

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE - 247 667**



Minutes of the emergent meeting (30th meeting) of the Building & Works Committee held on 31st October 2013 at 03.00 P.M. in the Board Room of the Institute.

The following were present:

- | | |
|--|-------------------|
| 1. Prof. Pradipta Banerji, Director | -Chairman |
| 2. Prof. S.P. Gupta, Dy. Director | - Member |
| 3. Prof. Mahendra Singh, Chairman, Estate & Works | - Member |
| 4. Er. H.K. Upreti, Chief Engineer, NH, Uttarakhand PWD | - Member |
| 5. Er. Mohan Mittal, Executive Engineer, UPCL | - Member |
| 6. Prof. Ravi Kumar, Mechanical & Industrial Engineering Department, IIT Roorkee | - Member |
| 7. Prof. Rajendra Prasad, Electrical Engineering | -Member |
| 8. Prof. Pradeep Kumar, Civil Engineering | - Member |
| 9. Er. Salek Chand, Superintending Engineer | - Member |
| 10. Lt. Col. (Retd.) A.K. Srivastava, Registrar | -Member Secretary |

The Chairman welcomed the members of the Building & Works Committee.

Deliberations:

The items on the Agenda were discussed and the deliberations/ recommendations are summarized as under:

Item No. 30.1: To confirm the minutes of the 29th meeting held on 18.07.2013.

Having received no comments, the minutes of the 29th meeting of the Building & Works Committee, as recorded and circulated, were **confirmed**.

Item No. 30.2 To receive a report on the action taken to implement the decisions of the 29th meeting of the Building & Works Committee held on 18.07.2013.

The Building & Works Committee noted the actions taken on the minutes of the 28th meeting, as reported.

Item No. 30.3: To consider the preliminary estimate of the under-mentioned agencies for construction of Laboratory of the Centre of Excellence in Disaster Mitigation and Management:

1. Project Manager Rs.171.49 lacs
UP Rajkiya Nirmal Nigam Ltd.
2. Project Manager Rs. 223.30 lacs
UP Project Corpn.Ltd.

The B&WC considered the estimates submitted by the Project Manager, UP Rajkiya Nirman Nigam Ltd. and Project Manager, U.P. Project Corpn. Ltd. for construction of Laboratory of the Centre of Excellence in Disaster Mitigation and Management and resolved that the work be assigned to the U.P. Rajkiya Nirman Nigam Ltd. at an estimated cost of Rs.171.49 lacs (**Appendix 'A'**). The structural design of the laboratory shall be entrusted to the UP Rajkiya Nirman Nigam to meet the load requirement of the equipment to be installed in the laboratory.

The meeting ended with a vote of thanks to the Chair.

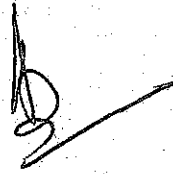


U.P.Rajkiya Nirman Nigam Ltd

(Camp office Gurkul Kangari Vishwavidyalaya near Daya Nand Dwar Haridwar)

Brief Particular

- (1) Name of work: - Construction of A state of Art Laboratory of the center of Excellence in Disaster Mitigation & Management in I.I.T Campus Roorkee in District Haridwar (U.K)
- (2) Cost of Work: - Rs 171.49 Lacs
- (3) Plinth Area: - (a) Ground Floor Plinth area up to Floor Height 3.35M: - M 142.82 M²,
(b) Ground Floor Plinth area up to height 6.70 M: - 248.45 M²
© First Floor Plinth area up to Floor Height 3.35 M: - 125.82 M²
- (4) C.P.W.D Plinth Area Rate: Effected 1-10-2012
- (5) Specification of work: - C.P.W.D Specification of Work



3/10/13

ESTATE & WORKS
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE


No. E&W/ 1090 /B&WC

Dated : September 23, 2013

✓ **Project Manager**
U.P. Rajkiya Nirman Nigam Ltd.
Gurukul Kangari University Campus
Haridwar


A State of Art Laboratory of the Centre of Excellence in Disaster Mitigation & Management is to be constructed in IIT Roorkee campus adjoining High Voltage Lab. The site plan, proposed building plans & elevation are being enclosed for preparing the preliminary estimate.

