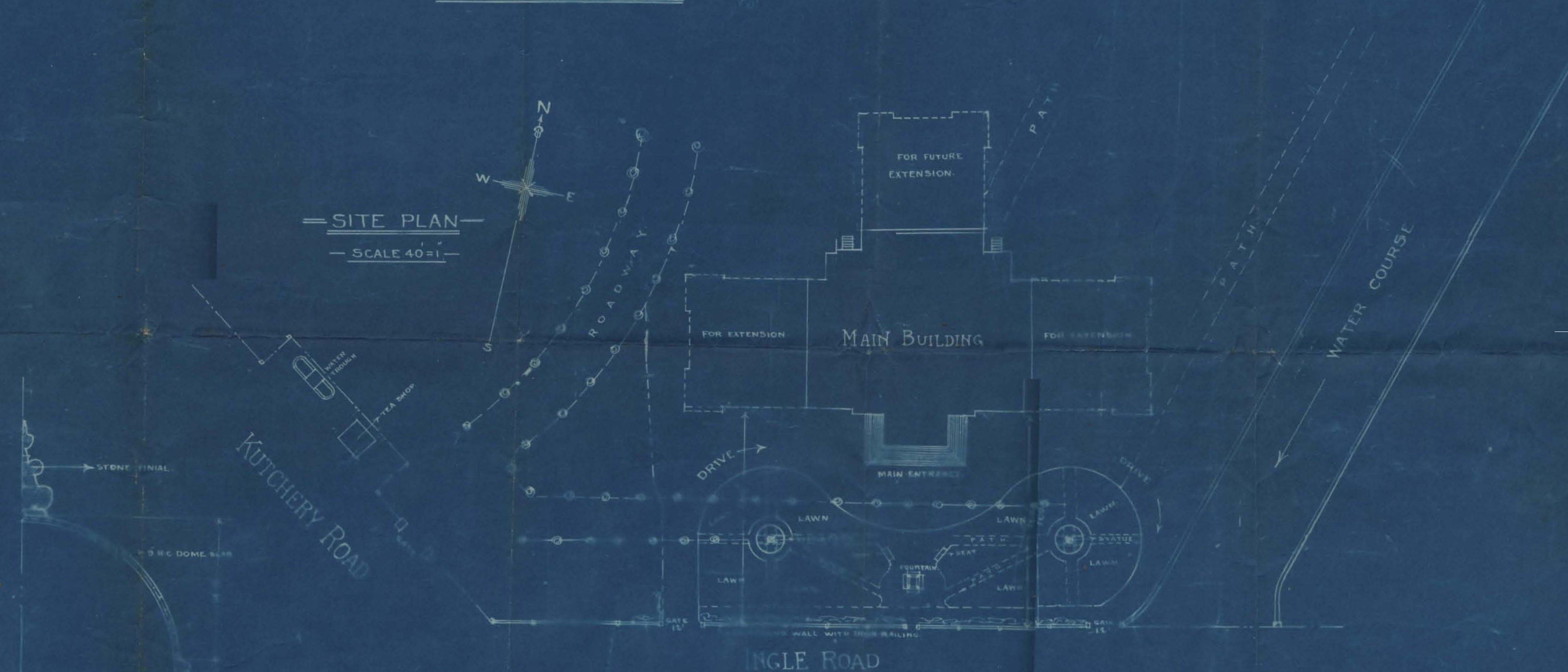
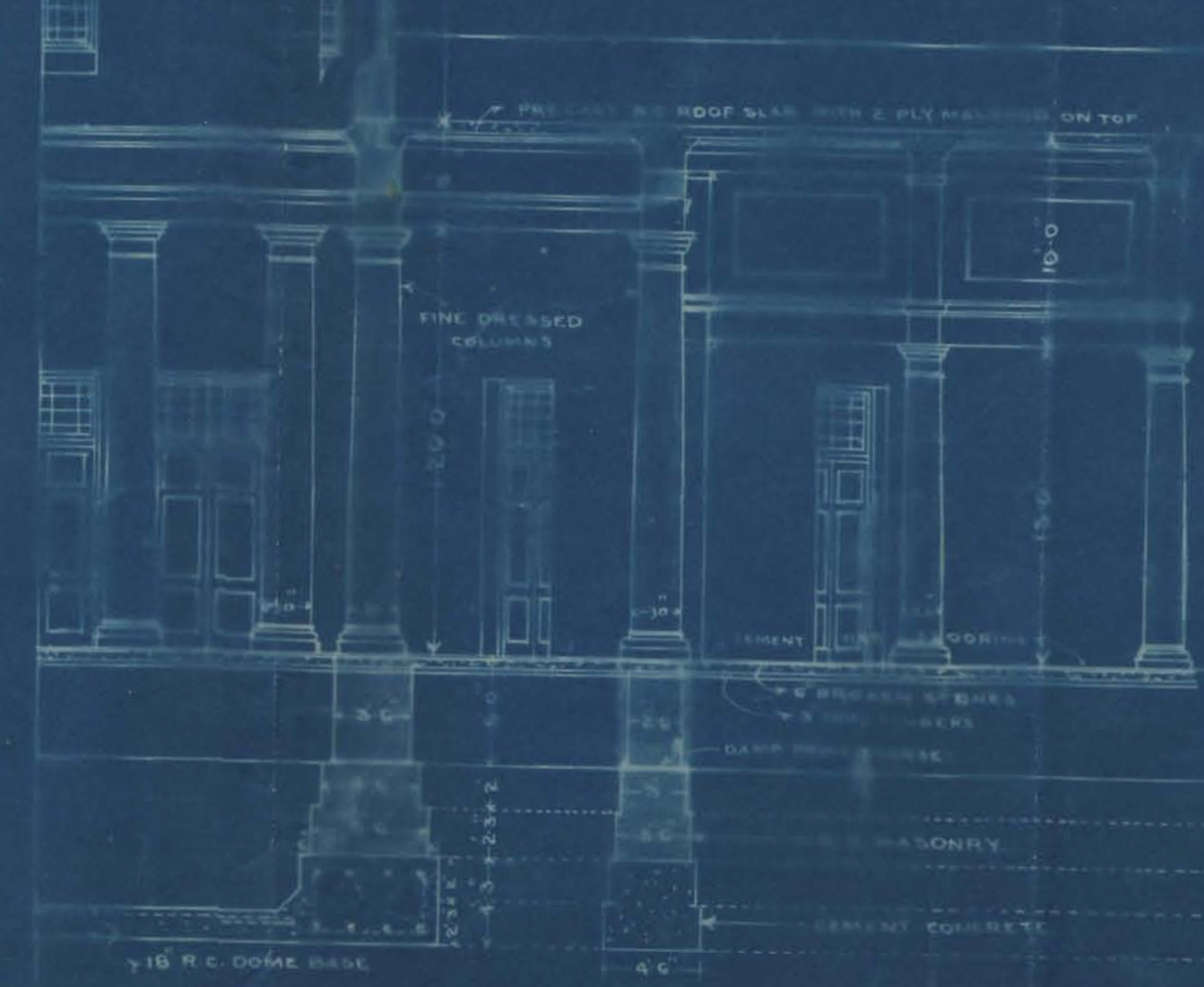
— SIDE ELEVATION —



