

SUPPLIER OF LIGHTING SYSTEM & ENERGY SAVER

<p>1. Crompton Greaves Limited (Lighting Division) Kanjur Marg (East), Mumbai -400 042, India. Tel: +91-022-67558000, 67558425/26 FAX: +91-022- 25787283 <u>Contact Person:</u> Mr. B Chakrabarti Email: biswa.chakrabarti@cgl.co.in</p>	<p>2. N. N. Projects Limited C-102, 10th Floor, Super M I, DLF City, Phase IV Hoshiarpur - 122 002, Tel: +91-(124)- 4042483 Fax : +(91)-(124)- 2386431 E-mail: info@nnprojects.com <u>Contact Person:</u> Mr. Gurdeep Singh Juneja Contact No. 9910018286</p>
<p>3. Duex Industrial Systems H-312, Sharad Industrial Estate, Lake Road, Bhandup (W), Mumbai 400078 Tel: 022-32688683 <u>Contact Person:</u> Mr. Nitin Thakur Contact No. 09324082483</p>	<p>4. CONZERV SYSTEMS PVT LTD 87, 1st Floor Industrial Development Colony (IDC) Mehrauli Road Hoshiarpur - 122 001, Phone:- 0124 4268899 Fax:- 0124 4268957 Email: del.sales@conzerv.com</p>

SUPPLIER OF SOLAR PV & LIGHTING SYSTEMS

<p>1. Tata BP Solar India Ltd UG/70-74, World Trade Centre Hotel Intercontinental Complex Barakhamba Road, New Delhi 110 001 Tel : 011 2341 1537 / 8 Fax : 011 2341 1520 <u>Contact Person</u> Mr. Amit Kumar Contact No. 09910018286</p>	<p>2. NEPC India Limited G-39, 3rd Floor, Pawan House, Connaught Circus, New Delhi-110001 Tel: 011 -43581298 / 1299 Fax: 011 41516499 Contact Person Mr. Rakesh Gupta Cell No: 9810106461 mailto:rakeshgupta@nepcindia.co.in Email: rakeshguptanepc@yahoo.com rakeshgupta@nepcindia.co.in</p>
<p>3. G.K. Energy Marketers Pvt. Ltd. F. No 601 , B No 11 B , Opp Data Mandir , Lokmanya Nagar , LBS Road , Navi Peth, PUNE - 411030 Ph. no - (020) 2432 1115 Fax No - (020) 2432 1115 Contact Person : Mr. Gopal Kabra Mob - 09970450000</p>	<p>4. Emmvee Solar Systems (P) Ltd. First Floor , No: 6 & 8 , R-23 , North Enclave , Opp : Nehru Place , Kalkaji, New Delhi - 110 019 Tel : 011-40502620 / 22 Fax : 011 40502623 <u>Contact Person :</u> Mr. Krishan Kumar Mobile : 098119 73344</p>
<p>5. Maharishi Solar Technology Ltd A-14, Mohan Co-op Indl Estate, Mathura Road, New Delhi 110044 Tel.: 011-30881700, 26959529 Fax : 011-26959669 <u>Contact Person :</u> Mr. Pawan Kulshrest Mob - 09899704676</p>	<p>6. Bharat Heavy Electricals Ltd. Integrated Office Complex Lodhi Road, New Delhi - 110 003 Tel : (011) 26001010 Fax : (011) 26493021 (011) 26492534</p>

SUPPLIER OF CHILLERS SYSTEMS

<p>1. Kirloskar Pneumatic Co. Ltd. Hadapsar Industrial Estate, Pune 411 031. Tel. : 020-26870133, 26727000 Fax : 020-26870297, 26870634 <u>Contact Person:</u> Mr. Hemadri N. Buzruk Cell: 09881495489</p>	<p>2. Voltas Ltd. EM&R BG, A43, Mohan Co-op Indl. Estate, Mathura Road, Delhi 110044 Tel: 011 66505550-5570 Fax: 011 26950022/26950081 Contact Person: Mr. Rajiv Saxena Email: rsaxena@voltas.com</p>
<p>3. Reynold India Pvt. Ltd C-38 & 39, Sector 2 Noida, 201 301 Tel : 0120-4252000/4664000 Fax No : 0120 -4252005 <u>Contact Person :</u> Mr. Vijay Ball Cell No: 09810100835</p>	<p>4. Werner Finley India Ltd. #9, Cauverynagar, Near Swayam Prabha Kalyanamantapa, Kamakshipalya, Magadi Main Road, Bangalore - 560 079 Tel:080-23289889 23288369 Fax: 080-232883191 <u>Contact Person:</u> Mr. J.R.Gundu Rao Cell No: 09845511586</p>
<p>5. Flamingo Chillers Pvt Ltd Z - 51-52 Okhla Indi Area, Phase 2, Delhi - 110020 Phone : 011 - 41610234, 35 Fax: 011 - 41610234</p>	<p>6. Schneider Electric (I) Pvt. Ltd. A-29, Mohan Co-Op. Indl. Estate, Mathura Road, New Delhi 110044 Ph.011-39404000, 41590000, Fax-011-41678010, 41678011</p>
<p>7. Hitachi Home & Life Solutions (I) Ltd. Central Air Conditioning Mr. Arpit Akotiya 022-27689287/83 Mob. 09321836063</p>	

SUPPLIER OF EVAPORATIVE COOLING SYSTEM

<p>1. Sumaya HMX Systems Ltd., # A 422, 1st Cross, 1st Stage, Peenya Industrial Area, Bangalore - 560 058 Tel: 080 -372 1065 / 372 2325 Fax: 080 -372 2326</p>	<p>2. Mamata Energy Pvt Ltd Plot No. 858, Kothari Industrial Estate, Behind Hutch Tower, Rakanpur-Santej Road, Santej - 382 721, Telefax : 02764-268328 Contact Person: Mr. Ashish Zha</p>
--	--

SUPPLIER OF COOLING TOWERS

<p>1. Telal Engineering Pvt. Ltd. 18, Krishna Apartmnet, Bhadrapura, Ambawadi, Ahmedabad 380 006 Phone : 079-26460313. Contact Person: Mr. A. R. Dhable Cell No.: 09428863087</p>	<p>2. Gem Cooling Towers Pvt. Ltd. S.F. No. 100A, Arasur, Colmbatore - 641 407, Tei : 0422 2360013, 2360130, 2360131, 2360059, 2360129 Fax : 0422 2360523</p>
---	---

<p>3. Paltech Cooling Towers & Equipments Limited B- 604 Sushant Lok, Phase- 1 Hoshiarpur, Haryana - 122 002 Tel : 0124 4222483/84/85/ <u>Contact Person :</u> Mr. H. P. Yadav Cell : 09871096333 E-Mail: hpyadav@paltech.in</p>	<p>4. Artech Cooling Towers (P) Ltd Plot No. 5021, B/H, Meghmani Organics, G.I.D.C. Ankleshwar - 393 002. Tel: (02646) 250302, 309661 Fax: (02646) 250302</p>
Power Analyzer	
<p>1. Fluke 16/1113, Tank Road Karol Bagh, New Delhi, Delhi 110005 Tel :011 25738858 Mobile : 09818515888</p>	<p>2. Nevco Engineers Pvt Ltd 90-A(2nd Floor), Amrit Puri-B Main Road, East of Kallash, New Delhi-110065 <u>Contact Person</u> Mr. Vinod Bhat Contact No : 09810711178</p>
<p>3. CONZERV SYSTEMS PVT LTD B7, 1st Floor Industrial Development Colony (IDC) Mehrauli Road Hoshiarpur - 122 001, Phone:- 0124 4268899 Fax:- 0124 4268957 Email: del.sales@conzerv.com</p>	<p>4. MECO Instruments Pvt. Ltd. Plot No. EL-1, MIDC Electronic Zone, TTC Industrial Area, Mahape, Navi Mumbai 400710. Tel: 022-27673311-16 Fax: 0091-22-27673310, 27673330</p>
FLOW METERS	
<p>1. Fluke 16/1113, Tank Road Karol Bagh, New Delhi, Delhi 110005 Tel :011 25738858 Mobile : 09818515888</p>	<p>2. Siemens Ltd. Thane Belapur Road Thane - 400601, Maharashtra, India Tel : 022-27623502 Fax : 022- 27623727 <u>Contact Person</u> Mr. Rajesh Jain Cell No. 9987089336</p>
<p>3. ABB Ltd. 14 Mathura Road , Faridabad, 121003 Tel : (0129) 2448131 Fax : (0129) 4023006 <u>Contact Person:</u> Mr. Sudhir Kulkarni Cell No: 098105 06367</p>	<p>4. Nevco Engineers Pvt Ltd 90-A(2nd Floor), Amrit Puri-B Main Road, East of Kailash, New Delhi-110065 <u>Contact Person</u> Mr. Vinod Bhat Cell No : 09810711178</p>



Er. H.P. Singh
Executive Engineer

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

PTU PUNJAB
TECHNICAL
UNIVERSITY

Esld. Under Punjab Technical University Act, 1996
(Punjab Act No. 1 of 1997)

PTU/EC/110

Dated 10.02.2015

Ref. No. **Sh. D.L. Sharma**, President,
Vardhman Spg. & Gen. Mills Ltd.,
Chandigarh Road, Ludhiana.

Sh. S.L. Kaushal,
Chief Architect, Punjab (Retd),
2865, Sector 42-C, Chandigarh.

Dr. A. P. Singh,
Dean (P&D),
Punjab Technical University, Jalandhar.

Er. A. K. Prabhakar,
OSD to Vice Chancellor,
Punjab Technical University, Jalandhar.

Sh. A. N. Chowdhry (Special Invitee),
3-B, Jyoti Nagar,
Jalandhar.

Er. Ashok Goyal,
CEN-II, PWD, SCO 61-62, Phase-II,
SAS Nagar, Mohali.

Sh. P. S. Satni,
Superintending Engineer,
PGL, Chandigarh.

Sh. Inderjit Kumar (Special Invitee),
(PH Experts)
House No. 116, Phase 3B/I, Mohali.

Sh. Amrit Sagar Mittal
CMD, Sonalika Tractors Ltd,
Hoshiarpur.

The Director,
Department of Technical Education, Punjab,
Plot No. 1, Sector-36A, Chandigarh.

Dr. Buta Singh,
Dean (Acadmecis),
Punjab Technical University, Jalandhar.

The Registrar,
Punjab Technical University,
Jalandhar.

Er. Kamaljit Chopra (Sp. Invitee),
(Electrical Expert)
House No. 13, Jyoti Nagar, Jalandhar.

Dr. Prabhjot Kaur (Special Invitee),
Officiating Director Mohali Campus,
C102B, Phase-7 Industrial Area, Mohali.

Sh. Varinder Kumar,
Executive Engineer, Construction Division-II,
PWD, Kapurthala.

Sh. Rajiv Aggarwal, Architect
M/s Archigroup Architects,
A-14, First Floor, Sector-15, Noida -201301.

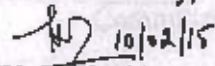
Sub : Construction of new campuses of Punjab Technical University - 45th meeting of the Standing Building Construction Committee.

Dear Sir/Madam,

Please find enclosed herewith minutes of the above said meeting for kind information and further necessary action please. Comments, if any, may please be forwarded within 10 days of issue of this letter.

Thanking you

Yours Sincerely,


(H. P. Singh)
Executive Engineer

Copy to : Dr. R. S. Khandpur, DG, PGSC (Retd), Science House, H. No. 2901, Phase 7,
(Sector 61), Mohali.

eINDIA 2010
AWARDS
Recognising excellence in ICT
Award of the Year

Punjab Technical University Jalandhar

Kapurthala Campus : Jalandhar-Kapurthala Highway, Kapurthala-144607
Mobile : 9478098017 www.ptu.ac.in E-Mail : xen@ptu.ac.in

ICT Enabled
University of the Year

Open & Distance Learning
Institute of the Year

164

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Minutes of the 45th Meeting of the Standing Building Construction Committee held on 22.01.2015 under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC (Retd) at PTU's Mohali campus.

Following were present in the meeting:

1. Sh. S. L. Kaushal, Chief Architect, Punjab (Retd),
2. Sh. Kamaljit Chopra, Chief Electrical Engineer, PSEB (Retd),
3. Sh. Mohanbir Singh, Additional Director, DTE
4. Sh. P.S. Saini, Superintending Engineer, PGI

5. Dr. Buta Singh, Dean/Academics, PTU,
6. Dr. A. P. Singh, Dean (P&D), PTU,
7. Sh. H. P. Singh, Executive Engineer, PTU.

8. Sh. Ashok Goyal, Chief Engineer, North-II, PWD,
9. Sh. Varinder Kumar, XEN, PWD, Div. 2, Kapurthala,
10. Sh. Mahabir Singh, SDE, PWD, Div. 2, Kapurthala.

11. Sh. Pritpal Singh, Senior Engineer, Punjab St Council for Sc. & Technology (PSCST).
12. Sh. K. K. Singla, Process Engineer, PSCST.

From Archigroup Architects, Noida:

13. Sh. Rajiv Aggarwal, Architect
14. Sh. Jeewan Kapur, Architect
15. Sh. Satyendra Sharma, Architect
16. Sh. Linus Lopez, Electrical Consultant,
17. Sh. Sunil Gupta, Air-conditioning consultant.

Item No. 45.1 : To confirm the Minutes of 44th meeting of Standing Building Construction Committee held on 20.10.2014.

As no comments had been received, the minutes of 44th meeting of Standing Building Construction Committee held on 20.10.2014 were confirmed.

Item No. 45.2 : Action taken on various items discussed during previous meeting of Standing Building Construction Committee.

It was informed by the Executive Engineer/PTU that following actions have been taken on various items discussed during previous meeting of Standing Building Construction Committee:

- The sub-committee constituted for finalization of University's requirements for acoustic treatment finishes and audio video system for the proposed auditorium at main campus, Kapurthala has submitted their report and the same is to be discussed in the present meeting for approval.

147

165

- The sub-committee constituted for finalization of University's requirements for type of stone to be used for flooring of circulation area and VIP Banquet area of the proposed auditorium at main campus, Kapurthala has submitted their report and the same is to be discussed in the present meeting for approval.
- Based upon the concept plans approved by the building committee in respect of the proposed auditorium and hostels at main campus, Kapurthala, municipal drawings have been submitted to Chief Town Planner, Punjab for approval.
- The detailed designing of 66 KVA sub-station for main campus, Kapurthala has been taken up by the Architect.

Item No. 45.3: To discuss and approve the requirements, manufacturers/ specifications for acoustic treatment and audio video system for the proposed auditorium at main campus, Kapurthala.

In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for acoustic treatment finishes and audio video system for the proposed auditorium at main campus, Kapurthala. The report submitted by the committee was discussed in detail and the same was approved.

Based upon the report submitted by the sub-committee and approved by the Building committee, the following estimates for these works were also approved:-

S. No.	Description of Works	Estimates sanctioned (In lacs of Rs)
1	Acoustic	70.53
2	Chairs	81.00
3	Stage Furnishing	51.99
4	Stage Lighting	36.37
5	Sound Reinforcement (Video)	11.65
	Total	251.54

The estimate for the projector was not approved. The Architect was advised to explore the possibility of provision of LED screen in place of the projector. The cost comparison of the projector and LED screen is to put up in the next meeting of the committee. The estimates for speakers and amplifiers and microphones requires to be relooked into, and will be finalized later on.

Item No. 45.4: To discuss and approve the flooring patterns for circulation area and VIP banquet area of the proposed auditorium at main campus, Kapurthala.

In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for type of stone to be used for flooring of circulation area and VIP Banquet area of the proposed auditorium at main campus, Kapurthala. The sub-committee in their report has recommended using granite for circulation area and VIP banquet area of the proposed auditorium at main campus, Kapurthala. The building committee also agreed for use of granite stone for these areas and advised Architect to prepare suitable floor patterns and detailed estimates accordingly.

Handwritten signature

Item No. 45.5 : To discuss and finalize the Energy audit report of PTU's main administrative building, main campus, Kapurthla submitted by Punjab State Council for Science and Technology.

The observations/recommendations submitted by Punjab State Council for Science and Technology (PSCST) in their energy audit report were presented by the Architect. After detailed discussions and deliberations, committee has taken the following decisions:-

S. No.	Observations/ Recommendations by PSCST	Decisions taken by the committee
1	Optimize operation of transformers.	Committee felt that the scheme suggested is not commensurate with the savings as additional skilled manpower will be required for switching on/off the transformers. However, it was agreed that switching on of AC system is delayed by 1-2 hours in the morning and switching off advanced by 1-2 hours before the closing time of the office.
2	Optimize the contract demand power supply from PSPCL.	The committee agreed to the proposal. However, it was suggested that extra contract demand power supply available may be used for new buildings (under construction). The Architect was advised to put up the scheme for use of extra contract demand power supply available in the new buildings.
3	Improve overall power factor of complex to unity.	The recommendations have been accepted and PTU was advised to add capacitor banks in existing APFC panels.
4	Replace existing air cooled screw chillers with water cooled screw chiller.	It was informed by the Architect that decision to provide air cooled screw chillers was a calculated and deliberated decision. This decision was taken to save water as there is a shortage of water in the area. The existing system will be continued.
5	Replace 36 watts and 18 watts fluorescent tube lights with 18 watts and 9 watts LED tube lights.	It was agreed that LED lights shall be purchased for all future maintenance requirements and with passage of the time, all lights will automatically be replaced with LED lights.
6	Replace 150W HPSV street lights with 60 watts LED and 70W HPSV with 30 W LED street lights.	It was agreed that LED lights shall be purchased for all future maintenance requirements and with passage of the time, all lights will automatically be replaced with LED lights.
7	Optimize power consumption of lighting by automation.	Before considering the proposal, Committee suggested that implication of sensors proposed must be studied for which PSCST was advised to provide literature/ specifications of the proposed sensors.

Committee suggested for provision of solar power system by PTU in their main campus, Kapurthala with a provision of supplying electricity to main grid system.

WJ

It was also suggested by the committee that a senior officer from PTU should be nominated to implement the Energy audit report.

Item No. 45.6 : To discuss and approve the master plan of main campus, Kapurthala after including International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre established at existing Lal Kothi.

After detailed discussions, committee approved master plan of main campus, Kapurthala after including International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre established at existing Lal Kothi. However, it has also been decided that this centre should be shifted to the main academic area of the University after completion of construction of the academic area. The buildings presently being used by International Resource Center-Universal Human Values & Ethics may be used for some other purpose. It was also suggested that the existing boundary wall of this centre may be dismantled so that this become a part of the main campus.

Item No. 45.7 : To discuss and approve the layout and estimate for construction of Internal road connecting existing road near main gate to International Resource Center-Universal Human Values & Ethics (IRC-UHVE).

After detailed deliberations, committee approved construction of approach road from Administrative building to International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre from proposed residential area side in the campus. It was decided that paver blocks should be used for construction of this approach road.

Item was discussed with the permission of the Chair.

Item No. 45.8 : Payment of fee to the Architect for preparation of building plans of proposed Auditorium and hostels at main campus, Kapurthala.

After detailed deliberations, committee advised Executive Engineer, PTU to put up the case in the next meeting with details and basis of payments made earlier for similar cases.

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

102



Er. H.P. Singh
Executive Engineer

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ
PTU PUNJAB
TECHNICAL
UNIVERSITY
Estd. Under Punjab Technical University Act, 1997
(Punjab Act No. 1 of 1997)

Ref. No: PTU/CC/266

Dated: 30.03.2015

Sh. D.L. Sharma, President,
Vardhman Spg. & Gen. Mills Ltd.,
Chan-figarh Road, Ludhiana.

The Director,
Department of Technical Education, Pb,
Plot No. 1, Sector-36A, Chandigarh.

Er. A. K. Prabhakar,
OSD to Vice Chancellor,
Punjab Technical University, Jalandhar.

Dr. A. P. Singh,
Dean (P&D),
Punjab Technical University, Jalandhar.

Dr. Prabhjot Kaur (Special Invitee),
Officiating Director Mohali Campus,
C102B, Phase-7 Industrial Area, Mohali.

Er. Kamaljit Chopra (Sp. Invitee),
(Electrical Expert)
13, Jyoti Nagar, Jalandhar.

Er. P. S. Saini,
Superintencing Engineer,
PGI, Chandigarh.

Sh. Rajiv Aggarwal, Architect
M/s Archigroup Architects,
A-14, Sector-15, Noida -201301.

Sh. Amrit Sagar Mittal
CMD, Sonalika Tractors Ltd,
Hoshiarpur.

Sh. S.L. Kaushal,
Chief Architect, Punjab (Retd),
2865, Sector 42-C, Chandigarh.

Er. A. N. Chowdhry (Special Invitee),
J-B, Jyoti Nagar,
Jalandhar.

Dr. Buta Singh,
Dean (Academics),
Punjab Technical University, Jalandhar.

The Registrar,
Punjab Technical University,
Jalandhar.

Er. Ashok Goyal,
CE/N-II, PWD, SCO 61-62, Phase-II,
SAS Nagar, Mohali.

Sh. Inderjit Kumar (Special Invitee),
(PH Experts) House No. 116, Phase 3B/I,
S.A.S. Nagar, Mohali.

Er. Varinder Kumar,
Executive Engineer, Const. Div-II,
PWD, Kapurthala.

Sub : Construction of new campuses of Punjab Technical University – 46th meeting of the Standing Building Construction Committee.

Dear Sir/Madam,

46th meeting of the Standing Building Construction Committee shall be held under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC (Retd) at 1130 hours on 09.04.2015 at PTU's Mohali campus at C-102/B, Industrial Area, Phase VII, (Sector-119), Mohali – 160 059 (Punjab). Agenda and Agenda note for the meeting are enclosed.

You are requested to make it convenient to attend the meeting.

Thanking you

Yours Sincerely,

H.P. Singh 30/03/15
(H. P. Singh)

Executive Engineer

Copy to : Dr. R. S. Khandpur, DG, PGSC (Retd), Science House, H. No. 2901, Phase 7,
(Sector 61), Mohali.

eINDIA 2010
AWARDS
Recognising excellence in ICT
Award of the Year

ICT Enabled
University of the Year

Open & Distance Learning
Initiative of the Year

Punjab Technical University Jalandhar
Kapurthala Campus : Jalandhar-Kapurthala Highway, Kapurthala-144601
Mobile : 9478098117

169

2

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Sub : Agenda for the 46th meeting of the Standing Building Construction Committee.

- Item No. 46.1 : To confirm the Minutes of 45th meeting of Standing Building Construction Committee held on 22.01.2015.
- Item No. 46.2 : Action taken on various items discussed during previous meeting of Standing Building Construction Committee.
- Item No. 46.3 : To discuss and finalize the provision of projector or LED screen for the proposed auditorium at main campus, Kapurthala.
- Item No. 46.4 : To discuss and approve the estimate for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala.
- Item No. 46.5 : To discuss and finalize the provision of LED lights in place of CFL lights in college buildings and library building (under construction) of Punjab Institute of Technology, main campus, Kapurthala.
- Item No. 46.6 : To discuss and approve the revised layout plan of proposed buildings for Punjab Institute of Technical Teachers Training and Research (PITTTR) at Ladowali Road, Jalandhar.
- Item No. 46.7 : To discuss and finalize the fee payable to the Architect for preparation of building plans of auditorium and hostels proposed at main campus, Kapurthala.
- Item No. 46.8 : To discuss and approve the start of construction works of proposed college buildings at Punjab Institute of Technology at Arniwala and Sikhwala.
- Item No. 46.9 : To discuss and approve the estimate for painting of boundary walls Punjab Institute of Technology, Mansa.
- Item No. 46.10 : To discuss and approve authorization to PWD for taking Environmental Clearance for construction of proposed auditorium and hostels buildings at main campus, Kapurthala.
- Item No. 46.11 : Any other point with the permission of the Chair.
- 170

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Agenda Note for the 46th meeting of the Standing Building Construction Committee.

Item No. 46.1 : To confirm the Minutes of 45th meeting of Standing Building Construction Committee held on 22.01.2015.

The minutes of 45th meeting of Standing Building Construction Committee held on 22.01.2015 were circulated on 10.02.2015. The minutes circulated are to be confirmed.

Item No. 46.2 : Action taken on various items discussed during previous meeting of Standing Building Construction Committee.

Actions taken on various items discussed during previous meeting of Standing Building Construction Committee are as under:

- Based upon the concept plans approved by the building committee in respect of the proposed auditorium and hostels at main campus, Kapurthala, the municipal drawings have been approved by Chief Town Planner, Punjab.
- The Architect will be making a presentation in the present meeting on cost comparison of projector and LED screen to be provided for the proposed auditorium at main campus, Kapurthala.
- The detailed estimate for provision of speakers, amplifiers and microphones to be provided for the proposed auditorium at main campus, Kapurthala will be presented by the Architect in the present meeting for discussions and approval.
- The issue pertaining to payment to the Architect against preparation of building plans for the proposed auditorium and hostels at main campus, Kapurthala is to be discussed in the present meeting.

Item No. 46.3: To discuss and finalize the provision of projector or LED screen for the proposed auditorium at main campus, Kapurthala.

In 45th meeting of the committee (agenda item No. 45.3), Architect was advised to explore the possibility of provision of LED screen in place of projector for the proposed auditorium at main campus, Kapurthala. Accordingly, the Architect has forwarded an offer for provision of LED screen for an amount of Rs. 330.75 lacs. (placed at Annexure-A). The Architect will be making a presentation of the comparison of cost of projector and LED screen.

The matter is placed before the Committee for discussions and decision please.

102

171

Item No. 46.4: To discuss and approve the estimate for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala.

In 45th meeting of the committee (agenda item No. 45.3), it was advised by committee that estimates for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala should be re-examined. The Architect will be making a presentation of the estimates of these items.

The matter is placed before the Committee for discussions and decision please.

Item No. 46.5 : To discuss and finalize the provision of LED lights in place of CFL lights in college buildings and library building (under construction) of Punjab Institute of Technology, main campus, Kapurthala.

In 45th meeting of the committee (agenda item No. 45.5), while discussing the energy audit report of PTU's main administrative building, it was suggested by committee that possibility of providing LED lights in college buildings and library building (under construction) of Punjab Institute of Technology, main campus, Kapurthala may be explored.

