Scott. II-27—58,004—27-10-47.

E & P. H. (1948) Department.

M S. SERIES.

30

~~G.O. NO.~~ Letter. No. 1452

Edn

Dated 2. 6. 48.

closed
cc
Supt

[Despatch Abstract.]

Sub: University - Annamalai - Buildings for Tamil research institute - R.E - applin for payment of enhanced rent.

Back Papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Further Papers.

G.O.	No.	Department.	Date.	G O.	No.	Department.	Date.
	3184	Edn.	6.12.51.				

82410
8/10
12/3
25/10

E.& P.H.(G.3)

Memo.No.~~18~~82,410 E3/47 Edn., dated 27/10/47

University - Annamalai - Building for the Tamil Research Institute ~~and~~ - Revised estimates - Scrutiny,

---

G.No.18646/47

From the C.E.,P.W.D.,(Gl.,Bldgs.& Defence),Chepauk,Madras, to the Registrar,Annamalai University,No.1598-Wks/46-5 ~~Ed~~ dated 3.3.47 (copy sent to this office).

PP17-189 (L)

The C.E.,P.W.D.,(G.B.& D) is requested to state when the plan and estimate for the Tamil Research Institute building, duly scrutinised, will be submitted to Govt.

To
The C.E.,P.W.D.,
(G.B.& D.).

21/10/47

27.X.47

25/10/47

ASST. SECRETARY TO GOVERNMENT
4 DEC 1947
EDUCATION AND PUBLIC HEALTH DEPT.

Office of the Chief Engineer, P.W.D.
General Branch, Chepauk, Madras.

From

Sri Rao Bahadur A.R.Venkata Acharya, B.E., I.S.E.,
Chief Engineer, P.W.D. (Irrigation) (General Branch).

To

The Secretary to Government,
Education and Public Health Department.

Letter No.1598.Wks/46-8 dated 1-12-1947.

Sir,

95624

Sub: University - Annamalai - Building for the Tamil Research Institute - Revised estimate -Scrutiny.

Ref: Govt. Edn. & Public Health Memo No.84410-G3/47-1. Edn. dated 27-10-47.

The particulars called for from the Registrar, Annamalai University, have been received recently, and are under scrutiny in this office.

The plan and estimate for the above work will be forwarded to Government with my remarks by the 20th December 1947.

for Chief Engineer, P.W.D.

TDC.1/12/47

4 4

Please see the CE/s letter on p 3 ante. His further report may be awaited by him 31/1/48.

W
9.2.)

Ref
6/2/48
AV
8/2/48

PUBLIC WORKS DEPARTMENT.

No. 1598-Wks/46-9 dated 17th Jan.1948.

From: Sri Rao Bahadur A. R. Venkatar Acharya, B.E., I.S.E., Chief Engineer, P.W.D. (Genl) Chepauk, Madras.

To The Secretary to Government, Education & Public Health Dept Fort St.George, Madras.

GOVT. SECRETARY TO GOVERNMENT EDUCATION AND PUBLIC HEALTH DEPT. 23 JAN 1948

Sir,

Sub: University - Annamalai - Building for the Tamil Research Institute and drainage scheme - Revised estimates -

Ref: Government - Education and Public Health Department Memorandum No.57435-B1/45-3 Edn. dated 8-3-1946.

In continuation of this office endorsement No.1598-Wks/46-6 dated 3-3-1947, I forward the plan and estimate, received from the Registrar, Annamalai University as referred to in my letter No.1598-Wks/46-1 dated 23-7-1946, along with my remarks thereon embodied in a technical note. The abstract of estimate received with the Government Memorandum quoted above and a copy of letter D.No.867 dated 2-10-1947 of the University Engineer with its enclosures are also enclosed.

The plan and estimate are, generally, in order, subject to the remarks contained in my technical note enclosed. The estimate amount has been increased to Rs.2.10 lakhs due to the reasons stated in the last para of the technical note.

for Chief Engineer, P.W.D. (General)

Encls:
Plan & estimates in original.
Abstract estimate in one sheet.
Pressure calculations in 2 sheets in original.
Site plan in original.
Copy of letter No.867 d/2-10-47 of the University Engineer.
Technical Note.

ppr. 17/1.

Copy of letter No. 867 dated 2-10-1947 from the University Engineer, Annamalai University, Annamalainagar to the Chief Engineer, P.W.D. (General).

Ref: Your letter No.1598-Wks/46-7 dated 10-7-1947.

Tamil Research Institute, was designed, to meet the minimum requirements, at that time but providing for future expansion. Hence the foundations and masonry work had to be made sufficiently strong, to take up a first floor later on. It is not necessary to state that this University, in the heart of Tamil Nad, and devoted to research and development of Tamil Culture, Tamil Isai etc. would need more and more space comparatively.

This Institute is situated adjoining the Oriental Buildings (which has two floors) and later on is to be inter connected, as the other college blocks have been for purpose of easy access. The site plan is herewith annexed.

Trial pits show that the sub soil is sandy and water logged, as the area is low lying and easily flooded. The average ground level is about 11.5, while the flood level as has been observed during the past years has been + 12 & +13.

The pressure calculations on the soil have also been sent herewith. The pressure calculations on the soil have also been sent herewith. The pressure per sft. is 1.04 tons and 1.6 for one & two floors respectively.

The excavation show that the oriental block adjacent the foundation have been taken down 6'-0" below ground level and 10-0 from basement. The basement level of this building is +17.00.

The basement level of the Tamil Research Institute also is kept at + 17.00 and extra depth has been given, to make up for the lower ground level.

Taking for wet sand, the size of the angle of repose at between 0.4"& 0.5" the minimum depth of excavation works to ~~xxxxx~~ between 7'-0" and 4'-0". This factor coupled with the depth of excavation for a similar structure have influenced to take up the depth as about 5'-6".

As the sub soil is easily water logged and the area flooded, a greater depth of foundation concrete in a fairly rich mix has been proposed.

2. As the basement level has been kept up to that of the Oriental Buildings and the ground level is lower it appears high. The site plan with spot levels is sent herewith.

3. River sand, which costs about Rs.2/- more than pit sand, has been used for the top one foot depth to ensure a layer, absolutely free of earthy and silty admixtures beneath the flooring.

4. The levels of the floors have been kept up in level with that of the adjacent buildings namely the Oriental Buildings, housing the various department concerning languages.

The pier walls in the ground floor, between doors and windows have to be in cement mortar 1:3. ~~xxx xxxx~~ This has been inadvertently omitted, and the extra cost of about Rs.250/- could be made up from the unforeseen contingencies.

The masonry on the bottom of the pier (5' x 1'-6") in brick cement mortar can withstand a load of 7 1/2 tons per sft. The rest of it will be in lime mortar as provided calculations have been submitted herewith for perusal as desired.

5. The calculations for the R.C. Lintels have been submitted. Details have been submitted for the Major door and windows openings and the verandah openings. As the lintels for doors & windows, and smaller openings have been proposed to be precast, a uniform depth was kept. If desired they may be modified.

6. 16" x 6" x 50 lbs. Rm. S. beams will be provided as proposed in your letter.

7. The R.W. joists will be joined with fish plate joints over the R.C. beams.

2/12/1

Chief Engineer's Technical Note on the plans and estimate for the construction of the Tamil Research Institute Building in the Annamalai University.

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1) GENERAL:

(a) The original estimate and plans for the building in question do not seem to have been received in this office for scrutiny.

(b) The abstract of the revised estimate, received with the Government Memorandum No.57435-B1/45-3 Edn. dated 8-3-46 and the one, now received direct from the Registrar differ considerably from each other in many respects, though the total estimate amount in both cases is the same, being Rs.2 lakhs.

In as much as the latter estimate is seen to be based on the detailed plan and data now received, it is presumed to be the correct revised estimate, and so, this alone has been taken up for scrutiny in preference to the former.

(c) It has to be mentioned here that no report accompanying the estimate, explaining the necessity and requirements of the proposals, has been enclosed with the estimate. It is, however, presumed that the proposals are as per the requirements of the Registrar, though he has not countersigned the plan. He may now be asked to countersign the plan and estimate in token of his approval.

(d) It is desirable to provide independent steps for the Central block and for the two wings. The steps for the two wings may be near the end rooms of the Professor and Historical Research Section, as roughly indicated in this office in pencil on the plan.

2. FOUNDATIONS: The pressure calculations furnished by the University Engineer in his D.No.867 d/2-10-47 are incorrect in the following respects:-

(i) The length of the pier between windows in taken as 5', while it ought to be 7'.

(ii) The proper method of arriving at the load on pier is to consider the portion of wall from centre to centre of openings and to make suitable deductions towards the actual openings and additions for the extra weight due to lintels etc. which has not been followed in the present calculations.

(iii) The weight of girder resting on the pier has not been taken into account.

(iv) Increased loading i.e. 170 lbs/□' ought to have been allowed for the floor load (the present roof) in calculating the pressure due to the addition of a first floor at a later date against 140 lbs allowed in the calculations both for the floor and roof.

The pressure obtained on the soil under maximum loading conditions i.e. when a F.F. is to be added at a future date is 1.28 tons/□' as worked out in this office, against 1.64 tons/□' arrived at by the University Engineer. The proposed foundations and basement though somewhat superfluous may be passed in view of the circumstances explained by the University Engineer in his present letter dated 2-10-1947.

3. MASONRY IN FOUNDATIONS AND BASEMENT: The mix of cement mortar to be used for this brick masonry should be 1:5 and not 1:7 as proposed, as the latter mix is too lean and weak.

4. DAMP PROOF COURSE: This has been provided only for the main and cross walls. This should be provided for the pillars in the verandah also.