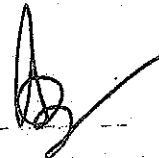
You are requested to submit the preliminary estimate by 7th Oct. 2013 for approval by the Competent Authority of this Institute. If any other information is required, you may contact Estate & Works Office of IIT Roorkee.


23/9/13
Superintending Engineer

Copy to : Chairman, Estate & Works, IIT Roorkee.

At 12/10/13, 10:00 AM
2/10/13


NIRAJ SINGH
SUPERINTENDING ENGINEER





सत्यमेव जयते

भारत सरकार

GOVERNMENT OF INDIA

केन्द्रीय लोक निर्माण विभाग
CENTRAL PWD

कुरसी क्षेत्र दरें

PLINTH AREA RATES

(1.10.2012)

THE UNITED BOOK
AGENCY
CENTRAL PWD
NEW DELHI

निर्माण महानिदेशक, के.लो.नि.वि. नई दिल्ली प्राधिकार से प्रकाशित
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Govt. of India
Central Public Works Department
(Technology Application and Standards Unit)
Nirman Bhawan, New Delhi

No: 62/SE(TAS)/Plinth Area Rates/399

Dated : 24/12/2012

MEMORANDUM

Plinth Area Rates as applicable on 1.10.2007 (Reprint) were last circulated under Memo no. SE(S&S)/EE-II/AE-III/ dated 19.7.2010 along with annexure I to IV. Relevant cost indices with reference to base 100 as 1.10.2007 shall continue to be applicable on these plinth area rates for works in progress etc.

However, the need for issuing fresh plinth area rates has been felt to account for rise in prices in the last 5 years as well as the latest development in construction practices such as fire safety measures for high rise buildings and also incorporating the green buildings concept for three star rating of GRIHA.

Accordingly, fresh plinth area rates with reference to base 100 as on 1.10.2012 has been prepared for circulation in the department. In future, Preliminary Estimates may be prepared on the basis of these plinth area rates.

All the rates are based on data of actual expenditure for structures completed recently, as received from various field formations. In case of any discrepancy in Hindi & English versions, English version will prevail.

The latest plinth area rates as on 1.10.2012 is hereby issued with following annexures :

- Annexure - I :** Fresh Plinth Area Rates with base 100, as on 1.10.2012 (for residential /non residential buildings, services and development).
- Annexure - II :** Broad specifications and scale of amenities for sanitary/Electrical fittings for which plinth area rates are applicable.
- Annexure - III :** Memo no. 29/21/58/WI of 10/83 indicating the rules for working out plinth area from plans, to be observed while adopting these plinth area rates given in Annexure - I.
- Annexure - IV :** Proforma for calculating cost index for future cost index with base 100 as on 1.10.2012 indicating revised weightages also.
- Annexure - V :** Specifications for buildings - Non Residential & Residential Buildings.