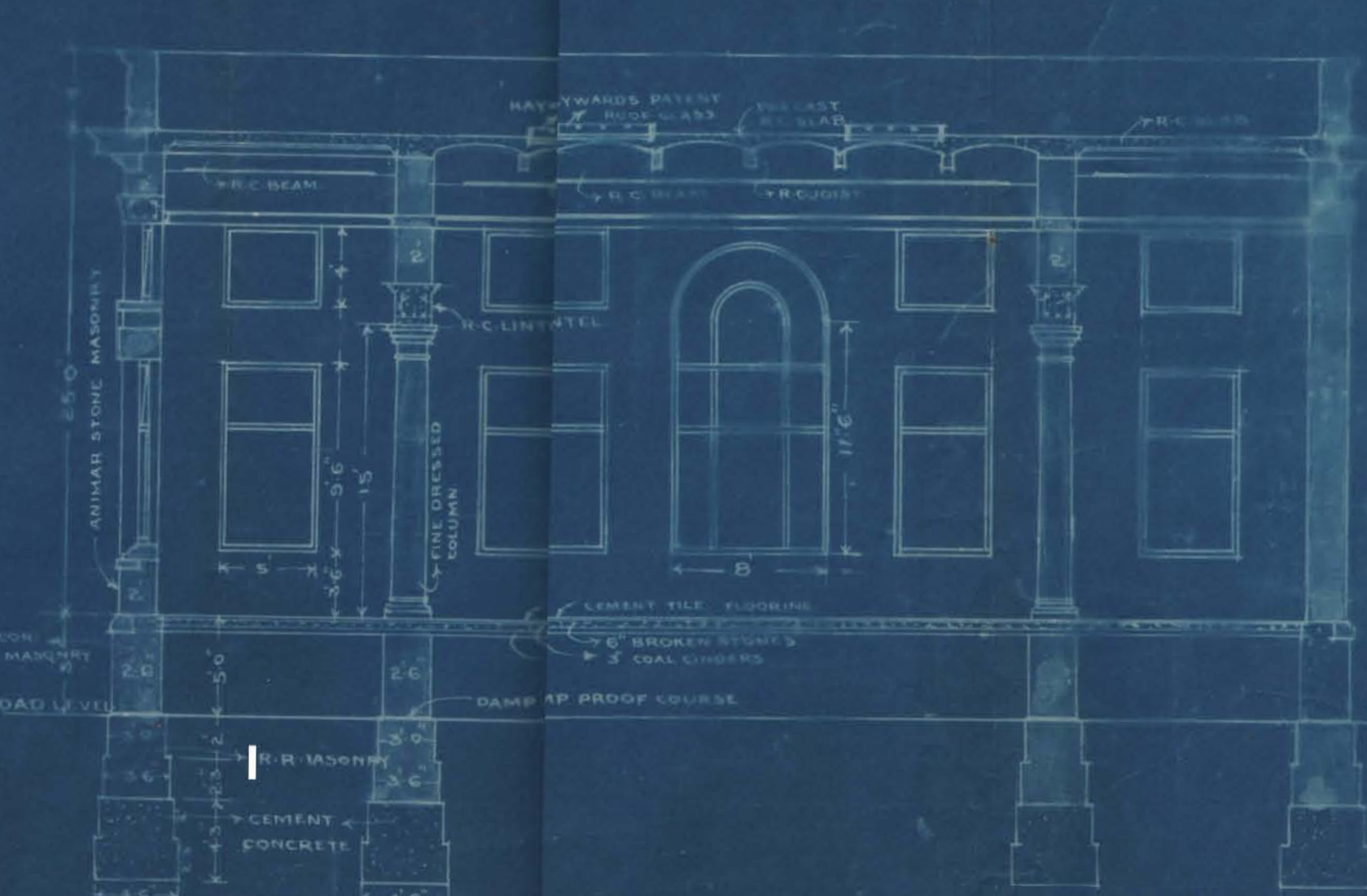
— GROUND PLAN —

— SITE PLAN —

SCALE 40"=1



— HALF LONG SECTION THRU GALLERY —



— SECTION ON A-B —



KARACHI MUNICIPALITY.

Extract from the Proceedings of the Managing Committee Meeting of the
Karachi Municipality held on the 20 DEC. 1924

SUBJECT—

37 Submitted Memo No. 7479, dated 5th November 1924, from the Executive Engineer, submitting with his remarks Works Committee's Resolution dated the 20th October 1924, recommending for sanction his proposal to give stone facing to R. C. Lintels making flat arches in respect of the New Museum involving an expenditure of Rs. 209/- over and above the original estimate.

RESOLUTION No.

2304. Sanctioned.

No. 2304 / 37 OF 19.

Municipal Office.

Karachi, 23.12. 1924

MEMO:

True extract forwarded to the Executive Engineer for

disposal with F.C

*Assn Engineer in charge
to N.O. returned
for 3.11.24*

*Inclined to order
3/1/25*

Diatta
For Chief Officer,
Karachi Municipality

*sw. noted & returned
7/1/25*

*File
6 7/1/25*



300-11-8-1924.

KARACHI MUNICIPALITY.

TELEPHONE No. 6.

J. P. SETNA.

B. SC. (GLAS), ETC.,

EXECUTIVE ENGINEER.

MUNICIPAL OFFICE,

KARACHI.

16756

6/11

Dated, 3rd November 1924.REFERENCE No. L. 2429 of 1924.Managing Committee.

The Works Committee have approved of the recommendation that the R.C.lintels in the exterior should have a facing of Banpettani stones jagged on the re-inforced concrete.

The excess of cost over estimate for this lintel is only Rs.209/-, the item will be covered by the tendered rates of the contractors.

Sanction is requested

For me,

Pencer

Executive Engineer,
Karachi Municipality.

Pencer

6/11

27 5/11

Extract of subject No.3 from the minutes of Works
Committee held at Municipal Office on Monday the 20th October 1924.

000000000000000000000000

3. Submitted letter No.6967 dated 18-10-1924 regarding museum submitting proposals regarding giving stone facing to R.C.Lintels making flat arches.

Resolved:- Proposal No.2 involving an excess of Rs.209/- are approved.