The

The size of stone to be used for this item of concrete should be only 3/4" and not 1½". Again, the thickness of the course need not be more than 3" against the 4½" now proposed.

5. SUPERSTRUCTURE: The pressure on masonry, as worked out in this office taking into account the proposed additions of a F.F. at a later date is 2.20 tons/S.ft. at first floor level, 4.66 tons/□ ' at the cill level of the window in the ground floor and '3.95 tons/□ ' at F.L. of ground floor. Under the circumstances, brick masonry in C.M. 1:3 may be provided for the full height of all the main walls of the building as verandah pillars in the ground floor and masonry in C.M. (1:5) for the rest of the walls.

6. TEAKWOOD DOORS: The size of the panelled doors 5' x 10' proposed for all the main doors of the building is a bit too large and may be reduced to 4'-6" x 10' with the panelled portion only for a height of 8'-0" and the remaining 2' at top may be of either fixed welded mesh or swing glazed ventilators.

7. TEAKWOOD WINDOWS: The size of panelled windows in the main halls is 5' x 7'. This size may also be reduced to 4'-6" x 7'-0" with the panelled portion for a height of 5', and the remaining 2' at top may be of fixed welded mesh over all the internal windows, and of swing glazed shutters over all the external windows. For the other sizes of windows also, the top 2' portion may be either fixed welded mesh or of swing glazed shutters, as the case may be, as suggested above.

8. R.C.LINTELS: The calculations furnished by the University Engineer in his letter d/2-10-47 are defective in the following respects:-

(i) Calculations in support of the lintels over the main doors and windows and the verandah openings only have been furnished and not for the other lintels over the collapsible gate, front pilasters (main entrance) beneath the dome etc.

(ii) Lower stresses of 600 lbs. and 16,000 lbs. for concrete and steel have been assumed, against the higher stresses of 750 lbs. and 18,000 lbs. permissible under the latest code.

(iii) For the verandah opening, the clear span assumed is 7', while it is 8' as per the provision made in the estimate under 'brick masonry in superstructure'.

(iv) For the lintel over the verandah opening, B.M. assumed is W1/12, while it ought to be W1/10 only.

(v) The weight of the parapet wall has not been taken into account.

From calculations made in this office, the following changes appear necessary in the thickness of lintels.

(a) The overall depth of the lintel over the verandah opening should be 11" if the clear span is 8' and 10" if the clear span is 7' against the 9" as proposed.

(b) The 9" lintels proposed over the 8' windows and 6" lintels over the 2' windows in the end rooms are quite inadequate, if the pier walls are 1'-0" x 1'-6" only of brick masonry, as scaled out from the plan.

If the relative position of these windows as shown now on the plan is to be retained, the piers between them should be built of plain cement concrete 1:2:4 using 3/4" sized granite jelly and the thickness of the lintel over the central 8' window should also be increased to 14" as the brick masonry pier between the windows as now proposed, cannot bear the loads coming on them, which is about 9 tons/□ '.

(c) The thickness of the continuous lintel over the three 5' windows on the south side of the philological Section is to be increased from 6" to 8".

As regards the lintels proposed over the collapsible gate, front pilasters (main entrance) and beneath the dome they are not susceptible of verification in this office in the absence of information regarding the exact position and details of the proposed dome. The adequacy of these may be re-examined by the University Engineer in the light of these remarks.

9. R.S.GIRDERS: As already pointed out to the Registrar, the 18" x 6" x 55 lbs. size of R.S.beams proposed for the two end rooms may be reduced to 16" x 6" x 50lbs.

10. BED BLOCKS: The size of the coarse aggregate adopted for the 1:2:4 cement concrete bed blocks should be reduced from 1½" to 3/4". The length of bed blocks should be increased from 2' to 3½".

11. T.W.JOISTS: As already pointed out to the Registrar in this office letter No.1598-Wks/46-5 dated 3-3-47, the teakwood joists proposed should be fished at joints over the R.S.beams.

12. FLOORING: It will be sufficient to have a flooring of cement concrete 4" thick with 1½" size hard broken stone in C.M. 1:3, laid in panels, well rammed and the top rubbed smooth instead of the 1½" thick grand flooring in cement concrete 1:2:4 over a 6" thick layer of brick jelly in C.M. 1:4, adopted in the estimate.

13. 1:2:4 C.C.SLAB, 2" THICK: and 3' wide, provided for in the estimate, is presumed to be laid above the G.L. alround the building. This appears un-necessary, and may be replaced by 3" or 4" gravelling, if at all required.

14. RATES: The rates as allowed in the estimate are all passed for estimate purposes only, as the actual cost and lead of materials have not been separately furnished for verification with the schedule of rates and to justify the 10% profits allowed under each item in the data.

It is presumed that the work will be entrusted to contractors only after calling for tenders.

15. The arthmetical errors in the data and estimate have been corrected in this office, wherever necessary. After allowing a suitable lump sum towards the extra cost of C.M.1:3 and C.M.1:5 against the C.M.1:7 proposed for the brick masonry, extra depths of lintels etc. the estimate amount has been increased from Rs.2 lakhs to Rs.2.10 lakhs.

3/3

for Chief Engineer, P.W.D.
(General).

ppr.17/1.

2/7/1

15

E+H

E+PH(GT3)

Please see the letter ~~from~~ from the Chief Engineer, P.W.D, on p5 and its enclosures on pp 6-9 ante. The main file ~~at~~ containing the previous papers on this subject has been circulated in connection and to H+H(Edn) on 27/1/48 ~~asking~~ to the ~~for~~ recommendation of the S.F.C. on the abbn. of the University for grant for the Drainage Scheme. This may await its return file

31/1/48.

28/1/48

29.1.48

29.1.48

12

E.& P.H.(G.3) (13)

Letter/Ref.No.84410 G3/47-3 Edn., dated 7/4/48

To

The Registrar, Annamalai University, Annamalainagar.

Sir,

Sub:- University - Annamalai - ~~Building~~ Building for the Tamil Research Institute - Revised Estimate - Application for payment of enhanced grant.

--

Ref:- Your letter No.9255 dated 1-3-1946. (2)/58

I am to request that an estimate of the expenditure the University is likely to incur on the scheme referred to above during 1948-49 may be furnished urgently to Govt.

Y.O.S.,

All communications should be addressed to the Registrar, Annamalai University, Annamalainagar by designation and not by name.

ANNAMALAI UNIVERSITY

ASST. SECRETARY TO GOVERNMENT
20 APR 1948
EDUCATION AND PUBLIC HEALTH DEPT.

No. 497 — 19th April, 1948.

From

THE REGISTRAR,
ANNAMALAI UNIVERSITY
ANNAMALAINAGAR.

To

The Secretary to Government of Madras,
Education and Public Health Department,
Fort St. George, Madras.

Sir,

Sub: University - Annamalai - Buildings for the Tamil Research Institute - Revised Estimate - Application for payment of enhanced Grant.

Ref: Letter No.84410 G3/47-3 Education dated 7th April, 1948.

With reference to Government's letter No.84410/G3/47-3 Edn. dated 7--4--48, I am to state that the University hopes to be able to spend a sum of Rs.50,000/- on the construction of the Tamil Research Buildings for the year 1948--49.

Your obedient servant,

DESPATCHED
APR 19 1948

N.19.

Ag.Registrar.

Edn. & P.H. Deptt.

Note for the Standing Finance Committee

UNIVERSITY - Annamalai - Building for the Tamil Research Institute - Revised estimate - Application for payment of enhanced grant.

SUMMARY OF COST.

Major head of account.	Minor & sub head of account.	Ultimate cost. Recurring.	Ultimate cost. Non-recurring.	Cost in the year of introduction. Recurring.	Cost in the year of introduction. Non-recurring
37-Education.	a-University-Grants to Universities - C.Annamalai University.	Nil.	Rs. 2.10 lakhs.	Nil.	50,000/- (in 48-49)

1/ In 1942, the Govt. sanctioned the payment of a full grant of Rs.96,000/- to the Annamalai University towards the ~~cost of~~ construction of a building for the Tamil Research Institute ~~estimated to cost Rs. 1 lakh~~. The University was at the same time informed that in view of the difficulty in getting the steel and iron required for the work and also in view of the ban imposed on the use of timber for buildings for other than those for war purposes, it might apply for the payment of the grant when the work was taken up for execution, on the restoration of normal conditions. In December, 1945, the University applied to the Govt. for payment of an enhanced grant based on revised estimates due to the increase in the cost of materials. The University was told that the Govt. had no objection to the University proceeding with the execution of the work, but that they could not commit themselves in regard to the amount of grant they would give for the work, until the revised estimates were received and considered by them. ~~duly scrutinized~~. The revised estimates since received from the University were forwarded to the

C.E.

C.E.,P.W.D. for scrutiny in March 1946. The C.E. after due examination, has reported that the plan and estimates of the University are generally in order, subject to certain technical remarks which he has made with regard to the structure of the building. He has also pointed out several defects and omissions in the estimates prepared by the University. According to him, the estimated cost for the construction of the buildings for the Tamil Research Institute will be Rs. 2.10 lakhs as against Rs. 2 lakhs estimated by the University. It was suggested by this deptt. that the scheme may first be placed before the U.G.C., and then before the S.F.C., and the Cabinet. Finance agreed to this proposal. ~~refer the scheme first to the U.G.C.~~ The case was then circulated for orders. H.M.(Edn) minuted as follows:--

"As H.M.(Fin) has noted before, it may not be necessary hereafter to refer these matters to the University Grants Committee. Our experience in the past has not convinced that it is necessary to have an intermediate body like the University Grants Committee. A note may be prepared for the Standing Finance Committee straightaway."

Sd.T.S.A(vinashilingam Chettiar)
H.M.(Edn.) 9.3.48.