Incl: Annexure I to V

Director General
CPWD, Nirman Bhawan,
New Delhi

PLINTH AREA RATES AS ON 01.10.2012

ANNEXURE - I

Description	Office/College/Hospital	Schools	Hostels	Residential
2	3	4	5	6
CC FRAMED STRUCTURE Specifications as per Annexure -II)	Rates in Rs. per sq. metre			
CC framed structure upto six storeys				
for ht. 3.35 mtr.	23500	17000		
for ht. 2.90 mtr.			16500	16000
CC FRAMED STRUCTURE (Normal Buildings) Specifications as per Annexure -V)				
CC framed structure upto six storeys				
for ht. 3.35 mtr.	✓ 19000	15200		
for ht. 2.90 mtr.			15000	14500
RATES FOR				
For every additional storey over six storeys up to nine storeys	560	560	560	560
For every additional storey over nine storeys upto twelve storeys	580	580	580	580
For every 0.3 mt. additional height of floor over normal floor height of 3.35 mt./ 9 mts.	✓ 270	270	270	270
For every 0.3 mt. higher plinth over normal plinth height of 0.6 mt. (on G.F. area	270	270	270	270
For every 0.30 mt. deeper foundations (normal depth of 1.20 metre on G.F. area only)	270	270	270	270
For every stronger foundations to take load of one additional floor at a later stage (on area of additional floor only)	2270	2270	2270	2270
For every foundations in poor soil having bearing capacity less than 10 tonnes/ (on G.F. area only)	520	520	520	520
For every resisting Earthquake forces	1140	1140	1140	1140
For every Raft foundations (on floor only)	6450	6450	6450	6450

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Description	Office & College	Hospitals	Schools	Hostels	Type of Quarters				
					I	II	III	IV	V,VI & above
2	3	4	5	6	7	8	9	10	11
SERVICES.									
Internal water supply & sanitary installations	4% ✓	10%	5%	15% with attached toilets, 10% with common toilets.	12%	12%	12%	12%	12%
					% age means % age of building cost of normal Building (1.0B)				
External service connections	5% ✓	5%	5%	5%	5%	5%	5%	5%	5%
Internal electric installations	12 1/2% ✓	12 1/2%	12 1/2%	12 1/2%	12 1/2%	12 1/2%	12 1/2%	12 1/2%	12 1/2%
					Note : The above does not include service connection charges & electrification				
Internal electric installations for laboratories schools	-	-	15% of building cost of normal building (1.0B)	-	-	-	-	-	-
Internal electric installations for terminal building and other allied structures in airports	15% of building cost	-	-	-	-	-	-	-	-
Rate for :									
Over wiring and plugs	4% ✓	4%	-	-	-	-	-	-	-
Central Call bell system	1%	-	-	-	-	-	-	-	-
Lightening conductors									
4 storeyed building	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
8 storeys buildings	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%
and 8 storeyed buildings	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Phone conduits	✓0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Centralized Intercom system	✓	-	-	-	1%	1%	1%	1%	1%
Outer conduiting	✓0.5%	0.5%	0.5%	0.5%					
Liability assurance	1%	1%	1%	1%	1%	1%	1%	1%	1%

Control charge of 1% should be taken in estimate only when client department request for TPI.

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Sl. No.	Description	Rates in Rupees
5	WATER TANK (RCC ONLY)	
5.1	Overhead tank without independent staging	9.00/Litre.
5.2	Overhead tank upto staging height 20 metres	15.20/Litre.
5.3	Overhead tank with staging height between 20 metres and upto 30 metres	17.30/Litre.
5.4	Overhead tank with staging height between 30 metres and 40 metres	21.00/Litre.
5.5	Underground sump	9.00/Litre
6	DEVELOPMENT OF SITE	
6.1	Levelling	55.00/sqm.
6.2	Internal roads & paths	83.00/sqm
6.3	Sewer	63.00/sqm.
6.4	Filter Water Supply	
6.4.1	Distribution lines 100 mm dia and below	46.00/sqm.
6.4.2	Peripheral and 150 mm to 300 mm dia pipes	35.00/sqm.
6.4.3	Unfiltered water supply distribution lines	27.00/sqm.
6.5	Storm water drains	50.00/sqm.
6.6	Horticulture Operations	47.00/sqm.
6.7	Street lighting	
6.7.1	With fluorescent lamps	55.00/sqm.
6.7.2	With HPMV Lamps	75.00/sqm.
6.7.3	With HPSV Lamps	95.00/sqm.
6.7.4	Exit sign board i/c electric signage.	50.00/sqm.