Lambert B. M. M.
Executive Engineer,
Karachi Municipality.

497479

3rd November

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Managing Committee.

The Works Committee have approved of the recommendation that the R.C.lintels in the exterior should have a facing of Banpettani stones jaggled on the re-inforced concrete.

The excess of cost over estimate for this lintel is only Rs.209/-, the item will be covered by the tendered rates of the contrators.

Sanction is required

Executive Engineer,
Karachi Municipality.

0000000000000000

Resolved:- Proposal No.2 Involving an excess of Rs.209/- are approved.

5/11/24
Executive Engineer,
Karachi Municipality.



Museum Building.

R. G. Lintels as provided in Contract.

Through out
all outer walls.

$$1 \times 400' \times 2'-6'' \times 1'-6'' = 1500 \text{ cft.}$$

$$@ 1/2 \text{ per 1 cft} = \text{Rs. } 1688$$

(Proposal 1) Ranpitani stone. Fine dressed flat arches.

with ~~R.C.~~ ^{stone} Backing at 20' height to Main Porch + outer walls.Front Porch } 1-36'
over columns. } 2-14

$$64' \times 2'-6'' \times 1'-6'' = 240$$

$$\text{Over Ventilators. } 14 \times 7' \times 2-6 \times 1-6 = 367$$

Walls on facing Total length

with Ghizre stone
backing

$$134' \times 1'-6'' \times 1'-6'' = 201$$

$$808 \text{ cft} @ \text{Rs } 275/ = \text{Rs } 2222$$

Ghizre stone

$$\text{Porch } 64' \times 1'-3'' \times 0'-6'' = 40$$

$$\text{Walls. } 134 \times 1'-6'' \times 1'-6'' = \frac{302}{342} \text{ cft}$$

$$@ 95/ = \text{Less Rs } 325$$

$$\text{Net total Rs. } 1897$$

(Proposal 2) Ranpitani stone. Fine dressed flat arches.

at 20' height all through stones. over ^{round} columns
and Ventilators.

$$\text{Porch } 1 \times 52' \times 2'-6'' \times 1'-6'' = 195$$

$$\text{Ventilators } 14 \times 7' \times 2-6 \times 1'-6'' = 367$$

$$\text{over walls in face- } 1 \times 134' \times 1'-6'' \times 1'-6'' = 201$$

$$\text{Total } 763 \text{ cft} @ 275 = \text{Rs } 2098$$

A. J. Smith
1200
24



2nd M a y 4.