The minutes of H.M.(Fin) there are as follows:--

"It may be absolished.

S.F.C. may consider the proposal."

Sd.B.G.(opala Reddy),
H.M.(Fin).
16.3.48.

2/ The points for orders are whether the grant of Rs.0.96 lakhs previously sanctioned to the Annamalai Univ. for the construction of a building for the Tamil Research Institute may now be increased to Rs. 2.10 lakhs based on the estimated cost by the C.E., owing to the increase in the cost of materials.

3/ Particulars of the Budget provision under the Major head of account etc. required to be furnished in this connection are given below:—

(a) Budget provision under the Major head of account in 1948-9 — 8,20,28,700.

(b) Actual expenditure up to the end of under the major head of account. — Nil

(c) Estimate of extra expenditure on the present scheme in the current year. — Rs. 50,000/-

(d) Savings in the budget provision for other items included in the major head.

(e) Total commitment in the year under the major head of account of new schemes (Not provided for in the budget) sanctioned since the beginning of the financial year up to the end of the month of

(f) Total commitment in the year under all major heads of account of new schemes (Not provided for in the budget) sanctioned since the beginning of the financial year up to the end of the month of

Does not arise as this is beginning of financial year

(**) which includes Rs. 7,60,400/- for grants to the Annamalai University (Rs. 5,10,400/- recurring and Rs. 2,50,000/- non-recurring)

20

(illegible)

2

E.YPH (G3) 12

Ms.

Letter/Page No. 1452 Dated- 21/6/48

To

The Registrar,
Annamalai University,
Annamalainagar.

28/2/48 5/6

Sir,

Sub:- University - Annamalai - Buildings for the Tamil Research Institute - Revised Estimate - Application for payment of enhanced grant -

Ref:- Correspondence ending with your letter No. 4972/4 - 19.4.48

P 15 of

I am directed to state that the proposal to increasing the grant already

2-2

already sanctioned for the Tamil Research Institute ~~shall be~~ considered as a Part II scheme for 1949-50. I am to request you to send a statement showing the expenditure that is likely to be incurred in 1949-50, early in August 1948, for the purpose of considering the provision to be included in the B.E. for 1949-50.

24/5/48

28.5.48

Copy to the C.E. P.W.D. (Irrigation-Electricity Branch)

Government of Madras.
Education and Public Health Department.
No.1452 Education.
***

From

M.V. Subramanian, Esq., I.C.S.,
Secretary to the Government of Madras.

To

The Registrar,
Annamalai University,
ANNAMALAINAGAR.
***

Dated Fort St. George the 2nd June 1948.
***

Sir,

Sub: University-Annamalai-Buildings for the Tamil Research Institute-Revised Estimate-Application for payment of enhanced grant.
Ref: Correspondence ending with your letter No.497 dated 19-4-1948
***

I am directed to state that the proposal to increase the grant already sanctioned for the construction of a building for the Tamil Research Institute should be deferred for consideration as a Part II scheme for 1949-50. I am to request you to send a statement showing the expenditure that is likely to be incurred in 1949-50, early in August 1948, for the purpose of considering the provision to be included in the Budget Estimate for 1949-50.

Your obedient servant,

M.V. Subramanian,
Secretary to Government.

MT/

P.T.O.

To

Copy to the Chief Engineer, Public Works Department (Irrigation-General Branch).

Forwarded/By order.

Superintendent.

MT/

E.& P.H.(G.3)

University - Annamalai - Building for the Tamil Research Institute - Revised estimates. - Application for payment of enhanced grant.

C.No.5484/48.

From the Chief Engineer, P.W.D.n No.1598 Wks/46-9 dated ~~17xIxx4~~ 17.1.1948.

The file relates to the application of the Annamalai University for the sanction of an enhanced amount of grant based on revised rates due ~~to~~ increase in the cost of building materials, ~~for~~ towards the construction of buildings for the Tamil Research Institute at the University. In G.O.No. 700 Edn., dated 12.5.1942, the Govt. sanctioned the payment of a grant of Rs. 96,000/- to the University towards the above work; ~~but~~ the University was at the same time informed that in view of the difficulty of getting the steel and iron required for the work and also ~~due to~~ in view of the ban imposed on the use of timber for buildings other than those for war purposes, ~~that the University~~ it might apply for the payment of the grant ~~xxxxxxxxxxxxx~~ when the work was taken up for execution, on the restoration of normal conditions. In December, 1945, the University applied to the Govt. for payment of an enhanced grant based on revised estimates due to the increase in the cost of materials. The University was told that the Govt. had no objection to the University proceeding with the execution of the work, but that they could not commit themselves in regard to the amount of grant they ~~xxxxxxxx~~ would give for the work, until the revised estimates were duly scrutinised. The revised estimates ~~were~~ since received from the University ~~in~~ were forwarded to the C.E.P.W.D., for scrutiny in ~~July~~ March 1946. The Chief Engineer, after due examination, now reports that the plan and estimates are generally in order, subject to the remarks contained in his technical notes on p.p.7-9 c.f. He has pointed out several defects and omissions in the estimates prepared by the Uty. According to him the estimated cost for the construction of buildings for the Tamil Research Institute will be Rs. 2.10 lakhs as against Rs. 2 lakhs now estimated by the Uty.

p.t.o. -2-

is
2. Attention/in this connection invited to the papers in the linked file wherein the request of the Annamalai Uty. for a similar enhancement of the orgl. grant sanctioned by Govt. for the provision of an underground drainage in the Uty. from Rs.2.31 lakhs to Rs. 4.927 lakhs owing to the increase in the prices of materials has been considered. This proposal was first placed before the Uty. Grants Committee and on its recommending the scheme, ~~was placed before the Standing Finance Committee for approval. The S.F.C. recommended that the proposal may be considered as a Part II Scheme for 1948-49 and it has accordingly been considered.~~ It seems that the same procedure should be followed in this case also. It is for orders whether the amount of Rs. 2.10 lakhs as estimated by the C.E. may be taken into account for the purpose and the proposal placed first before the Uty. Grants Committee.

3. Finance may see the case u.o. for remarks prior to circulation.

RS 17/2/48
18.2.48.

19.2.48

Fin. (Exp. A)

E.P.H.-W.O.84410-G3-47-1
25.2.48.

Please see the note from p. 1. above.
Finance may agree to the proposal at A above.

B
27.2.48
27.2.48

C.S.
27.2.48

28/2/48

A.S.

Fin. 12373 Exp. A-1
28.2.48.

E+PH

Please see Fin Dept. note above.
Genl Dept. agrees with Edn Dept.'s Suggestion at A above. The file may now be circulated to HM(Edn) for orders on A above.

E+PH/G3,

2.3.48

S
HM

HM (Edn)
M. Fin.

1-3-48

E+PH(G3)
2GM-84410-G3/47-2
31/3/48

3/4/48

A
8.4.
27.3.48.

28.3.48

S
HP
31/3/48

Fin. (Exp. A)

(Seen in Fin. on previous page)

Please see the minutes of Hon'ble the Minister (Education) and Hon'ble Minister (Finance) above. With reference to (1) above, necessary extracts have been taken for separate action regarding the question of abolition of the University Grants Committee.

A draft note for the S.F.C. is submitted for approval.

It may be sent to Finance U.O. for acceptance prior to circulation to HM Edn. to place the proposal to place the scheme before the S.F.C. [illegible] see with reference to the University Grants Committee [illegible]

2.4.48

The cost in the year of introduction shown as 'nil' apparently takes the year of introduction as 1947-8. If the scheme is sanctioned in 1948-9 (the current year), some expenditure will portions be incurred this year. E&PH may rectify this and refer again. Item (c) on P. 3 of the draft and

SECRETARY, EDN. AND P.H. DEPT. 10 MAR 1948 GOVERNMENT OF MADRAS

SECRETARY, EDN. AND P.H. DEPT. 10 MAR 1948 GOVERNMENT OF MADRAS

ASST. SECRETARY TO GOVERNMENT 12373 26 FEB 1948 FINANCE DEPARTMENT

ASST. SECRETARY TO GOVERNMENT 1 MAR 1948 EDUCATION AND PUBLIC HEALTH DEPT.

15280

ASST. SECRETARY TO GOVERNMENT 26536 1 APR 1948 FINANCE DEPARTMENT

As H.M. Finance has noted before, it may perhaps ~~I don't think it~~ is necessary hereafter to refer these matters to the University Grants Committee. Our experience in the past has not convinced that it is necessary to have an intermediate body like the University Grants Committee. A note may be prepared to the Standing Finance Committee straightway.

ISA
9.3.48

(1) It may be abolished. H.M. (Edn)
(2) S.F.C may consider the proposal.
N.M.
16.3

in the summary at the beginning of the draft the amount of expenditure, if any, anticipated in the current year.

Ko
3.4.48 SSPA

Fin. No. 26536 E.A/48-1
3.4.48.

SECRETARIAT, EDUCATION AND PUBLIC HEALTH DEPT. 8 APR 1948

21969

E.& P.H.(G.3)

Please see the Finance Department notes on p.p. 3-4 ante. The expenditure that is likely to be incurred by the University during 1948-49 is not known. The information may be called for from the University. A draft letter is submitted for approval.

Spdss
8.4.
6.4.48.

[Issued as Rc. Reg. No. 84410 G3/47-3 Edn dt- 7.4.48] P13cf

C.No. 2817/48 - From the Registrar, Annamalai University, No. 497 dt 19/4/47. P15cf

Please see the letter from the Registrar, Annamalai University on p. 15 cf. He states that the University hopes to be able to spend Rs. 50,000/- on the scheme during the current year. With reference to Fin note on pp. 3-4 ante, necessary additions have since been made here to the note for the S.F.C. The file may now be circulated to HH(Edn), Hlr. and HE, for approval of the note, and for placing the scheme before the S.F.C. without a reference to the University Grants Committee. [The main file relating to the abolition of the Univy. Grants committee has not yet returned from circulation).