- Note:
- The rates are per sqm. and are to be applied on the entire areas of the plot to be developed.
 - These rates will apply to normal conditions and normal layout plans. If any extras are required due to nature of layout involving filling, cutting or bringing services from large distances, then additional provision should be made.
 - Cost of bulk services water supply, sewage disposal e.g.
 - Tube wells, pumps, open wells, treatment plant, extension of lines from source of local bodies, head works at water source etc.
 - Sewage pumps, sewage treatment plants, septic tanks, extension of cut-fall sewer up to point of disposal etc. are not included in these rates. Extra provision depending upon site conditions may be made for these.
 - The cost of providing green building & Water harvesting are to be taken as per actual.
 - Cost of HT sub-station equipments, LT distribution system, DG sets, pumps, air-conditioning and other specialized works like aesthetic external lighting with metal halide lamp for façade lighting, addressable fire alarm system, rising mains, UPS, aviation obstruction lights, external service connections, storage water cooler, IBMS, CCTV, access control system for security, solar water heating system, solar lighting etc. are not included in above rates and the same are to be taken as per actual based on functional / utility of the proposed building.
 - I.O (A) shall be adopted for GPO and GPRA.
I.O (B) may be adopted for other buildings.

(A.V.R.Bhat)
Executive Engineer (S&M)
CPWD, Nirman Bhawan,
New Delhi

(M.K.Tilak)
Superintending Engineer (T&S)
CPWD, Nirman Bhawan,
New Delhi

(SURESH KUMAR)
Chief Engineer (CSQ)
CPWD, New Delhi

ASSISTANT ENGINEER (C&E)
U.P.P.W.A. LTD.

U.P. Rajkiya Nirman Nigam Ltd Haridwar Unit Haridwar (U.K)

Camp office Gurkul Kangari Vishw Vidhalaya near Daya Nand Dwar Haridwar)

Name of Work :- Construction of A State of Art Laboratory of the center of Excellence in Disaster Mitigation & Managent in I.I.T campus Roorkee in District Haridwar (U.K)

Measurement sheet

S.No	Particular of item	No	L	B	H	Quantity
1	Plinth area Measurement					
	(A) Ground Floor Plinth Area					
	Room / office	1x1	17.96	4.73		84.95
	---do---	1x1	10.23	3.9		39.9
	Column Offsets	1x12	0.27	0.3		0.97
		1x1	4.7	2.12		10.34
	Entrance Pouch	1x1	3.7	1.8		6.66
	Total					142.82 M2
	(B) Ground Floor Plinth Area (Double Height - 6.70 M)					
	Hall	1xx	24.845	10		248.45 M2
	(C) First Floor Plinth Area					
	Room / office	1x1	17.96	4.73		84.95
	---do---	1x1	10.23	3.9		39.9
	Column Offsets	1x12	0.27	0.3		0.97
	Total Quantity					125.82 M2
	(a) Grand Total Plinth Area 3.35 M Floor Height = 142.82 M2					
	(b) Hall G.F Plinth Area 6.70 M Floor Height = 248.45 M2					
	(c) First Floor Plinth Area 3.35 M Floor Height = 125.82 M2					
3	Supply and Fixing 1.5 mm thick					
	Aluminium Door / Window with					
	Anodized , 5mm thick Rubber					
	beading ,Handle, with locking					
	arrangement susem etc complete					
	including all materials labour T&P					
	etc complete for proper completion					
	of work					
	Ground Floor Entrance Door	1x2	3.5		2.5	17.5
	Room Door (G.F)	1x6	1		2.5	40
	Corridor (G.F)	1x1	2.4		2.5	6
	Window (G.F)	1x11	3.385		1.6	59.58
	Toilet Door (G.F)	1x1	0.9		2.1	1.89
	Ventilator (G.F)	1x2	0.9		0.45	0.81
	Window (First Floor)	1x12	3.385		1.6	64.99
	Room Door First Floor	1x6	1		2.5	15
	Corridor (F.F)	1x1	2.4		2.5	6
	In Hall	1x1	8.27		3.38	27.95
	In Hall	1x1	6.77		3.38	22.88
	In Hall	1x1	1		3.38	3.38
	In Hall	1x1	22.16		3.38	74.9
	Total Quantity					340.88 M2

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NIPANJAN SINGH
M.T.S. ENGINEERING
M. A. S. P. O.