2743 4

M e m o:-

Contractors, Messrs. Charry & Coy., are informed that their bill amounting to Rs.81-14-0 for cutting the trees & clearing the site for the New Museum Building in the Burns Garden has been sanctioned by the Managing Committee. Instructions have been issued to the Accountant for the payment of this bill.

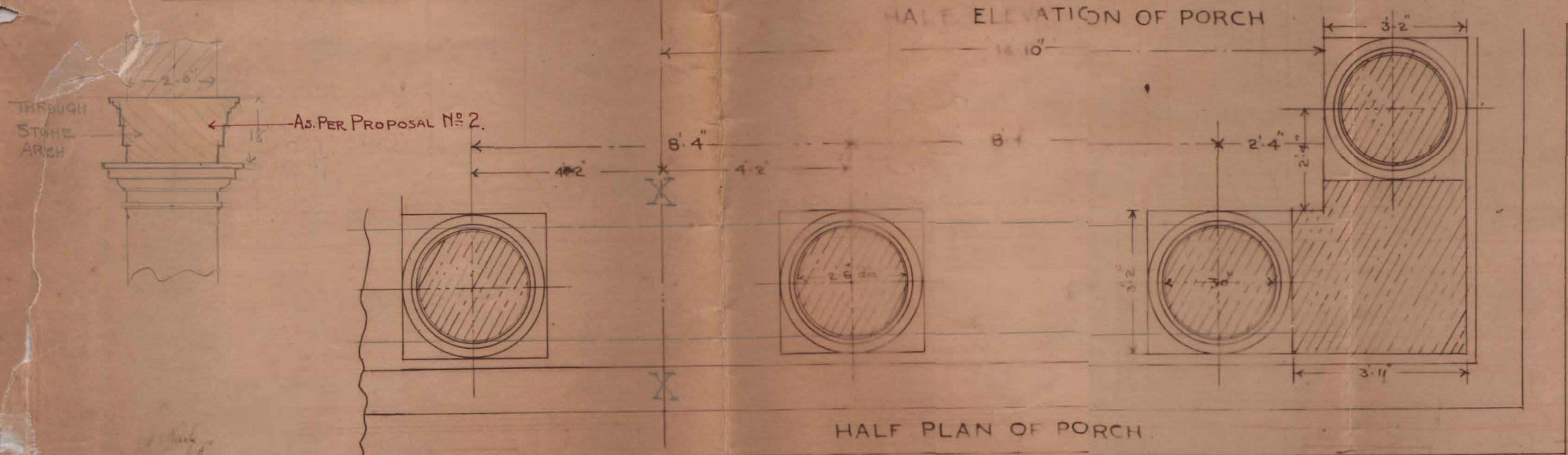
hys
Executive Engineer.,
Karachi Municipality.

No.E/ 2744 of 1924.

Karachi, 2nd M a y 1924.

Copy forwarded to the Accountant for information & necessary action, as per Managing Committee's Resolution No.700.

hys
Executive Engineer.,
Karachi Municipality.



SCALE 1/2 TO A FOOT

Drawn by
Kawji K. K. K.
DRAFTER
5.5.24



7343

30th October

4

1-11

4

Managing Committee.

Undersigned forwards the accompanying recommendation of the Works Committee to the Managing Committee with regard to the altered type of roof on the Museum.

It will be seen from the report, that a stronger & economical form of Reinforced Concrete roof is arrived at and as this flat slab construction is already specified for the extensions, pre-cast type of slabs are changed to "in situ" construction to obtain uniformity.

No extra cost is involved as the Contractor has shown his willingness to work at the same rate as the pre-cast slabs. Sanction is requested to proceed with the work.

Executive Engineer.,
Karachi Municipality.

11/11



7232

29th October

30

4

148

Contractors, Messrs. Charry & Co.,

With reference to my conversation with you ten days ago, will you please let me know if you agree to Ranputani fine dressed work placed in front and joggled with R. C. Lintels, being done at the rate of Rs.2/4- for Ranputani Stone and Re.1/8-for R.C.Lintel?

You have seen the drawing.

Executive Engineer.,

Karachi Municipality.

*yes. we accept
the above rate
specification*

*Charry Ro
31/10*



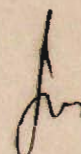
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Extract of subject 2 from the minutes of the Works
Committee held at Municipal Office on Monday the 20th. October
1924.

.....
2. Submitted letter No.6968 dated 18th October 1924 re -
Museum Sub-Committee proposals regarding R.C.Flat roof in place
of present segmental.