Summary under Sp. on p. 1 of the note + Appdx 3 on p. 3 — dr

Spdss
7.4.48

circulation.] Budgetary provision in respect of the awards Univ. has also been shown in para 3 of the note

8.4.
26.4.48

27-4-48

16

Let it wait for some time

G.P.R
15/5

ISA
2.5.48

Hr. (Edn)
Hr. (Lit.)
Hr. Pr.
HE.

B.G.N
5.5

May be Rc. circulated to Hr. (Edn) & Hr. (Lit.) & HE. in view of the urgency

Hr. (Edn)
Hr. (Lit.)

may be taken up as Part-II Scheme for 1949-50.

ISA
23-5-48

B.G.1
24.5

SECRETARIAT, EDN. AND P. H. DEPT. 17 MAY 1948 GOVERNMENT OF MADRAS

17 MAY 1948 EDUCATION

E+H (G3)
Rec No. 84410 G3/47-5 Edn
31/5/48

SECRETARIAT, EDN. AND P. H. DEPT. 24 MAY 1948 GOVERNMENT OF MADRAS

E+H (G3)

40452

Please see the minutes of HH(Edn) above. A draft letter to Annamalai University is sent for approval. Fin may see before issue.

Spdss
24.5.
25.5.48

Issued 27-5-48 2 (Resp. A)

Rec
27.5.48

ANNAMALAI UNIVERSITY ANNAMALAI NAGAR.

Proposed Jamil Research Institute

SITE PLAN showing BLOCK LEVELS At 8Very 50'0.

ROAD

13·67 13·65 13·51 13·35 13·32 13·39

ORIENTAL BUILDING

12·87 11·73 11·11 11·39 11·27 11·15

13·00 11·79 11·39 12·42 11·13 11·33

12·87 12·21 11·37 11·41 11·55 11·15

13·52 12·37 LAV. 11·38 11·65 11·12 11·12

12·71 12·03 11·49 11·42 10·49 11·45

UNION HALL

HOSTEL EAST-BLOCK

ROAD

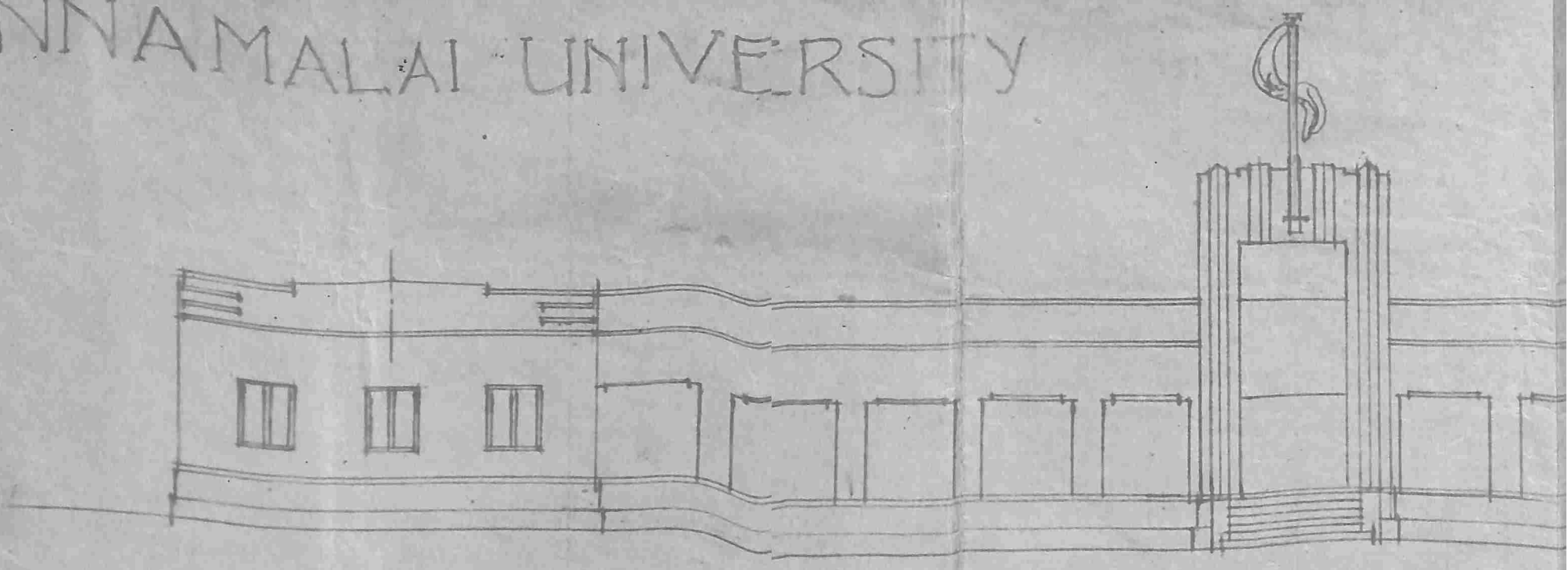
Note :-

Tp - Trial Pit

Scale 1" 66'0

J. Krishna Murthy
3/10/47. Engr

ANNAMALAI UNIVERSITY

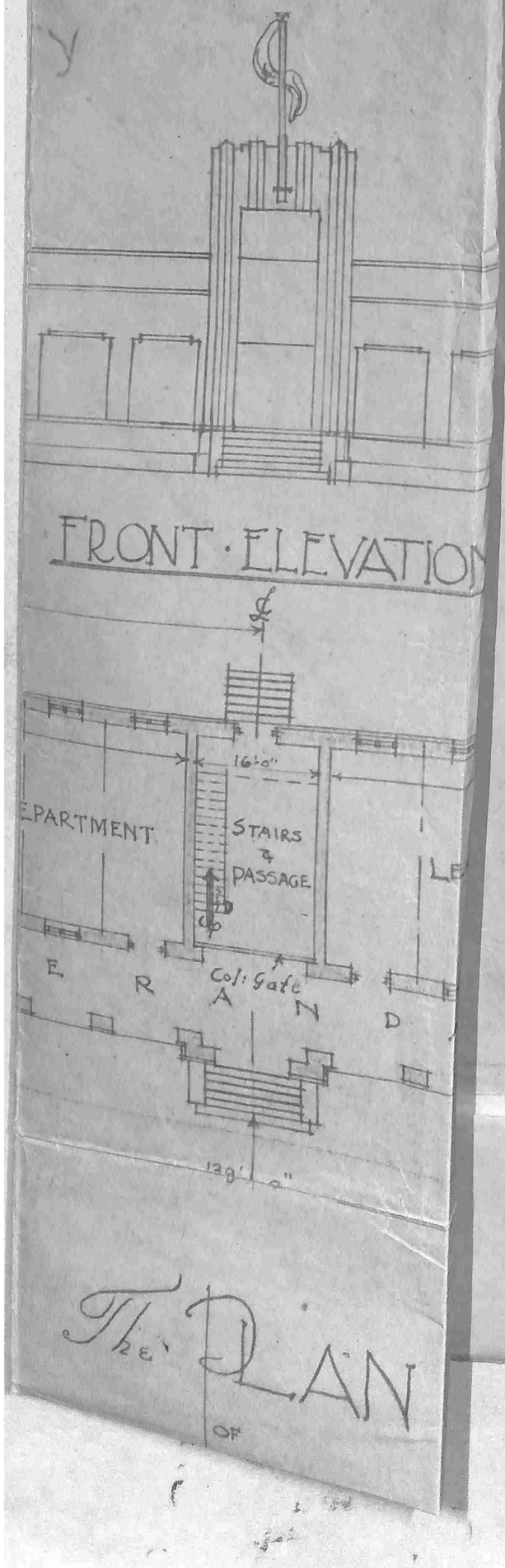


FRONT ELEVATION



THE PLAN OF TAMIL RESEARCH

SCALE 10 FEET TO 1 INCH



ANNAMALAI UNIVERSITY

DETAILED ESTIMATE

14

Name of Work CONSTRUCTING TAMIL RESEARCH BUILDING.

Details of Work	No.	Measurements in Feet			Area or Contents	Total quantity of each description of work
		Length	Breadth	Depth		
1	2	3	4	5	6	7
1. EARTHWORK EXCAVATION FOR FOUNDATION:--						
Central Portion of the Building						
alround.	1	460-0	5-0	6-0	13800	
Side Wings. alround.	2	242-0	5-0	6-0	14520	
End rooms alround.	2	119-0	5-0	6-0	5140	
Cross Walls	8	21-6	5-0	6-0	5160	
Verandah walls.	1	304-6	5-0	6-0	9135	
Verandah cross walls	4	5-0	5-0	6-0	600	
Lavatory.	1	39-6	5-0	6-0	1185	
Steps	1	18-0	6-0	2-0	216	
"	1	10-0	6-0	2-0	120	
"	1	4-0	3-0	2-0	24	
Front pilaster	1	22-0	1-6	6-0	198	
			Total.		52098	
Deduct for side wing end walls.	2	31-6	5-0	6-0	1890	
"	2	25-9	5-0	6-0	1545	
	Total deduction.				3435	
Total less deduction 52098-3435.			48663	or	49000 Cu.ft.	
2. STONE JELLY CONCRETE IN CEMENT MORTAR 1:4IN FOUNDATIONS:--						
Central Portion alround.	1	460-0	5-0	2-6	5750	
Side wings alround.	2	242-0	5-0	2-6	6050	
End rooms alround	2	119-0	5-0	2-6	2975	
Cross walls	8	21-6	5-0	2-6	2356	2152
Verandah wall.	1	304-6	5-0	2-6	3806	
Verandah cross walls.	4	5-0	5-0	2.6	250	
Lavatory	1	39-6	5-0	2-6	494	
Front Pilaster.	1	2200	1-6	2-6	83	
Steps.	1	18-0	6-0	1-0	108	
"	1	10-0	6-0	1-0	60	
2	1	400	3-0	1-0	12	
			Total.		21938	21738
Deduct for side wing end walls	2	31-6	5-0	2-6	788	
"	2	25-9	5-0	2-6	644	
	Total deduction.				1432	
Total less deduction 21938-1432.		20506.		Or	20500 Cu.ft.	
3. BRICK WORK IN CEMENT MORTAR 1:7 IN FOUNDATIONS AND BASEMENT:--						
1st footing. Central portion.	1	460-0	3-9	2-0	3450	
Side wings.	2	242-0	3-9	2-0	3630	
End rooms.	2	119-0	3-9	2-0	1785	
Cross Walls.	8	22-9	3-9	2-0	1365	
Verandah wall.	1	305-9	3-9	2-0	2293	

ANNAMALAI UNIVERSITY

SHEET.NO.2.