In this regard, it is submitted that in the approved estimates and works awarded to the contractors by PWD, there is provision of CFL lights. The extra financial implication for replacing the CFL lights with LED lights has been worked out by PWD and the Architect separately, which are as under. The payback period worked out by the Architect is also shown:

S. No.	Building	Amount as per approved estimate	Additional Financial Implication worked out by		Payback Period
			PWD	Architect	
1	College Building-I and Seminar Hall.	Rs. 63.31 lacs	Rs. 70.81 lacs	Rs. 78.02 lacs	25 years
2	College Building-II and Library	Rs. 104.53 lacs	Rs. 101.46 lacs	Rs. 113.76 lacs	22 years
3	College Building-III, Hostels & Director Office	Rs. 36.23 lacs	Rs. 58.58 lacs		
Total		Rs. 204.07 lacs	Rs. 230.85 lacs		

(Details are placed at Annexure-B)

The matter is placed before the Committee for discussions and decision please.

Item No. 46.6 : To discuss and approve the revised layout plan of proposed buildings for Punjab Institute of Technical Teachers Training and Research (PITTTR) at Ladowali Road, Jalandhar.

Two acres of land was transferred by Punjab Govt. to PTU at Ladowali road, Jalandhar for establishment of Punjab Institute of Technical Teachers Training and Research (PITTTR). The concept plans for this proposed institute were approved in 37th meeting (Agenda item No. 37.3) of the building committee.

12

172

Earlier, it was planned that entrance for this institute will be kept from Master Tara Singh Nagar, which is a residential area. During one of the discussions held with Municipal Corporation, Jalandhar, it was informed by them that building plans will not be approved if entrance of the institute will be from Master Tara Singh Nagar, being residential area and having road width less than the required width. Whereas, on other side of this institute, there exists Guru Nanak Dev University's campus. To have access of proposed PITTR from GNDU side, a meeting was held under the chairmanship of Principal Secretary, Technical Education, Punjab, wherein it was decided that the entrance road from GNDU campus side will be shared between PTU and GNDU but land equivalent to the 50% of the area of the road being shared will be transferred by PTU from its allotted land to GNDU. On the basis of this decision, land area of about 612 Sqm. will be shifted from PTU area to GNDU for sharing of access road. Based upon the revised area available, the Architect has revised the site plan and being presented in the meeting. However, the building plans shall be got approved from Municipal Corporation, Jalandhar with allotted land area of two acres only.

The matter is placed before the Committee for discussions and approval of the revised site plan please.

Item No. 46.7 : To discuss and finalize the fee payable to the Architect for preparation of building plans of auditorium and hostels proposed at main campus, Kapurthala.

In 45th meeting of the committee (agenda item No. 45.8), it was advised by the committee that details and basis of payments made earlier for preparation of building plans (similar cases) is put up in the next meeting. In this regard, it is informed that following payments have been made to the Architect against preparation of building plans of various buildings of main campus, Kapurthala:-

S. No.	Description	Covered Area of buildings approved	Amount Paid	Reference approval of Building committee
1	Housing Project (Phase-II)	17428.0 Sqm.	Rs. 6.0 lacs + S. Tax	20.7
2	College buildings-3Nos, Library, seminar hall and hostels.	31928.0 Sqm.	Rs. 10.99 lacs + S. Tax	27.7

Copies of the minutes of the building committees and agreement signed between PTU and the Architect are placed below at Annexure-C.

On the above basis (area of the buildings), the Architect has requested for release of payment of Rs. 10.03 lacs (including service tax) against preparation of building plans of auditorium and hostels (covered area : 25936 Sqm.).

The matter is placed before the Committee for discussions and decision please.

[Handwritten signature]

6

Item No. 46.8 : To discuss and approve the start of construction works of proposed college buildings at Punjab Institute of Technology at Arniwala and Sikhwala.

In 42nd meeting of the building committee (agenda item No. 42.4 and 42.5), committee noted that Punjab Cabinet have approved constitution of new technical university at Bathinda and district Fazilka (Arniwala) and Muktsar Sahib (Sikhwala) will fall under the jurisdiction of the new university. It was opinioned by the committee that new university may have different requirements for these campuses and thus it was decided to defer the approval of design basis reports of these campuses for the time being.

In this regard, it is brought to the kind notice of the committee that management of Punjab Technical University has decided to go ahead with construction of proposed buildings (Phase-I) and external development works for these campuses.

Item No. 46.9 : To discuss and approve the estimate for painting of boundary walls Punjab Institute of Technology, Mansa.

The estimate for construction of boundary wall of Punjab Institute of Technology, Mansa was approved in 30th meeting of the building committee (agenda item No. 30.7) for an amount of Rs. 300.0 lacs. Further, the revised estimate for an amount of Rs. 409.27 lacs for this work was approved in 44th meeting of the building committee (Agenda item No. 44.6). In these estimates, there was a provision of RCC precast panel for three side walls and CC blocks wall with grills for front wall. There was also a provision of painting of the front wall only (other walls being RCC precast panels) in the initial estimate but the same was not included in the revised estimate. Thus, there is no provision of painting of walls in the approved estimate.

During one of the visit of the Architects to site, they were of the opinion that finish of the precast panels is not up to the level as it was envisaged at the time of preparation of design/estimate. The Architect suggested that complete wall (all the four sides) should be got painted to have better appearance, finish and durability. The Architect has submitted an estimate for an amount of Rs. 36.35 lacs for painting of all the walls of the institute (placed at Annexure-D).

The matter is placed before the Committee for discussions and decision please.

Item No. 46.10 : To discuss and approve authorization to PWD for taking Environmental Clearance for construction of proposed auditorium and hostels buildings at main campus, Kapurthala.

On the basis of conceptual plans approved by building committee for the proposed auditorium and hostels proposed at main campus, Kapurthala, the building plans for these buildings have been approved by Chief Town Planner, Punjab. Before taking up the construction for these buildings, Environmental clearance (EC) from Ministry of Environment and Forest is to be taken. It is to inform that while submitting application for EC, an undertaking, wherein some commitments towards safety measures during execution, control of pollution, facilities & amenities to workers, social responsibility towards workers engaged etc. is submitted and most of these are

174

to be made during execution only. Since, the execution of these works is to be done by PWD, it is proposed that EC for these buildings is taken by PWD so that they are aware of the commitments and are followed during execution.

The matter is placed before the Committee for discussions and decision please.

Item No. 46.11: Any other point with the permission of the Chair.

Handwritten initials

ANNEXURE-A



Ref. No. DIN/VS/LED/1458

Dated: 29.1.2015

Archie Group Architects
A-14, Sector-15,
Noida - 201301

Kind Attn: Mr. Rajiv Aggarwal

Subject: Offer for LED Video Wall for Auditorium

Dear Sir,

It is a pleasure for us to provide you with this proposal, addressing your interest in Indoor True Color LED Walls for Auditorium use.

You will find below a detailed response to your requirements.

Delta expertise and history in large volume ODM, design and manufacturing for the most renowned brands in consumer and professional electronic industries, is bringing the supply of LED display into a new area of industrialized solutions for the Industrial Indoor/outdoor display industry.

Delta is very excited about this project and greatly appreciates the opportunity to provide you with a proposal. Please do not hesitate to contact me directly should you have any further questions.

Best regards
For Delta India Electronics Pvt Ltd.

A handwritten signature in black ink, appearing to read 'Vikram Sabharwal', is written over a faint grid background.

VIKRAM SABHARWAL
National Sales Manager
Display Solution Business Unit
(M) +91-9910048925

Delta India Electronics Pvt. Limited, Plot No. 43, Sector - 35,
Gurgaon - 122 001, Haryana, India. Phone: + 91 124 4169040

177



Sl. No.	Description	Make	Qty	Unit	Unit Price In INR	Amount in INR
1	Design, supply, installation, testing and commissioning of LED Video Wall of size 8.64 m X 5.28 m consisting of 6mm LED pixel pitch modules, 3 in 1 SMD having pixel density 6755 pixels per metre; viewing angle of 140 degree horizontal, 110 degree vertical; Contrast: 1000:1; Native brightness: 1500 nits including required mounting structure.	Delta	1	Set	28,500,000.00	28,500,000.00
2	Supply, installation, testing and commissioning of LED Display controller with 1 x DVI Input; Resolution 1280 x 1024, 1024 x 1200, 1600 x 848, 1920 x 720, 2048 x 668 & other user define resolution; Signal Output: RJ45; Maximum Width Output: 2048 pixels; Maximum Height Output: 1200 pixels; Control Port: USB	Delta	1	Nos.	400,000.00	400,000.00
3	Supply, installation, testing and commissioning of Power distributor with LED display power management; RS-485 remote control; Lightning Current surge protection; Weekly timer on/off function; Emergency stop button; Power Capacity: 28KVA.	Delta	1	Nos.	500,000.00	500,000.00
Total Amount						29,400,000.00
VAT @ 12.5%						3,675,000.00
Grand Total						33,075,000.00

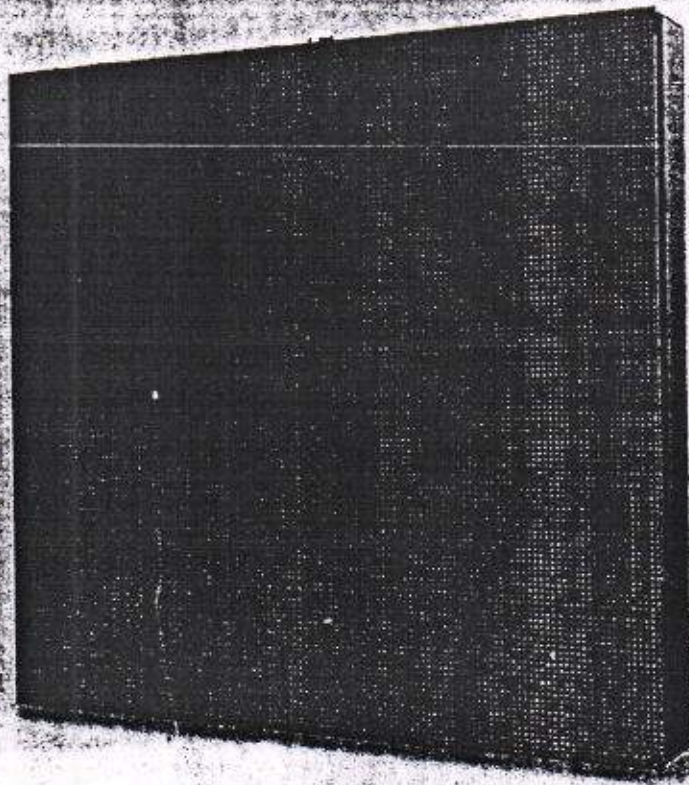
Delta India Electronics Pvt. Limited, Plot No. 43, Sector - 35,
Gurgaon - 122 001, Haryana, India. Phone: + 91 124 4169040



Commercial Terms & Conditions:

Prices :	:	The above quoted prices are SITC in INR.
Freight Charges	:	Would be Charged Extra as Applicable.
Payment Terms	:	100% advance along with PO.
Shipment delivery	:	Within 8 Weeks from the date of PO. We can try to ship earlier than promised.
Warranty	:	Our equipments are warranted against manufacturing defects for a period of 12 months from the date of shipment.
Transportation	:	Any transportation forms required shall be provided by you.

**Delta India Electronics Pvt. Limited, Plot No. 43, Sector - 35,
Gurgaon - 122 001, Haryana, India. Phone: + 91 124 4169040**

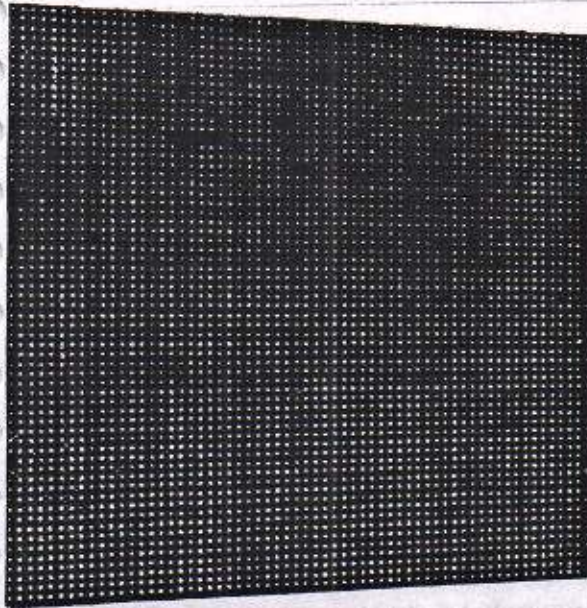


IX-6 Indoor LED Tile : 6mm

Product Features

- High reliability ensures 24/7 operation
- Short viewing distances & wide viewing angles
- Easy service (front and rear access)

DELTA



The 3-in-1 SMD technology used in Delta's indoor LED displays makes them ideal for indoor applications where viewing distances are typically short. Delta's indoor LED modules deliver sharp, vibrant and full-color content with exceptional color depth and uniformity.

Product website:
www.deltadisplays.com

Contact E-mail:
LEG.Sales@deltadisplays.com

Europe

FRANCE
 Delta Electronics (France) S.A.
 21 du bois Chaland 2 15 rue des
 Pyramides, Lisses, 91056 Evry
 Cedex, France

NETHERLANDS
 Delta Electronics Europe
 Zandsean 15, 2132 HZ
 Hoofddorp,
 The Netherlands

SLOVAKIA
 Delta Electronics (Slovakia) s.r.o.
 Priemyselna ulica 4600/1
 018 41 Dubnica nad Vahom,
 Slovakia

North America

USA / FREMONT
 Delta Products Corporation
 4405 Cushing Parkway,
 Fremont, CA 94536, U.S.A.

USA / PORTLAND
 1600 MW Compton Drive,
 Suite 100, Hillsboro OR 97006,
 U.S.A.

Asia

TAIWAN
 Delta Electronics, Inc.
 186 Ruay Kuang Road, Nanhui,
 Taipei 11449, Taiwan

KOREA
 Delta Electronics (Korea) Inc
 1511, Gyeongsan Digital Valley 6-
 cha, Gasan-dong, Gajeong-gu,
 Seoul, Korea 153-704

JAPAN
 Delta Electronics (Japan) Inc.
 Delta Shibuya-shin Building,
 2-1-14 Shibuya-shin, Minato-Ku,
 Tokyo, 100-0012, Japan

THAILAND
 Delta Electronics (Thailand) PCL
 900 Soi 9, E.P.Z., Bangpoo
 Industrial Estate, Moo 4, Pathana
 1 Rd., T.Prasang, A.Muang
 Samutprakan 10280, Thailand

INDIA
 Delta India Electronics Pvt. Ltd.
 Plot No 43, Sector 35, HSIDC,
 Gurgaon 122001, Haryana,
 India

CHINA
 Delta Electronics (Shanghai)
 Co., Ltd. No.162 Minyu Road,
 Pudong Shanghai, P.R.C. Post
 Code: 201209

SINGAPORE
 Delta Electronics (Int) (S) Pte.
 Ltd. 4 Kold Blvd Ave 1, #05-05
 Singapore 417009

Specifications

Product Name		IX-6
Pixel Pitch		6 mm
Pixel Configuration		R/G/B 3 in 1 SMD
Pixel Density		27,556 pixel/m ²
Native Brightness		1,500 nits
Contrast Ratio		1000 : 1
Refresh Rate		400 Hz
Viewing Angle	Horizontal	140° (+/- 70°)
	Vertical	110° (+/- 55°)
Dimming Capability		64 levels
Lifetime		50,000 Hrs
Power Input		100 ~ 240 VAC, 50/60 Hz
Power Consumption	Maximum	800 watts/m ²
	Average	287 watts/m ²
Temperature	Operating	0 to 40°C
	Storage	-20 to 60°C
Humidity	Operating	10 % ~ 80%
	Storage	10 % ~ 90%
Service Access		Front & Rear

181

ANNEXURE-B

ABSTRACT OF COST

No.	Name of Building	Amount as per Estimate	Amount as per LED rates Phillips make	Difference
1	C.B-1 & Seminar Hall Building	6331479.60	13412464.00	7080984.40
2	C.B-2 & Library Hall	10453248.00	20599691.00	10146443.00
3	C.B-3, Girls Hostel, Boys Hostel & Director Office	3623399.49	9481105.00	5857705.51
			Total Difference (+)	23085132.91
			Say Rs.	23085133.00

Sub Divisional Engineer
Electrical S/D
W.D. Kanoria

CB-1

Sr. No.	Existing Fitting	As Per Estimate				As Per Philips LED Rates				Total Cost		
		Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	LED Replacement	Wattage Per Fitting	Qty.	Total Power Consumption		Cost Per Unit	
i	Bulk Head (Similar to Philips FXC101 1xPL-5 / 2P 9W AC GR or equivalent Schneider)	9	52	468	851.00	44152.00	WT202W LED65 CW PSU SL PC	6	52	312	1428.00	95108.00
ii	Fluorescent fixture 1x36 watts FL (Philips Cat. No. TCS306 1xTL-D36W IC or equivalent Schneider)(Wall Mounted)	44	462	20328	1973.00	911526.00	RC8698 LED 30S 6500 PSE W30L120 DB GR	30	462	13860	7071.00	3766802.00
iii	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 306 1xTL-D36W 1x36w suspended mirror optic luminaire with dimmable ballast Schneider as approved by the Engineer Incharge of the work.	-	66	2376	3036.00	200508.00	RC8698 LED 30S 6500 PSE W30L120 DB GR	30	66	1980	7071.00	456586.00
iv	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 398 2xTL-D36W EBT with D6 reflector and HF 2x36w, Schneider Make as approved by the Engineer Incharge of the work.	76	462	35112	4165.00	1924230.00	RC8698 LED 30S 6500 PSE W30L120 DB GR	30	462	13860	7071.00	3268802.00
v	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 501/ 1xTL-D36W EBT 1x36w Schneider Make as approved by the Engineer Incharge of the work.	38	166	6308	985.00	163510.00	BN150W LED20S-6500 PSE OD GR	150	166	24900	3048.00	505968.00
vi	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. FBH 145/M 2xPL-C/AP 13W HFM 2x13w Schneider Make as approved by the Engineer Incharge of the work.	30	139	4170	2055.00	285645.00	DN1928 LED09S-6500 PSU WH	9	139	1251	1985.00	220315.00

184

CB-1

Sr. No.	Existing Fitting	As Per Estimate				As Per Philips LED Rates						
		Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost	LED Replacement	Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost
vii	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. FBH 145/M, 1xPL-C/4P 13W HFH 1x13w Schneider Make as approved by the Engineer Incharge of the work.	14	6	84	1580.00	9480.00	DN1928 LED95-6500 PSU WH	9	6	54	1585.00	9510.00
viii	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. HCS 370 1xPL118 18W Schneider Make as approved by the Engineer Incharge of the work.	22	14	308	5645.00	79030.00	BCP150 LED150/NW PSU 220-240V 7043	150	14	2100	10485.00	146790.00
ix	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. Megapolis DCP731 1x70W CDMT Schneider Make as approved by the Engineer Incharge of the work.	-	1	356	12510.00	50040.00	86P150 LED2000/NW PSU 220-240V 7043	150	1	600	36570.00	146280.00
x	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. RVP 1x70W CDMT as approved by the Engineer Incharge of the work or its equivalent Make Schneider	89	2	178	3965.00	7930.00	8VP120 LED 35 CW FG 51 PSU GR	35	2	70	7315.00	14630.00
xi	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. COMS 218E 2x18w HF Ballast philips/ Schneider Make as approved by the Engineer Incharge of the work.	40	496	19840	2275.00	1128400.00	DN1928 LED95-6500 PSU WH	9	496	4464	1585.00	786160.00
xii	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. COR5118E 1x18W CDMT philips/ Schneider Make as approved by the Engineer Incharge of the work.	30	395	7900	1946.00	768670.00	DN1928 LED95-6500 PSU WH	9	395	3555	1585.00	626075.00

185

CB-1

Sr. No.	Existing fitting	As Per Estimate				As Per Philips LED Rates				Total Cost	
		Wattage Per fitting	Qty.	Total Power Consumption	Cost Per Unit	Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit		
xiii	Supplying, installation, testing and commissioning of tube fittings MDS LEGRAND Make Cat No. "G5" self contained emergency light 8W philiphs /Schneider Make as approved by the Engineer incharge of the work.	8	49	392	6035.00	295715.00	8	49	392	5035	246715.00
xiv	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. LINE XS WALL 2G11 1x36W philiphs / Schneider Make as approved by the Engineer incharge of the work.	38	12	456	1870.00	22440.00	38	12	456	9366	112632.00
xv	Supplying, installation, testing and commissioning of tube fittings PHILIPHS Make Cat No.HWS 370 1XPL-C 1x18W Schneider Make as approved by the Engineer incharge of the work.	22	5	110	2080.00	10400.00	150	5	750	9510.00	47550.00
xvi	Supplying, installation, testing and commissioning of tube fittings PHILIPHS Make Cat No. TBS 369 2xTL-D36W EBT with D6 reflector and dimmable ballast 2x36W Schneider Make as approved by the Engineer incharge of the work.	76	18	1368	5245.00	94410.00	- 30	18	540	27856.00	411408.00
xvii	Supplying, installation, testing and commissioning of tube fittings PHILIPHS Make Cat No. Energy Line T5 28w EBT Schneider Make as approved by the Engineer incharge of the work.	32	5	160	474.72	7373.60	32	5	160	2194.00	10970.00
	Total			99914		5998559.60			69304		10380401.00

Val 14.30 % on Rs. 10380401/- = 1484397.00

= 332970.00

Add 5.55 % on Rs. 5998559.60/-

Income Tax 2 % on Rs. 10380401/- = 207608.00

= 6331479.60

CB-1

Labour Cost 1% on Rs. 10380401/- = 103804.00
Contractor Profit 10% on Rs. 10380401/- = 1038040.00
Office Contingency 1.50% on Rs. 13214250/- = 198214.00
13412464.00

Rate (As Per Estimate)	Rate (As Per LED Rates Of Phillips)	Difference
6331479.60	13412464.00	7080984.40
Total Amount		

Sub Divisional Engineer
Electrical S/D
W.D. Kapatthala

CB-2

Sr No	Existing Fitting	As Per Estimate			As Per Philips LED Rates			Total Cost
		Qty.	Total Power Consumption	Cost Per Unit	Qty.	Total Power Consumption	Cost Per Unit	
(i)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 398 2xTL-D36W EBT with D6 reflector and HF 2x36w, Schneider Make as approved by the Engineer incharge of the work.	76	36176	4765.00	30	14280	7071.00	3365796.00
(ii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 306 1xTL-D36W FBE 1x36w Schneider Make as approved by the Engineer incharge of the work.	38	22268	1930.00	30	586	7071.00	4143606.00
(iii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 306 1xTL-D36W 1x36w suspended mirror optic liminaire with dimmable ballast Schneider Make as approved by the Engineer incharge of the work.	36	2556	3080.00	30	71	7071.00	502041.00
(iv)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 501/ 1xTL-D36W EBT 1x36w Schneider Make as approved by the Engineer incharge of the work.	38	8398	217685.00	150	221	3048.00	673508.00
(v)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. FBH 145/M 2xPL-C/AP 13W HFM 2x13w Schneider Make as approved by the Engineer incharge of the work.	30	3330	22005.00	30	111	3286.00	364746.00
(vi)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. FBH 145/M 1xPL-C/AP 13W HFM 1x13w Schneider Make as approved by the Engineer incharge of the work.	15	6285	1580.00	9	419	1585.00	664115.00
(vii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. HCS 370 1xPL18 18W Schneider Make as approved by the Engineer incharge of the work.	22	14	5645.00	150	14	10485.00	146790.00

CB-2

Sr. No.	Existing Fitting	As Per Estimate				As Per Philips LED Rates						
		Wage Per fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost	LED Replacement	Wage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost
(viii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. FXC 101 1xPL9 9W Schneider Make as approved by the Engineer Incharge of the work.	9	67	603	830.00	55610.00	WT202W LED65 CW PSU 51 PC	6	67	402	1829.00	122543.00
(ix)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. Megapolis DCP731 1x70W CDMT Schneider Make as approved by the Engineer Incharge of the work.	89	4	356	12510.00	50040.00	8GP150 LED7000/NW PSU 220-240V 70A3	150	4	600	36570.00	146280.00
(x)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. RVP 1x70W CDMTD Schneider Make as approved by the Engineer Incharge of the work.	89	2	178	3985.00	7930.00	8VP120 LED 35 CW FG 51 PSU GR	35	2	70	7315.00	14630.00
(xi)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. COR5 218E 2x18W HF Ballast philips/ Schneider Make as approved by the Engineer Incharge of the work.	40	645	25800	2275.00	1467175.00	DN192B LED95-6500 PSU WH	9	645	5905	1585.00	1022325.00
(xii)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. COR5118E 1x18W CDMT philips/ Schneider Make as approved by the Engineer Incharge of the work.	20	466	9320	1946.00	906836.00	DN192B LED95-6500 PSU WH	9	466	4194	1585.00	738610.00
(xiii)	Supplying, installation, testing and commissioning of tube fittings MDS LEGRAND Make Cat No. "G5" self contained emergency light BW philips /Schneider Make as approved by the Engineer Incharge of the work.	8	63	504	6035.00	380205.00	MDS legrand cat no. G5 self contained emergency light BW	8	63	504	5035.00	317205.00
(xiv)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. LINE XS WALL 2G11 1x36W philips /Schneider Make as approved by the Engineer Incharge of the work.	40	6	240	1870.00	1120.00	Thorn-Line XS Wall 2G11 1x36w	40	6	240	9386.00	96316.00

189

Sr. No.	Existing Wiring	As Per Estimate				LED Equipments	As Per Philips LED Rates			Total Cost
		Qty.	Total Power Consumption	Cost Per Unit	Wattage Per Fitting		Qty.	Total Power Consumption	Cost Per Unit	
(vi)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. HWS 370 1AFL-C 1x18W Schneider Make as approved by the Engineer incharge of the work.	22	1.10	2080.00		HWS130 LED700/NW PSU 220-240V 70-43	150	750	95.10.00	87550.00
(vii)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. TBS M 369 1AFL-L 18W E65 D6 8x18W Schneider Make as approved by the Engineer incharge of the work.	80	4.920	4229.00	2316780.00	PC3808 LED30-6500 PSE-00 WH	30	16470	588.1.00	3212895.00
(viii)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. FGC 202 1apL-LZF 18W Schneider Make as approved by the Engineer incharge of the work.	18	4.14	2968.00	54395.00	BCP150 LED150/NW PSU 220-240V 70-43	150	3450	10485.00	241355.00
(ix)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. CIAR 118E 1x18W philips/Schneider Make as approved by the Engineer incharge of the work.	20	600	4770.00	143100.00	Thorn-CIAR 118E 1x18W	20	600	2438.00	73140.00
		20	740	2400.00	88400.00	Thorn-CVIR 118 32 E 1x18W	20	740	2438.00	90206.00
	Total		162106		10011791.00		110166			15942861.00