Resolved:- The flat roof be constructed provided the Contractor
accepts the same rate as for present one.

~~~~~

  
Executive Engineer,  
Karachi Municipality.

1000.

Note on the roof on the central portion  
of the Museum.

1. According to the specification in the contract, the roof in the central portion underneath the dome is to be of plain re-inforced concrete slab with beams, without any waterproofing cover.
2. Roof over the side wings however is described as precast segmental arched roofing 4" in thickness placed over subsidiary beams which rest over main beams 32' feet long. This roofing is to be covered with Malthoid. These precast blocks are to be 5 feet long and about 2 to 3 feet wide. The arrangement would be as per isometric sketch <sup>below</sup> attached.
3. My experience is that in re-inforced concrete precast units particularly in a roof are a source of weakness, because the construction is not made monolithic, and every joint in <sup>the</sup> precast slabs is a source through which water is likely to leak. Besides hauling up of each block, which will weigh from 500 to 700 lbs according to the width, will produce stresses in the slab not allowed for.
4. But one of the principal objections is due to the long span of the main beam which is 32 feet centre to centre of the columns. In re-inforced concrete structures, it is very economical to stress steel & concrete to their safe limits of stress Viz., 16,000 lbs and 600 lbs per square inch respectively.
5. Taking these stresses to develop simultaneously, the economic depth for the main beam is calculated to be 47". Width of the beam <sup>assumed</sup> is ~~assumed~~ to be 24". ~~Calculations are attached overleaf.~~ The reason why such a heavy size of beam is required is that the strength <sup>continuous</sup> that a ~~continuous~~ slab gives in a T beam is lost in this case, as the precast slabs are not continuous. This size of beam would appear out of place with the interior proportions of the Museum.
6. If however stresses in steel & concrete were not to be developed to their safe limits, it is possible to reduce the depth of the beam by providing re-inforcements at the top of the beam. Such a beam is calculated (vide sheets over leaf) and the size is given to be 27" x 16". But the great drawback in this beam is that concrete in compression is stressed beyond its limits and it is as a rule not advisable to stress the concrete to its breaking point, as it will produce cracks.

2.1.  
f  
2.1.

do not keep  
more info  
proper  
10/11/24

2.

7. I am therefore strongly of opinion that the roof in the wings ~~and~~ should be changed to plain slab construction with beams & water -  
-proofing on top.
8. This will be in uniformity with the roof in the extensions, which is specified as ~~of~~ plain R.C.Slabs with beams. There should not be two kinds roof in the same wing. I have designed such a beam which will be of size  $24\frac{1}{2}$ " x 16" or 28" x 13". (~~Vide calculations~~)
9. Going into the question of costs, I find that the present Contractor is to get Rs.80/- per 100 Sq.feet.of plain slab roof without beams. The beams are to be paid at Rs.1/2- per Cft. For the pre-cast segmental roof, he is to get Rs.129/-per 100 Sq.feet inclu -  
-sive of all beams and waterproof cover.

If the Contractor<sup>him</sup> were asked to do the plain slab roof in the wings at ~~their~~ rate of Rs.80/-per 100 Sq.ft. and pay extra for beams & waterproof ~~cover~~ cover, the rate works out as follows:-

For one bay of 60' x 11'

|                   |                               |                       |   |                     |
|-------------------|-------------------------------|-----------------------|---|---------------------|
| Slabs             | 660 Sq.ft.                    | @ Rs.80/-             | = | Rs. 528 - 0 - 0     |
| Beam              | $24\frac{1}{2}$ " x 16" x 60' | @ Re.1/2-<br>per Cft. | " | 184 - 0 - 0         |
| Malthoid Covering | 660 Sft.                      |                       | " | 231 - 0 - 0         |
|                   |                               |                       |   | Rupees. 943 - 0 - 0 |

Compared with this if the Contractor did this portion at Rs.129/-per 100 Sft.including waterproofing, the cost works out to Rs.851/-. Therefore I recommend that the Contractor be asked to do the roof in plain R.C.Slab & Beam with Malthoid covering at Rs.129/-per 100 Sqft. This rate will apply to central portion also.

Municipal Office,

Karachi,

Dated, 17th October 1924.

Executive Engineer.,

Karachi Municipality,

Note on the roof on the central portion  
of the Museum.

1. According to the specification in the contract, the roof in the central portion underneath the dome is to be of plain re-inforced concrete slab with beams, without any waterproofing cover.
2. Roof over the side wings however is described as precast segmental arched roofing 4" in thickness placed over subsidiary beams which rest over main beams 32' feet long. This roofing is to be covered with Malthoid. These precast blocks are to be 5 feet long and about 2 to 3 feet wide. The arrangement would be as per isometric sketch ~~attached~~ <sup>below</sup> ~~attached~~.
3. My experience is that in re-inforced concrete precast units particularly in a roof are a source of weakness, because the construction is not made monolithic, and every joint in <sup>the</sup> precast slabs is a source through which water is likely to leak. Besides hauling up of each block, which will weigh from 500 to 700 lbs according to the width, will produce stresses in the slab not allowed for.