DETAILED ESTIMATE

Name of Work

Details of Work	No.	Measurements in Feet: Length	Breadth	Depth	Area or Contents	Total quantity of each description of work
1	2	3	4	5	6	7
Verandah cross wall.	4	6-3	3-9	2-0	188	
Lavatory	1	40-9	3-9	2-0	306	
Front Pilaster.	1	2099	1-6	2-0	62	
2nd footing:-						
Central portion.	1	460-0	3-0	1-6	2070	
Side Wings.	2	242-0	3-0	1.6	2178	
End Rooms.	2	119-0	3-0	1-6	1071	
Cross walls.	8	23-6	3-0	1-6	846	
Verandah Wall.	1	306-6	3-0	1-6	1379	
Verandah cross wall.	4	7-0	3-0	1-6	126	
Lavatory	1	41-6	3-0	1-6	187	
Front Pilaster.	1	20-0	1-6	1-6	45	
3rd Footing:--						
Central Portion.	1	460-0	2-3	1-0	1035	
Side Wings.	2	242-0	2-3	1-0	1089	
End Rooms.	2	119-0	2-3	1-0	526	
Cross Walls.	8	24-3	2-3	1-0	437	
Verandah Wall.	1	307-3	2-3	1-0	691	
Verandah Cross walls.	4	7-9	2-3	1-0	70	
Lavatory	1	42-3	2-3	1-0	95	
Front Pilaster.	1	19-3	1-6	1-0	29	
Basement:-- Central portion.	1	460-0	1-10	3-6	3019	
Side Wings.	2	242-0	1-10	3-6	3176	
End Rooms.	2	119-0	1-10	3-6	1562	
Cross walls.	8	24-7½	1-10	3-6	1293	
Verandah wall.	1	307-7½	1-10	3-6	2027	
Verandah cross wall	4	8-1½	1-10	3-6	213	
Lavatory	1	42-7½	1-10½	3-6	280	
Front Pilaster.	1	18-10½	1-10½	3-6	124	
Steps.					500	
			Total.		37137	
Deduct for side wing end walls 1st footing	2	30-3	3-9	2-0	454	
" 2nd "	2	29-6	3-0	1-6	266	
" 3rd "	2	28-9	2-3	1-0	129	
" basement	2	28-4½	1-10½	3-6	370	
" 1st footing.	2	24-6	3-9	2-0	368	
" 2nd "	2	23-9	3-0	1-6	214	
" 3rd "	2	23-0	2-3	1-0	104	
" basement.	2	23-7½	1-10½	3-6	297	
			Total.		2202	
Total less deduction. 37137 - 2202 = 34935 Or					35000	Cu.ft.

4. DAMP PROOF COURSE CEMENT CONCRETE 1:3:6:--

Central Portion.	1	460-0	1-10½	0-4½	323
Side Wings.	2	242-0	1-10½	0-4½	340
End Rooms.	2	119-0	1-10½	0-4½	167
Cross walls.	8	24-7½	1-10½	0-4½	139
Lavatory.	1	42-7½	1-10½	0-4½	30
Front Pilaster.	1	18-10½	"	0-4½	13
			Total.		1012

Details of Work	No.	Measurements in Feet: Length	Breadth	Depth	Area or Contents	Total quantity of each description of work
1	2	3	4	5	6	7
Deduct for side wing end walls	2	28-4½	1-10½	0-4½	40	
"	2	22-7½	1-10½	0-4½	32	
	26	8-0	1-10½	0-4½	72	
	1	14-0	1-10½	0-4½		
			Total.		72	
Total less deduction. 1012 - (72 = 940.				Or	950	Cu.ft.
5. FILLING IN BASEMENT WITH EXCAVATED SOIL:--						
Central portion rooms	2	59-3	24-3	1-0	2899	
"	2	29-3	24-3	1-0	1419	
" Passage.	1	15-3	24-3	1-0	370	
Side wing rooms.	6	29-3	24-3	1-0	2146	
End room	2	35-9	19-3	1-0	703	
Lavatory.	1	19-3	9-3	1-0	178	
Verandah centre.	1	138-3	7-9	1-0	1071	
Verandah corners.	2	7-9	7-9	1-0	120	
Verandah in wings.	2	83-9	7-9	1-0	1298	
		82-3				
			Total.		10204	
				Or	10200	Cu.ft.
6. FILLING IN BASEMENT WITH LOCAL PIT SAND:--						
Central Rooms.	2	59-7½	24-7½	2-4½	6974	
"	2	29-7½	24-7½	2-4½	3465	
Side Wing Rooms.	6	29-7½	24-7½	2-4½	10396	
End Rooms.	2	36-1½	19-7½	2-4½	3368	
Passage.	1	15-7½	24-7½	2-4½	914	
Lavatory.	1	12-7½	9-7½	2-4½	449	
Verandah centre.	1	138-7½	8-1½	2-4½	2675	
" in wings.	2	84-1½	8-1½	2-4½	3243	
" in corners.	2	8-1½	8-1½	2-4½	314	
			Total.		31798	
				Or	31800	Cu.ft.
7. FILLING IN BASEMENT WITH RIVER SAND:--						
Central Rooms.	2	59-7½	24-7½	1-0	2937	
"	2	29-7½	24-7½	1-0	1450	
Side Wing Rooms	6	29-7½	24-7½	1-0	4350	
End Rooms	2	36-1½	19-7½	1-0	1418	
Pass age.	1	15-7½	24-7½	1-0	585	
Lavatory.	1	19-7½	9-7½	1-0	189	
Verandah in centre.	1	138-7½	8-1½	1-0	1126	
" in wings.	2	84-1½	8-1½	1-0	1367	
" in corners.	2	8-1½	8-1½	1-0	132	
		82-7½				
			Total.		13354	
				Or	13400	Cu.ft.

Details of Work	No.	Measurements in Feet			Area or Contents	Total quantity of each description of work
		Length	Breadth	Depth		
1	2	3	4	5	6	7
8. BRICK IN CEMENT MORTAR 1:7 IN SUPER-STRUCTURE AND PARAPET:						
Central portion.	1	460-0	1-6	16-6-	11385	
Side Wings.	2	242-0	1-6	16-6	11979	
End Rooms.	2	119-0	1-6	16.6	5891	
Cross walls.	8	25-0	1-6	16-6	4950	
Verandah Wall.	1	308-0	1-6	16-6	7623	
Lavatory	1	43-0	1-6	16-6	1064	
Front Pilaster.	1	18-6	1-6	16-6	458	
Parapet.	1	956-0	0-9	14-0	2868	
Dome alround	1	54-3	1-1½	18-0	1099	
Front pilaster.	1	18-6	1-1½	18-0	375	
			Total.		47692	
Deduc for Side Wing ends.	2	28-0	1-6	16-6	1386	
"	2	21-6	1-6	16-6	1064	
" Doors	15	5-0	1-6	10-0	1125	
" "	2	3-0	1-6	7-0	63	
Col gate	1	14-0	1-6	10-0	210	
Windows.	59	5-0	1-6	10-7.0	3098	
Windowsin Professors and in History Research rooms	4	8-0	1-6	7-0	336	
" lavatory.	8	2-0	1-6	7-0	168	
Windows Staff Common Room.	3	3-6	1-6	7-0	110	
" in lavatory.	2	2-0	1-6	7-0	42	
R.C.Lintels over doors.	15	6-6	1-6	0-6	73	
"	2	4-0	1-6	0-6	6	
Col gate,	1	16-0	1-6	1-0	24	
Windows	59	6-6	1-6	0-6	288	
	4	9-6	1-6	0-9	43	
	8	3-0	1-6	0-6	18	
	3	4.6	1-6	0-6	10	
	2	3-0	1-6	0-6	5	
" Alround verandah.	1	308-0	1-6	0-9	247	
" Over pilaster	1	12-0	1-6	1-0	18	
Verandah openings.	26	8-0	1-6	10-0	3120	
" central	1	14-0	1-6	10-0	210	
"	1	10-0	1-6	10-0	168	
Bed blocks under girders	128	2-0	1-6	1-0	168	
			Total.		11982	
Total less deduction.	47692 -	11982	=		35710 Or 35800 Cu.ft.	
9. REINFORCED CONCRETE WORK:-- LINTELS						
Over doors.	15	6-6	1-6	0-6	73	
"	2	4-0	1-6	0-6	6	
Over Collapsible gate.	1	16-0	1 6	1-0	24	
" Windows.	59	6-6	1-6	0-6	288	
	4	9-6	1-6	0-9	43	
	8	3-0	1-6	0-6	18	
	3	4-6	1-6	0-6	10	
	2	3-0	1-6	0-6	5	
Below dome.	2	10-0	1-6	1-6	45	
Alround verandah.	1	308-0	1-6	0-9	347	
Over front pilasters.	2	10-6	1-6	1-0	32	
	1	12-0	1-6	1-0	18	
				Total	908	
				Or	910 Cu.ft.	