Add 4.41 % on Rs. 10011731/-

= 441517.00

10453248.00

Vat 14.30 % on Rs. 15942861/-

= 2279839.00

Income Tax 2 % on Rs. 15942861/-

= 318857.00

Labour Cess 1 % on Rs. 15942861/-

= 159429.00

CB-2

Contractor Profit 10 % on Rs. 13942801/- 1594280.00
20259691.00
Office Contingency 1.50 % on Rs. 20599691.00 304429.00
20599991.00

	Rate (As Per Estimate)	Rate (As Per LED Rates Of Phillips)	Difference
Total Amount	10453248.00	20599691.00	10146443.00

[Signature]
Sub Divisional Engineer
Electrical S/D
P.W.D. Kapatthala

CB-3

Sr. No.	Existing Fitting	As Per Estimate				As Per Philips LED Rates						
		Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost	LED Replacement	Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost
i	Recessed mounted 4 x 14 W light fixture complete with CFL lamps and all accessories(Similar to Philips TBSD88 4xTL5-14W E87 R42 or equivalent Schneider)	64	132	7168	2874.87	321985.44	RC3808 LED30-6500 PSE-OD WH	30	112	3360	5851.00	655312.00
ii	Bulk Head(Similar to Philips FXC101 1xPL-5 / 2P 9W AC GR or equivalent Schneider)	9	36	324	799.51	28782.36	WT202W LED65 CW PSU S1 PC	6	36	216	1830.00	65880.00
iii	Ceiling light/compact fluorescent (2 x 11watts) CFL Philips/Schneider	24	245	5880	1060.70	259871.50	Ceiling light/compact fluorescent (2x11W)	24	245	5880	2438.00	597710.00
iv	Fluorescent fixture 1x36 watts FTL (Philips Cat. No. TCS306 1xTL-D36W IC or equivalent Schneider)(Wall Mounted)	44	170	7480	1853.63	315117.10	RC8698 LED 30S-6500 PSE W30L120 D8 GR	30	170	5100	7071.00	1302070.00
v	Fluorescent fixture 1x36 watts FTL (Philips Cat. No. TCS019 1xTL-D36W IC O or equivalent Schneider)(Ceiling Mounted)	44	120	5280	1166.86	140023.20	RC8698 LED 30S-6500 PSE W30L120 D8 GR	30	120	3600	7071.00	848520.00
vi	Fluorescent fixture 2x36 watts FTL (Philips Cat. No. TCS805 2xTL-D36W IC M1 or equivalent Schneider)	88	250	21000	2338.42	584605.00	RC8698 LED 30S-6500 PSE W30L120 D8 GR	30	250	7500	7071.00	1767750.00
vii	Ceiling light/compact fluorescent (1x18watts) CFL Make Philips/Schneider	18	42	756	2055.02	86730.84	DN1928 LED95-6500 PSU WH	9	42	378	1585.00	65570.00
viii	Ceiling light/compact fluorescent (2x18watts) CFL Make Philips/Schneider	40	380	15200	2486.86	945006.80	DN1928 LED95-6500 PSU WH	9	380	3420	1585.00	602390.00

Sr. No.	Existing Fitting	As Per Estimate				As Per Philips LED Rates						
		Wattage Per fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost	LED Replacement	Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost
ix	Compact Fluorescent Mirror Light (1x11watts) CFL (Philips Cat.No.FMS 200/111 or equivalent Schneider)	12	75	900	617.25	46293.75	8W150W LED135-6500 PSE OD GR	150	75	11250	1830.00	137250.00
x	Bracket Light		210		2561.08	537826.80	Bracket Light		210		4876.00	1023980.00
xi	Supply and erection of Bracket light wall mounted fixture Cat no. BUL115 W.RF Make Crompton and Havells make and including the cost of CFL 15 watts etc. complete in all respect as desired by the engineer incharge of the work at site.						BWS150 LED200/NW PSU 220 240V 7043					
xii	Supply and erection 2x36 watts mirror optics false ceiling fitting of Crompton make Cat No. CRFQ 11236 P.5 / Philips make Energy saving C.F.L tube road lux 6500K Decorative mirror optics recessed false ceiling mounted luminaires bright anodized aluminium reflector low glare P-5 Parallel louvre suitable for 600mm x 600mm modular / POP/ GYPSUM Ceiling mounted etc complete with Electronics choke (Low losses) and improved power factor and tube holder etc. along with erection of the same with connections, testing etc. Complete in all respect as approved and desired by the Engineer incharge at site.	16	3	48	559.00	1677.00		150	3	450	9510.00	28530.00
xiii	Supply and erection of surface mounted (Box type) 1x36watt T-8 lamp Channal Luminaries, make Crompton, Greaves Cat no. DUB1214EB/Make Phillips Cat no. TMS021 1xTLD36W EBT or its equivalent Make : Schneider, suitable for 1x36 watt tube lamp make Havells complete with box type fixtures including lamp copper choke and lamp holders etc. along with erection of the same with connections, testing etc. complete in all respect as approved and desired by the Engineer incharge at site.	80	10	800	3335.22	33352.20	ACB690 LED 305-6500 PSE W30L120 DS GR	30	10	300	7071.00	70710.00
		38	6	228	826.76	4960.56	8W150W LED205-6500 PSE OD GR	150	6	900	3048.00	18288.00

CB-3

Sr. No.	Existing Fitting	As Per Estimate				As Per Philips LED Rates					
		Wattage Per fitting	Qty.	Total Power Consumption	Cost Per Unit	LED Replacement	Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost
AV	Supply and erection of 3x14 recessed type ceiling light fixture cat No. BTMRA equivalent make 314 MS / Crompton Make / Havelles with 3 Nos T-8 14 watt CFL tube lamp. Fitting size 600mm x 600mm. recessed mounted functional decorative mirror optics with aqua louvers and suitable size etc. complete in all respect. The fitting to be installed in Existing ceiling erection connection testing etc as desired by the engineer-in-charge of work at site.	48	22	1056	2517.86	RC3808 LED30-6500 PSE-OD WH	30	22	660	5851.00	128722.00
AVI	Supply and erection of Down light 2 x 18 watts CFL fitting cat no. BIDR-HW2 EB Bajaj make / Crompton / Havelles make with CFL lamp 18 watt die cast aluminium reflector housing epoxy gray powder coating electronic reflector fixed in slab outer and inner surface and including cost of 2 Nos CFL 18 watt lamp and including connection testing etc. complete in all respect as desired by the engineer incharge of the work at site.	40	61	2480	714.02	DN192B LED95-6500 PSU WH	9	62	558	1585.00	98270.00
	Supply and erection of 1 x 18 watts CFL fixture Cat no. BIDR 18 WEB / VI / Crompton / Havelles equivalent make down light recessed in the slab outer and inner site with lamp. Holder and 18 watt CFL lamp with gray powder coating etc. complete in all respect as desired by the engineer incharge of the work at site.	22	12	264	648.25	DN197B LED95-6500 PSU WH	9	12	108	1585.00	19070.00

CB-3

Sr. No.	Existing Fitting	As Per Estimate			As Per Phillips LED Rates				
		Wattage Per fitting	Qty.	Total Power Consumption	Wattage Per Fitting	Qty.	Total Power Consumption	Cost Per Unit	Total Cost
xvii	Supply and erection of 1x11 watts CFL mirror light cat no. BJC 111 Bajaj Make / Crompton / Havells surface mounted fitting complete with Accessories including the cost of CFL lamp 11 watt lamp etc. complete in all respect and including connection testing etc as desired by the engineer incharge of work at site.	12	6	72 69936	12	6	72 43752	1219.00	7314.00
	Total								733776.00

Add 6.05 % on Rs. 3416689.49/-

= 206710.00

Val 24.30 % on Rs. 733776/- = 1049302.00

3623399.49

Income Tax 2 % on Rs. 733776/- = 14675.00

Labour Cost 1 % on Rs. 733776/- = 7337.00

Contractor Profit 10 % on Rs. 733776/- = 73377.00

9340990.00

Office Contingency 1.50 % on Rs. 9340990/- = 140115.00

9481105.00

Rate (As Per Estimate)	Rate (As Per LED Rates Of Phillips)	Difference
3623399.49	9481105.00	5857705.51
Total Amount		

Sub Divisional Engineer
Electrical S/D
P.W.D. Kapatthala

COLLEGE BUILDING - I - ADDITIONAL COST FOR REPLACING LED LIGHTS IN PLACE OF CFL LIGHTS [AS CALCULATED BY R/S ARCH GROUP, BOMBAY]

S.No.	Existing Fitting	Wattage per fitting	Qty	Total Power	Cost Per Unit	Total Cost	LED MODEL	Watt age LED	Qty	Total Power Consumption	LIST PRICE	Dis Price	Cost	Diff Wattage	Total Power Diff	Diff Price	Diff Cost	Diff Cost/Diff Wattage
i)	Sub. Para. Similar to Philips FTL-D; 18W-5 / 20 W AC GR or equivalent Schneider	9	52	468	851	44252	BAJAJ - BIMP 10	10	52	520	4500	2610	135720	-1	-52	-1759	-91468	1759.00
ii)	(Philips Cat. No TCS06 18TL-D35W K or equivalent Schneider/Wal Mounted)	18	462	17556	1973	911526	BAJAJ - BRTZ 28W	28	462	12936	12700	7366	3403092	10	4620	-5393	-2491566	-539.30
iii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 28TL-D38W 18W equivalent indoor spot fixture with dimmable ballast Schneider as approved by the Engineer incharge of the work.	36	66	2376	3038	200508	BAJAJ - BRTZ 28W LED with Dimming Ballast	28	66	1848	17700	10266	677556	8	578	-7228	-477048	-903.50
iv)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 36TL-D38W CFL with 0.6 ballast and 17 W AC, Schneider Make as approved by the Engineer incharge of the work	36	462	16632	4165	1924230	GE - GEK 034 56 CD	36	462	16632	11000	6380	2947560	40	18480	-2215	-1023330	-55.38
v)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TCS 36TL-D38W CFL with 0.6 ballast and 17 W AC, Schneider Make as approved by the Engineer incharge of the work.	36	166	6306	985	163510	GE - LBTE 8 18 DL P EN	18	166	2988	4000	2320	385120	20	3320	-1335	-221610	-66.75
vi)	commissioning of tube fittings philips Make Cat No. FHM 14S/14 WPL c/4P 12W 18W 2x18W ballast Make as approved by the Engineer incharge of the work.	30	139	4170	2055	285645	GE - Hemisphere 12 W	12	139	1668	4200	2436	338604	18	2502	-381	-52959	-21.17
vii)	supplying, installation, testing and commissioning of tube fittings philips Make Cat No. FHM 14S/14 WPL c/4P 12W 18W 2x18W ballast Make as approved by the Engineer incharge of the work	14	6	84	1580	9480	GE - Hemisphere 10 W	10	6	60	3800	2204	13224	4	24	-624	-3744	-156.00
viii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. HCS 070 14W 14W ballast Make as approved by the Engineer incharge of the work.	22	14	308	5645	79030	GEO 8005.56088 (Orane 5W LED Ballast)	5	14	70	7100	4118	57652	17	238	1527	21378	89.82
ix)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. Magpacks 18W22L 18W22L ballast Make as approved by the Engineer incharge of the work.	89	4	356	12510	50040	BAJAJ - BRL 45W	45	4	180	28500	16530	66120	44	176	-4020	-16080	-91.36
x)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. 18W 18W ballast Make as approved by the Engineer incharge of the work or its equivalent Make schneider	89	2	178	3965	7980	BAJAJ - BFL 30W	30	2	60	14500	8410	16820	59	118	-4445	-8890	-75.34
xi)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. 0308 18W 18W ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	40	496	19840	2275	1128400	GE - Hemisphere 18 W	18	496	8928	5100	2958	1467168	22	10912	-683	-338768	-31.05
xii)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. 0308 18W 18W ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	20	395	7900	1946	768670	GE - Hemisphere 12 W	12	395	4740	4200	2436	962220	8	3180	-490	-193550	-61.25
xiii)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. 18W 18W ballast Make as approved by the Engineer incharge of the work.	8	49	392	6035	295715	BAJAJ - BHEM 10W	1	49	49	5900	3422	167678	7	343	2613	128037	373.29
xiv)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. 18W 18W ballast Make as approved by the Engineer incharge of the work.	38	12	456	1870	22440	BAJAJ - BLWSP 25W WH	25	12	300	11000	6380	76560	13	156	-4510	-54120	-346.92
xv)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. 18W 18W ballast Make as approved by the Engineer incharge of the work.	22	5	110	2080	10400	GEO 004.56088 (Globe 4W LED with dimming)	4	5	20	6300	3654	18270	18	90	-1574	-7870	-47.44
xvi)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. 18W 18W ballast Make as approved by the Engineer incharge of the work.	76	18	1368	5245	94410	BAJAJ - BRTZ 40W Led with dimming driver	40	18	720	18700	10846	195228	36	648	-5601	-100818	-155.58

Supplying, installation, testing and commissioning of tube fittings 170L/170H 44mm Cn. Wt. 2hourly 11m 13
 Eddy GM Schreiber Safety as approved by the Engineer in charge of the work,

	32	5	160	474.72	2373.6	BAJAJ - BCL5B 10WH	10	5	50	2600	1508	7540	22	110	-1013.28	-5166.4	46.97
			97142		5998559.60		332	2353	51769			10936132.00					
Total			97142		5998559.60				51769	0	0	10936132					
ADD 5.5% On					329920.778	Vat 14.30%						1563866.88					
Total after					6328480.38	Income Tax 2%						218722.64					
						Labour Cess 1%						109361.32					
						Contractor Profit@10%						1093613.2					
						Total						13921696					
						Office Contingencies@1.5%						208825.441					
						Total						14130521.5					

Difference in Cost	7802041.1	INR
Difference in Watts	45373	Watts
Energy Saving @ 6 hrs for 220 days in a year with diversity of 0.8	47913.888	KWH
Considering 1 KWH @ INR 6.39	306169.744	INR
Payback Period	25	Years

COLLEGE BUILDING - II - ADDITIONAL COST FOR PROVIDING LED LIGHTS IN PLACE OF CFL LIGHTS (AS CALCULATED BY M/S ARCHIGROUP, Noida)

S.No.	Existing Fitting	Wattage per fitting	Qty	Total Power	Cost Per Unit	Total Cost	LED MODEL	Watt age LED	Qty	Total Power Consumption	UGT PRICE	Dis. Price	Cost	Diff. Wattage	Total Power Diff	Diff Price	Diff Cost	Diff Cost/Diff Wattage	Remarks
i)	commissioning of tube fittings philips Make cat No. TMC 2X18-D 8W	75	476	35700	4.16	1982540	GE - GDR 038 58-CO	36	476	17136	11000	6180	303680	40	19040	-2215	-1054340	-55.38	
ii)	(Philips Cat No TMC24 18T)-D 24W 18 or equivalent manufacturer/Philips Make as approved by the Engineer incharge of the work.	38	586	22268	1973	1156178	BAJAJ - BRTZ 22W	36	586	16408	17700	7366	4316476	10	5660	-538	-3160296	-559.30	
iii)	Supplying, installation, testing and commissioning of tube fittings philips Make cat No. TMC 2X18-D 8W 1x36w suspended indoor app; 8m height with dimmable ballast Schneider as approved by the Engineer incharge of the work.	36	71	2556	8038	215698	BAJAJ - BRTZ 28W LED with Dimming Ballast	28	71	1988	17700	10266	728866	8	568	-7728	-513188	-905.50	No Benefit to Change
iv)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 50L/ 18T/ D35W 18T 1x36w Schneider Make as approved by the Engineer incharge of the work.	38	221	8398	985	217685	GE - 18T8 18 DL P EN	18	221	3974	4000	2320	512720	20	4420	-1335	-295035	-66.75	
v)	commissioning of tube fittings philips Make Cat No. TMC 1x36w 18T 18W 18W 2x18w Schneider Make as approved by the Engineer incharge of the work.	30	111	3330	2055	228105	GE - Hemisphere 12 W	12	111	1332	4700	2436	270396	18	1998	-381	-42291	-21.17	
vi)	supplying, installation, testing and commissioning of tube fittings philips Make cat No. TMC 1x36w 18T 18W 18W 2x18w Schneider Make as approved by the Engineer incharge of the work.	15	418	6275	1580	662020	GE - Hemisphere 10 W	10	418	4180	3800	2204	923476	5	2095	-624	-261456	-124.80	
vii)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 18T 18W 18W 2x18w Schneider Make as approved by the Engineer incharge of the work.	22	14	308	5643	79020	GE0 8005.56088 (Crane 5W LED Ballast)	5	14	70	7100	4118	57652	17	238	1527	71378	89.82	No Benefit to Change as fixture wattage is higher
viii)	Bulk Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 18T 18W 18W 2x18w Schneider Make as approved by the Engineer incharge of the work.	9	67	603	830	55610	BAJAJ - B8DP 10	10	67	670	4500	2620	174870	-1	-67	-1780	-119280	1780.00	
ix)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 18T 18W 18W 2x18w Schneider Make as approved by the Engineer incharge of the work.	89	4	356	12510	50040	BAJAJ - BRIL 45W	45	4	180	28500	16530	66120	44	176	-4020	-16080	-91.36	
x)	Supplying, installation, testing and commissioning of tube fittings philips Make Cat No. TMC 18T 18W 18W 2x18w Schneider Make as approved by the Engineer incharge of the work.	80	2	178	3965	7990	BAJAJ - BRL 30W	30	2	60	14500	8410	16820	59	118	-4445	-8890	-75.34	
xi)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	40	645	25800	2275	1467375	GE - Hemisphere 18 W	18	645	11610	5100	2958	1907910	22	14190	-683	-440595	-31.05	
xii)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	20	466	9320	1946	906836	GE - Hemisphere 12 W	12	466	5592	4200	2436	1135176	8	3728	-490	-228340	-61.25	
xiii)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	8	63	504	6035	380205	BAJAJ - BHEM 10W	1	63	63	5900	3422	215586	7	441	2613	164619	373.29	
xiv)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	38	6	228	1870	11220	BAJAJ - BLWSP 25W WH	25	6	150	11000	6380	38280	13	78	-4510	-7260	-346.92	No Benefit to change
xv)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	22	5	110	2080	10400	GE04 004.56088 (Globe 4W LED with dimming)	4	5	20	4300	3654	18270	18	90	-1574	-7870	-87.44	
xvi)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	80	549	43920	4220	2316780	GE Car Ho-Phil 8 25W 25W, Greater than 5000 lumens	35	549	19215	10500	6090	3345410	45	24705	-1870	-1026630	-41.56	
xvii)	Supplying, installation, testing and commissioning of tube fittings PHILIPS Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	18	25	414	2365	54395	GE - Hemisphere 12 W	12	25	276	4200	2436	56028	6	138	-71	-1633	-11.83	
xviii)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	20	30	600	4770	143100	BAJAJ - BL 58 10	10	30	300	2600	1508	45240	10	300	3262	97860	326.20	
xix)	Supplying, installation, testing and commissioning of tube fittings THORN Make Cat No. TMC 18T 18W 18W 2x18w Ballast philips/ Schneider Make as approved by the Engineer incharge of the work.	20	37	740	3400	88800	BAJAJ - BL 58 10	10	37	370	2600	1508	55796	10	370	883	33004	89.20	

	160340	9747552.00		82662	16782928.00
Total	160340	9747552.00		82662	16782928.00
ADD 5.5% On		536120.86	Var 14.30%		2397098.7
Total after		10283772.86	Income Tax 2%		335258.56
			Labour Less 1%		167829.28
			Contractor Profit@10%		1678292.8
			Total		21339207.3
			Office		
			Contingencies@1.5%		320088.11
			Total		21659295.5

Difference in Cost	11375522.6	INR
Difference in Watts	77678	Watts
Energy Saving @ 4 hrs for 228 days in a year with diversity of 0.8	82027.968	KWH
Considering 1 KWH @ INR 6.70	549158.716	INR
Payback Period	22	Years

ANNEXURE-C



PUNJAB

AGREEMENT

240964

The agreement made this day 1st day of September 2005 at Jalandhar between the Punjab Technical University, Jalandhar, hereinafter referred to as 'the University' through its Registrar, of the one part and the firm M/s Archigroup Architects (Regd.) registered with the registrar of firms, Government of NCT of Delhi and having their registered office at 5/304, Sikka Complex, Preet Vihar Community Centre, Delhi-110092 hereinafter referred to as 'the Architects'.

WHEREAS THE UNIVERSITY represented by its Registrar is desirous of getting prepared, in conformity with the prescribed standards, Architectural Design including Master Plan design of the entire University campus at Jalandhar-Kapurthala Highway showing the various buildings and activities to be put up as per the programme given by the University, structural details and all the schemes to be executed therein (hereinafter referred to as "Project" defined in clause 1)

AND WHEREAS the University has decided to appoint M/s. Archigroup Architects (Regd.) as Architects for the Master Plan and Architectural Services of the entire

Handwritten signatures and initials.

Handwritten signature.

201

AND WHEREAS the Architects are willing to undertake Master Plan and Architectural Design consultancy services of the entire project, in consideration of the professional fees to be paid to the Architects, as hereinafter provided on the terms and conditions as set forth hereinafter, and taking into account all activities specified under the scope and elaborated under the clause 2.0 and 3.0 of this agreement.

1.0 DEFINITIONS:

Unless Context or consistency demands otherwise the following terms shall have meaning assigned to them as stated below:

- 1.1 "Architects" shall mean M/S Archigroup Architects (Regd.) which expression shall unless repugnant to the context or meaning thereof includes the Partners of the said firm, or the survivors of them.
- 1.2 "Statutory Authority" shall mean any competent authority established by or under Indian Law and having jurisdiction over any aspect(s) of the project.
- 1.3 "Consultant" shall mean an individual, firm, or company retained or employed by the Architect to perform services.
- 1.4 "Project" shall mean the various buildings as per the program to be given by the University.
- 1.5 "Project Phases" shall mean various phases of the planning and construction as per the requirements of the University.
- 1.6 "Stage(s)" shall mean the division into parts of services to be performed by the Architects in all Project Phases.
- 1.7 "University" shall mean the Punjab Technical University, Jalandhar represented by its Registrar or its authorized officer(s).
- 1.8 "Completion" shall mean that the work on any Project Phase or portion thereof is complete.

2.0 SCOPE OF WORK:

The Architects will be required to provide services in respect of the following:

- 2.1 Taking University's instructions and preparation of design brief.

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

2002

3/13³¹

- 2.2 Architectural design including structural design for the building blocks.
- 2.3 Sanitary, plumbing, drainage, water supply and sewerage designs.
- 2.4 Electrical, electronic, communication systems and design.
- 2.5 Heating, ventilation and air conditioning design (HVAC) and other mechanical systems.
- 2.6 Elevators, escalators, etc.
- 2.7 Fire detection, Fire protection and Security systems, etc.
- 2.8 Periodic Inspection and evaluation of Construction works.
- 2.9 Use of Non conventional sources of energy.
- 2.10 Innovative latest technologies with cost optimization.
- 2.11 Rain water harvesting.
- 2.12 Recycling of wastewater.
- 2.13 Solid waste Management.
- 2.14 Tender for construction.
- 2.15 Roads and landscaping Architecture.

3.0 SCHEDULE OF SERVICES:

The Architects shall, after taking instructions from the University, render the following services:

3.1 Master Plan Stage (Stage 1):

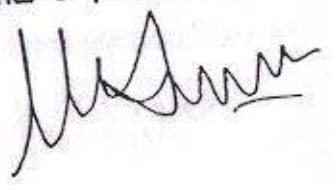
- 3.1.1 Preparation of concept design showing circulation parking open spaces and external architectural form in plan.

3.2 Master Plan Stage (Stage 2):

- 3.2.1 Obtain approval of all the designs and drawings detailed above from the University after incorporating university's suggestions and modifications.

3.3 Architectural Design Services - Preliminary Design and Drawings [Stage 1]:

- 3.3.1 Ascertain Client's requirements, examine site constraints & potential ; and prepare a design brief for Client's approval.



203

3.3.2 Prepare report on site evaluation, state of existing buildings, if any, and analysis and impact of existing and /or proposed development on its immediate environs.

3.3.3 Prepare conceptual design with reference to requirements given and prepare rough estimate of cost on area basis.

3.3.4 Prepare drawings showing all floor plans, sections and elevations for all buildings in each phase to sufficiently explain the Design.

3.3.5 Prepare drawings and documents to enable the University to get the site surveyed and conduct soil investigation at the site of the project.

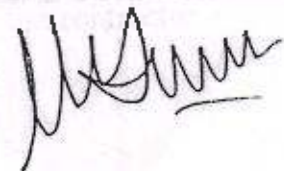
3.3.6 Obtain approval of all the designs and drawings detailed above from the University after incorporating university's suggestions and modifications.

3.3.7 Prepare estimates of all works on the basis of Plinth Area Rates of C.P.W.D. adjusted with relevant factors as defined by CPWD for Punjab. Estimate for the components not covered in the CPWD Plinth Area Rates may be prepared on the basis of the latest DSR (Delhi Schedule of Rates) while for components not covered in neither CPWD nor Delhi schedules, the prevailing market rates may be adopted.

3.4 Architectural Design Services - Working Drawings [Stage 2]:

3.4.1 Prepare detailed working drawings relating to construction of each building, which includes complete architectural, structural and services drawings covering electrical installations, HVAC, fire detection and fire fighting, internal water supply and sanitary installations, communications, details of soil, waste and rain water pipes, man holes, schedule and details of doors and windows, staircases and railings, etc. as per the requirement.

3.4.2 Prepare detailed working drawings of all services including water supply, water tanks, drainage, sewerage, electrical, communication, HVAC, fire detection and fire protection, fire tank, solid waste management, rain water harvesting, recycling of waste water, irrigation system, use of solar energy, landscape, surface drainage, water management, open space, roads, parking, hard and soft areas, walls, gates and fences, landscape structure and features, garden furniture, illumination design and other services as may be indicated by the University.