4. But one of the principal objections is due to the long span of the main beam which is 32 feet centre to centre of the columns. In re-inforced concrete structures, it is very economical to stress steel & concrete to their safe limits of stress Viz., 16,000 lbs and 600 lbs per square inch respectively.
5. Taking these stresses to develop simultaneously, the economic depth for the main beam is calculated to be 47". Width of the beam <sup>assumed</sup> is ~~assumed~~ to be 24". ~~Calculations are attached overleaf.~~ The reason why such a heavy size of beam is required is that the strength <sup>continuous</sup> that a ~~continuous~~ slab gives in a T beam is lost in this case, as the precast slabs are not continuous. This size of beam would appear out of place with the interior proportions of the Museum.
6. If however stresses in steel & concrete were not to be developed to their safe limits, it is possible to reduce the depth of the beam by providing re-inforcements at the top of the beam. Such a beam is calculated (vide sheets over leaf) and the size is given to be 27" x 16". But the great drawback in this beam is that concrete in compression is stressed beyond its limits and it is as a rule not advisable to stress the concrete to its breaking point, as it will produce cracks.

Note on the roof on the central portion  
of the Museum.

1. According to the specification in the contract, the roof in the central portion underneath the dome is to be of plain re-inforced concrete slab with beams, without any waterproofing cover.
2. Roof over the side wings however is described as precast segmental arched roofing 4" in thickness placed over subsidiary beams which rest over main beams 32' feet long. This roofing is to be covered with Malthoid. These precast blocks are to be 5 feet long and about 2 to 3 feet wide. The arrangement would be as per isometric sketch *below*.
3. My experience is that in re-inforced concrete precast units particularly in a roof are a source of weakness, because the construction is not made monolithic, and every joint in <sup>the</sup> precast slabs is a source through which water is likely to leak. Besides hauling up of each block, which will weigh from 500 to 700 lbs according to the width, will produce stresses in the slab not allowed for.
4. But one of the principal objections is due to the long span of the main beam which is 32 feet centre to centre of the columns. In re-inforced concrete structures, it is very economical to stress steel & concrete to their safe limits of stress viz., 16,000 lbs and 600 lbs per square inch respectively.
5. Taking these stresses to develop simultaneously, the economic depth for the main beam is calculated to be 47". Width of the beam assumed is ~~assumed~~ to be 24". ~~Calculations are attached herewith.~~ The reason why such a heavy size of beam is required is that the strength of a continuous slab gives in a T beam is lost in this case, as the precast slabs are not continuous. This size of beam would appear out of place with the interior proportions of the Museum.
6. If however stresses in steel & concrete were not to be developed to their safe limits, it is possible to reduce the depth of the beam providing re-inforcements at the top of the beam. Such a beam calculated (vide sheets over leaf) and the size is given as 16". But the great drawback in this beam is that corrosion is stressed beyond its limits and it is not possible to stress the concrete to its breaking point without cracks.

155

Feb 12

Woke up at 7 o'clock  
for the house in afternoon,  
stirring etc.

Jan 4



2.

am therefore strongly of opinion that the roof in the wings ~~xxx~~ should be changed to plain slab construction with beams & water - proofing on top.

This will be in uniformity with the roof in the extensions, which is specified as of plain A.C.Slabs with beams. There should not be two kinds roof in the same wing. I have designed such a beam which will be of size  $24\frac{1}{2}" \times 16"$  or  $23" \times 13"$ . (~~vide calculation~~)

3. Going into the question of costs, I find that the present Contractor is to get Rs.80/- per 100 Sq.feet.of plain slab roof without beams. The beams are to be paid at Re.1/2- per Cft. For the pre-cast segmental roof, he is to get Rs.129/-per 100 Sq.feet inclu - ve of all beams and waterproof cover.

If the Contractor were asked to do the plain slab roof in the wings at ~~their~~ <sup>his</sup> rate of Rs.80/-per 100 Sq.ft. and pay extra for beams & waterproof ~~snare~~ cover, the rate works out as follows:-

For one bay of 60' x 11'

|                   |                                   |                       |   |                 |
|-------------------|-----------------------------------|-----------------------|---|-----------------|
| Slabs             | 660 Sq.ft.                        | @ Rs.80/-             | = | Rs. 528 - 0 - 0 |
| Beam              | $24\frac{1}{2}" \times 16"$ x 60' | @ Re.1/2-<br>per Cft. | " | 184 - 0 - 0     |
| Malthoid Covering | 660 Sft.                          |                       | " | 231 - 0 - 0     |
|                   |                                   |                       |   | <hr/>           |
| Rupees.           |                                   |                       |   | 943 - 0 - 0     |

Compared with this if the Contractor did this portion at Rs.129/-per 100 Sft.including waterproofing, the cost works out to Rs.851/-. Therefore I recommend that the Contractor be asked to do the roof in plain A.C.Slab & Beam with Malthoid covering at Rs.129/-per 100 Sqft. This rate will apply to central portion also.