ANNAMALAI UNIVERSITY

Sheet.No.3.

DETAILED ESTIMATE

Name of Work

Details of Work	No.	Measurements in Feet			Area or Contents	Total quantity of each description of work
		Length	Breadth	Depth		
1	2	3	4	5	6	7
10. CEMENT CONCRETE BED BLOCKS 1:2:4:--						
Under Girders.	2x28	2-0	1-6	1-0	168 or 170 Cu.ft.	
11. Doors.	15	5-0	10-0		450	
Doors.	2	3-0	7-0		42	
					492 Sq.ft.	
12. Collapsible Gates:	1	16-0		10-0	160 Sq.ft.	
13. Windows.	59	5-0		7-0	2065	
	8	8-0		7-0	224	
	3	3-6		7-0	74	
	10	2-0		7-0	140	
					2503 Sq.ft.	
14. R.S.GIRDERS:-- 20"x6½"x65lbs.	24	28-0	x 65	lbs.	43680	
18"x6" x55 lbs.	4	23-0	x 55	lbs.	5060	
					48740	
					Dr 21.76 Tons.	
15. Hoisting Girders.					21.76 Tons.	
16. Teakwood wrought and put up.						
Joists - Centre rooms.	2x3x16	12-6	0-3	0-8	200	
End rooms.	2x2x16	13-0	0-3	0-8	139	
	2x16	10-6	0-2½	0-7	41	
Side Rooms	4x16	11-0	0-2½	0-7	86	
	6x16	10-6	0-2½	0-7	123	
End rooms	12x16	11-0	0-2½	0-7	257	
	2x12	12-8	0-3	0-8	51	
	4x12	13-3	0-3	0-8	106	
Verandah	204	10-0	0-2½	0-7	248	
Lavatory.	13	11-6	0-2½	0-7	18	
				Total	12 68	
					Or 1270 Cu.ft.	
17. MADRAS TERRACE ROOFING:--						
Central portion.	1	203-6	26-6		5393	
Side wings.	2	94-6	26-6		5009	
End Rooms.	2	38-0	21-6		1634	
Verandah.	1	140-6	10-0		1405	
"	2	94-6	10-0		1890	
Lavatory.	1	21-6	11-6		247	
				Total.	15568	
					Or 15600 Sq.ft.	

DETAILED ESTIMATE

Name of Work.....

Details of Work	No.	Measurements in Feet: Length	Breadth	Depth	Area or Contents	Total quantity of each description of work
1	2	3	4	5	6	7
18. FLOORING WITH BRICK JELLY CONCRETE IN CEMENT MORTAR I:4, 6" thick:--						
Central Rooms.	2	59-7½	24-7½		I458	
" End Rooms	2	29-7½	24-7½		I459	
Staircase Room	I	I5-7½	24-7½		389	
Side Rooms	6	29-7½	24-7½		4376	
End Rooms	2	36-I½	I9-7½		I4I8	
Verandah	I	I38-7½	8-I½		II26	
"	2	94-I½	8-I½		I530	
Lavatory.	I	I9-7½	9-7½		I89	
					II955	
					Or I2000 Sq.ft	
19. GRANO FLOORING I:2:4, I½" thick:--						
Central Rooms.	2	60-0	25-0		3000	
End rooms.	2	30-0	25-0		I500	
Staircase rooms.	I	I6-0	25-0		400	
Side rooms.	6	30-0	25-0		4500	
End Rooms.	2	36-0	20-0		I440	
Verandah.	I	I39-0	8-6		II82	
"	2	94-6	8-6		I607	
Lavatory.	I	20-0	I0-0		200	
					I3829	
					Or I3900 Sft	
20. CEMENT PLASTERING I:5, ½" thick:						
Exterior: Alround	I	908-0		I6-6	I4982	
Parapet alround.	I	908-0		8-0	7264	
Basement alround.	I	4I0-0		5-6	5005	
Interior: Verandah alround.	I	679-0		I6-6	II204	
Central rooms.	2	I79-0		I6-6	5610	
Side Rooms	2	II0-0		I6-6	3630	
Side wing rooms	6	II0-0		I6-6	I0890	
End Rooms.	2	II3-0		I6-6	3729	
Passage	I	82-0		I6-6	I353	
Lavatory	I	60-0		I6-6	990	
Dome Both sides.	2	60-0		I8-0	I0I60	
Sides of vera.Ope	26	26-0	I-6		I0I4	
" Centre op.	I42	32-0	I-6		75831	
Deduct for verandah openings.	2x26	8-0		I0-0	4I60	
Doors.	I5	5-0		I0-0	750	
"	2	3-0		7-0	42	
Windows.	59	5-0		7-0	2065	
"	4	8-0		7-0	224	
"	3	3-6		7-0	74	
"	I0	2-0		7-0	I40	
C.W Sofits.	2	I4-0		I0-0	280	
Centre of Arch					7455	
Extra for Soffits of doors, windows &c						
Total deduction.					68376 or	
Total less deduction.					68400 Sq.ft	
					22800 Sq.ft	
21. Whitewashing 3 Coats:						
22. WHITEWASHING ONE COAT AND COLOUR WASHING TWO COATS.					45600 Sq.ft.	

Details of Work	No.	Measurements in Feet: Length	Breadth	Depth	Area or Contents	Total quantity of each description of work
1	2	3	4	5	6	7
23. PAINTING WOODWORK: --						
Doors	2½ x I5	5-0		I0-0	I688	
"	2½ x 2	3-0		7-0	95	
Windows	2.3/4x59	5-0		7-0	5372	
"	2.3/4x4	8-0		7-0	616	
"	2.3/4x3	3-6		7-0	I94	
"	2.3/4xI0	2-0		7-0	385	
Joists Central rooms.	6xI6	I2-6		I-7	I900	
" "	4xI6	I3-0		I-7	I3I7	
End Rooms.	2xI6	I0-6		I-4½	3586	
"	4xI6	II-0		I-4½	968	
Side rooms	6xI6	I0-0		I-4½	I320	
"	I2xI6	II-0		I-4½	2904	
End rooms	2xI2	I2-8		I-7	48I	
"	4xI2	I3-3		I-7	I007	
Verandah.	204	8-6		I-4½	2384	
Lavatory	I3	I0-0		I-4½	I79	
R.S.Girders.	24	28-0		5-0	3360	
"	4	20-0		4-6	360	
					28I23	
					Or 28200 Sq.ft.	
24. CEMENT CONCRETE SLAB I:2:4, 2" thick:						
Alorund the building.	I	9I0		3-0	2730	
					Or 2800 Sft.	
25. SUNSHADE OVER OUTSIDE WINDOWS.	60 Nos.					
26. PROVIDING STAIRCASE BEAMS AND JOISTS IN THE STAIRCASE ROOM.						
27. Sanitary fittings, mains and water connections.	L.S.					
28. Electric fittings.	L.S.					
29. Architectural works.	L.S.					
30. Down water rain pipes and other unforeseen items.	L.S.					
31) Furniture & chicks.	L.S.					
32). Forming approach and levelling the ground.	L.S.					

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Details of Work	No.	Measurements in Feet			Area or Contents	Total quantity of each description of work
		Length	Breadth	Depth		
1	2	3	4	5	6	7

DATA SHEET.

From Sheet No 3

23

1. CEMENT MORTAR 1:5. — Per 100 Cu.ft.

1800 lbs.	Cement	Rs.66-14-0	Ton.	Rs. 53-12-0
100 Cu.ft.	Sand.	Rs.13- 0-0	100 Cft.	Rs. 13- 0-0
	Mixing sand and sundries.			Rs. 2-12-0
			Total.	Rs. 69- 8-0

2. CEMENT MORTAR 1:7. — Per 100 Cu.ft.

38-7-0

1286 lbs.	Cement.	Rs.66-14-0	Ton.	Rs. 37- 7-0
100 Cu.ft.	Sand.	Rs.13- 0-0	100 Cft.	Rs. 13- 0-0
	Mixing sand and sundries.			Rs. 2- 9-0
			Total.	Rs. 54- 0-0

3. CEMENT BROKEN STONE IN CEMENT MORTAR 1:4 - 100 Cu.ft.

100 Cu.ft.	Stone jelly 1½"	Rs.50- 0-0	100 Cu.ft.	Rs. 50 -0-0
40 Cu.ft.	Cement mortar 1:4	Rs.83- 0-0	-do-	Rs. 33- 3-0
1/2 No.	Mason.	1- 8-0	Each.	Rs. 0-12-0
5 Nos.	Man coolies.	0-12-0	Each.	Rs. 3-12-0
4 Nos.	Woman Coolies	7-0	Each.	Rs. 1-12-0
	Sundries.			0- 9-0
			Total.	Rs. 92- 0-0
			Add 10%	9- 0-0
			Total.	Rs. 101- 0-0

4. CONCRETE BROKEN STONE 1½" IN CEMENT MORTAR 1:2:4 FOR BED BLOCKS -- 100 Cu.ft.

For the Slab 3/4"