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U.P.Rajkiya Nirman Nigam Ltd Haridwar Unit Haridwar (U.K)

Camp office Gurkul Kangari Vishw Vidhalaya near Daya Nand Dwar Haridwar)

Name of Work :- Construction of A State of Art Laboratory of the center of Excellence in Disaster Mitigation & Managent in I.I.T campus Roorkee in District Haridwar (U.K)

Measurement sheet						
S.No	Particular of item	No	L	B	H	Quantity
4	Supply and Fixing Door Floor Spring etc complete					
	G.F & F.F	1x20				20 No
11.49.2	Providing and Laying Vitrified Tile in different size 600mmx600mm (thickness to be specified by manu facture) with water absorption less than 0.80% and conforming to IS 15622 15622 ,of approved make , in all colour & shade, in cement mortar 1:3 cement 3 Coarse & joint finish with white cemrnt slurry & matching pigment etc complete					
	Ground Floor					
	In Room	1x1	4.5	3.385		15.23
		1x1	7	3.385		23.7
	Skirting	1x2	28		0.1	5.6
	---- do -----	1x2		9.77	0.1	1.95
	---- do -----	1x2	4.5		0.1	0.9
	---- do -----	1x2x2		3.385	0.1	1.35
	---- do -----	1x2	7		0.1	1.4
	First Floor					
	Room	1x4	4.5	3.385		60.93
		1x1	6.83	3.43		23.42
	balcony	1x1	22.93	1.5		34.4
	---- do -----	1x1	9.77	1.3		12.7
	Room	1x1	3.43	3.07		12.69
	Skirting	1x2x4	4.5		0.1	3.6
	---- do -----	1x2		3.385	0.1	0.68
	---- do -----	1x2	6.83		0.1	1.37
	---- do -----	1x2x2		3.43	0.1	1.37
	---- do -----	1x2		3.07	0.1	0.61
	---- do -----	1x2	22.93		0.1	4.59
	---- do -----	1x2		1.5	0.1	0.3
	---- do -----	1x2	9.77		0.1	1.95
	Total Quantity					208.74 M2
11.48.2	Grouting the Joints of Flooring tiles having joints of 3mm width using epoxy grot mix of 0.70 Kg of organic coated filler of desired shade I/C filling/ grouting and finishing complete as per direction of Engineer - in - charge etc complete					
		Quantity same as per item No11.49.2				208.74 M2

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U.P. RAJKIYA NIRMAN NIGAM LTD
HARIDWAR UNIT HARIDWAR (U.K.)

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U.P.Rajkiya Nirman Nigam Ltd Haridwar Unit Haridwar (U.K)

Camp office Gurkul Kangari Vishaw Vidhalaya near Daya Nand Dwar Haridwar)

Name of Work :- Construction of A State of Art Laboratory of the center of Excellence in Disaster Mitigation & Managent In I.I.T campus Roorkee in District Haridwar (U.K)