Municipal Office,

Karachi,

Dated, 17th October 1924.

Executive Engineer.,

Karachi Municipality,

2.

I am therefore strongly of opinion that the roof in the wings should be changed to plain slab construction with beams & water-proofing on top.

This will be in uniformity with the roof in the extensions, which is specified as of plain R.C. Slabs with beams. There should not be two kinds roof in the same wing. I have designed such a beam which will be of size 24" x 16" or 23" x 13". (~~See calculation~~)

9. Going into the question of costs, I find that the present Contractor is to get Rs. 30/- per 100 Sq. feet of plain slab roof without beams. The beams are to be paid at Rs. 1/2- per Cft. For the present segmental roof, he is to get Rs. 129/- per 100 Sq. feet including all beams and waterproof cover.

If the Contractor were asked to do the plain slab roof in the wings at ~~his~~ rate of Rs. 30/- per 100 Sq. ft. and pay extra for beams & waterproof ~~same~~ cover, the rate works out as follows:-

For one bay of 60' x 11'

Slabs 660 Sq. ft. @ Rs. 30/- = Rs. 523 - 0 - 0

Beam 24" x 16" x 60' @ Rs. 1/2-  
per Cft. " 184 - 0 - 0

Walthead Covering 660 Cft. " 231 - 0 - 0

Rs. 938 - 0 - 0

Compared with this if the Contractor did this portion at Rs. 129/- per 100 Sq. ft. including waterproofing, the cost works out to Rs. 938/-.. Therefore I recommend that the Contractor be asked to do the roof in plain R.C. Slab & Beam with Walthead covering at Rs. 129/- per 100 Sq. ft. This rate will apply to central portion also.

Municipal Office,

Karachi,

Dated, 17th October 1924.

Executive Engineer.,

Karachi Municipality.

Note on the roof on the central portion  
of the Museum.

1. According to the specification in the contract, the roof in the central portion underneath the dome is to be of plain re-inforced concrete slab with beams, without any waterproofing cover.
2. Roof over the side wings however is described as precast segmental arched roofing 4" in thickness placed over subsidiary beams which rest over main beams 32' feet long. This roofing is to be covered with Malthoid. These precast blocks are to be 5 feet long and about 3 feet wide. The arrangement would be as per isometric sketch ~~low.~~

My experience is that in re-inforced concrete precast units particularly in a roof are a source of weakness, because the construction is not made monolithic, and every joint in precast slabs is a source which water is likely to leak. Besides hauling up of each which will weigh from 500 to 700 lbs according to the width, stresses in the slab not allowed for.

The principal objections is due to the long span of the 32 feet centre to centre of the columns. In reinforced concrete structures, it is very economical to stress steel to their safe limits of stress viz., 16,000 lbs and 4000 lbs respectively.

5. Making these stresses to develop simultaneously, the economic depth for the main beam is calculated to be 47". Width of the beam assumed is 24". ~~calculations are attached overleaf.~~ The reason why such a heavy size of beam is required is that the strength of a continuous slab gives in a T beam is lost in this case, as the precast slabs are not continuous. This size of beam would appear out of place with the interior proportions of the Museum.

6. If however stresses in steel & concrete were not to be developed to their safe limits, it is possible to reduce the depth of the beam by providing re-inforcements at the top of the beam. Such a beam is calculated (vide sheets over leaf) and the size is given to be 27" x 16". But the great drawback in this beam is that concrete in compression is stressed beyond its limits and it is as a rule not advisable to stress the concrete to its breaking point, as it will produce cracks.

2.

7. I am therefore strongly of opinion that the roof in the wings should be changed to plain slab construction with beams & water - proofing on top.
8. This will be in uniformity with the roof in the extensions, which is specified as of plain R.C. Slabs with beams. There should not be two kinds roof in the same wing. I have designed such a beam which will be of size 24" x 16" or 23" x 13". (~~vide calculation~~)
9. Going into the question of costs, I find that the present Contractor is to get Rs.80/- per 100 Sq.feet. of plain slab roof without beams. The beams are to be paid at Rs.1/2- per Cft. For the pre-cast segmental roof, he is to get Rs.129/-per 100 Sq.feet inclusive of all beams and waterproof cover.

If the Contractor were asked to do the plain slab roof in the wings at <sup>the</sup> rate of Rs.80/-per 100 Sq.ft. and pay extra for beam & waterproof ~~cover~~, the rate works out as follows:-

For one bay of 60' x 11'

|                   |                 |                       |         |                 |
|-------------------|-----------------|-----------------------|---------|-----------------|
| Slabs             | 660 Sq.ft.      | @ Rs.80/-             | =       | Rs. 528 - 0 - 0 |
| Beam              | 24" x 16" x 60' | @ Rs.1/2-<br>per Cft. | "       | 134 - 0 - 0     |
| Malthoid Covering | 660 Sft.        |                       | "       | 231 - 0 - 0     |
|                   |                 |                       |         | <hr/>           |
|                   |                 |                       | Rupees. | 943 - 0 - 0     |

Compared with this if the Contractor did this portion at Rs.129/-per 100 Sft.including waterproofing, the cost works out to Rs.861/-. Therefore I recommend that the Contractor be asked to do the roof in plain R.C.Slab & Beams with Malthoid covering at Rs.129/-per 100 Sqft. This rate will apply to central portion also.