100 Cu.ft.	Broken stone 1½"	Rs.50-0-0	100 C.ft.	Rs. 50- 0-0
50 Cu.ft.	Sand.	Rs.13-0-0	per 100 Cu.ft.	Rs. 6- 8-0
2250 lbs.	Cement	66-14-0	Ton.	Rs. 67-3 -0
1 No.	Mason 1st class.	1-10-0	each.	Rs. 1-10-0
6 Nos.	Man coolies.	0-12-0	"	Rs. 4-8 -0
10 Nos.	Woman Coolies.	0- 7-0	"	Rs. 4- 6-0
	Centering including labour).			Rs. 17- 0-0
	Sundries.			Rs. 2-13-0
				Rs. 156- 0-0
			Add 10%	15- 0-0
			Total.	Rs. 171- 0-0

5. CONCRETE BROKEN STONE 1½" IN CEMENT MORTAR 1:3:6 FOR DAMP PROOF COURSE - 100 Cu.ft.

For the Slab 3/4"

100 Cu.ft.	Broken Stone 1½"	50-0-0	100 Cft.	Rs. 50- 0-0
50 Cu.ft.	Sand.	13-0-0	"	Rs. 6- 8-0
1500 lbs.	cement.	66-14-0	Ton.	Rs. 44-12-6
1/2 Mason.		1- 8-0	Each.	Rs. 0-12-0
5 Nos.	Man coolies.	0-12-0	"	Rs. 3-12-0
4 Nos.	Woman Coolies.	0- 7-0	"	Rs. 1-12-0
	Centering., mixing charges etc			Rs. 12- 0-0
	Sundries.			Rs. 0- 7-6
				Rs. 122- 0-0
			Add 10%	12- 0-0
			TOTAL.	Rs. 134- 0-0

11. FLOORING WITH BRICK JELLY CONCRETE IN CEMENT MORTAR 1:4, 6" THICK AND CEMENT PLASTER 1:4, ½" THICK AT TOP - 100 Sq.ft.

50 Cu.ft.	Brick jelly concrete in cement mortar 1:4.	Rs.71-8-0	100 Cft.	Rs. 35-12-0
100 Sq.ft.	Cement plaster 1:4..	7-12-0		7-12-0
			Total	Rs. 43-8-0

12. MADRAS TERRACE ROOFING WITH BRICK ON EDGE 3" CONCRETE, 3 COURSES OF FLAT TILES AND 3 COATS OF LIME PLASTER AT TOP AND ONE COAT OF CEMENT PLASTER 1:3 ½" thick at bottom - 100 Sq.ft.

1800 Nos. Terrace Bricks.	13-0-0	1000 Nos.	Rs. 25 -6-5
1430 Nos. Flat Tiles.	13-0-0	1000 Nos.	18-9-5 5 -9-6
32 Cu.ft. Broken Bricks 3/4"	30-0-0	100 Cu.ft.	9 -9-7
12½ Cu.ft. Lime.	0-9-0	Cu.ft.	7 -0-6
14½ Cu.ft. Lime Mortar 1:1½	0-10-6	Cu.ft.	9 -6-3

Plastering 3 coats of lime plaster 100 Sq.ft.

6 Cu.ft. Lime mortar 1:2	0-9-0	3-6-0	
2½ cu.ft. -do- 1:1½	0-10-6	1-10-3	
3/4 Cu.ft. Lime	0-9-0	0-6-9	
3 Nos. Brick layers.	1-10-0	4-14-0	
1 Man Coolie.	0-12-0	0-12-0	
5 Women coolies.	0- 7-0	2- 3-0	
Sundries.		0- 7-0	
		13-11-0	Rs. 13-11-0

100 Sq.ft.	Cement plaster 1:3 1/2" thick.	9-0-0	Rs. 9- 0-0
3 Nos.	Brick layers 1st class.	1-10-0	Rs. 4-14-0
~~2 Nos.~~	2nd class.	1- 8-0	Rs. 3-0-0
2 Nos.	Man coolies.	0-12-0	Rs. 1-8-0
5 Nos.	Woman Coolies.	0- 7-0	Rs. 2-3-0
	Sundries.		Rs. 1-11-9
			Rs. 91-0-0
		Add 10%	Rs. 9-0-0
		Total.	Rs. 100-0-0

13. PAINTING WITH APPROVED PAINT TWO COATS OVER A PRIMING COAT TO NEW WOOD WORK - 100 Sq.ft.

Ready Mixed Paint. 8 lbs at Re.1/- per lb.	..	Rs. 8 -0-0
Painter 1½ Nos at 1-4-0 each.	..	Rs. 1-14-0
Sundries including brushes soap putty etc.	..	Rs. 0- 6-0
		Rs. 10- 4-0
	Add 10%	1- 0-0
	Total.	Rs. 11- 4-0

14. PAINTING TWO COATS TO NEW IRON -- 100 Sq.ft.

5 lbs.	Ready mixed paint.	1-4-0 lb.	..	Rs. 5 -0-0
1 No.	Painter.	1-4-0 Each.	..	Rs. 1 -4-0
	Sundries.	1-12-0	..	Rs. 0 -6-0
				Rs. 6-10-0
		Add 10%		0-10-0
		Total.		Rs. 7 -4-0

15. WHITEWASHING 3 COATS - 1000Sq.ft.

3 Cu.ft.	Screened shell lime	1-8-0 cu.ft.	Rs. 4 -8-0
2 Nos.	Brick lauers 1st class	1-10-0 each.	Rs. 3 -400
1/2 No.	Man coolies	0-12-0 each.	Rs. 0 -6-0
3½ Nos.	Woman Coolies.	0-7-0 each.	Rs. 1 -8-6
	Sundries.		Rs. 1-13-6
			Rs. 11-8-0
		Add 10%	1-0-0
		Total	12-8-0

Per 100 Sq.ft. Rs.1-4-0.

16. R.C.PINTELS - Per Cu.ft.

1 Cu.ft.	Baby Jelly.	0-12-0 Cu.ft.	..	Rs. 0-12-0
½ Cu.ft.	Sand.	0-2-0 Cu.ft.	..	0- 1-0
22½ lbs.	Cement-	66-14-0 Ton.	..	0-11-0
6 lbs	M.S.Rods	280-0-0 Ton.	..	0-12-0
16 BWG.	Tie Rod.	L.S.	..	0 -1-0
Labour for mixing, laying and curing cement at		0-6-0 cu.ft.	..	0- 6-0
Preparing moulds and centering charges at		0-12-0 per Cu.ft.	..	0-12-0
Sundries.				0- 3-0
				3-10-0
		Add 10% profit.		0- 6-0
		Total.		Rs. 4- 0-0

17. GRANO FLOORING Per 100 Sq.ft.

Cement concrete 1:2:4 with baby jelly 1½" thick.

12½	Cu.ft. Baby jelly	0-12-0 per cu.ft.	..	Rs. 9 -6-0
6¼	Cu.ft. Sand	0-2-0 Cu.ft.	..	0-12-6
Cement 282 lbs at		66-14-0 Ton.	..	8 -6-6
Labour for mixing, laying and curing concrete etc.				13- 7-0
				Rs 32- 0-0
		Add 10% profit.		3- 0-0
		Total.		Rs 35- 0-0

21/8/46

ANNAMALAI UNIVERSITY

ABSTRACT OF ESTIMATE

Name of Work ..... CONSTRUCTION OF TAMIL RESEARCH BUILDINGS.

Trichinopoly United Printers Ltd.—(J)

Quantity	Unit	Description of Work	Rate	Per	Amount	Remarks.
1	2	3	4	5	6	7
49000	Cu.ft.	1. Earthwork excavation for foundation in sandy soil, clay soil. ..	16 - -	1000 Cu.ft.	784 - -	
20,300 ~~20500~~	"	2. Stone Jelly concrete in cement mortar 1:4 in founds.	99 - - ~~101 - -~~	100 Cu.ft.	2009 - - ~~20705 - -~~	
35000	"	3. Brickwork in cement mortar 1:7 in foundations and basement. ..	79 - -	"	27650 - -	
1000 ~~950~~	"	4. Damp Proof Course with concrete broken stone ½" in cement mortar 1:3:6. ..	132 - - ~~134 - -~~	"	1254 - - ~~1273 - -~~	+66
13000 ~~10200~~	"	5. Filling in basement with excavated soil including watering and consolidation. ..	1 12 -	"	228 - - ~~179 - -~~	
31800	"	6. Filling in basement with local pit sand including watering and consolidation. ..	12 - -	"	3816 - -	
13400 35,600	"	7. Filling in basement with river sand including watering and consolidation. ..	15 - -	"	2010 - -	
~~35800~~	"	8. Brickwork in cement mortar 1:7 in superstructure and parapet. ..	79 - -	"	28,124 - - ~~28282 - -~~	
910	"	9. Reinforced concrete lintels 1:2:4. ..	4 8 - ~~4 - -~~	Cu.ft	4095 - - ~~3640 - -~~	
170	"	10. Cement concrete bed blocks in cement mortar 1:2:4 with 1½" stone jelly. ..	169 - - ~~171 - -~~	100 Cu.ft.	287 - - ~~291 - -~~	
792 ~~492~~	"	11. Doors Teakwood fully panelled including all fittings etc, complete. ..	4 3 -	Sq.ft.	3312 - - ~~2060 - -~~	
160	"	12. Iron Collapsible Gate -	5 - -	"	800 - -	
2503	Sq.ft.	13. Windows teakwood fully panelled including all fittings etc, complete. ..	6 - -	"	15018 0 0 ~~6963 - -~~	
21.76	Tons.	14. R.S.Girders. ..	320 - -	Ton.	~~6960 - -~~	
21.76	"	15. Hositing R.S.Girders and fixing in position. ..	25 - -	"	544 - -	
					~~114012 - -~~	
					11498 - -	+66

ANNAMALAI UNIVERSITY

ABSTRACT OF ESTIMATE

Name of Work ..... CONSTRUCTING A BUILDING FOR TAMIL RESEARCH.