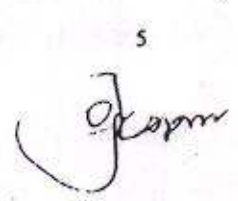
204

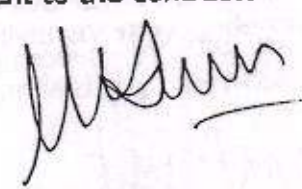
4/13

5/33
13

- 3.4.3 Prepare detailed working drawings, specifications and schedule of quantities in respect of all the components mentioned above sufficient to prepare detailed estimates of cost and tender documents and covering aspects like mode of measurement, method of payments, quality control procedures on materials and works and other conditions of contract.
- 3.4.4 Submit supporting design calculations of the structural design / drawings for approval of the University and also assist the University in getting the same vetted from proof consultants, appointed by the University. Fees of the proof consultant shall be borne by the University.
- 3.4.5 Prepare detailed specifications and analysis of rates for all non Delhi Schedule of Rates schedule items of work proposed in the drawings and their estimates.
- 3.4.6 Prepare schedule of quantities, supported with measurement sheets for all the works and give specifications and other relevant details sufficient to prepare the tender documents. The tenders will be invited by the University.
- 3.4.7 Prepare detailed cost estimates.
- 3.4.8 Analyze and evaluate the tenders and make recommendations in respect of selection of Contractor as and when required.
- 3.5 Architectural Design Services - Construction Drawings [Stage 3]:**
 - 3.5.1 Prepare and Issue working drawings and details for proper execution of works during construction as required or asked for by the University.
 - 3.5.2 Check and approve shop drawings submitted by the contractor / vendors.
 - 3.5.3 Render advice on the suitability of various samples of materials and components if asked for by the University.
 - 3.5.4 In order to ensure that the work at site proceeds in accordance with the contract documents / drawings and to exercise time and quality controls, the day to day supervision will be carried out by a team headed by a construction manager, who shall work under the guidance and direction of the Architect and shall be appointed and paid by the university. This team will also be responsible to verify construction with drawing dimension, check JMB (to be prepared jointly by the contractor and the team) and send a checked bill to the Architect for their certification and release of payment to the contractor.



5




2015

- (6/12/17)
34
- 3.5.5 Visit the site of work, at intervals to be decided by the University from time to time, to clarify any decision, offer interpretation of the drawings/specifications, attend conferences, meetings to ensure that the project proceeds in accordance with the approved drawings/specifications and keep the University informed and render advice on any issue related with construction of project, wherever necessary or asked for by the University.
- 3.5.6 Certification of bills by the architect before making any payment to the contractor as per the actual work done as mentioned in clause 3.5.4 above.
- 3.5.7 Issue Certificate of Virtual Completion of works.

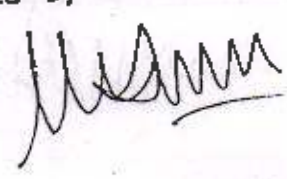
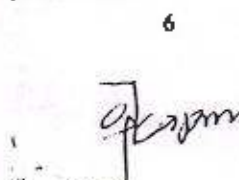
3.6 Architectural Design Services - Completion [Stage 4]:

- 3.6.1 Prepare and submit completion reports and drawings for the project.
- 3.6.2 The Architect shall issue two sets of "As Built" drawings including services and structures and one CD as per the data provided by the Team / University.
- 3.6.3 As required and assist the university in obtaining "completion /occupancy certificate" from the statutory authority , wherever required.
- 3.6.4 The Architect shall also prepare an integrated layout plan of the University campus showing all the services as finally laid as per the data provided by the Project Management Team / University.
- 3.6.5 The Architect shall provide technical data for obtaining all service connections from various civic authorities.

4.0 PROFESSIONAL FEE:

In consideration of the professional services rendered by the Architect in accordance with the scope of work and schedule of services given in Clause 2.0 and 3.0 of this agreement, they shall be paid total professional fee of lump-sum Rs. 15 lakhs (lump-sum Rupees fifteen lakhs) for the Master Plan and for Architectural Design Services @1.94% (one point ninety four percent) of the actual cost of civil works on completion in accordance with the schedule of payment mentioned in clause 5.0 of this agreement.

- 4.1 Whereas the complete design of the master plan (including making of model) is required to be completed in one stage, the university may undertake the construction work in phases. Each phase approved by the competent



206

authority of the university shall be conveyed to the Architects by the University.

7/13/3

5.0 SCHEDULE OF PAYMENT:

5.1 Master Plan Design

The Architect shall be paid professional fee for Designing the Master Plan in the following stages plus other charges and reimbursable expenses as agreed upon:

Stage 1	
On submitting concept design showing circulation, parking, open spaces and external Architectural form in plan	50% of total fees payable.
Stage 2	
On submitting the final master plan after incorporating modification suggested by University's, <u>model</u> and preliminary project cost on plinth area basis and approval thereof from the University	100% of total fees payable less payment already made at Stage 1.

5.2 Architectural Design Services:

The Architect shall be paid professional fee for Comprehensive Architectural Design in the following stages plus other charges and reimbursable expenses as agreed upon:

Stage 1 (Preliminary Drawings)	
On completing of preliminary designs duly Incorporating University's brief along with the preliminary estimates thereof stage 1 clause 3.3.	15% of total fees payable. ✓
On incorporating University's suggestions in preliminary designs and drawings and submitting final design and approval thereof from the University	30% of total fees payable less payment already made.
Stage 2 (Working Drawings)	
Upon submission of <u>working drawings</u> , specifications and <u>schedule of quantities</u> and <u>documents and drawings</u>	45% of the total fees payable less payment

[Handwritten signature]

7
[Handwritten signature]

[Handwritten signature]

207

sufficient for the University to invite tenders as given in Stage 2 clause 3.4.	already made.
Upon award of contract to the successful bidder as given in Stage 2 clause 3.4.	60% of the total fees payable less payment already made.
Stage 3 (Construction Drawings)	
a) On submitting working drawings and details required for commencement of work at site as per Stage 3 clause 3.5.	75% of the total fees payable less payment already made.
b) (i) On completion of 25% of the work.	80% of the total fees payable less payment already made.
(ii) On completion of 50% of the work.	85% of the total fees payable less payment already made.
(iii) On completion of 75% of the work.	90% of the total fees payable less payment already made.
(iv) On Virtual Completion of work.	95% of the total fees payable less payment already made.
Stage 4	
On submitting completion Report and drawings for issuance of completion/occupancy certificate. Issue of "As Built" drawings.	100% of the fees payable less payment already made.

6.0 EFFECTING PAYMENT TO THE ARCHITECT:

6.1 The fee payable to the Architect shall be computed on the actual cost of works on completion. The payment due to the Architect at different stages be computed on the following basis:

- 6.1.1 At Stage 1 : preliminary Cost Estimates
- 6.1.2 At Stage 2 : Detailed Cost Estimates
- 6.1.3 At Stage 3 : Accepted Tender Cost

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

9/13
37

6.1.4 At Stage 4 : Actual completion Cost

6.2 Progressive, on account payment shall be made by the University to the Architect against any of the above stages based on the quantum of work done during that stage as may be mutually agreed between the Architect and the University.

6.3 No deductions shall be made from the fee of the Architect on account of penalty, liquidated damages, part rates or other sums withheld from the payment of the contractors.

6.4 When the work is executed wholly or in part with old materials or labour or carriage is provided by the University, the % fee shall be calculated as if the work had been executed wholly by the contractor supplying all labour and new materials.

6.5 The actual cost of the completed work shall include cost of execution of assigned works, referred to In Scope of Work and also cost of equipment and machinery such as transformers, diesel generating sets, sub-station, lifts, a/c machines, pumps and motors, water / sewage plants, etc., but excluding the cost of land.

6.6 Any tax levied by law from time to time during the life of this contract, such as service tax, etc., contingent to professional services rendered by the Architect, shall be payable by the University, over and above the gross fees charged by the Architects in relation to the services provided.

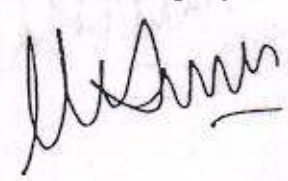
7.0 REIMBURSABLE EXPENSES:

In addition to the fee payable under the preceding clauses, the University will reimburse the Architects towards actual expenses of the following:

7.1 cost of presentation models , computer simulation , presentation drawings , etc , prepared at the Instance of the university for purposes other than the design and execution of the project.

7.2 For travel to be undertaken beyond 5 free visits, architects, his staff & consultants shall be paid as follows:

a. I Class AC fare from city of Architects and their Consultants office to Jalandhar/Chandigarh/as case may be or as per actual if traveling by taxi.



209

(10/17/38)

- b. Free boarding and lodging equivalent to 3 star hotel.
- c. Local transport both in the city of Architects/ Consultants, Jalandhar/Chandigarh/as case may be.

7.3 Per diem per person will be paid @ Rs. 750/- per day for senior staff and @ Rs. 500/- per day for the remaining staff.

7.4 Cost of tender documents / drawings if prepared in the Architects office shall be paid extra.

8.0 UNIVERSITY'S ROLE AND RESPONSIBILITIES:

The University shall discharge all its obligations connected with the project and engagement of the Architect as follows:

- 8.1 To provide detailed requirements of the project.
- 8.2 To provide a site plan, to a suitable scale, showing boundaries, contours at suitable intervals, existing physical features including any existing roads, paths, trees, existing structures, existing service and utility lines and such lines to which the proposed services can be connected.
- 8.3 To furnish reports on soil conditions and water tests reports etc. as required from time to time by the Architect.
- 8.4 To pay all the fees, levies, security deposits in respect of statutory sanctions if any.
- 8.5 To honour Architect's bill within twenty-one days of its submission.
- 8.6 To appoint a Team headed by a construction manager, (clerk of works / site supervisor or construction management agency) as per the architect advise.

9.0 EXECUTION OF THE ASSIGNMENT:

- 9.1 The architect shall keep the university informed about the progress of the work in his office.
- 9.2 The Architects shall appoint specialized consultants for the execution of the project.
- 9.3 The architect shall, if requested make available the design calculations.

10
Jaspreet

Mishra

01/13
34

- 9.4 All the stages of work shall be completed by the Architects and the necessary approvals shall be given by the University.
- 9.5 The Architects shall supply to the University, free of cost, upto six sets of drawings at different stages. Any additional sets required by the University shall be paid for on actual cost of reproduction basis.
- 9.6 The Architects shall not make any deviations, alterations or omissions from the approved drawings, involving financial implications without prior consent of the University
- 9.7 The Architect shall exercise all reasonable skill, care and diligence in the discharge of his duties and shall exercise such general superintendence and inspection as may be necessary to ensure that works are structurally sound and are being executed in accordance with the approved drawings/specification.
- 9.8 If at any time after the execution of this agreement, and commencement of work, the University for any reasons whatsoever, does not require the whole or part of the scheme as specified in this agreement to be performed by the Architects, the University shall give one month's notice in writing to this effect to the Architects, who shall thereupon have no claim to any payment or compensation whatsoever, on account of any profit or advantage which he would have derived had the work not been so curtailed. However the Architects shall be entitled to payment on a pro-rata basis, for the work done, submitted and got approved by them upto the time of such notice.

10.0 TIME SCHEDULE:

- 10.1 The architect shall, in consultation with the University, prepare a Time Schedule in respect of various services (given in this agreement) to be rendered. These are placed at appendix -A.

11.0 LIABILITY OF THE ARCHITECT:

- 11.1 The Architect's liability shall be limited to a maximum period of two years after the issue of completion/occupancy certificate.

12.0 INDEMINIFICATION:

- 12.1 In the event that a claim or suit is brought against the Architects by any third party for damages arising from personal injury or property damage caused

11

12/13/40

wholly by the University, then the University shall indemnify the Architects fully and vice versa in the event that a claim or suit is brought against the University by any third party for damages arising from personal injury or property damage caused wholly by the Architects, or a consultant appointed by the architect, then the Architects shall indemnify the University fully.

13.0 OWNERSHIP OF COPYRIGHT:

13.1 Architectural design is an intellectual property of the Architects. The drawings, specifications, documents and models as instruments of service are the property of the Architects whether the project, for which they are made, is executed or not. The University shall retain copies of the Architects' drawings, specifications and other documents for its information and use in connection with the project. These shall not be used for any other project by the University or the Architects or any other person, excepting for a repetition on the same site as required by the University and agreed to by the Architects.

14.0 TERMINATION OF AGREEMENT:

14.1 Agreement between the Architect and the University may be terminated by either one giving the other a written notice of not less than 30 (thirty) days, should either fail substantially to perform his part of responsibilities/ duties, so long as the failure is not caused by the one initiating the termination.

14.2 When termination of this Agreement is not related or attributable, directly to any act, omission, neglect or default on the part of the Architect, the Architect shall be entitled to Professional fees.

14.3 In the event of University having terminated the agreement, the University shall have right to employ another architect to complete the work, after making payment.

15.0 ARBITRATION:

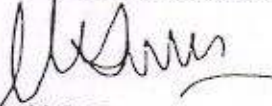
All disputes and differences, arising out of or relating to this agreement and/ or incidental there-to will be referred for adjudication through arbitration by a sole arbitrator to be nominated or appointed with mutual consent of the Architect and University. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be

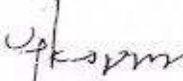
12

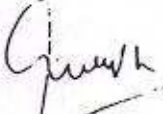
13/13

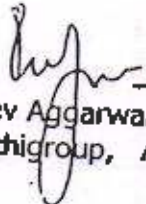
entitled to proceed with the reference from the stage at which it was left by his predecessor.

The arbitration shall be conducted as per the provisions of the Arbitration and Conciliation Act, 1996.


Dr. M.S Grewal
Registrar, PTU


Mr. Jeevan Kapur-partner
M/s Archigroup Architects

Witness 
1 Dr. V.K. Arora
Dean Academics, PTU

Witness 
1 Mr. Rajeev Aggarwal
M/s Archigroup, Architect,
Delhi

2.

2.

213

Appendix-A

The architect is to provide drawings containing the terms and conditions, construction drawings, bill of quantities	15 Oct 2005
Drawings to be handed over to the shortlisted companies for submitting their financial bids.	18 October 2005
Last date of receipt of financial bids from the shortlisted companies	8 November 2005
Finalisation of bids	22 November, 2005
Award of contract	25 November, 2005

[Handwritten Signature]
01/9/05



A. N. Chowdhry
Chief Engineer (Construction)

PTU PUNJAB
TECHNICAL
UNIVERSITY

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

Ref No: PTU/Constr/SBCC-2/181-188/8913

Date: 30-06-2009

1. Sh.N.S.Kalsi Joint Director (CS)
Room No.193-AZ,North Block,
Ministry of Home Affair-Govt.of India, New Delhi-1
2. Dr.R.S.Khandpur,Member BOG,
Director General,Pushpa Gujral Science City,
SCO 60-61.3rd Floor, Sector 34-Chandigarh.
3. Sh.Chandra Mohan, Member BOG,
H.No.202,Sector 36-A Chandigarh.
4. Sh.S.L.Kaushal,
Advisor (Architecture),PTU.
2865,Sector 42-C Chandigarh.
5. Smt.Sarojini Gautam Sharda PCS,
Registrar-PTU.

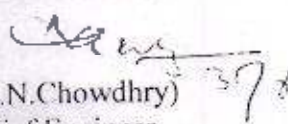
Subject: Minutes of the 20th Meeting of the Standing Building Construction Committee held on 22/6/2009 under the Chair personship of Ms.Tejinder Kaur,IAS, Principal Secretary, Technical Education,Govt.of Punjab in her office at Chandigarh.

Dear Sir,

Please find enclosed herewith minutes of the above said meeting for your kind information and further necessary action, please.

Thanking you,

Yours sincerely,


(A.N.Chowdhry)
Chief Engineer.

Incl.As above.

C.C.

1. Sh.N.S.Bhatti Advisor (Electrical) H.No.3040 Sector 19-D Chandigarh.
2. Sh.V.D.Sharma,Executive Engineer-PTU.
3. C.O.F-Jalandhar alongwith copy of the Agenda.

215

41

PUNJAB TECHNICAL UNIVERSITY

Subject:- Minutes of the 20th Meeting of the Standing Building Construction Committee held on 22/06/2009 under the Chairmanship of Ms. Tejinder Kaur, IAS, Principal Secretary, Technical Education, Govt of Punjab in her office at Chandigarh.

Present:

1. Dr. R. S. Khandpur, DG, PGSC, Member BOG.
2. Sh. Chandra Mohan, Member BOG.
3. Sh. S. L. Kaushal, Advisor (Architecture) PTU.
4. Ms. Sarojini Gautam Sharda PCS, Registrar, PTU.
5. Sh. A. N. Chowdhry, Chief Engineer, PTU.
6. Sh. Sh. N. S. Batti, Advisor (Electrical), PTU.
7. Sh. V. D. Sharma, Executive Engineer, PTU.

Item No.20.1 Extension of Time period of Contract of M/S IVRCL, Civil Contractor.

In view of the explanation provided by the Agency, the Committee granted time extension for the completion of the work upto 31/03/2009.

Item No.20.2 Approval of Tender of Bituminous Road Work at the Gate- Rs,1,91,585/-

- (a) Approval of the tender granted.
- (b) The Committee however, felt that for small works, the University may grant approval of estimates and tenders at its own level rather than approaching this Committee. It was decided to delegate the power of the Committee to approve expenditure upto Rs.50.00 Lacs in this regard to the V.C.

Item No.20.3 Approval of Detailed Estimate of Landscaping Work of Additional Area around Administration Building in New Campus of PTU.

Approved.

Item No.20.4 Status of Phase II of Construction.

Noted. Architectural Sub Committee meeting on 26/06/2009 may review the Architecture of Residential Units of type IV to keep these as G+2 instead of G+3.

(2018)

Item No. 20.5 Extension of Services of Staff of Construction Cell.

- a) The Committee approved extension of the staff upto dates indicated against each as under:-

Sr. No.	Name	Designation	Date
1	Sh. A. N. Chowdhry	Chief Engineer	31-03-2010
2	Sh. N. S. Bhatti	Advisor (Electrical)	31-03-2010
3	Sh. Amarjeet Singh Soni	AEE (Electrical)	31-08-2009
4	Sh. R. S. Ball	AEE (Civil)	31-08-2009
5	Sh. V. D. Sharma	AEE (Civil)	31-03-2010
6	Sh. Resham Chand	AE (AC)	31-08-2009
7	Sh. Shingara Singh Safri	AE(Electrical)	31-03-2009
8	Sh. Sunil Bhasin	AE (Civil)	31-03-2010
9	Sh. Remesh Chander Sharma	AE (PH)	31-08-2009
10	Sh. Baldev Singh	Quantity Surveyor	31-03-2010
11	Sh. Ram Parkash	Sr. Auditor	31-03-2010
12	Sh. Dilbag Singh	Quantity Surveyor	31-03-2010
13	Sh. Surinder Pal	Pvt. Secretary	31-03-2010

- b) The Committee feels that there is an urgent need to set up a Building Maintenance Cell in the University to look after the sophisticated and latest Electrical and Air-conditioning equipments etc. installed in the University and qualified and experienced staff be recruited immediately.
- c) Sh.A.N.Chowdhry Chief Engineer pointed out that increments/pay raise to the construction staff has not been granted though recommended twice by the Committee. Registrar,PTU promised to look into it.

Item No.20.6 Recasting of Committees regarding Design/Construction Procedures.

Proposal approved. The Committee appreciates and brings on record the commendable work done by Dr.R.S.Khandpur for Phase-I.

Item No. 20.7 Lumpsum Payment of Rs.6.00 lacs to M/S Archigroup,Delhi for extra work for submission of drawings of Phase-II for approval from JDA,PPCB and Environment Clearance.

Approved.

Chand
30/6
Chief Engineer-PTU

217



Er. H.P. Singh
Executive Engineer

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

PTU PUNJAB
TECHNICAL
UNIVERSITY

Est'd. Under Punjab Technical University Act, 1996
(Punjab Act No. 1 of 1997)

Ref No. 170/CC/524/28948

Dated 19-07-2011

Sh. Chander Mohan,
House No. 202, Sector 36-A, Chandigarh.

Sh. S.L. Kaushal,
Chief Architect/Punjab (Reid),
2865, Sector 42-C, Chandigarh.

Dr. Nachhattar Singh,
Advisor to VC and Dean (P&D),
Punjab Technical University, Jalandhar.

Dr. Buta Singh,
Dean/Academics, Punjab Technical University, Jalandhar.

Sh. H.S. Bains,
Registrar, Punjab Technical University, Jalandhar.

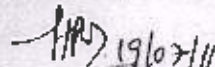
Sub : Construction of new campus of Punjab Technical University - 27th meeting of the Standing Building Construction Committee.

Dear Sir,

Please find enclosed herewith minutes of the above said meeting for kind information and further necessary action please. Comments, if any, may please be forwarded within 10 days of issue of this letter.

Thanking you

Yours Sincerely,


(H. P. Singh)
Executive Engineer

Copy to :

- i. Dr. R. S. Khandpur, Director General, PGSC, SCO 60-61, Sector 34-A, Chandigarh for kind information please.
- ii. Sh. Rajiv Aggarwal, M/s Archigroup Architects, A-14, Sector-15, Noida -201301.
(Minutes of agenda items No. 27.1, 27.2, 27.4 to 27.7)

INDIA 2010
AWARDS
Recognising excellence in ICT
Award of the Year

ICT enabled
of the Year

Open & Distance Learning
Institute of the Year

Punjab Technical University Jalandhar

Kapurthala Campus : Jalandhar-Kapurthala Highway, Post Bag No. 01, Kapurthala.

Mobile : 9501109042 www.ptu.ac.in E-Mail : exepu@gmail.com

218

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Minutes of the 27th Meeting of the Building Construction Committee held on 13.07.2011 under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC in his office at Chandigarh.

Present :

1. Sh. Chander Mohan, Member/BOG,
 2. Sh. S.L. Kaushal, Chief Architect (Retd.), Punjab
 3. Dr. Nachhattar Singh, Advisor to VC and Dean (P&D), PTU
 4. Dr. Buta Singh, Dean/Academics, PTU
 5. Sh. H.S. Bains, Registrar, PTU
 6. Sh. H. P. Singh, Executive Engineer, PTU
 7. Sh. Rajiv Aggarwal, Architect
 8. Ms. Mansi Bedi, Architect
- } From Archigroup
} Architects, Noida.

Item No. 27.1 : To confirm the Minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011.

The minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011 were confirmed by all the members except for some comments received against item No. 26.3 (Para 3) from Sh. S. R. Aggarwal, Chief Engineer (Retd), special invitee in 26th meeting. The comments/observations received from Sh. Aggarwal were discussed in detail and the following was decided:

Para 1) i : Agreed

Para 1) ii : Agreed

Para 2) : CPVC will be used in chases as these pipes have longer life and other advantages over GI pipes.

Para 3) : It was decided that STP with FAB Technology will be provided for APIT campus, Kapurthala as provision for double piping for flushing system has not been kept in the buildings already constructed and treated water from STP will only be used for horticultural purposes. However, UV treatment system will be provided as per the requirements of Ministry of Environment. Considering the running and maintenance issues, it was decided that all STPs of PTU will be constructed with FAB technology as the same persons will be able to run and maintain all the STPs.

Item No. 27.2 : Action taken on various items discussed during previous meetings of Standing Building Construction Committee.

Action taken on various items discussed during previous meeting of Standing Building Construction Committee is as under:

219

- Three stage evaluation in respect of appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works were completed and discussed in the present meeting.
- The Architect has started detailed designing for structure, HVAC, Electrical, Plumbing and Fire Fighting systems of two towers, one library and one seminar hall of the proposed PIT at main campus, Kapurthala. The Architect presented schedule for completion of these activities in the present meeting.

Item No. 27.3 : To finalize the appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works.

In the bids invited for appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works, M/s Archigroup Architects, Noida scored the highest overall score and is eligible for award of work/negotiations in terms of bid conditions. Committee negotiated the rates with the representative of M/s Archigroup Architects, Noida and after discussions, M/s Archigroup Architects, Noida reduced their rates from 2.04% to 2.00%.

Committee recommends award of this work to M/s Archigroup Architects, Noida at negotiated rates of 2.00% . All terms and conditions of tender will remain the same.

Item No. 27.4 : To discuss and approve the rough cost estimate (based upon plinth area rates of CPWD) submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.

The rough cost estimates for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road based upon plinth area rate of CPWD amounting to Rs. 97.71 Crores were approved.

Item No. 27.5 : To discuss and finalize the methodology/procedure to be adopted for invitation & finalization tenders, project management including supervision of works in respect of PIT Kapurthala works.

After approval of the Estimates by the BoG, tender will be invited as per the following system:

1. Open tenders in two packet systems will be invited for engagement of contractors.
2. All civil, internal electrical, Fire detection, lifts, plumbing works of all the buildings will be included in one package.

h

3. Specialized agencies will be engaged for specialized works such as external electrical works, fire fighting works, external development, Pump houses, STP, Air-Conditioning etc.
4. PTU is not inclined to appoint engineering staff for continuous supervision of works as there may be utilization problems for this staff after completion of the works. So, it was decided to engage supervision consultant, preferably a central Govt. PSU, through invitation of tenders for which EE/PTU was advised to prepare the bid document and present the same in the next meeting for discussions and approval.

Item No. 27.6 : To discuss and approve the 'Finishing Schedule' submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.

The Architect presented the proposed 'Finishing Schedule' for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road. After lot of discussions/deliberation, following finishing schedule has been approved:

1. COLLEGE BUILDINGS:

- | | |
|--|---|
| • KOTA STONE: | All areas except entrance cores, staircases, toilets & entrance courts (with 20% marble in Pattern) |
| • GRANITE: | Entrance cores & general staircase |
| • VITRIFIED TILES (NON SKID): | Toilets |
| • INTERLOCKING PAVERS: | Entrance Courts |
| • PLASTIC EMULSION WITH PUTTY | All Areas except in toilets |
| • ACRYLIC WASHABLE DISTEMPER WITH PUTTY | Toilets, dry Canteen, Utility |
| • DRY DISTEMPER | Utilities |
| • WHITE (VERY LIGHT BISCUIT COLOR) STONE | Corridor Walls |
| • BLACK GRANITE COUNTERTOP | Research Labs (Only on one side), Canteen, Pantries |

2. LIBRARY

- | | |
|--------------------|---|
| • KOTA STONE: | Entrance Courts (Kota with 20% granite in Pattern), entrance steps, All areas except toilets and general Staircase(Kota with 20% marble in Pattern) |
| • VITRIFIED TILES: | Toilets |
| • GRANITE: | General Staircase |

S

- IPN AHU
- PLASTIC EMULSION WITH PUTTY: All areas except toilets, kitchen, AHU's and Utilities
- ACRYLIC WASHABLE DISTEMPER WITH PUTTY Toilets, Kitchen, AHU
- DRY DISTEMPER Utilities
- BLACK GRANITE COUNTERTOP Kitchen, Serving (cafeteria), Issue Counter

3. SEMINAR HALL

- VITRIFIED TILES: Toilets
- KOTA STONE: Seminar hall (carpet optional), Stage, Entrance Foyer (with 20% marble in Pattern), Entrance Steps
- PLASTIC EMULSION WITH PUTTY: All areas except toilets
- ACRYLIC WASHABLE DISTEMPER WITH PUTTY: Toilets
- BLACK GRANITE COUNTERTOP: Toilets

4. EXTERNAL FINISH

- RED AND WHITE (very light biscuit color) SAND STONE As per elevation

5. MISCELLANEOUS

- SOUND INSULATION In seminar, AV room, meeting room and Lecture halls as required
- FALSE CEILING (Gypsum & Armstrong Boards): As required

6. DOORS AND WINDOWS

- WINDOWS Anodized aluminum with reflective single glass
- STRUCTURAL GLAZING Anodized aluminum with reflective glass (single/double as required)
- DOORS Aluminum Frames with laminated Flush Door shutters

✓

Item No. 27.7 :

Payment to the Architect for preparation of drawings and data to be submitted to Department of Town and Country Planning for approval of plans and to the Ministry of Environment and Forest for Environmental Clearance for APIT and PIT works at main campus.