Municipal Office,  
Karachi,

Dated, 17th October 1924.

Executive Engineer.,  
Karachi Municipality,

Note on the roof on schedule 1  
the central portion of  
the Museum

160

- 1- According to the specification in the contract the roof in the central Hall underneath the dome is to be of plain re-inforced concrete slab with beams, without any waterproofing.
- 2- Roof over the side wings however is described as precast segmented arched roofing 6" in thickness placed over subsidiary beams which rest over main beams 32 feet long. This roofing is to be covered with malthoid. These precast blocks are 2 to 3 feet wide. long and about 2 to 3 feet wide. The arrangement would be as shown below. as far as is practicable sketch below.

- 3- ~~However~~ My experience is that in re-inforced concrete precast units particularly in a roof over a source of weakness because the construction is not made monolithic and every joint in the precast slabs is a source of leak. Besides which it is likely that from some stresses will be put on the slab, not allowed for. But the principal objection is due to the beam which is of the main centre of 32 feet. In re-inforced concrete structures it is very economical to stress the steel

- connect to their safe limits of  
stress viz 1600 lbs and 600 lbs  
being with respect to
- 5- Taking these stresses as ~~for~~ to  
develop simultaneously the  
economic depth for this main  
beam is calculated to be  
47" ~~the~~ width of the beam is  
to be 24" ~~to conform~~ The reason why  
such a heavy size of beam is  
required is that the ~~strongly~~ that  
a continuous slab in this case  
as the pre-cast slabs are not  
continuous. This size of beam  
would allow out of place with  
the interior partitions of the  
museums.
- 6- If however stresses in steel &  
concrete were not to be  
developed to their safe limits  
it is possible to reduce the  
depth of the beam by providing  
reinforcement at the top of the  
beam. Such a beam is calculated  
(vide sheets nos B & F) and  
the size is given to be 27" x 16".  
But the great drawback in  
this beam is that concrete is stressed  
beyond its limits. It is  
as a rule not advisable to  
stress the concrete to its breaking  
point cracks.
- 7- I am therefore strongly of opinion  
that the roof in the wing  
should be changed to  
plain slab construction with  
beams or water proofing on  
top.
- 8- This will be in conformity  
with the roof in the extensions,  
which is sheet piling as of plain  
R.C. slabs with beams. There  
should not be two kinds.

roof in the same way.

162

~~Living in the question of~~  
I have designed a beam  
which will be <sup>each</sup> <sup>size</sup>  $2\frac{1}{2}'' \times 16''$   
or  $2\frac{1}{2} \times 13$ . (vide calculation)

9. ~~Living in the question of cost~~  
I find that the ~~lowest cost~~  
is to get ~~sof~~ ~~for 100 sq. ft~~  
of plain slab roof without  
beams. The beams ~~are to~~  
be paid at Rs  $1\frac{1}{2}$  line-ft.  
For the precast segmented roof  
he is to get Rs 129/- for 100  
sq. feet inclusive of all beams  
& water-hoof cover.  
If the cost ~~is~~ asked to  
do the plain slab roof in the  
water at his rate of Rs sof  
for 100 sq. ft & bay extra for  
beams & water-hoof cover the  
rate work out as follows.

|                                          |                      |   |                  |
|------------------------------------------|----------------------|---|------------------|
| For one bay of $60' \times 11'$          |                      |   |                  |
| slabs $660$ sq. ft                       | @ Rs 1/-             | = | 525-0-           |
| Beam $2\frac{1}{2} \times 16 \times 60'$ | @ $1\frac{1}{2}$ cft | = | 195-0-           |
| multiloid cover $660$                    |                      | = | 231-0-           |
|                                          |                      |   | <u>Rs 951-0-</u> |

compared with this if the cost  
did this portion @ Rs 129/- for 100 sq. ft  
including water-hoofing the  
cost work out to Rs 851/-  
Therefore I recommend that the  
cost be asked to do the  
roof in plain R.C. slab & beam  
with multiloid cover. This rate  
129/- per 100 sq. ft will be  
with ability to control portion  
also.

18th October 4

Works Committee.

## M e m o:-

The galleries comprised in the extension of the Museum are to be covered with reinforced concrete beams and slabs over the same all formed in-situ (Vide sketch A.).

2. The first portion of such galleries which forms the wings to the central domed area and comprised in the original contract is arranged to be covered with reinforced concrete beams and precast segmental arches as covers (Vide sketch B.).

3. It would be preferable that the whole of the galleries including the portion now proposed to be undertaken and the short wings in the existing contract should be of the same roof construction.

Not only is this desirable on account of making the roof of the gallery throughout uniform, but as I show on the attached schedule the in-situ concrete roof covering is preferable to the <sup>precast</sup> ~~present~~ segmental covering.

The area involved is 4322 Square feet.

The cost of the present segmental type will be Rs.5,375/-.

The cost of in-situ flat type will be ..... " 6,188/-

I therefore recommend that the segmental covering in the wings be replaced with the flat covering as for the remainder of the gallery.

6 188  
5 375  
-----  
0 813

Executive Engineer.,

Karachi Municipality. *Sc*