Abstract of Cost						
S.No	Particular of item	Unit	P. Area	Rate	Amount (In Lac)	
(A)	C.P.W.D Plinth area Rate vide letter No:62 / SE / (TAS) / Plintharea rates / 399 dated 24/12/2012 which is effected from date 1/10/2012					
1.1.1(B)	R.C.C Framed Structure Building with 3.35M floor heihtg					
	For Office / Room	M2	268.64M2	19000		51.04
	For Hall	M2	248.45M2	19000		47.21
	add extra floor height beyond 3.35 M height is 6.70 M diffrence of floor height is 3.350 M No of floor height 3.35 /0.30 = 11.17 No of Floor Height	M2	248.45 M2x 11.17 @ Rs 270.00			7.49
	Total					105.74
2	Add for Anti temite Treatment	M2	391.27 M2	Rs 240.00		0.94
1.2.8	Resisting earthquake forces	M2	517.09 M2	1140		5.89
3.1	Internal water supply & Sanitary Inst allations			Rs 105.74 Lacs @ 4 %		4.23
3.2	Add for External Service Connections			Rs 105.74 Lacs @ 5 %		5.29
3.3	Add for Internal electric Installations			Rs 105.74 Lacs @ 12.5 %		13.22
3.6.1	Add for Power wiring and plug			Rs 105.74Lacs @ 4 %		4.23
3.6.4	Add for Telephone conduits			Rs 105.74 Lacs @ 0.50 %		0.53
3.6.6	Add for Computer conduiting			Rs 105.74 Lacs @ 0.50 %		0.53
B	Supply and Fixing 1.5 mm thick Aluminium Door / Window with Anodized , 5mm thick Rubber beading ,Handle, with locking arrangement susem etc complete including all materials labour T&P etc complete for proper completion of work	M2	340.88 M2	Rs 4500		15.34
21.4.2	Providing and fixing double action hudraulic floor spring with stainless steel cover minium 1.25mm thickness of approved brand and manufacture confirming to IS: 6315 having brand logo embossed on the body / plate with double spring mechanism and door weight up to 125 kg, for door including cost of cutting floor , emb edding in floors as required and					
	Total					155.94

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U.P.Rajkiya Nirman Nigam Ltd Haridwar Unit Haridwar (U.K)

Camp office Gurkul Kangari Vishaw Vidhalaya near Daya Nand Dwar Haridwar)

Name of Work :- Construction of A State of Art Laboratory of the center of Excellence in Disaster Mitigation & Managent in I.I.T campus Roorkee in District Haridwar (U.K)

Abstract of Cost						
S.No	Particular of item	Unit	P. Area	Rate		Amount (In Lac)
					B / F	155.94
	making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S sheet outer box with side plate etc complete as per the direction of Engineer - in - charge	No	20 No	Rs 2127.30		0.45
11.49.2	Providing and Laying Vitrified Tile in different size 600mmx600mm (thickness to be specified by manufacture) with water absorption less than 0.80% and conforming to IS 15622 ,of approved make , in all colour & shade, in cement mortar 1:3 cement 3 Coarse & joint finish with white cement slurry & matching pigment etc complete	M2	208.74 M2	Rs 954.30		1.99
	Difference of Rate Rs 1457.70 - Rs 504.30 = Rs 954.30 Per Squaremeter					
1.48.2	Grouting the Joints of Flooring tiles having joints of 3mm width using epoxy grout mix of 0.70 Kg of organic coated filler of desired shade /C filling / grouting and finishing complete as per direction of Engineer - in - charge etc complete	M2	208.74 M2	Rs 164.10		0.34
	Total					158.72
C	Add 2 % Contingencies					3.17
	Total					161.89
D	Less 5 % U.P.R.N.N.Ltd working				(--)	8.09
	Total					153.8
E	Add 11.5 % U.P.R.N.N.Ltd centage charges				(+)	17.69
	Grand Total Amount					171.49
				Rs 171.49 Lac Only		