It was informed to the committee that PTU is to submit drawings and data to the Department of Town and Country Planning for approval of plans and to the Ministry of Environment and Forest for Environmental Clearance for APIT and PIT works at main campus. All these drawings and data are to be prepared by the Architect but the same is not included in his scope of work. For performing similar work in respect of Phase-II (A) works, a payment of Rs. 6.00 lacs has been approved in 20th meeting of the Building Construction Committee (Agenda Item No. 20.7). The Architect has requested for similar payment in respect of APIT and PIT, Kapurthala works. The Committee agreed and approved payment on proportionate basis of the covered area of the proposed buildings in Phase II (B).

✓

ANNEXURE-D

JG/c
27/3/15

27.03.15

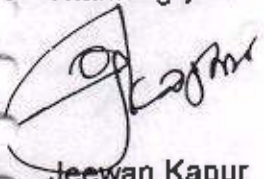
Engineer,
University,

Mansa-Painting of Boundary Wall.

Sir,

On our recent visit to PIT Mansa site, it has been noted that finish of the precast panels fixed for three sides of the boundary wall is not up to the level as it was envisaged at the time of preparation of design/estimate. It is suggested that all the sides of the boundary wall should be got painted to have better appearance, finish and durability. An estimate for an amount of Rs. 36,35,055/- for painting of all the walls of the campus is submitted alongwith for kind consideration and approval please.

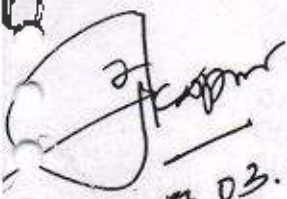
Thanking you



Jeewan Kapur
Architect

225

Description of Item	Unit	Qty	Rate	Amount
Finishing walls with textured exterior paint of required shade New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/ 10 sqm	Sqm	21500.25	154.20	33 15 339
Finishing walls with Rustick textured exterior paint of required shade New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/ 10 sqm	Sqm	1034.68	309.00	3 19 716
Total				36 35 055


 27.03.2015

226



Er. H.P. Singh
Executive Engineer

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

PTU PUNJAB
TECHNICAL
UNIVERSITY

Estab. Under Punjab Technical University Act, 1996
(Punjab Act No. 1 of 1997)

Ref. No. Pu/ee/318

Dated 16/04/15

Sh. D.L. Sharma, President,
Vardhman Spg. & Gen. Mills Ltd.,
Chandigarh Road, Ludhiana.

The Director,
Department of Technical Education, Pb,
Plot No. 1, Sector-36A, Chandigarh.

Er. A. K. Prabhakar,
OSD to Vice Chancellor,
Punjab Technical University, Jalandhar.

Dr. A. P. Singh,
Dean (P&D),
Punjab Technical University, Jalandhar.

Dr. Prabhjot Kaur (Special Invitee),
Officiating Director Mohali Campus,
C102B, Phase-7 Industrial Area, Mohali.

Er. Kamaljit Chopra (Sp. Invitee),
(Electrical Expert)
13, Jyoti Nagar, Jalandhar.

Er. P. S. Saini,
Superintending Engineer,
PGI, Chandigarh.

Sh. Rajiv Aggarwal, Architect
M/s Archigroup Architects,
A-14, Sector-15, Noida -201301.

Sh. Amrit Sagar Mittal
CMD, Sonalika Tractors Ltd,
Hoshiarpur.

Sh. S.L. Kaushal,
Chief Architect, Punjab (Retd),
2865, Sector 42-C, Chandigarh.

Er. A. N. Chowdhry (Special Invitee),
3-B, Jyoti Nagar,
Jalandhar.

Dr. Buta Singh,
Dean (Academics),
Punjab Technical University, Jalandhar.

The Registrar,
Punjab Technical University,
Jalandhar.

Er. Ashok Goyal,
CE/N-II, PWD, SCO 61-62, Phase-II,
SAS Nagar, Mohali.

Sh. Inderjit Kumar (Special Invitee),
(PH Experts) House No. 116, Phase 3B/A,
S.A.S. Nagar, Mohali.

Er. Varinder Kumar,
Executive Engineer, Const. Div-II,
PWD, Kapurthala.

Sub : Construction of new campuses of Punjab Technical University -- 46th meeting of the
Standing Building Construction Committee.

Dear Sir/Madam,

Please find enclosed herewith minutes of the above said meeting for kind information and further necessary action please. Comments, if any, may please be forwarded within 10 days of issue of this letter.

Thanking you

Yours Sincerely,

HP 16/04/15
(H. P. Singh)
Executive Engineer

Copy to : Dr. R. S. Khandpur, DG, PGSC (Retd), Science House, H. No. 2901, Phase 7,
(Sector 61), Mohali.

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Minutes of the 46th Meeting of the Standing Building Construction Committee held on 09.04.2015 under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC (Retd) at PTU's Mohali campus.

Following were present in the meeting:

1. Sh. S. L. Kaushal, Chief Architect, Punjab (Retd),
2. Sh. Kamaljit Chopra, Chief Electrical Engineer, PSEB (Retd),
3. Sh. Mohanbir Singh, Additional Director, DTE
4. Sh. P.S. Saini, Superintending Engineer, PGI
5. Dr. Buta Singh, Dean/Acadmics, PTU,
6. Dr. Prabhjot Kaur, Officiating Director PTU's Mohali campus.
7. Sh. H. P. Singh, Executive Engineer, PTU.
8. Sh. Ashok Goyal, Chief Engineer, North-II, PWD,
9. Sh. Vijay Kumar Chopra, Chief Electrical Engineer, PWD,
10. Sh. Varinder Kumar, XEN, PWD, Div. 2, Kapurthala,
11. Sh. Roop Chand, XEN, PWD, Electrical Division, Jalandhar.

From Archigroup Architects, Noida:

12. Sh. Rajiv Aggarwal, Architect
13. Sh. Satyendra Sharma, Architect
14. Sh. Nirutpal, Architect
15. Sh. Raman Gupta, Acoustic consultant.

Item No. 46.1 : To confirm the Minutes of 45th meeting of Standing Building Construction Committee held on 22.01.2015.

As no comments has been received, the minutes of 45th meeting of Standing Building Construction Committee held on 22.01.2015 were confirmed.

Item No. 46.2 : Action taken on various items discussed during previous meeting of Standing Building Construction Committee.

It was informed by the Executive Engineer/PTU that following actions have been taken on various items discussed during previous meeting of Standing Building Construction Committee:

- Based upon the concept plans approved by the Building Committee in respect of the proposed auditorium and hostels at main campus, Kapurthala, the municipal drawings have been approved by Chief Town Planner, Punjab.

- The Architect will be making a presentation in the present meeting on cost comparison of projector and LED screen to be provided for the proposed auditorium at main campus, Kapurthala.
- The detailed estimate for provision of speakers, amplifiers and microphones to be provided for the proposed auditorium at main campus, Kapurthala will be presented by the Architect in the present meeting for discussions and approval.
- The issue pertaining to payment to the Architect against preparation of building plans for the proposed auditorium and hostels at main campus, Kapurthala is to be discussed in the present meeting.

Item No. 46.3: To discuss and finalize the provision of projector or LED screen for the proposed auditorium at main campus, Kapurthala.

After detailed discussions and deliberations, committee agreed for provision of LED screen for proposed auditorium at main campus, Kapurthala. However, specifications, estimates etc. will be discussed and approved at the time of procurement depending upon the technology available at that time. It was also agreed to provide conduits etc. for the conventional projector to take care of the situation in case the provision of LED screen is ruled out at a later stage.

Item No. 46.4: To discuss and approve the estimate for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala.

After discussions, committee approved the estimate for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala for an amount of Rs. 81.26 lacs. It was decided by the committee that tenders for execution of these works shall be invited on performance basis only.

Additionally, it was also agreed that the complete tendering process/scheme for execution of various works of the auditorium shall be discussed and approved by the Building committee.

Item No. 46.5: To discuss and finalize the provision of LED lights in place of CFL lights in college buildings and library building (under construction) of Punjab Institute of Technology, main campus, Kapurthala.

After detailed discussions and deliberations, committee decided for provision of CFL lights, as originally approved in the estimates.

Item No. 46.6: To discuss and approve the revised layout plan of proposed buildings for Punjab Institute of Technical Teachers Training and Research (PITTR) at Ladowali Road, Jalandhar.

Committee approved the revised site plan/scheme presented by the Architect.

Item No. 46.7 : To discuss and finalize the fee payable to the Architect for preparation of building plans of auditorium and hostels proposed at main campus, Kapurthala.

Committee noted that the documents presented are not sufficient to take the decision. Executive Engineer, PTU was advised to present additional documents like the original recommendations of the committee set up by the H'ble Vice Chancellor, Agendas of 20th and 27th meetings of the building committee etc.

Item No. 46.8 : To discuss and approve the start of construction works of proposed college buildings at Punjab Institute of Technology at Arniwala and Sikhwala.

Committee noted that University has decided to go ahead with construction of proposed buildings (Phase-I) and external development works of Punjab Institute of Technology at Arniwala and Sikhwala.

Item No. 46.9 : To discuss and approve the estimate for painting of boundary walls Punjab Institute of Technology, Mansa.

Committee noted that buildings and other development works of the campus are yet to be started and it may take 2-3 years time to make the campus operational. If painting of the boundary wall is done at this stage, repainting may be required at the time of start of the campus and expenditure done at this stage will become redundant. After detailed discussions and deliberations, committee decided that the work of painting of boundary wall may be taken up at the time of making the campus operational.

Item No. 46.10 : To discuss and approve authorization to PWD for taking Environmental Clearance for construction of proposed auditorium and hostels buildings at main campus, Kapurthala.

In view of the notification dated 22.12.2014 issued by 'Ministry of Environment, Forest and Climate Change' presented in the meeting, committee noted that Environmental Clearance for building construction projects for educational institutes is not required. However, committee advised PWD/PTU to confirm the same before start of any new construction activity.

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



J

**ABSTRACT OF AGENDA AND MINUTES OF 43RD, 44TH, 45TH AND 46TH
MEETINGS OF STANDING BUILDING CONSTRUCTION COMMITTEE**

Item No. 43.3:

To discuss, analyze and approve the provisions/specifications for video presentation system, sound reinforcement system, stage lighting, fire fighting, wall paneling and acoustic treatment for proposed auditorium at main campus, Kapurthala.

Agenda	Decision
<p>In 42nd meeting of Standing Building Construction Committee (Agenda item No. 42.3), it was decided that detailed study, analysis and specifications of various provisions (as listed below) are finalized before finalization of the estimate of proposed auditorium at main campus, Kapurthala and experts engaged by the Architect for these works shall make the presentations on the provisions, specifications, manufacturers etc. considered while preparing the estimate:-</p> <ol style="list-style-type: none"> i. Video presentation system ii. Sound reinforcement system iii. Stage lighting iv. Fire Fighting v. Wall paneling vi. Acoustic Treatment. <p>Accordingly, the experts engaged by the Architect will be making the presentations on the above.</p> <p>The matter is placed before the Committee for discussions and approval please.</p>	<p>After detailed discussions and deliberations on the presentations made by the Consultants engaged by the Architect and by Sh. Rajiv Aggarwal, Architect, following decisions have been taken by the committee:</p> <p>a) Acoustic Treatment :-</p> <p>All the materials proposed to be used for this work should preferably be manufactured in India. The technical specifications of such materials, their comparative cost to be put up in the next meeting. The costing of this work will also be revised accordingly.</p> <p>Committee agreed for provision of push back chairs with wooden arm rest and without cup holder.</p> <p>All the wood to be used should be pre-treated against termite.</p> <p>Provision for three motorized curtains shall be made on the stage. The front curtain will be uplifting and rear curtains will be side moving.</p> <p>Fixed cyclorama will be provided and the same will also act as a rear wall of the stage.</p> <p>Carpet will be provided in the aisles only and remaining area will be covered with PVC or linoleum sheets.</p> <p>The design/scheme of the treatment proposed for the walls of the auditorium shall be presented to the committee for approval.</p> <p>b) Stage Lighting System :-</p> <p>Provision of three lighting bars over the stage and one in front of the stage is approved.</p> <p>All lights will be LED lights and a combination of normal and intelligent light fittings to be provided.</p> <p>Provision of suitable cat-ladders for maintenance of lights is to be provided.</p> <p>Lighting control is to be provided in the projector room.</p>

c) Sound Reinforcement System :-

Provision of stereo sound system with hanging/flying line-array FOH speakers and subwoofer is approved. However, no provision is to be made for 5.1 sound system.

Front fill speakers on vertical wall of stage and stage fill speakers along with stage monitor are to be provided.

Sufficient microphone connection socket would be provided in the stage for easy access.

The SPL, STI and other performance related specifications for audio systems to be submitted along with design so that the same can be verified after implementation.

d) Audio Video System :-

Provision of two side screens in the auditorium hall is not to be kept. However, provision for TVs is to be kept in VIP suite, VIP banquet and student's verandah.

Video projector of 20000 ANSI lumens at control room is to be provided.

Minimum 2 presentation point at stage for connecting booth of analogue- VGA and digital inputs - HDMI from laptop/computer to be provided.

All the controls should be provided in the control room to be set up on one side of the stage.

No provision for inter-active touch screen at podium and video conferencing system is to be kept.

Stage Monitor Screen of 55" or suitable higher size to be provided for people at Dias /Podium.

(Further discussed under Agenda item No. 44.3)

Item No. 43.4 :

To discuss and approve the patterns for exterior finishes of hostels and auditorium proposed to be constructed at main campus, Kapurthala.

Agenda	Decision
In 42 nd meeting of Standing Building Construction Committee (Agenda item No. 42.7), committee agreed for provision of stones for exterior finishes of the auditorium and grit wash on entrance and painting for rest of the area for the external finishes of the proposed	The patterns presented by the Architect for exterior finishes of hostels and auditorium were approved by the committee.

60.36) It was also decided that type of stone, pattern scheme for these finishes shall be got approved by the Architect from the committee. Accordingly, the Architect will be making the presentations on the same.

The matter is placed before the Committee for discussions and approval please.

Item No. 43.5 : To discuss and approve the flooring patterns for circulation area and VIP Banquet area of auditorium proposed to be constructed at main campus, Kapurthala.

Agenda	Decision
<p>In 42nd meeting of Standing Building Construction Committee (Agenda item No. 42.7), committee agreed for granite and marble stone pattern for flooring of circulation area and VIP Banquet area of auditorium proposed to be constructed at main campus, Kapurthala and the flooring pattern same shall be got approved from the committee. Accordingly, the Architect will be making the presentations on the same. The matter is placed before the Committee for discussions and approval please.</p>	<p>It was decided that some more patterns may be presented by the Architect so that appropriate decision is taken in this regard.</p> <p><i>(Further discussed under Agenda item No. 44.5 & 45.4)</i></p>

Item No. 44.3: To discuss and approve the manufacturers/specifications for acoustic treatment for the proposed auditorium at main campus, Kapurthala.

Agenda	Decision
<p>In 43rd meeting of the committee, it was decided that all the materials proposed to be used for acoustic treatment should be preferably manufactured in India. Accordingly, the Architect will be making the presentation on type of the materials proposed to be used and their cost comparison.</p> <p>The matter is placed before the Committee for discussions and approval please.</p>	<p>The Architect presented the various options available in respect of the materials, specifications, their finishes, costs etc. for acoustic treatment and audio video system. After detailed discussions and deliberation, the committee was of the opinion that before taking any decision in this regard, University must finalize its requirements for acoustic treatment finishes and audio video system. Accordingly, the committee decided to appoint following sub-committee to finalize the University's requirements in respect of acoustic treatment finishes and Audio Video System:-</p> <ol style="list-style-type: none"> 1. Dr. Buta Singh, Dean/Academics, PTU 2. Sh. P.S. Saini, Superintending Engineer, PGI, Chandigarh 3. Executive Engineer, PTU 4. Executive Engineer, PWD, Construction Division 2, Kapurthala 5. Sh. Rajiv Aggarawal, Architect. <p><i>(Further discussed under Agenda item No. 45.3)</i></p>

Item No. 44.4: **To discuss and approve rough cost estimate for proposed auditorium at main campus, Kapurthala.**

Agenda	Decision
<p>In 42nd meeting of the committee, the rough cost estimate for the proposed auditorium was discussed under agenda item No. 42.3 (copy of the estimate discussed in 42nd meeting is placed at Annexure-A). After detailed discussions, the committee agreed for the cost except for specialized items such as Acoustic treatment, Stage lighting system, Sound reinforcement system and audio video system. The Architect will be making presentations on detailed estimate for these items.</p> <p>The matter is placed before the Committee for discussions and approval please.</p>	<p>After detailed discussions and deliberations, the committee approved the rough cost estimate based upon plinth area rates of CPWD for Civil, Electrical, Public Health, Fire fighting and air-conditioning works amounting to Rs. 1720.59 lacs. As regards, the estimates for other specialized items such as Acoustic treatment, Stage lighting, Sound reinforcement system, Audio video presentation etc. the same shall be finalized after receipt of requirements from University (Agenda item No. 44.3 above).</p> <p>However, for the time being, payment to the Architect may be released by considering 70% of this cost (Rs. 1720.59 lacs) as detailed estimates being prepared on the basis of Punjab PWD CSR are always lower than the estimates prepared on the basis of plinth area rates of CPWD.</p>

Item No. 44.5 : **To discuss and approve the flooring patterns for circulation area and VIP Banquet area of auditorium proposed to be constructed at main campus, Kapurthala.**

Agenda	Decision
<p>In 43rd meeting of the committee, it was decided that some more flooring patterns for circulation area and VIP Banquet area of the proposed auditorium may be presented by Architect so that appropriate decision is taken in this regard. Accordingly, the Architect will be presenting some more flooring patterns.</p> <p>The matter is placed before the Committee for discussions and approval please.</p>	<p>The Architect presented various flooring patterns by using kota stone, marble, granite and their combinations alongwith their cost implications. The committee is of the view that some hard stone should be used for these areas. However, there is a huge difference in the cost of kota/marble stone and granite stone. After detailed discussions and deliberation, the committee is of the opinion that before taking any decisions in this regard, it will be appropriate that University finalizes its requirements for the type of the stone to be used for these areas. Accordingly, the committee decided to appoint following sub-committee to finalize the University's requirements for the type of the stone to be used for these areas:-</p> <ol style="list-style-type: none"> 1. Dr. A. P. Singh, Dean/P&D, PTU 2. Dr. Rajneesh Sachdev, Registrar, PTU 3. Executive Engineer, PTU 4. Executive Engineer, PWD, Construction Division 2, Kapurthala 5. Sh. Rajiv Aggarawal, Architect. <p><i>(Further discussed under Agenda item No. 45.4)</i></p>

Item No. 44.6 :

To discuss and approve the revised estimate for construction of boundary wall of Punjab Institute of Technology, Mansa.

Agenda	Decision
<p>in 30th meeting (Agenda item No. 30.7) of the Standing Building Construction Committee, estimate for construction of boundary wall of Punjab Institute of Technology, Mansa for an amount of Rs. 300.0 lacs was approved. This estimate was based upon a tentative design prepared by the Architect. Additionally, at the time of approval of this estimate, the length of the boundary wall was considered as 4224 metre. However, as per site conditions, the actual length of the boundary wall is about 4870 metre. It has been confirmed by the Architect that by mistake length of boundary wall for one site was not included in the approved estimate. There has been substantial increase in size of the foundations from that considered at the time of preparation of original estimate. Moreover, there are some increase in the quantities as per site conditions also. By considering all these factors, the revised estimated cost for the boundary wall works out to be Rs. 409.27 lacs i.e. increase in cost by 36.42%. In addition to this, price escalation as per clause 10cc of CPWD already approved in building committee and BOG meetings, shall be payable to the contractor.</p> <p>This matter was also discussed in 42nd meeting of the committee and it was decided that works upto award value of the works is got executed from the contractor to avoid any litigation with the contractor and contract is foreclosed by considering the facts that Punjab Cabinet has approved constitution of new technical university at Bathinda and district Mansa will fall under the jurisdiction of new university and it was opinioned by the committee that new university may have different requirements for this campus.</p> <p>The matter has again discussed at University level and by considering the facts that final decision is still to be taken by Punjab Govt. on new University and to avoid trespasses, theft and misuse/encroachment of the campus area, boundary wall works are got completed from the existing contractor.</p> <p>The matter is placed before the Committee for discussions and approval please,</p>	<p>The Architect informed committee that there has been increase in the cost of work of boundary wall of PIT, Mansa on account of the followings:</p> <ol style="list-style-type: none">1. The estimate approved in 30th meeting (Agenda item No. 30.7) of the Standing Building Construction Committee for this work for an amount of Rs. 300.0 lacs was based upon a tentative design prepared by the Architect and there has been a substantial change in the design as per actual site conditions/geo-technical investigations. There has been substantial increase in size of the foundations from that considered at the time of preparation of original estimate.2. The length of boundary wall has increased from 4224 metre to 4870 metre on account of a mistake by the Architect at the time of preparation of original estimate as length of boundary wall for one site was not included in the estimate. Moreover, there has been increase in length of boundary wall as per site conditions. Additional boundary wall is being constructed all-around one acre of land, which has not been acquired by Punjab Govt. and this land is falling in between PTU's land. <p>After reviewing the earlier decisions taken by the committee in this regard and considering the reasons for increase in the cost, committee approved the revised estimated cost for the boundary wall works of PIT Mansa for an amount of Rs. 409.27 lacs. plus price variations payable to the contractor as decided earlier. It was also agreed by the committee that works may be got executed from the existing contractor at already accepted rates to avoid trespasses, encroachments and misuse of the area as without completing the boundary wall works, the whole area will remain open.</p>

Item No. 44.7 :

To discuss and approve the design basis reports submitted by the Architect for Structure, Electrical and Public Health works in respect of Punjab Institute of Technology, Arniwala, Fazilka.

Agenda	Decision
<p>The Architect has submitted design basis reports of Structure, Electrical and Public Health works in respect of Punjab Institute of Technology, Arniwala, Fazilka (Annexure-B). The same will be presented by the Architect in the meeting.</p>	<p>After detailed discussions and deliberations, committee decided as under:</p>
<p>The matter is placed before the Committee for discussions and approval of the reports.</p>	<p>1. Structure:</p>
	<p>The report presented by the Architect has been approved.</p>
	<p>2. Electrical Works:</p>
	<p>i. As the maximum demand load is only 40 KW for the proposed construction, LT connection will be taken.</p>
	<p>ii. Provision of DG set of 25KVA capacity.</p>
	<p>3. Public Health Works:</p>
	<p>a) <i>Water supply system:</i></p>
	<p>i. Provision of Underground reservoir (UGR)</p>
	<p>ii. Treatment of raw water near UGR.</p>
	<p>iii. Pumping of water after treatment directly to overhead PVC tanks to be installed at terrace of the building.</p>
	<p>b) <i>Sewerage system:</i></p>
	<p>i. Provision of 15 KLD overhead STP with FAB technology.</p>
	<p>In addition to the above, committee reviewed its earlier decisions taken for PIT Arniwala and decided as under:</p>
	<p>i. Plinth level of the buildings should be kept minimum 300mm above the main highway running in front of the institute.</p>
	<p>ii. The buildings proposed to be constructed now should be constructed in front area of the campus.</p>
	<p>iii. No filling of earth is to be done for open areas around the buildings.</p>

Item No. 44.8 To discuss and approve the Electric load of Hostels and auditorium proposed to be constructed at main campus, Kapurthala (Table Item).

Agenda	Decision
<p>In 42nd meeting of the committee, it was decided that calculation of electric loads for proposed hostels and auditorium may be re-examined. Accordingly, the same has reviewed and presented by the Architect in the meeting.</p>	<p>After detailed discussions and deliberations, committee approved the following:-</p> <ol style="list-style-type: none"> i. Total demand load of 1123 KVA. ii. Provision of 3 transformers of capacity 400 KVA each. <p>As the total demand load of the University has increased to more than 4 MVA, the committee directed that planning for 66 KVA sub-station is done on priority. Location proposed by the Architect for housing 66 KVA sub-station in about 1000 Sqm. area near the existing metering house was also approved by the committee.</p>

Item No. 45.3: To discuss and approve the requirements, manufacturers/ specifications for acoustic treatment and audio video system for the proposed auditorium at main campus, Kapurthala.

AGENDA:

In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for acoustic treatment finishes and audio video system for the proposed auditorium at main campus, Kapurthala. The committee has submitted their report (placed at Annexure-A). Based upon this report, the Architect will be making the presentation.

The matter is placed before the Committee for discussions and approval please.

DECISION:

In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for acoustic treatment finishes and audio video system for the proposed auditorium at main campus, Kapurthala. The report submitted by the committee was discussed in detail and the same was approved.

Based upon the report submitted by the sub-committee and approved by the Building committee, the following estimates for these works were also approved:-

S. No.	Description of Works	Estimates sanctioned (In lacs of Rs)
1	Acoustic	70.53
2	Chairs	81.00
3	Stage Furnishing	51.99
4	Stage Lighting	36.37
5	Sound Reinforcement (Video)	11.65
	Total	251.54

The estimate for the projector was not approved. The Architect was advised to explore the possibility of provision of LED screen in place of the projector. The cost comparison of the projector and LED screen is to put up in the next meeting of the committee. The estimates for speakers and amplifiers and microphones requires to be relooked into, and will be finalized later on.