Trichinopoly United Printers Ltd.—(J)

Quantity	Unit	Description of Work	Rate	Per	Amount	Remarks.
1	2	3	4	5	6	7
80030	Cu.ft.	1. Earthwork Excavation for foundations. ..	20 - -	1000 Cu.ft.	1001 - -	
21388	"	2. Brick jelly concrete in cement mortar 1:6 in foundations. ..	72 - -	100 Cu.ft.	15613 - -	
32801	"	3. Brickwork in lime mortar 1:2 in foundations and basement. ..	82 8 -	"	27061 - -	
1456	"	4. Cement concrete 1:2:4 for damp proof course under jambs. ..	2 - -	"	3912 - -	
34838	"	5. Brickwork in lime mortar in superstructure. ..	82 8 -	"	28741 - -	
813	"	6. R.C.C.Work in beams, lintels etc. ..	4 8 -	"	3659 - -	
700	Sq.ft.	7. Teakwood Doors. ..	6 - -	Sq.ft.	4200 - -	
2205	"	8. Teakwood Windows. ..	6 12 0	"	14884 - -	
23	Tons.	9. R.S.Joists. ..	320 - -	Ton.	7360 - -	
2.078	Cu.ft.	10. Teakwood Joists. ..	18 - -	100 Cu.ft.	37404 - -	
16.202	Sft.	11. Madras Terrace roofing. ..	90 - -	100 Sq.ft.	14582 - -	
14085	"	12. Flooring Pillie pattern. ..	35 - -	"	4930 - -	
7043	Cu.ft.	13. Levelling Course under floor slabs with brick jelly in cement mortar 1:4. ..	42 - -	100 Cu.ft.	2958 - -	
59366	Sq.ft.	14. Cement Plastering 1:4. ..	8 - -	100 Sq.ft.	4750 - -	
49298	Cu.ft.	15. Filling in basement with local pit sand. ..	10 - -	100 Cu.ft.	4930 - -	
10554	Cu.ft.	16. Filling in basement with vellar sand. ..	15 - -	"	1583 - -	
35000	Sq.ft.	17. Whitewashing 3 coats.	1 4 -	100 Sq.ft.	430 - -	
27000	"	18. Whitewashing 1 coat & colourwashing 2 coats. ..	1 4 -	"	336 - -	
88	Cu.ft.	19. Cement Concrete bed blocks. ..	2 - -	Cu.ft.	176 - -	
				C.O.	Rs. 178520	

Quantity	Unit	Description of Work	Rate	Per	Amount	Remarks.
1	2	3	4	5	6	7
		BROUGHT FORWARD.			114987 - - / 114012 - -	+66
1270	Cu.ft.	16. Teakwood joists wrought and put up. ..	18 - -	Cu.ft	22860 - -	
15600	Sq.ft.	17. Madras Terrace roofing - with brick on edge 3" concrete 3 courses of flat tiles, 3 -- coats of lime plaster at top - and 1 coat of cement plaster - 1:3, ½" thick at bottom. ..	114 0 0 / 100 - -	100 Sq.ft	17784 - - / 15600 - -	
13,500 / 12000	"	18. Flooring with brick jelly concrete in cement mortar - 1:4, 6" thick. ..	35 12 -	"	4726 - - / 4290 - -	
13900	"	19. Grano flooring 1:2:4, 1½" thick. ..	2 7 8 0 / 35 - -	"	3823 - - / 4865 - -	
58500 / 68400	"	20. Cement plastering 1:5 -- ½" thick. ..	7 - -	" 2	4095 - - / 4788 - -	
1950 / 22800	"	21. Whitewashing 3 coats. ..	1 4 -	"	244 - - / 285 - -	
39000 / 45600	"	22. Whitewashing 1 coat and colourwashing 2 coats. ..	1 12 -	"	683 - - / 798 - -	
25300 / 28200	"	23. Painting Woodwork with - approved paint two coats over a priming coat. ..	12 0 0 / 11 4 -	"	3036 - - / 3173 - -	
2900 / 2800	"	24. Cement concrete slab -- 1:2:4, 2" thick around the building. ..	50 - 0	"	1450 - - / 1400 - -	
60	Nos.	25. Sunshade over outside -- windows (R,C.C.Work). ..	20 - -	Each.	1200 - -	
		26. Providing Staircase including beams and joists in the staircase room. ..		L.S.	500 - -	
		27. Sanitary fittings, mains - and water connection. ..		L.S.	2000 - - / 3000 - -	
		28. Electric fittings. ..		L.S.	4000 - -	
		29. Architectural works. ..		L.S.	1500 - -	
		30. Down water rain pipes & other unforeseen items. ..		L.S.	2000 - -	
		31. Furniture & Chicks. ..		L.S.	5000 - -	
		32. Forming approach and levelling the ground. ..		L.S.	1150 / 1000 - - / 10,000 0	
		Add for extra cost of C.M in 1:3:6 for brick masonry, extra depths of lintels etc			1524 / 8829 - -	9012 -66
		Contingencies at 5%				
		TOTAL Rs.			200000 - -	2,10,000

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Quantity	Unit	Description of Work	Rate	Per	Amount	Remarks.
1	2	3	4	5	6	7
				B.F.	178520 - -	
L.S.		20. Rainwater Pipes.		L.S.	1 500 - -	
84	Nos.	21. R.C.Work in sunshades.	20 - -	Cu.ft.	1080 - -	
L.S.		22. Extra for architectural works.			1000 - -	
2898	Sq.ft.	23. Cement Concrete Slab 2" thick over 4" brick jelly concrete in cement mortar 1:6 all-round buildings.	- 8 -		1448 - -	
L.S.		24. Furniture.		L.S.	6000 - -	
L.S.		25. Water Supply and Sanitary fittings.			2000 - -	
L.S.		26. Lighting.			3000 - -	
		27. Contingencies and petty supervision charges etc.			5451 - -	
			TOTAL	Rs.	200000 - -	

J Krishna Murty
UNIVERSITY ENGINEER.

Proposed Tamil Research Institute

Annamalai University,
Annamalainagar.

CALCULATIONS.

Pressure on soil - Loads.

1) Load from terrace floor (Hall) - ½ x 12 x 25 x 140 = 21,000 lbs.
2) - do - verandah. ½ x 8'-0 x 12 x 140 = 2,318 "
3) Masonary. 5'-0 x 1'-6 x 16'-6 x 120 = 14,850 "
38,168.

Say 17.Tons.

Pressure at the base 5' x 1'-6 = 7.5 Sq.ft.
Pressure per Sq.ft. $\frac{17}{7.5}$ = 2.27 Tons.

Below Basement.

5 x 18-10½" x 3'-10½" x 120
5' x 2'-3" x 1'-0 x 120
5 x 3'-0 x 1'-6" x 120
5 x 3'-9 x 2'-0 x 120
5 x 5'-0 x 2'-6 x 120

$\frac{600 \times 34}{2240}$ = 9. Tons.

Total W = 26. Tons.

Area of base 5 x 5 = 25 Sq.ft.
Pressure per, Sq.ft. = $1\frac{1}{25}$ ton or 1.04 Ton

Pressure with the 1st floor added.

1) Load terrace rppf . ½ x 12 x 20 x 140 = 16,800.
2) Verandah terrace roof. ½ x 12 x 8'-6 x 140 = 7,140.
3) Masonry. 5 x 1'-1½" x 14 x 120 = 9,450.
33,390 or 15. Tons.

Base 5 x $1\frac{1}{8} = 5\frac{5}{8}$
Pressure per sq.ft. $\frac{15 \times 8}{45} = 2\frac{2}{3}$ Tons.

In ground floor total weight is 32 tons.
Base area 7½ sq,ft.
pressure per sq.ft. $\frac{32 \times 2}{15} = \frac{64}{15} = 4\frac{1}{4}$ tons.

Brick in cement mortar 1:3. to be provided.

On the soil total weight 41 tons.
Area 25 sq.ft.
Pressure per sq.ft. $\frac{41}{25}$ = 1.64 tons.

J Krishna Murty
University Engineer.

Design of R. C. Lintels.

Assumption of Concrete 1:2:4 — Compressive stress 600 Lb per sq inch

" Tensile " 16000 " "

1. Verandah openings. Moment of Resistance $M = \frac{WL}{12}$.

clear span 7'-0" Effective span 7'-9"

Assume thickness of lintel 9".

Self weight of lintel 7'-9" X 0-9" X 1-6 X 150 = 1350 lb.

weight of masonry 7'-9" X 4-9" X 1-6 X 120 = 6840 "

Weight of terrace $\frac{1}{2}$ X 7'-9" X 8'-3/4" X 140 = 4655 "

12845

$$\frac{WL}{12} = \frac{12845 \times 93}{12} \quad \text{or} \quad = 95\ bd^2$$

$$\therefore\ d = \sqrt{\frac{12845 \times 93}{12 \times 95 \times 18}} = 8"$$

with minimum cover 9" over all depth.

11. Lintels over doors and windows.

$$M = \frac{WL}{6}$$ Assume 6"

clear span 5'-0" effective span 5'-6"

Self weight of lintel 5-6" X0'-6" X 1-6" X 150 = 620 lb.

Weight of masonry 5-6" X $\frac{5\text{-}6"}{2}$ X 1-6" X 120 = 2724 ".

$$M = \frac{WL}{6} = \frac{3344}{6} \times 66 = 95\ bd^2$$

$$d = \sqrt{\frac{3344 \times 66}{6 \times 95 \times 18}} = 4\ 3/4".$$

with cover 6" over all depth.

Allen
2/10/42