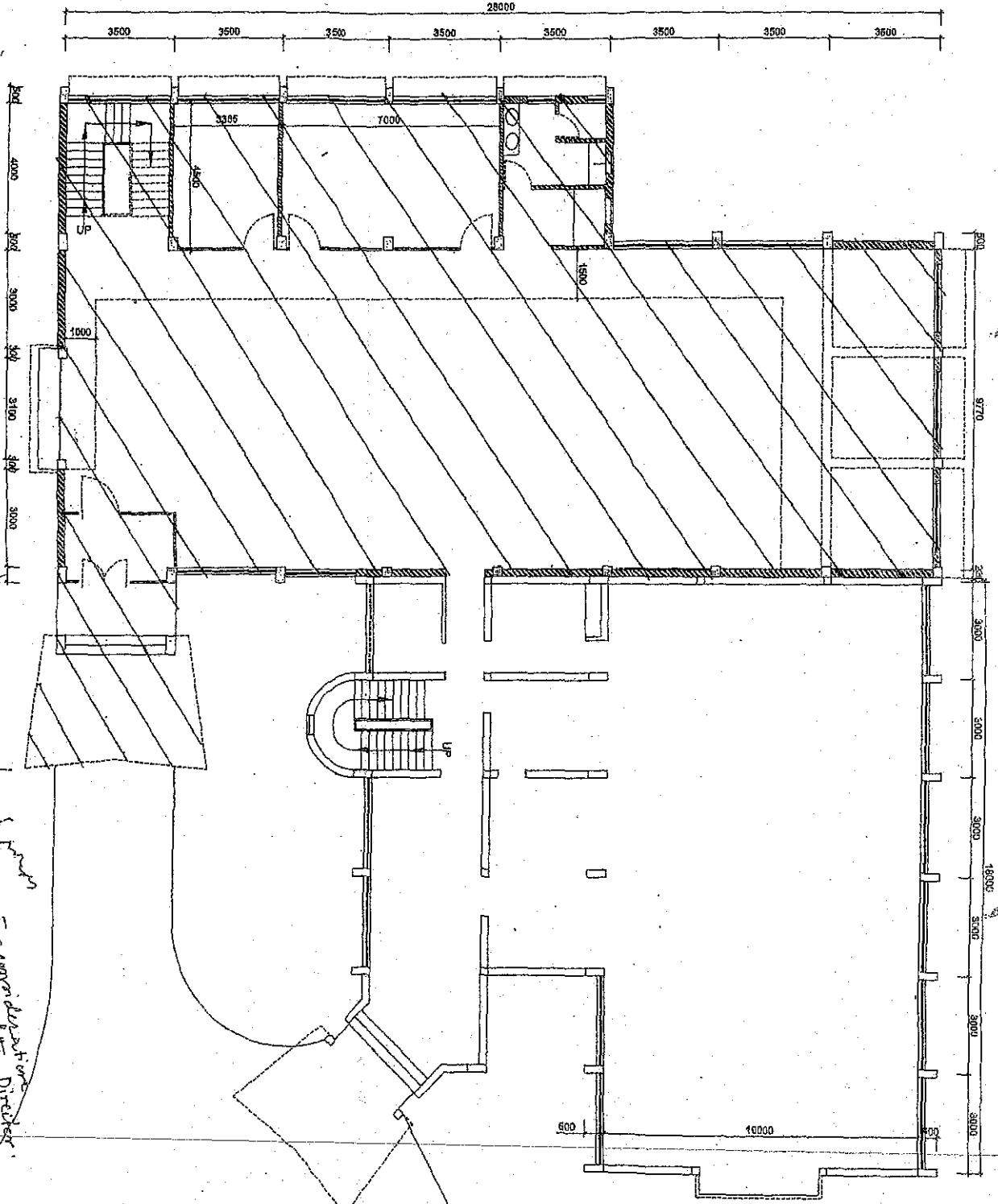
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SPE