(Further discussed under Agenda Item No. 46.2 & 46.4)

Item No. 45.4: To discuss and approve the flooring patterns for circulation area and VIP banquet area of the proposed auditorium at main campus, Kapurthala.

Agenda	Decision
<p>In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for type of stone to be used for flooring of circulation area and VIP Banquet area of the proposed auditorium at main campus, Kapurthala. The committee has submitted their report (placed at Annexure-B). Based upon this report, the Architect will be making the presentation.</p> <p>The matter is placed before the Committee for discussions and approval please.</p>	<p>In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for type of stone to be used for flooring of circulation area and VIP Banquet area of the proposed auditorium at main campus, Kapurthala. The sub-committee in their report has recommended using granite for circulation area and VIP banquet area of the proposed auditorium at main campus, Kapurthala. The building committee also agreed for use of granite stone for these areas and advised Architect to prepare suitable floor patterns and detailed estimates accordingly.</p>

Item No. 45.5 : To discuss and finalize the Energy audit report of PTU's main administrative building, main campus, Kapurthala submitted by Punjab State Council for Science and Technology.

AGENDA:

In 39th meeting of the committee, it was decided that Energy audit of PTU's main administrative building, main campus, Kapurthala will be got done from Punjab State Council for Science and Technology. Accordingly, the energy audit has been done by Punjab State Council for Science and Technology and submitted draft audit report (placed at Annexure-C). The observations/recommendations made by Punjab State Council for Science and Technology in their audit report will be presented by the Architect.

The matter is placed before the Committee for discussions and approval of the report please.

DECISION:

The observations/recommendations submitted by Punjab State Council for Science and Technology (PSCST) in their energy audit report were presented by the Architect. After detailed discussions and deliberations, committee has taken the following decisions:-

S. No.	Observations/ Recommendations by PSCST	Decisions taken by the committee
1	Optimize operation of transformers.	Committee felt that the scheme suggested is not commensurate with the savings as additional skilled manpower will be required for switching on/off the transformers. However, it was agreed that switching on of AC system is delayed by 1-2 hours in the morning and switching off advanced by 1-2 hours before the closing time of the office.
2	Optimize the contract demand power supply from PSPCL.	The committee agreed to the proposal. However, it was suggested that extra contract demand power supply available may be used for new buildings (under construction). The Architect was advised to put up the scheme for use of extra contract demand power supply available in the new buildings.
3	Improve overall power factor of complex to unity.	The recommendations have been accepted and PTU was advised to add capacitor banks in existing APFC panels.

Item No. 45.4: To discuss and approve the flooring patterns for circulation area and VIP banquet area of the proposed auditorium at main campus, Kapurthala.

Agenda	Decision
<p>In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for type of stone to be used for flooring of circulation area and VIP Banquet area of the proposed auditorium at main campus, Kapurthala. The committee has submitted their report (placed at Annexure-B). Based upon this report, the Architect will be making the presentation.</p> <p>The matter is placed before the Committee for discussions and approval please.</p>	<p>In 44th meeting of the committee, a sub-committee was constituted to finalize University's requirements for type of stone to be used for flooring of circulation area and VIP Banquet area of the proposed auditorium at main campus, Kapurthala. The sub-committee in their report has recommended using granite for circulation area and VIP banquet area of the proposed auditorium at main campus, Kapurthala. The building committee also agreed for use of granite stone for these areas and advised Architect to prepare suitable floor patterns and detailed estimates accordingly.</p>

Item No. 45.5 : To discuss and finalize the Energy audit report of PTU's main administrative building, main campus, Kapurthala submitted by Punjab State Council for Science and Technology.

AGENDA:

In 39th meeting of the committee, it was decided that Energy audit of PTU's main administrative building, main campus, Kapurthala will be got done from Punjab State Council for Science and Technology. Accordingly, the energy audit has been done by Punjab State Council for Science and Technology and submitted draft audit report (placed at Annexure-C). The observations/recommendations made by Punjab State Council for Science and Technology in their audit report will be presented by the Architect.

The matter is placed before the Committee for discussions and approval of the report please.

DECISION:

The observations/recommendations submitted by Punjab State Council for Science and Technology (PSCST) in their energy audit report were presented by the Architect. After detailed discussions and deliberations, committee has taken the following decisions:-

S. No.	Observations/ Recommendations by PSCST	Decisions taken by the committee
1	Optimize operation of transformers.	Committee felt that the scheme suggested is not commensurate with the savings as additional skilled manpower will be required for switching on/off the transformers. However, it was agreed that switching on of AC system is delayed by 1-2 hours in the morning and switching off advanced by 1-2 hours before the closing time of the office.
2	Optimize the contract demand power supply from PSPCL.	The committee agreed to the proposal. However, it was suggested that extra contract demand power supply available may be used for new buildings (under construction). The Architect was advised to put up the scheme for use of extra contract demand power supply available in the new buildings.
3	Improve overall power factor of complex to unity.	The recommendations have been accepted and PTU was advised to add capacitor banks in existing APFC panels.

4	Replace existing air cooled screw chillers with water cooled screw chiller.	It was informed by the Architect that decision to provide air cooled screw chillers was a calculated and deliberated decision. This decision was taken to save water as there is a shortage of water in the area. The existing system will be continued.
5	Replace 36 watts and 18 watts fluorescent tube lights with 18 watts and 9 watts LED tube lights.	It was agreed that LED lights shall be purchased for all future maintenance requirements and with passage of the time, all lights will automatically be replaced with LED lights.
6	Replace 150W HPSV street lights with 60 watts LED and 70W HPSV with 30 W LED street lights.	It was agreed that LED lights shall be purchased for all future maintenance requirements and with passage of the time, all lights will automatically be replaced with LED lights.
7	Optimize power consumption of lighting by automation.	Before considering the proposal, Committee suggested that implication of sensors proposed must be studied for which PSCST was advised to provide literature/specifications of the proposed sensors.

Committee suggested for provision of solar power system by PTU in their main campus, Kapurthala with a provision of supplying electricity to main grid system.

It was also suggested by the committee that a senior officer from PTU should be nominated to implement the Energy audit report.

(Further discussed under Agenda item No. 46.5)

Item No. 45.6 : To discuss and approve the master plan of main campus, Kapurthala after including International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre established at existing Lal Kothi.

Agenda	Decision
<p>Punjab Technical University has established International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre after renovation of existing building of Lal Kothi at main campus, Kapurthala. The Architect will be making a presentation on the master plan of main campus, Kapurthala after including this centre in the plan.</p> <p>The matter is placed before the Committee for discussions and approval of the revised master plan please.</p>	<p>After detailed discussions, committee approved master plan of main campus, Kapurthala after including International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre established at existing Lal Kothi. However, it has also been decided that this centre should be shifted to the main academic area of the University after completion of construction of the academic area. The buildings presently being used by International Resource Center-Universal Human Values & Ethics may be used for some other purpose. It was also suggested that the existing boundary wall of this centre may be dismantled so that this become a part of the main campus.</p>

Item No. 45.7 : To discuss and approve the layout and estimate for construction of internal road connecting existing road near main gate to International Resource Center-Universal Human Values & Ethics (IRC-UHVE).

Agenda	Decision
<p>Punjab Technical University has established International Resource Center-Universal Human Values & Ethics (IRC-UHVE) centre after modifying the existing building of Lal</p>	<p>After detailed deliberations, committee approved construction of approach road from Administrative building to International Resource Center-Universal Human Values & Ethics (IRC-UHVE)</p>

Kothi at main campus, Kapurthala. Presently, there is no access road to this centre from the main campus. Architect will be making a presentation of the layout and estimate for an approach road to this centre from the main administrative building.

centre from proposed residential area side in the campus. It was decided that paver blocks should be used for construction of this approach road.

The matter is placed before the Committee for discussions and approval of layout and estimate of the proposed approach road please.

Item was discussed with the permission of the Chair.

Item No. 45.8 : Payment of fee to the Architect for preparation of building plans of proposed Auditorium and hostels at main campus, Kapurthala.

After detailed deliberations, committee advised Executive Engineer, PTU to put up the case in the next meeting with details and basis of payments made earlier for similar cases.

(Further discussed under Agenda item No. 46.7)

Item No. 46.3: To discuss and finalize the provision of projector or LED screen for the proposed auditorium at main campus, Kapurthala.

Agenda	Decision
<p>In 45th meeting of the committee (agenda item No. 45.3), Architect was advised to explore the possibility of provision of LED screen in place of projector for the proposed auditorium at main campus, Kapurthala. Accordingly, the Architect has forwarded an offer for provision of LED screen for an amount of Rs. 330.75 lacs. (placed at Annexure-A). The Architect will be making a presentation of the comparison of cost of projector and LED screen.</p> <p>The matter is placed before the Committee for discussions and decision please.</p>	<p>After detailed discussions and deliberations, committee agreed for provision of LED screen for proposed auditorium at main campus, Kapurthala. However, specifications, estimates etc. will be discussed and approved at the time of procurement depending upon the technology available at that time. It was also agreed to provide conduits etc. for the conventional projector to take care of the situation in case the provision of LED screen is ruled out at a later stage.</p>

Item No. 46.4: To discuss and approve the estimate for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala.

Agenda	Decision
<p>In 45th meeting of the committee (agenda item No. 45.3), it was advised by committee that estimates for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala should be re-examined. The Architect will be making a presentation of the estimates of these items.</p> <p>The matter is placed before the Committee for discussions and decision please.</p>	<p>After discussions, committee approved the estimate for speakers, amplifiers and microphones for the proposed auditorium at main campus, Kapurthala for an amount of Rs. 81.26 lacs. It was decided by the committee that tenders for execution of these works shall be invited on performance basis only.</p> <p>Additionally, it was also agreed that the complete tendering process/scheme for execution of various works of the auditorium shall be discussed and approved by the Building committee.</p>

SMI

Item No. 46.5 : To discuss and finalize the provision of LED lights in place of CFL lights in college buildings and library building (under construction) of Punjab Institute of Technology, main campus, Kapurthla.

AGENDA :

In 45th meeting of the committee (agenda item No. 45.5), while discussing the energy audit report of PTU's main administrative building, it was suggested by committee that possibility of providing LED lights in college buildings and library building (under construction) of Punjab Institute of Technology, main campus, Kapurthla may be explored.

In this regard, it is submitted that in the approved estimates and works awarded to the contractors by PWD, there is provision of CFL lights. The extra financial implication for replacing the CFL lights with LED lights has been worked out by PWD and the Architect separately, which are as under. The payback period worked out by the Architect is also shown:

S. No.	Building	Amount as per approved estimate	Additional Financial Implication worked out by		Payback Period
			PWD	Architect	
1	College Building-I and Seminar Hall.	Rs. 63.31 lacs	Rs. 70.81 lacs	Rs. 78.02 lacs	25 years
2	College Building-II and Library	Rs. 104.53 lacs	Rs. 101.46 lacs	Rs. 113.76 lacs	22 years
3	College Building-III, Hostels & Director Office	Rs. 36.23 lacs	Rs. 58.58 lacs		
Total		Rs. 204.07 lacs	Rs. 230.85 lacs		

(Details are placed at Annexure-B)

The matter is placed before the Committee for discussions and decision please.

DECISION:

After detailed discussions and deliberations, committee decided for provision of CFL lights, as originally approved in the estimates.

Item No. 46.6 : To discuss and approve the revised layout plan of proposed buildings for Punjab Institute of Technical Teachers Training and Research (PITTTR) at Ladowali Road, Jalandhar.

Agenda	Decision
<p>Two acres of land was transferred by Punjab Govt. to PTU at Ladowali road, Jalandhar for establishment of Punjab Institute of Technical Teachers Training and Research (PITTTR). The concept plans for this proposed institute were approved in 37th meeting (Agenda item No. 37.3) of the building committee.</p> <p>Earlier, it was planned that entrance for this institute will be kept from Master Tara Singh Nagar, which is a residential area. During one of the discussions held with Municipal Corporation, Jalandhar, it was informed by them that building plans will not be approved if entrance of the institute will be from Master</p>	<p>Committee approved the revised site plan/scheme presented by the Architect.</p>

having road width less than the required width. Whereas, on other side of this institute, there exists Guru Nanak Dev University's campus. To have access of proposed PITTR from GNDU side, a meeting was held under the chairmanship of Principal Secretary, Technical Education, Punjab, wherein it was decided that the entrance road from GNDU campus side will be shared between PTU and GNDU but land equivalent to the 50% of the area of the road being shared will be transferred by PTU from its allotted land to GNDU. On the basis of this decision, land area of about 612 Sqm. will be shifted from PTU area to GNDU for sharing of access road. Based upon the revised area available, the Architect has revised the site plan and being presented in the meeting. However, the building plans shall be got approved from Municipal Corporation, Jalandhar with allotted land area of two acres only.

The matter is placed before the Committee for discussions and approval of the revised site plan please.

Item No. 46.7 : To discuss and finalize the fee payable to the Architect for preparation of building plans of auditorium and hostels proposed at main campus, Kapurthala.

AGENDA:

In 45th meeting of the committee (agenda item No. 45.8), it was advised by the committee that details and basis of payments made earlier for preparation of building plans (similar cases) is put up in the next meeting. In this regard, it is informed that following payments have been made to the Architect against preparation of building plans of various buildings of main campus, Kapurthala:-

S. No.	Description	Covered Area of buildings approved	Amount Paid	Reference approval of Building committee
1	Housing Project (Phase-II)	17428.0 Sqm.	Rs. 6.0 lacs + S. Tax	20.7
2	College buildings-3Nos, Library, seminar hall and hostels.	31928.0 Sqm.	Rs. 10.99 lacs + S. Tax	27.7

Copies of the minutes of the building committees and agreement signed between PTU and the Architect are placed below at Annexure-C.

On the above basis (area of the buildings), the Architect has requested for release of payment of Rs. 10.03 lacs (including service tax) against preparation of building plans of auditorium and hostels (covered area : 25936 Sqm.).

DECISION:

Committee noted that the documents presented are not sufficient to take the decision. Executive Engineer, PTU was advised to present additional documents like the original recommendations of the committee set up by the H'nble Vice Chancellor, Agendas of 20th and 27th meetings of the building committee etc.

Item No. 46.8 : To discuss and approve the start of construction works of proposed college buildings at Punjab Institute of Technology at Arniwala and Sikhwala.

Agenda	Decision
<p>In 42nd meeting of the building committee (agenda item No. 42.4 and 42.5), committee noted that Punjab Cabinet have approved constitution of new technical university at Bathinda and district Fazilka (Arniwala) and Muktsar Sahib (Sikhwala) will fall under the jurisdiction of the new university. It was opinioned by the committee that new university may have different requirements for these campuses and thus it was decided to defer the approval of design basis reports of these campuses for the time being.</p> <p>In this regard, it is brought to the kind notice of the committee that management of Punjab Technical University has decided to go ahead with construction of proposed buildings (Phase-I) and external development works for these campuses.</p>	<p>Committee noted that University has decided to go ahead with construction of proposed buildings (Phase-I) and external development works of Punjab Institute of Technology at Arniwala and Sikhwala.</p>

Item No. 46.9 : To discuss and approve the estimate for painting of boundary walls Punjab Institute of Technology, Mansa.

Agenda	Decision
<p>The estimate for construction of boundary wall of Punjab Institute of Technology, Mansa was approved in 30th meeting of the building committee (agenda item No. 30.7) for an amount of Rs. 300.0 lacs. Further, the revised estimate for an amount of Rs. 409.27 lacs for this work was approved in 44th meeting of the building committee (Agenda item No. 44.6). In these estimates, there was a provision of RCC precast panel for three side walls and CC blocks wall with grills for front wall. There was also a provision of painting of the front wall only (other walls being RCC precast panels) in the initial estimate but the same was not included in the revised estimate. Thus, there is no provision of painting of walls in the approved estimate.</p> <p>During one of the visit of the Architects to site,</p>	<p>Committee noted that buildings and other development works of the campus are yet to be started and it may take 2-3 years time to make the campus operational. If painting of the boundary wall is done at this stage, repainting may be required at the time of start of the campus and expenditure done at this stage will become redundant. After detailed discussions and deliberations, committee decided that the work of painting of boundary wall may be taken up at the time of making the campus operational.</p>

they were of the opinion that finish of the precast panels is not up to the level as it was envisaged at the time of preparation of design/estimate. The Architect suggested that complete wall (all the four sides) should be got painted to have better appearance, finish and durability. The Architect has submitted an estimate for an amount of Rs. 36.35 lacs for painting of all the walls of the institute (placed at Annexure-D).

The matter is placed before the Committee for discussions and decision please.

Item No. 46.10 : To discuss and approve authorization to PWD for taking Environmental Clearance for construction of proposed auditorium and hostels buildings at main campus, Kapurthala.

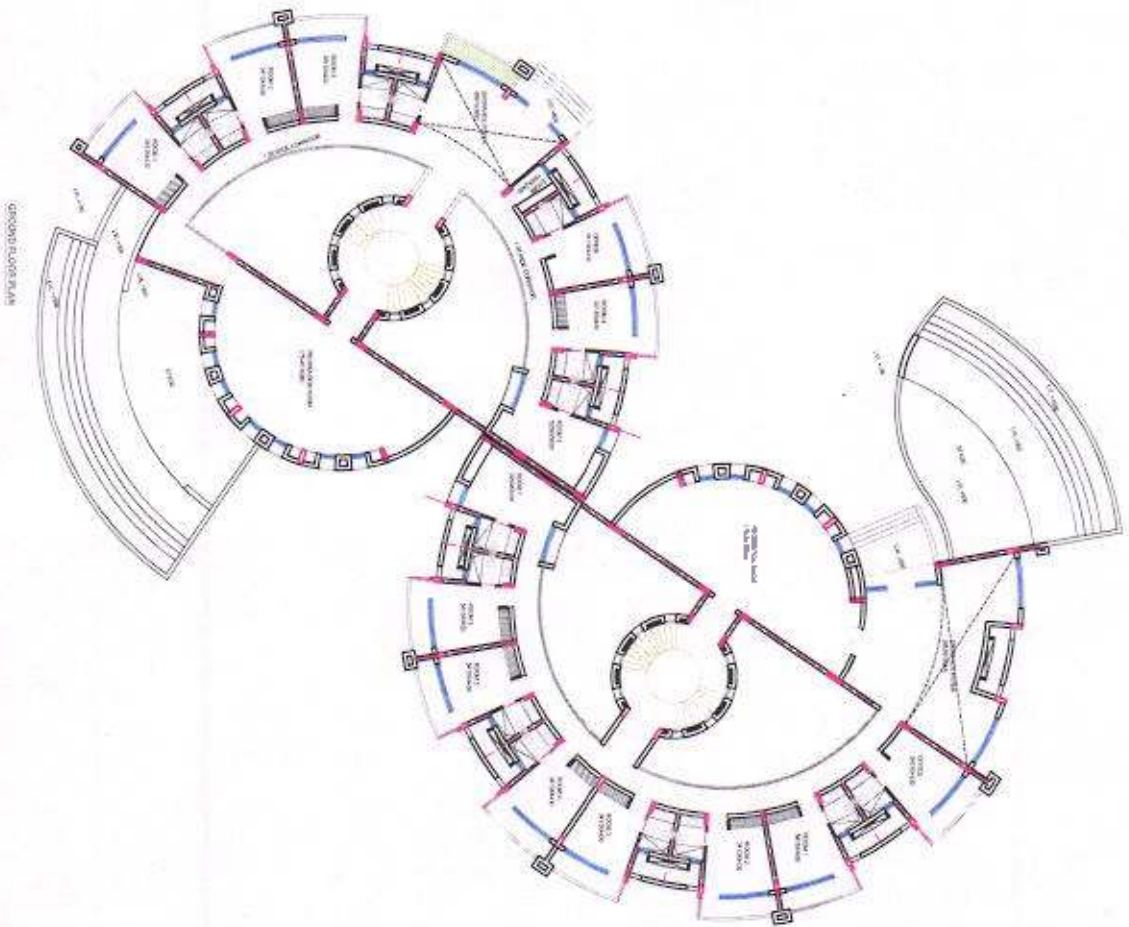
Agenda	Decision
<p>On the basis of conceptual plans approved by building committee for the proposed auditorium and hostels proposed at main campus, Kapurthala, the building plans for these buildings have been approved by Chief Town Planner, Punjab. Before taking up the construction for these buildings, Environmental clearance (EC) from Ministry of Environment and Forest is to be taken. It is to inform that while submitting application for EC, an undertaking, wherein some commitments towards safety measures during execution, control of pollution, facilities & amenities to workers, social responsibility towards workers engaged etc. is submitted and most of these are to be made during execution only. Since, the execution of these works is to be done by PWD, it is proposed that EC for these buildings is taken by PWD so that they are aware of the commitments and are followed during execution.</p> <p>The matter is placed before the Committee for discussions and decision please.</p>	<p>In view of the notification dated 22.12.2014 issued by 'Ministry of Environment, Forest and Climate Change' presented in the meeting, committee noted that Environmental Clearance for building construction projects for educational institutes is not required. However, committee advised PWD/PTU to confirm the same before start of any new construction activity.</p>

K

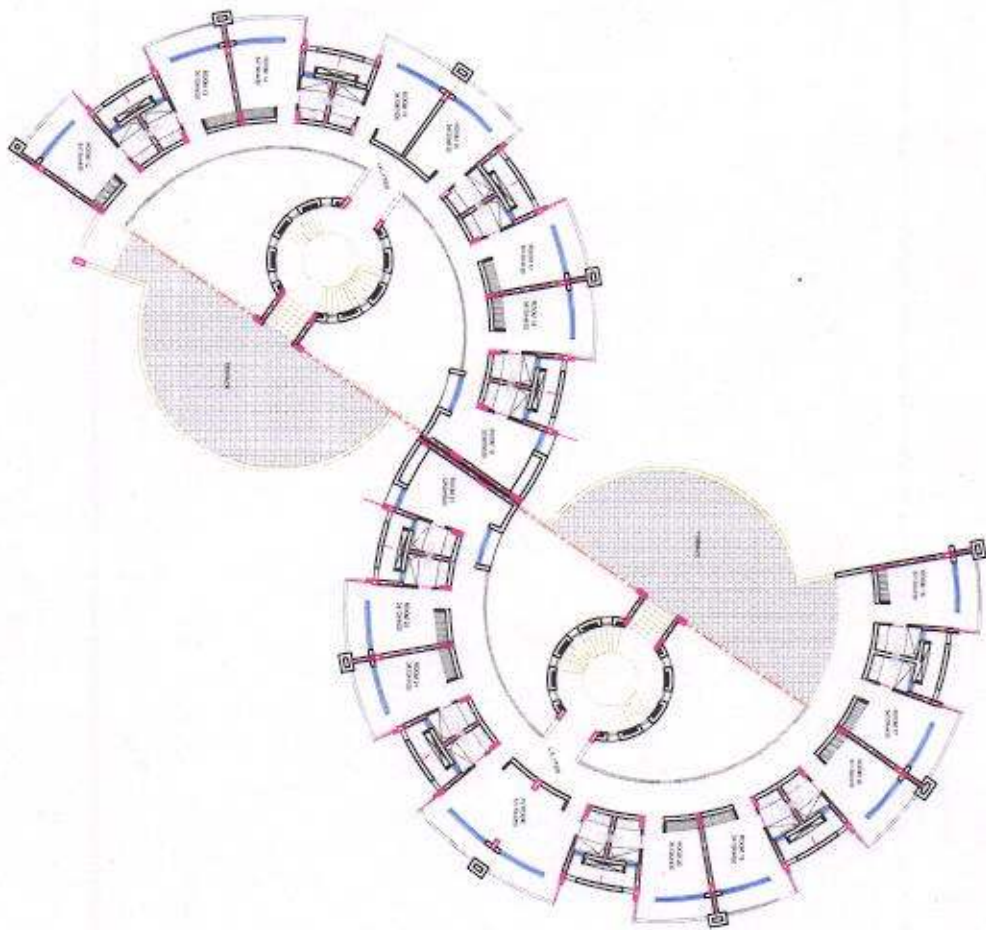
Concept plans and Estimate for setting up sports hostel at main campus, Kapurthala.

SALIENT FEATURES

Capacity	:	52 Students Boys - 33 Girls - 19 (Separate block/entry for boys and girls)
Facilities	:	All rooms with attached toilets. Separate recreation rooms for boys and girls Separate open air theaters for boys and girls
No. of floors	:	Ground plus three floors for boys portion. Ground plus two floors for girls portion.
Total plinth area	:	3015.58 Sqm (32448 SF)
Estimated cost for civil, Electrical & Public Health Works (on the basis of CPWD Plinth area rates).	:	Rs. 733.45 Lacs



CONCEPT DRAWING PUNJAB TECHNICAL UNIVERSITY, JALANDHAR PHASE-IV ARCHITECT PRINCE ARCHITECTS (PVT.) LTD. 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	



RENCANA LANTAI



PT. SANGGARAHATI

CONCEPT DRAWING

PROJEKSI
**PUNJAB TECHNICAL
 UNIVERSITY JALANDHAR
 PHASE IV**

LOKASI
PAKSI TECHNICAL UNIVERSITY

LOKASI
Ambiqumj Ardiha (10/11)

LOKASI
PAKSI TECHNICAL UNIVERSITY

LOKASI
PAKSI TECHNICAL UNIVERSITY

LOKASI
PAKSI TECHNICAL UNIVERSITY

LOKASI
PAKSI TECHNICAL UNIVERSITY

LOKASI
PAKSI TECHNICAL UNIVERSITY

LOKASI
PAKSI TECHNICAL UNIVERSITY

Sports Hostel	
Type of Building -	Hostel
Total Plinth Area -	3,015.58 sq.m
Building / Component	980.62 sq.m
Total covered area-	2,884.44 sq.m
Double height area-	216.13 sq.m
G.F. area-	0.00 sq.m
Total Plinth Area (Excluding Still)-	3,015.58 sq.m
No. of storeys-	G+3
Floor height	3.30 m

Description	Unit	Qty	Nos	Rate		Amt	Explanation
				6	7(Updated)		
2	3	4	5	6	7(Updated)	8 = (4*5*7)	8
A.G.C. FRAMED STRUCTURE							
RCC framed structure upto three storeys							
Floor height 3.30m							
Floors	sqm	3,015.58	1.0	16,500.00	17,655.00	532,40,064.90	
Extra for						0.00	
Every 0.3m additional height of floor above normal floor height of 2.90m.	sqm	3,015.58	1.33	270.00	288.90	11,81,601.42	
Every 0.3m additional height of floor above normal floor height of 2.90m. (Double height areas)	sqm	216.13	12.33	270.00	288.90	7,69,884.67	Double height areas
Every 0.3m higher plinth over normal plinth height of 0.6m (on G.F. area only)	sqm	980.62	1.00	270.00	288.90	2,83,301.12	
Every 0.3m deeper foundation over normal depth of 1.20m (on G.F. area only)	sqm	980.62	6.00	270.00	288.90	16,99,806.71	
Resisting Earthquake forces	sqm	3,015.58	1.00	1,140.00	1,219.80	36,78,404.48	
Total A (1.1.1.a + 1.2.2) =						544,01,666.32	
Total B (1.2.3 to 1.2.9.1) =						64,31,398.98	
SERVICES							
Internal water supply & sanitary installations	% of A			@ 10%		54,40,166.63	
Internal Electrical Installation	% of A			@ 12.5%		68,00,209.29	
Extras for							
Data network conduits	% of A			@ 0.5%		2,72,008.33	
Total C (2.1 to 2.3.2) =						125,12,383.25	
Grand Total E = A+B+C						733,45,446.55	

Rs 2260/- per Hft

A. N. Chowdhry
Chief Engineer (Construction)

PTU PUNJAB
TECHNICAL
UNIVERSITY

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

No. Pr.4/Const/ C.E.C. C-02/354-7529/8646

17-06-2009

1. Sh.N.S.Kalsi, IAS,
Joint Secretary (CS),
Room No.193-A/Z North Block,
Ministry of Home Affair Govt.of India,
New Delhi-1.
2. Dr.R.S.Khandpur, DG, PGSC,
SCO 60-61, Sector 34-A Chandigarh.
3. Sh.Chandra Mohan Member BOG,
H.No.202 Sector-36 A Chandigarh.
4. Sh.S.L.Kaushal,
Advisor (Architecture),
2865 Sector 42-C Chandigarh.
5. Ms.Sarojni Gautam Sharda, PCS,
Registrar PTU-Jalandhar.

Subject: Construction of New Campus of PTU-20th Meeting of the Standing Building Construction Committee.


Dear Sir,

20th Meeting of the Standing Building Construction Committee shall be held under the Chairmanship of Ms.Tejiinder Kaur, IAS, Principal Secretary, Technical Education Punjab at 10.30 A.M. on 22/6/2009 in her office in Mini Secretariat, Sector-9 Chandigarh.

You are requested to kindly make it convenient to attend the meeting.

Thanking you,

Yours sincerely,


(A.N. Chowdhry)
Chief Engineer-PTU
C.C.

1. PS to Principal Secretary, Technical Education, Govt. of Punjab for kind information of the Principal Secretary please.

Encl. Agenda and Agenda Note.

255

6-2/2

PUNJAB TECHNICAL UNIVERSITY-JALANDHAR

SUBJECT: Agenda for the 20th Meeting of the Standing Building Construction Committee.

Item No.20.1 Extension of Time period of Contract of M/S IVRCL,Civil Contractor.

Item No.20.2 Approval of Tender of Bituminous Road Work at the Gate - Rs.1,91,585/-

Item No.20.3 Approval of Detailed Estimate of Landscaping Work of Additional Area Around Administration Building in New Campus of PTU.

Item No.20.4 Status of Phase-II of Construction.

Item No.20.5 Extension of Services of Staff of Construction Cell.

Item No.20.6 Recasting of Committees regarding Design/Construction Procedures.

Item No.20.7 Lumpsum Payment of Rs.6.00 lacs to M/S Archigroup Delhi for extra work for submission of drawings of Phase-II for approval from JDA,PPCB and Environment Clearance.

Item No.20.8 Any other point with the permission of Chair.

- 1 -

(22/3)

PUNJAB TECHNICAL UNIVERSITY-JALANDHAR

Subject:- Agenda note for the 20th Meeting of the standing Building Construction Committee.

Agenda Item No. 20.1 :-Extension of Time period of Contract of M/S IVRCL,Civil Contractor.

The work of Construction of Wing A, B, C and Core in the New Campus of PTU was allotted to M/S IVRCL I&P Ltd vide Ref No. PTU/Const/001/378-380 dated 20/01/2006 for a time limit of 10 months for the Front C Wing and 18 months for the Rear A,B and Core Wings. Last extension in the time limit as applied by the Agency upto 15/2/2008 for the Front Block and upto 31/10/2008 for the Rear Block was approved by the Committee in its 19th meeting held on 11/04/2008.

The Agency could not complete the work by the extended date and submitted applications for time extensions as under:-

- (i) Vide No.IVRCL/PTU/08-09/59 dated 22/10/2008 upto 31/12/2008.
- (ii) Vide No.IVRCL/PTU/08-09/67 dated 29/12/2008 upto 31/01/2009.
- (iii) Vide No.IVRCL/PTU/08-09/70 dated 05/02/2009 upto 28/02/2009.
- (iv) Vide No.IVRCL/PTU/08-09/70-A Dated 27/02/2009 upto 31/03/2009.

The work has been virtually completed by 31/03/2009

Comments by the Executive Engineer in annotated form on the reasons put forward by the Agency are enclosed as Annexure-'A' (Page 5).

As per Clause No.6 Page 078 of the Contract Agreement (Annexure 'B' Page 8),competent authority to grant time extension is this Committee.

Put up for the decision of the Committee.

Agenda Item No. 20.2 :- Approval of Tender of Bituminous Road Work at the Gate- Rs.1,91,585/-

Bituminous Road work at the Gate of the University could not be completed in full width as removal of trees in the forest land along the Jalandhar Kapurthala got delayed due to late receipt of clearance for G O I. For the completion of the work tenders were invited and received on 10/02/09. Two Agencies submitted the tenders & Photocopy of comparative statement is attached as Annexure 'C' (Page 11). Lowest offer of M/S Satish Aggarwal at Rs 1,91,585/- gives a saving of Rs 5161/- i.e. 2.62 % over the present day analytical rates.

Committee may approve the award of work to the lowest tenderer as mentioned above .

257

22/11

Agenda Item No. 20.3:- Approval of Detailed Estimate of Landscaping Works of Additional Area Around Administration Building in New Campus of PTU.

The proposal of landscaping of additional area around Administration Building comprising of grassing of 10 m wide strip along the front diversifying roads and plantation of remaining trees and bushes stands approved by the Architectural Sub Committee in its meeting held on 18/11/2008. Detailed estimate amounting to Rs. 18,31,500/- also stands approved by the Sub Committee in its meeting held on 24/02/2009. Selection of trees & bushes is as per plan of the Architects. Tenders have been invited to be received on 2/7/2009.

The Committee may approve the detailed estimate so that work is carried out.

Agenda Item No.20.4:- Status of Phase-II of Construction.

It is proposed to start construction of Residences for Staff, Registrar's Residence, V.C.'s Residence, Guest House, Convention Centre and Sports Complex. The Project is likely to cost Rs.40.00 crores. Before starting construction the approval of drawings from Jalandhar Development Authority and Environmental Clearances from State Environment Impact Assessment Authority are required. Drawings and reports for submission to Jalandhar Development Authority are awaited from Architect. Notice for prequalification of civil agencies has been advertised.

This is for the information of the Committee.

Agenda Item No.20.5 :- Extension of Services of Staff of Construction Cell.

Extension in the services of the staff mentioned below stand approved upto 31/01/2009. Further extensions are required upto 31/03/2010 except in the case of at Sr. No. 7 below who has left and whose extension is required upto 31/03/2009.

Sr. No.	Name	Designation	Date
1	Sh. A. N. Chowdhry	Chief Engineer	31-03-2010
2	Sh. N. S. Bhatti	Advisor (Electrical)	31-03-2010
3	Sh. Amarjeet Singh Soni	AEE (Electrical)	31-03-2010
4	Sh. R. S. Ball	AEE (Civil)	31-03-2010
5	Sh. V. D. Sharma	AEE (Civil)	31-03-2010
6	Sh. Resham Chand	AE (AC)	31-03-2010
7	Sh. Shingara Singh Safri	AE (Electrical)	31-03-2009
8	Sh. Sunil Bhasin	AE (Civil)	31-03-2010
9	Sh. Remesh Chander Sharma	AE (PH)	31-03-2010
10	Sh. Baldev Singh	Quantity Surveyor	31-03-2010
11	Sh. Ram Parkash	Sr. Auditor	31-03-2010
12	Sh. Dilbag Singh	Quantity Surveyor	31-03-2010
13	Sh. Surinder Pal	Pvt. Secretary	31-03-2010

258

At present the staff is engaged in finalization of accounts and planning of Phase-II. Accounts are likely to be finalized by the end of August when requirement of staff engaged on the job shall be reviewed. Such a staff has consented to go on leave without pay till their services are required for construction of Phase-II.

Committee may approve the extension of the staff upto the date mentioned against each.

Agenda Item NO.20.6 :-Recasting of Committees regarding Design/Construction Procedures.

Following Committees regarding Design/Construction Procedures stand constituted with Dr.R.S.Khandpur D.G.,PGSC and member BOG as Chairman and work of Phase-I has been completed with the stearnanship of these Committees:-

1. Architectural Sub Committee.
2. Committee for the approval of N.S.Items.
3. Tender Evaluation Committee.
4. Pre-bid Committee.

Dr.R.S.Khandpur has desired to be relieved of the Chairmanship of the Committees but has agreed to be a member of the Committees. It is proposed to appoint V.C.as Chairman of these Committees and appoint Dr.R.S.Khandpur as member in addition to other members.

Put up for the approval of the Committee.

Agenda Item No.20.7 :- Lumpsum Payment of Rs.6.00 lac to M/S Archigroup Delhi for extra work for submission of drawings of Phase-II to JDA for approval and PCB for Environment Clearance.

Before starting construction above approvals are mandatory. We have given an undertaking to State Level Environment Impact Assessment Authority that Environment Clearance shall be obtained before starting construction and on this undertaking, violation on our behalf of in case of Phase-I was condoned.

Architects were requested to supply plans vide Reference No.PTU/const/Phase-II/160/3618 dated 04/09/2008. Four sets of plans indicating following requirement of JDA were asked for vide NO.PTU/const/Phase-II/277/6869 dated 17/03/2009:-

- (a) Site Plan.
- (b) Plans, Elevations and sections of proposed Buildings.
- (c) Water Supply, drainage plans, Scheme for fire safety and electrical system for air conditioning.

Architects vide their Reference No.AA (R)/PTU/3002 dated 08/04/2009 (Annexure 'D' Page 15) submitted that supply of drawings is not in their scope and demanded extra fee for it which works out to Rs.12.00 lacs approximately. A meeting was convened with them under the Chairmanship of Dean (Academics) on 21/04/2009 in which they were intimated that preparation of Drawings and Reports is already contained in the Agreement and there is no question of paying any additional fees. They were informed of the same position vide Ref.No.PTU/const/PH-II/309/7651 dated 24/04/2009.(Annexure 'E' Page 16). A Photo copy of the Clause 2.0 of the Contract Agreement defining scope of the work is enclosed as Annexure 'F' Page 17.

When the plans were not forthcoming a meeting was convened with them under the Chairmanship of V.C.on 12/05/2009 in which above position was explained. Sh.S.L.Kaushal Advisor (Architecture) who has been associated with the Project right from the beginning stated in the meeting that much work is not involved which has to be done in any case for the preparation of the final plans. However Sh.S.S.Bais,Principal Chitkara School of Planning and Architecture Rajpura stated that Municipal drawings are different and payment of Architects on man-hour basis can be considered.

V .C.constituted a Committee comprising of Sh.S.L.Kaushal Advisor (Architecture),Sh.S.S Bais,Principal Chitkara School of Planning and Architecture,Rajpura and Sh.A.N.Chowdhry,Chief Engineer to consider the issue. The report of the Committee is as under:-

"The Committee met on 5/6/2009 at Chandigarh. It is observed that preparation of Drawings for Municipal (JDA) approval is not in the scope of the Architect as per the Agreement. Architect has to do extra work and has to prepare as many as 28 drawings as reported by him. For extra work ,extra fee was negotiated with him. The Committee recommends that lumpsum amount of Rs.6.00 Lacs may be paid to him which is acceptable to him."

The recommendation of the Committee is acceptable to the University. However as per decision of the Board of the Governors in its 23rd meeting, Building Construction Committee has been authorized to approve all expenditure inconnection with construction.

The Committee may therefore approve the payment of Rs.,6.00 lacs to M/S Archigroup, Architect New Delhi.

Agenda Item No.20.8:- Any other point with the permission of Chair.

260

2017

<p>Question</p> <p>Subject: Construction of Wing A,B & C at PTU site, Jal. Kapurthala Highway- -Request for Extension of Time limit upto 31/3/09.</p> <p>Name of Agency:- M/S IVRCL I&P Ltd</p> <p>Dear Sir,</p> <p>All the major Cement works have since been completed and the house keeping works is in progress. 98% of the total work has been completed. Work amount i.e. 40 lakhs is balance due to sister agencies. Due to non completion of some works of other agencies and the non approval of rates for the NS Item the following mentioned works were incomplete.</p> <p>Incontinuation to our letter NO.IVRCL/PTU/08-09/38 Dated 01/03/08, we invited your kind attention to the following points for granting us further time extension for wing A,B and Core upto 31st December 2008 and further requested vide no. IVRCL/PTU/08-09/067 dated 29/12/2008 for extension upto 31/01/2009 and letter no. IVRCL/PTU/08-09/70 dated 5/2/09 for extension upto 28/2/09 & letter no. IVRCL/PTU/08-09/70 dated 27/2/09 for extension upto 31/3/09.</p> <p style="text-align: right;">Application dated 22/10/2008</p> <p>1. The lift agency has not yet given clearance for the lift wall cladding work, due to which the total cladding works is incomplete in all the lifts (i.e.) Passenger Lifts and Goods Lift.</p>	<p>The work of construction of Wing,A,B,C & Core Area in New Campus of PTU on Jalandhar Kapurthala Road was allotted to M/S IVRCL I&P Ltd.vide letter No.PTU/XEN/Const/001/378-380 Dated 20/01/06 . The last extension in time limit was granted upto 15/2/2008 for the front block G+3 (Four storey building) and upto 31/10/2008 for the rear G+7 (Eight storey + basement)The front C Block (G+3) was virtually completed by 15/2/2008 and the University started functioning there as per its requirements and convenience. The Rear Block including basement i.e.G+7 was not completed by the agency upto extended date i.e. 30/10/2008. Comments regarding Letter of IVRCL I&P Ltd.No.PTU/08-09/59 Dated 22/10/2008 and further extension upto 31/1/2009 vide No.IVRCL/PTU/08-09/67 D6.29/12/2008 and letter no. IVRCL/PTU/08-09/70 dated 5/2/09 for extension upto 28/2/09 & letter no. IVRCL/PTU/08-09/70 daicd 27/2/09 for extension upto 31/3/09 are given as under in annotated from:-</p> <p>1. Agreed-The lift agency M/S Kone Elevator India Pvt. Ltd. delayed clearance for cladding work on walls of goods lift and lift in G+3.Clearance was given by M/S Kone Elevator India Pvt Ltd on 25/3/2009 but the agency could not complete remaining work upto the last date of extension viz.31/10/2008.</p>
--	--

205

AC approved to submit shop Drawing for expansion Joint which were submitted at a later stage on 12/09/2008 and the approval for the same was given vide no. PTU/SE/IVRCL/1189 dated 26/09/08. The approval for N. S. item rate of expansion joint was also sanctioned vide No. PTU/IVRCL/1162-68 dated 25/11/08.

3. Not agreed. N.S. rate were submitted by IVRCL vide No.IVRCL/PTU/08-09/57 dated 24/9/2008 and the same was sanctioned vide No .PTU/SE/IVRCL/1262-66/5103 Dated 25/28-11-08 after proper verification of rates from the market.

4. Not agreed. Rainy season has been normal.

5. Not agreed. Agency to whom Air Conditioning work is allotted could not give clearance for false ceiling to be done by M/S IVRCL I&P Ltd.because of the non availability of power in G+7. M/S Suvidha Engineer India Pvt Ltd completed Air Conditioning work on 15/2/09, so M/S IVRCL I&P ltd. required more time beyond 15/2/09 to complete false ceiling work.

6. Not agreed.M/S IVRCL I&P Ltd.never asked in writing for providing three phase electric supply . The same would have been given as the Generators stand installed/commissioned at site.

7. Agreed.

2. The approval for your letter No.PTU/SE/IVRCL/1189 DL26/09/08 but rate for this NS item is not yet approved. In absence of approval of rate for N.S.item,we are not in a position to place the order for the required materials. The urgency for approval of rate was already expressed vide our letter NO.IVRCL/PTU/08-09/56 dt.10/10/08.

3. Similarly the NS rate analysis for Race way stands submitted vide our letter No.IVRCL/PTU/08-09/51 dt.24/09/08. But the race has not so far been approved which has again resulted delay in procurement of material for raceway.

4. The unexpected high intensity rains during July and August has interruptedly disturbed our internal and external works.

5. The A.C.agency has not given clearance for the false ceiling work in some part, so false ceiling and painting works is balance.

6. We are not in a position to test the electrical system in fully as there is not PSEB supply available at the site as on today.

7.The disbursement of our RA bills from your side was abnormally delayed than the stipulated time as per the Contract Agreement. Thus the delayed payment had affected abnormally delay in procurement of materials. The payment details were enclosed as per annexure -1.

Application dated 29/12/2008.

8. Due to extreme prevailing cold weather and extreme fog in the end of December 08, the progress of work has hampered significantly.

9. The decision for providing external special quality paint instead of snocem in shafts was conveyed very late. The rate of special quality paint was submitted by us vide No.IVRCL/PTU/08-09/30 Dt.5/5/2008 and approved vide No.PTU/SE/Wing/1106-1110 dt.14/8/2008

10. The University started functioning in G+3 in February, 2008, so as the construction work in G+7 block was in progress University started to shift material which hampered the progress of work as the work had to be executed with high precautionary measures to avoid any accident with the labour shifting University material through same stairs which are also used for construction purpose.

Application Dated 5/2/2009

11. Expansion joint material is not available in India and is being imported which is likely to reach the site by 7/2/2009.

8. Winter season was normal.

9. Not agreed, because only snocem has been got done in shafts.

10. Work has been hampered to some extent but agency should have completed the work by 31/10/2008 and such a situation could have been avoided.

Not agreed, it was well known that expansion joint material was to be got imported. Agency should have arranged the same earlier.

[Signature]
15/5/09

22/9

6/2/10

ANNEXURE - B

0078

The Punjab Technical University - Jalandhar

5.4 Claims, disputes and other matters in question relating to the performance of the Work or the Interpretation of the Contract Documents shall be referred in writing to the Engineer, who will review the referred matter, and convey his decision to the contractor

5.5 The Engineer shall invite the consultants and contractor as necessary for the co-ordination meetings at which the contractor shall present progress reports, plans and everything that may be required to assess the work status and related matters

6 Time schedule and delays

6.1 Contract time: The time of completion of the different blocks shall be as follows:

- a. Wing A, Wing B and Core (Basement + G + 7 floors) - 18 calendar months from the date of Commencement; and
- b. Wing C (G + 3 floors) - 10 calendar months from the date of Commencement.

6.2 Commencement of works: The contractor shall commence performance of the work on ward of LOI.

6.3 Time is the essence of the contract and contractor shall undertake to complete the work within stipulated time. In the event the contractor does not complete the work the Employer shall suffer irreparable financial losses and damage which the contractor shall have to make good subject to the terms and conditions of the formal agreement.

6.4 The contractor shall have complete control of the works and shall effectively direct and supervise the work so as to ensure conformity with the contract documents and completion of the works within the time stipulated. He shall be solely responsible for construction means, and methods, techniques sequences and procedures and for coordinating various parts of the works, whether performed by him or by any sub- contractors.

6.5 The totality of this project covered by this contract shall be completed in all respects within the stipulated time. The contractor shall guarantee completion of the works within the stipulated time, or any extension thereof pursuant to general conditions of contract.

6.6 Within 5 days of the award of the contract, the contractor shall furnish the Engineer a detailed program chart for the works, critical path analysis, procurement schedules and all related manpower and other resource schedules (using MS PERT). The schedule shall be reviewed

by the Engineer, amended if necessary and approved for the implementation by the contractor.

- 6.7 The contractor shall adhere closely to the approved schedule, closely monitor progress of work, promptly report and delays and submit catch up action plans to make good such delays to the Engineer.
- 6.8 Any delays due to any reason whatsoever shall be the responsibility of the contractor and shall attract penalties.
- 6.9 Within one fortnight of the occurrence of any of the following, which the contractor might regard as impediments in the progress of work, the contractor shall apply in writing to the Engineer for extension of time, setting out the reasons for delays sought to be condoned. The contractor shall not be entitled to extension of time if he fails to apply as above.
 - a. Addition, alteration or substitution ordered in the work, which could have a significant time impact and issued to the contractor an official change order only.
 - b. Act of god or force majeure, i.e. a situation arising out of any occurrence totally beyond the control of the contractor, and explicitly excluding consequences of actions of the contractor or his staff or agents.
 - c. Forced closure of the works by a general political strike and unrest not related to contractor's labour or personnel.
- 6.10 The contractor's application for extension of time in any of the above circumstances shall be considered by the BOG Committee and its decision shall be final and binding.
- 6.11 The granting of any extension of time shall not entitle the contractor to claim any additional remuneration or consideration whatever for costs incurred as a result of such delays or due to cost escalation.
- 6.12 The contractor shall also be liable for all incidental costs and expenses incurred by the Employer on account of the delays including fees payable to the consultants for the entire overrun period until final completion.
- 6.13 **Compensation For Delay:** The time allowed for carrying out the work as entered in the Tender shall be strictly observed by the Contractor and shall be reckoned from the date on which the order to commence work is given to the Contractor. The work shall throughout the stipulated period of the Contract be proceeded with all due diligence (time being deemed to be the essence of the Contract on the part of the Contractor) and the Contractor shall pay as Liquidated Damages and

For NTRCL Infrastructures & Services Ltd

Authorized Signatory

Architectural Engineer

265

not by way of penalty an amount equal to one percent or such smaller amount as the Engineer may decide, on the value of accepted Tender for every week or part of a week that the work remains uncommenced or unfinished after the expiry of the completion date. And further to ensure good progress during the execution of the work the Contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete one fourth of the work before one fourth of the whole time allowed under Contract has elapsed; and one half of the work before one half of such time has elapsed and three fourth of the work before three fourth of such time has elapsed. Provided always that the entire amount of compensation to be paid under the provisions of the clause shall not exceed ten percent of the value of the accepted Tender. BOG Committee may on representation from the Contractor reduce the amount of compensation and its decision in writing shall be final.

14 The Contractor may make a representation to the BOG Committee to reduce the amount of penalty and its decision in this regard shall be final. Any money due to the Contractor or lying to his credit with the PTU will be adjusted from the amount of extra expenses incurred.

Employers right to take over work or terminate contract

The Employer shall be entitled to take possession of the site and works and to remove the contractor giving the contractor seven days notice under any of the following circumstances.

- 1.1 If in the opinion of the Engineer, the contractor has failed to proceed with the work with due diligence and failed to make such progress as would enable the works to be completed within the stipulated time.
- 1.2 The contractor has suspended the work in contravention of the conditions of the contract and failed to resume the work within seven days of receipt of such notice from the Engineer.
- 1.3 The contractor has abandoned the work.
- 1.4 The contractor has neglected or failed persistently to implement instructions of the Engineer after due written warnings.
- 1.5 The contractor has sub-let or assigned the work or any part thereof without the written consent of the Engineer.
- 1.6 The contractor has become or is adjudged to be insolvent.

1.2 Use of completed portions: Subject to "6.1" above the Employer shall have the right to take possession of and use any completed or partially completed portion of the work notwithstanding that the time for completing the entire work may not have expired. Taking such

Handwritten signature

Handwritten signature

For I.T.C.I. Instructions: (P.V.N.)

Analysis of cost for...

1. Collection of Binumen 60/70
0.050 M. T. @ 35500/-

Rs 1775.00

2. Labour for Tack Coat on
existing black top Surface.

Rs 38.50

3. Add 380% Premium

Rs 146.30

Total

Rs 1959.80

Rate per Sqm

Rs 19.598

Say:-

Rs 19.60 Sqm

22/14


CULTIVE ENGINEER
T. C. ENGINEERING UNIVERSITY

258

22/15

Analysis of rate for providing and laying designated 75mm compacted thick B.M. over tack coat.

Unit = one M.T.

Material one cum

Sl.No.	Name of item	Density = 2.2 gm/cc	Rate
1.	Collection of 20mm gauge stone metal @ 0.5667 cum @ 788.50/cum		446.84
2.	Collection of 11.2 mm gauge bajri 0.5667 cum @ 788.50/cum		446.84
3.	Collection of coarse sand 0.283 cum @ 673.30 per cum		190.54
4.	Collection of bitumen @ 4% 0.088 M.T. @ 34465/-		3032.90
	Total: Rs.		4117.14
	Rate per M.T. = 4117.14/2.2 =		1871.42 (A)
5.	Labour for laying and mixing B.M. with an Av. 14 Kms Lead 1 Km. 1--13 Kms Total: Add 500 premium Total:- Rate per M.T. 1278/2.2 =		148.00 65.00 213.00 1065.00 1278.00 580.90 (B)
	Grand total rate per M.T. A+B		2452.32
	Say:-		2452.00


 ACCOUNT ENGINEER
 J. J. S. TECHNICAL UNIVERSITY
 JALDHARA

22/16

Analysis of rate for providing and laying 30mm thick compacted SDBC at site of work.

Density 2300 Kg/MT

Material (grading) as per data book (output 1.95 cum material)

Volum = $2300 \times 0.95 / 1.5 = 1.456$

Plant near Dyalpur

S.No.	Name of Item	Rate (Rs.)
1.	Collection of 12mm bajri 57% = 0.83 cum @ 752/- 20mm nominal aggregate = 0.83 cum @ 788.50	624.00 654.45
2.	Collection of Course sand @ 41% of 1.456 = 0.597 cum @ 673.30	401.96
3.	Filler 2% (lime/cement) = $218.5 \times 2\% = 43.70$ @ Rs. 4500.00	196.65
4.	Bitumen 80/100 @ 5% of mixed material = $2300 \times 5 = 115$ Kg @ 34465/-M.T.	3963.48 <u>5840.54</u>
	Rate per M.T. $34465 / 2.3 = 5840.54 / 2.3 = 2539.36$ (A)	<u>2539.36</u>
5.	Labour for laying SDBC lead 14 Kms 1 Km lead = 151.00 Premium 500% = 755.00 13 Kms lead = 65.00 Premium 500% = <u>325.00</u> Rs. = $1296.00 / 2.3 = 563.48$ (B)	
	Total A+B = $2539.36 + 563.48 = 3102.84$ Say: Rate per MT = 3103/-	<u>563.48</u>

SCOUTING ENGINEER
TECHNICAL UNIVERSITY

27/17



Archigroup Architects (Regd.)