[Signature]
RANJAN SINGH

[Signature]
Unit InCharge
U.P.R.N.N.Ltd
Haridwar Unit

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GROUND FLOOR PLAN



INSTITUTE ARCHITECT
LIT. DIVISION

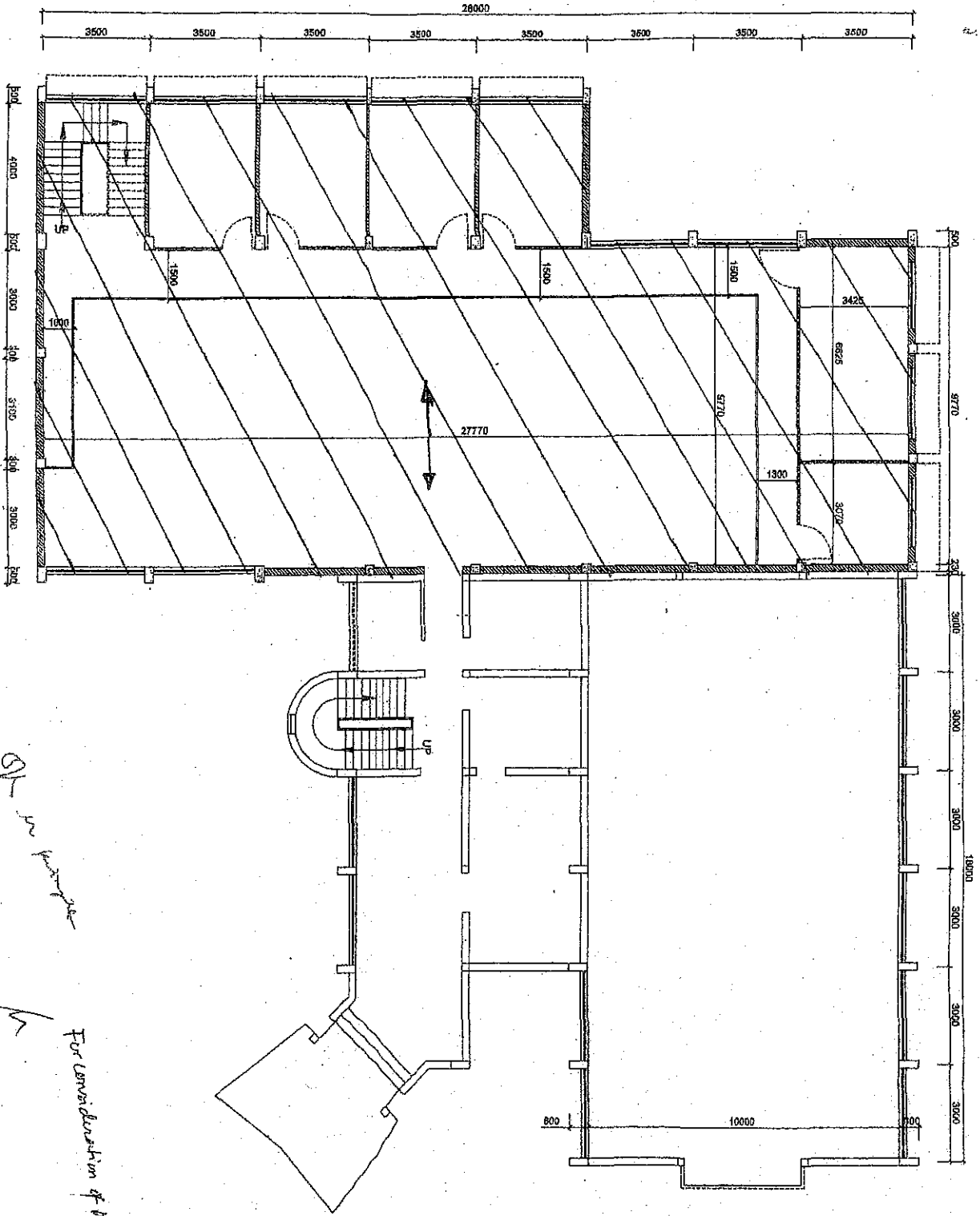
For consideration of the Director

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FIRST FLOOR PLAN



INSTITUTE ARCHITECT
I.I.T. ROORKEE

For consideration of the Director
I.I.T.



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