STUDIO : 5/304, SIKKA COMPLEX, PRIET VIHAR COMMUNITY CENTRE, VIKAS MARG, DELHI - 110092 TEL : 011-22509766, 011-22509767 FAX : 011-22509767
MAIL : mail@archigroup.org WEBSITE : www.archigroup.org

ER
CWS
17/4

Ref No. : AA (R)/PTU/ Phase II/ 3002
Date : April 8, 2009

Mr. A.N. Chowdhry (Chief Engineer)
Punjab Technical University
Jalandhar

Project: The new campus of the Punjab Technical University, Jalandhar
Subject: Submission drawings for PTU.

Sir,

With reference to your letter no. PTU/Const/PhaseII/277/6869 dated 17.3.2009 about submission of drawings for approval from PUDA and Jalandhar Development Authority, may we present the following for your kind consideration:

1. At the time of signing the contract with us, the PTU site on the Jalandhar - Kapurthala highway was outside the municipal limits both from Jalandhar and Kapurthala.
2. In order to economize on our fee during negotiations this component was not included in our scope of work. Stages of payment were also decided accordingly without incorporating any stage for payment for these services.
3. Now that additional drawings have to be prepared for this component, we request that additional fee should be paid for the extra work involved at our end.
4. We request that the additional fee for this work may be calculated as per the percentage norms defined by the Council of Architecture in the Comprehensive Architectural Services (copy attached). The council defines under Stage 3 (a) 10% of the total fee on submission of drawings for municipal approval; and (b) 5% on approval of drawings from the authority. In our case the professional fee will be the percentage agreed with you which is much lower than Council's specifications for the fee.
5. This matter is pending for the Phase I building also for which we had supplied the drawings of Phase I for submission to PUDA vide our letter no. AA (R)/PTU/ 1912 dated July 26, 2006 in response to your letter no. PTU/XEN/Archi-01/129 dated 19/07/006 and also for approval from Environment Department.

A confirmation of this may please be conveyed at the earliest so that we can prepare and submit the drawings.

Thanking you,

Truly yours,

Rajiv Aggarwal

CC The Dean Academics, Punjab Technical University, Ladowali Street, Jalandhar

Encl: as above.

27/1



A. N. Chowdhry
Chief Engineer (Construction)

PTU PUNJAB
TECHNICAL
UNIVERSITY

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

Ref. No. PTU/Const/PH-II/2009/7651

Date 24-04-2009

M/S Archigroup Architects,
5/304 Sikha Complex,
Preet Vihar Community Centre,
Vikas Marg-Delhi.

Subject: Submission of Drawings for PTU.

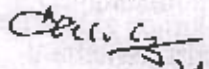
Dear Sir,

Kindly refer to your Reference No.AA(R)/PTU/Phase II/3002 Dated 8/4/2009. The preparation of Drawings, Plans and Reports desired by the University vide No.PTU/Const/Phase II/277-6869 Dated 17-3-2009 is already contained in the scope of work as per the Agreement signed by the University with M/S Archigroup.No additional drawings are required. Therefore there is no question of paying any additional fees. No charges for supplying drawing of Phase-I for approval from PU/DA are pending.

You are requested to supply the drawings immediately as approval from JDA and clearance from State Environment Authority is getting delayed.

Thanking you.

Yours sincerely,


(A.N.Chowdhry)
Chief Engineer.

AND WHEREAS the Architects are willing to undertake Master Plan and Architectural Design consultancy services of the entire project, in consideration of the professional fees to be paid to the Architects, as hereinafter provided on the terms and conditions as set forth hereinafter, and taking into account all activities specified under the scope and elaborated under the clause 2.0 and 3.0 of this agreement.

1.0 DEFINITIONS:

Unless Context or consistency demands otherwise the following terms shall have meaning assigned to them as stated below:

- 1.1 "Architects" shall mean M/S Archigroup Architects (Regd.) which expression shall unless repugnant to the context or meaning thereof includes the Partners of the said firm, or the survivors of them.
- 1.2 "Statutory Authority" shall mean any competent authority established by or under Indian Law and having jurisdiction over any aspect(s) of the project.
- 1.3 "Consultant" shall mean an individual, firm, or company retained or employed by the Architect to perform services.
- 1.4 "Project" shall mean the various buildings as per the program to be given by the University.
- 1.5 "Project Phases" shall mean various phases of the planning and construction as per the requirements of the University.
- 1.6 "Stage(s)" shall mean the division into parts of services to be performed by the Architects In all Project Phases.
- 1.7 "University" shall mean the Punjab Technical University, Jalandhar represented by its Registrar or Its authorized officer(s).
- 1.8 "Completion" shall mean that the work on any Project Phase or portion thereof is complete.

2.0 SCOPE OF WORK:

The Architects will be required to provide services in respect of the following:

- 2.1 Taking University's instructions and preparation of design brief.

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

- 2.2 Architectural design including structural design for the building blocks.
- 2.3 Sanitary, plumbing, drainage, water supply and sewerage designs.
- 2.4 Electrical, electronic, communication systems and design.
- 2.5 Heating, ventilation and air conditioning design (HVAC) and other mechanical systems.
- 2.6 Elevators, escalators, etc.
- 2.7 Fire detection, Fire protection and Security systems, etc.
- 2.8 Periodic Inspection and evaluation of Construction works.
- 2.9 Use of Non conventional sources of energy.
- 2.10 Innovative latest technologies with cost optimization.
- 2.11 Rain water harvesting.
- 2.12 Recycling of wastewater.
- 2.13 Solid waste Management.
- 2.14 Tender for construction.
- 2.15 Roads and landscaping Architecture.

3.0 SCHEDULE OF SERVICES:

The Architects shall, after taking instructions from the University, render the following services:

3.1 Master Plan Stage (Stage 1):

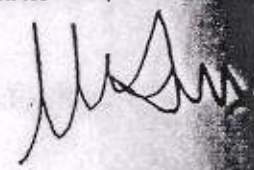
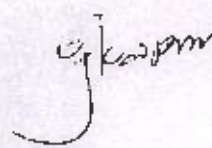
- 3.1.1 Preparation of concept design showing circulation parking open spaces and external architectural form in plan.

3.2 Master Plan Stage (Stage 2):

- 3.2.1 Obtain approval of all the designs and drawings detailed above from University after incorporating university's suggestions and modifications.

3.3 Architectural Design Services - Preliminary Design and Drawings [Stage 1]:

- 3.3.1 Ascertain Client's requirements, examine site constraints & potential and prepare a design brief for Client's approval.



A. N. Chowdhry
Chief Engineer (Construction)

PTU PUNJAB
TECHNICAL
UNIVERSITY

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

PTU/Cons-1/SBCC-02/181-388/8913

30-06-2009

1. Sh.N.S.Kalsi Joint Director (CS)
Room No.193-AZ,North Block,
Ministry of Home Affair-Govt.of India, New Delhi-1
2. Dr.R.S.Khandpur,Member BOG,
Director General,Pushpa Gujral Science City,
SCO 60-61,3rd Floor, Sector 34-Chandigarh.
3. Sh.Chandra Mohan, Member BOG,
H.No.202,Sector 36-A Chandigarh.
4. Sh.S.L.Kaushal,
Advisor (Architecture),PTU
2865,Sector 42-C Chandigarh.
5. Smt.Sarojini Gautam Sharda PCS,
Registrar-PTU.

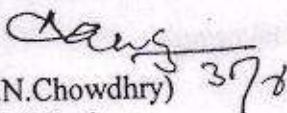
Subject: Minutes of the 20th Meeting of the Standing Building Construction Committee held on 22/6/2009 under the Chair personship of Ms.Tejjinder Kaur,IAS, Principal Secretary, Technical Education,Govt.of Punjab in her office at Chandigarh.

Dear Sir,

Please find enclosed herewith minutes of the above said meeting for your kind information and further necessary action, please.

Thanking you,

Yours sincerely,


(A.N.Chowdhry) 370
Chief Engineer.

Encl.As above.

C.C.

1. Sh.N.S.Bhatti Advisor (Electrical) H.No.3040 Sector 19-D Chandigarh.
2. Sh.V.D.Sharma,Executive Engineer-PTU.
3. C.O.F-Jalandhar alongwith copy of the Agenda.

275

(26/2)

PUNJAB TECHNICAL UNIVERSITY

Subject:- Minutes of the 20th Meeting of the Standing Building Construction Committee held on 22/06/2009 under the Chairmanship of Ms. Tejinder Kaur, IAS, Principal Secretary, Technical Education, Govt of Punjab in her office at Chandigarh.

Present:

1. DL.R.S.Khandpur, DG, PGSC, Member BOG.
2. Sh. Chandra Mohan, Member BOG.
3. Sh. S.L. Kaushal, Advisor (Architecture) PTU.
4. Ms. Sarojini Gautam Sharda PCS, Registrar, PTU.
5. Sh. A.N. Chowdhry, Chief Engineer, PTU.
6. Sh. Sh. N.S. Batti, Advisor (Electrical), PTU.
7. Sh. V.D. Sharma, Executive Engineer, PTU.

Item No.20.1 Extension of Time period of Contract of M/S IVRCL, Civil Contractor.

In view of the explanation provided by the Agency, the Committee granted time extension for the completion of the work upto 31/03/2009.

Item No.20.2 Approval of Tender of Bituminous Road Work at the Gate-Rs, 1,91,585/-

- (a) Approval of the tender granted.
- (b) The Committee however, felt that for small works, the University may grant approval of estimates and tenders at its own level rather than approaching this Committee. It was decided to delegate the power of the Committee to approve expenditure upto Rs.50.00 Lacs in this regard to the V.C.

Item No.20.3 Approval of Detailed Estimate of Landscaping Work of Additional Area around Administration Building in New Campus of PTU.

Approved.

Item No.20.4 Status of Phase II of Construction.

Noted. Architectural Sub Committee meeting on 26/06/2009 may review the Architecture of Residential Units of type IV to keep these as G+2 instead of G+3.

Item No. 20.5 Extension of Services of Staff of Construction Cell.

- a) The Committee approved extension of the staff upto dates indicated against each as under:-

Sr. No.	Name	Designation	Date
1	Sh. A. N. Chowdhry	Chief Engineer	31-03-2010
2	Sh. N. S. Bhatti	Advisor (Electrical)	31-03-2010
3	Sh. Amarjeet Singh Soni	AEE (Electrical)	31-08-2009
4	Sh. R. S. Ball	AEE (Civil)	31-08-2009
5	Sh. V. D. Sharma	AEE (Civil)	31-03-2010
6	Sh. Resham Chand	AE (AC)	31-08-2009
7	Sh. Shingara Singh Safri	AE(Electrical)	31-03-2009
8	Sh. Sunil Bhasin	AE (Civil)	31-03-2010
9	Sh. Remesh Chander Sharma	AE (PH)	31-08-2009
10	Sh. Baldev Singh	Quantity Surveyor	31-03-2010
11	Sh. Ram Parkash	Sr. Auditor	31-03-2010
12	Sh. Dilbag Singh	Quantity Surveyor	31-03-2010
13	Sh. Surinder Pal	Pvt. Secretary	31-03-2010

- b) The Committee feels that there is an urgent need to set up a Building Maintenance Cell in the University to look after the sophisticated and latest Electrical and Air-conditioning equipments etc. installed in the University and qualified and experienced staff be recruited immediately.
- c) Sh.A.N.Chowdhry Chief Engineer pointed out that increments/pay raise to the construction staff has not been granted though recommended twice by the Committee . Registrar,PTU promised to look into it.

Item No.20.6 Recasting of Committees regarding Design/Construction Procedures.

Proposal approved. The Committee appreciates and brings on record the commendable work done by Dr.R.S.Khandpur for Phase-I.

Item No. 20.7 Lumpsum Payment of Rs.6.00 lacs to M/S Archigroup, Delhi for extra work for submission of drawings of Phase-II for approval from JDA,PPCB and Environment Clearance.

Approved.

Chowdhry
396
Chief Engineer-PTU

277

Er. H.P. Singh
Executive Engineer

No PTU/CC/496

Dated 06/07/11

Sh. Chander Mohan,
House No. 202, Sector 36-A, Chandigarh.

Sh. S.L. Kaushal,
Chief Architect/Punjab (Retd),
2865, Sector 42-C, Chandigarh.

The Director,
Department of Technical Education and Industrial Training, Punjab,
Plot No. 1, Sector-36A, Chandigarh.

Dr. Nachattar Singh,
Advisor to VC and Dean (P&D),
Punjab Technical University, Jalandhar.

Sh. H.S. Bains,
Registrar, Punjab Technical University, Jalandhar.

Dr. Buta Singh (Special Invitee),
Dean (Academics), Punjab Technical University, Jalandhar.

Sub : Construction of new campus of Punjab Technical University – 27th meeting of the Standing Building Construction Committee.

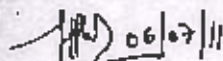
Dear Sir,

27th meeting of the Standing Building Construction Committee shall be held under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC at 11.30 hours on 13.07.2011 in his office at SCO 60-61, Sector 34-A, Chandigarh. Agenda and Agenda note for the meeting are enclosed.

You are requested to make it convenient to attend the meeting.

Thanking you

Yours Sincerely,



(H. P. Singh)
Executive Engineer

Copy to :
i. Dr. R. S. Khandpur, DG, PGSC, SCO 60-61, Sector 34-A, Chandigarh.
ii. Sh. Rajiv Aggarwal, M/s Archigroup Architects, A-14, Sector-15, Noida -201301.

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Agenda for the 27th meeting of the Standing Building Construction Committee.

- Item No. 27.1 : To confirm the Minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011.
- Item No. 27.2 : Action taken on various items discussed during previous meetings of Standing Building Construction Committee.
- Item No. 27.3 : To finalize the appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works.
- Item No. 27.4 : To discuss and approve the rough cost estimate (based upon plinth area rates of CPWD) submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.
- Item No. 27.5 : To discuss and finalize the methodology/procedure to be adopted for invitation & finalization tenders, project management including supervision of works in respect of PIT Kapurthala works.
- Item No. 27.6 : To discuss and approve the 'Finishing Schedule' submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.
- Item No. 27.7 : Any other point with the permission of the Chair.

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Sub : Agenda Note for the 27th meeting of the Standing Building Construction Committee.

Item No. 27.1 : To confirm the Minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011.

The minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011 were circulated on 01.06.2011. Following comments have been received against Item No. 26.3 (Para 3) of the minutes of the meeting from Sh. S. R. Aggarwal, Chief Engineer (Retd), special invitee in 26th meeting:

- 1) To ensure supply of potable/ quality water, it involves two activities i.e.
 - i) Treatment of the water if so required. Decision to be taken after testing of the available underground water (recorded in the Minutes)
 - ii) Disinfection of treated water. Herein it was pointed out that disinfection with UV Sterilizer is not suitable for piped water supply. Therefore, PTU should adopt any other process of disinfection which has residual effect to guard against any bacterial contamination of water during transmission through pipe line network. It was suggested that gaseous chlorine shall be most effective and economical mode of disinfection.
- 2) For a public building it is always preferred to use GI pipe in wall chases to the various fixtures. Proposed use of CPVC pipes need to be further evaluated.
- 3) **Technology of STP:** As the treated effluent is proposed to be recycled for use in horticulture/ flushing, therefore, technology for treatment of the sewage effluent should be such which is capable of providing requisite quality of treated effluent (BOD < 5). Accordingly it was suggested that either of the technologies i.e. MBR or SBR should be adopted after working out its economic viability. (Technology mention in the Minutes as MRB need to be corrected).

The above is to be discussed and minutes are to be confirmed.

Item No. 27.2 : Action taken on various items discussed during previous meetings of Standing Building Construction Committee.

Action taken on various items discussed during previous meeting of Standing Building Construction Committee is as under:

- Three stage evaluation in respect of appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works have been completed and the same is being discussed in the present meeting.

b

280

- The Architect has started detailed designing for structure, HVAC, Electrical, Plumbing and Fire Fighting systems of two towers, one library and one seminar hall of proposed PIT at main campus, Kapurthala. The Architect is presenting a schedule for completion of these activities in the present meeting.

Item No. 27.3 : To finalize the appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Darnala, PTU's Regional campus at Mohali and other future works.

Based upon the procedure and tender documents discussed/approved in 23rd, 24th and 25th meeting, open bids in two packets system through press advertisement were invited by PTU for this work. As per bid conditions, the distribution of scores for evaluation and finalization of bids are as under:

- | | |
|------------------|----------|
| 1. Technical Bid | 60 marks |
| 2. Presentation | 20 marks |
| 3. Financial Bid | 20 marks |

Fifteen bids were received and technical bids were opened on 19.05.2011.

In terms of 'Procedure for evaluation of bids' forming part of bid document, based upon the scores (out of 60 marks) obtained by various bidders in technical evaluation, top five bidders, as listed below, were invited to make presentation in front of 'Board of Assessors':

1. M/s Archigroup Architects, Noida
2. Suresh Goel & Associates, N. Delhi
3. Morphogenesis, New Delhi
4. Architects Atelier, Chandigarh
5. Design Associates Inc., Noida

The presentations were made by all the five bidders on 27.06.2011 in the office of Director General, PGSC at Chandigarh. Further, as per bid conditions, the scores obtained by the bidders in technical evaluation (out of 60 marks) and in the presentation (out of 20 marks) have been added and financial bids of top three bidders (as per merit list prepared based upon total scores obtained by the bidders out of 80 marks) have been opened on 01.07.2011.

The rates quoted by these three bidders are as under:

S. No.	Agency	Rates quoted
1.	M/s Archigroup Architects, Noida	2.05%
2.	Suresh Goel & Associates, N. Delhi	1.90%
3.	Morphogenesis, New Delhi	2.00%

The details of the scores obtained by top three bidders after complete evaluation in three stages (i.e. Technical, Presentation and Financial) is as under:

S. No.	Agency	Scores obtained in			
		Technical Evaluation	Pre-sen-tation	Financial evaluation	Total
1.	M/s Archigroup Architects, Noida	60	19	18.54	97.54
2.	Suresh Goel & Associates, N. Delhi	59	13	20.0	92.00
3.	Morphogenesis, New Delhi	54	18	19.0	91.00

Thus, M/s Archigroup Architects, Noida have scored the highest overall scores and is eligible for award of work/negotiations in terms of bid conditions.

Committee is requested to discuss and finalize its recommendations for appointment of the Architect.

Item No. 27.4 : To discuss and approve the rough cost estimate (based upon plinth area rates of CPWD) submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.

Based upon the plans approved in 23rd meeting, the Architect has submitted the rough cost estimates based upon plinth area rate of CPWD for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road. The total estimated cost for these works is Rs. 97.71 Crores. The details and copy of the estimate submitted by the Architect is also placed at Annexure-A.

Item No. 27.5 : To discuss and finalize the methodology/procedure to be adopted for invitation & finalization tenders, project management including supervision of works in respect of PIT Kapurthala works.

The Architect has submitted the estimates for Punjab Institute of Technology Kapurthala works for an amount of Rs. 97.71 crores. Committee is requested to discuss the following issues pertaining to these works and approve the methodology/procedure to be adopted for invitation & finalization tenders, project management including supervision of works in respect of these works. :

1. Packages (Splitting of works for invitation and finalization of contractors/ agencies for execution of works)
2. Mode of invitation of tenders - Open tenders under two packet system or short-listing/pre-qualification of bidders at first stage.
3. Project Management including supervision of works.

Item No. 27.6 : To discuss and approve the 'Finishing Schedule' submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.

The Architect has submitted the 'Finishing Schedule' for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road. The same is placed at Annexure-B. Committee is requested to discuss and consider approval of the same.

Item No. 27.7 : Any other point with the permission of the Chair.

2

ANNEXURE - A

PUNJAB TECHNICAL UNIVERISTY

ABSTARCT OF ESTIMATES FOR COLLEGE BUILDINGS, LIBRARY AND SEMINAR HALL AT PTU'S MAIN CAMPUS AT JAL-KPT ROAD

No.	Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
				per Sqm	per Sft
1	College Building - 1	12962.42			
	Civil works		2,754.54	21,250.20	1,974.93
	Public Health		204.79	1,579.87	146.83
	Electrical Works		747.03	5,763.04	535.60
	Fire Fighting		60.18	464.27	43.15
	Passenger Lifts		75.60	583.22	54.20
	Total		3,842.14	29,640.60	2,755.00

No.	Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
				per Sqm	per Sft
2	College Building - 2	12857.29			
	Civil works		2,725.98	21,201.82	1,970.43
	Public Health		203.13	1,579.88	146.83
	Electrical Works		740.96	5,762.96	535.59
	Fire Fighting		59.55	463.16	43.04
	Passenger Lifts		75.60	587.99	54.65
	Total		3,805.22	29,595.81	2,751.00

No.	Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
				per Sqm	per Sft
3	Central Library & Canteen	5516.71			
	Civil works		1,280.62	23,213.47	2,157.39
	Public Health		87.97	1,594.61	148.20
	Electrical Works		175.94	3,189.22	296.40
	Fire Fighting		62.23	1,128.03	104.84
	Passenger Lifts		18.00	326.28	30.32
	Total		1,624.76	29,451.61	2,737.00

No.	Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
				per Sqm	per Sft
4	Seminar Hall	302.55			
	Civil works		93.06	30,758.55	2,858.60
	Public Health		5.09	1,682.37	156.35
	Electrical Works		10.20	3,371.34	313.32
	Fire Fighting		2.38	786.65	73.11
	Passenger Lifts		-	-	-
	Total		110.73	36,598.91	3,401.00

Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
			per Sqm	per Sft
Open Air Theatre	234.64			
Civil works		14.47	6,166.89	573.13
Public Health		-	-	-
Electrical Works		-	-	-
Fire Fighting		-	-	-
Passenger Lifts		-	-	-
Total		14.47	6,166.89	573.00

Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
			per Sqm	per Sft
Overall (Without AC)	31873.61			
Civil works		6,868.67	21,549.71	2,002.76
Public Health		500.98	1,571.77	146.08
Electrical Works		1,674.13	5,252.40	488.14
Fire Fighting		184.34	578.35	53.75
Passenger Lifts		169.20	530.85	49.34
Grand Total for all works except AC		9,397.32	29,483.08	2,740.00

No.	Description	Area (In Sqm)	Total Cost (In lacs of Rs)	Cost (In Rs)	
				per Sqm	per Sft
	Air-Conditioning				
1	College Building 1	6232.06	139.29	2,235.00	207.71
2	College Building 2	6090.22	136.12	2,235.00	207.71
3	Library	4218.33	94.28	2,235.00	207.71
4	Seminar Hall	157.72	3.53	2,235.00	207.71
	Total	16698.33	373.21	8,940.00	831.00

RAN, GRAND TOTAL INCLUDING AC WORKS

9,770.53 LACS

OR

97.71 CRORES

8

287

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

AREA DETAILS
SUMMARY- PRELIMINARY ESTIMATE

S. No.	Building / Component	Plinth Area (Sqm)	Cost in Rs	Reference
1	2	3	4	5
1	College Building 1	12,962.42	37,62,93,466.25	Ref. Annexure 1
2	College Building 2	12,857.29	37,25,15,280.34	Ref. Annexure 2
3	Central Library including cafeteria	5,516.71	16,04,76,115.06	Ref. Annexure 3
4	Seminar Hall	302.55	96,56,338.88	Ref. Annexure 4
5	O.A.T.	234.64	14,46,717.97	Ref. Annexure 5
6	Sub Total for Buildings	31,873.61	92,03,87,918.50	
7	Other Building Expenses (Richer Specifications, Air conditioning)		5,66,72,280.83	Ref. Annexure 6
8	Total including other building expenses (6 + 7)		97,70,60,199	

288

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

ARE College Building 1

Annexure 1

A

Type of Building -	College
Total Plinth Area -	12,962.42 sq.m
Plinth Area On G. Floor -	2,352.37 sq.m
Total covered area-	12,144.76 sq.m
Plinth area of laboratories	527.74 sq.m
No. of storey-	G + 5
Floor height-	3.75 m

Refer Drg No. PTU-II A/PRE/AC/CB1-01 TO 06

Sr.No.	Description	Unit	Qty	Nos	Rate	Am't	Explanation
1	2	3	4	5	6	7 = (4*5*6)	8
1 R.C.C. FRAMED STRUCTURE							
1.1	RCC framed structure upto six storeys						
1.1.1	Floor height 3.35m						
a.	Floors	sqm	12,962.42	1.0	13,200.00	17,11,03,844.00	
1.2	Extra for						
1.2.1	Every 0.3m additional height of floor above normal floor height of 3.35m.	sqm	12,962.42	1.33	150.00	25,92,484.00	
1.2.2	Every 0.3m deeper foundation over normal depth of 1.20m (on G.F. area only)	sqm	2,352.37	2.00	150.00	7,05,711.00	
1.2.3	Resisting Earthquake forces	sqm	12,962.42	1.0	630.00	81,66,324.60	
1.2.4	RCC Raft foundation	sqm	2,352.37	1.0	3,560.00	83,74,437.20	
1.2.5	Stronger structural members to take heavy loads above 500 kg/sq.m upto 1000 kg/sq.m	sqm	527.74	1.0	850.00	4,48,570.00	
1.2.6	Larger Module over 35 sqm	sqm	12,962.42	1.0	890.00	1,26,32,795.60	
1.2.7	Fire fighting						
	With wet riser system	sqm	12,962.42	1.0	300.00	38,88,728.00	
1.2.8	Fire Alarm						
	Automatic fire alarm system	sqm	2,352.37	1.0	300.00	7,05,711.00	
	Total A (1.1.1.a + 1.2.1) =					17,38,86,428.00	
	Total B (1.2.2 to 1.2.8) =					3,61,22,284.60	
2 SERVICES							
2.1	Internal water supply & sanitary installations	% of A			@ 4%	69,47,857.12	
2.2	External service connections	% of A			@ 5%	86,84,821.40	
2.3	Internal Electrical installations	% of A			@ 12.5%	2,17,12,053.60	
2.4	Internal Electrical installations for laboratories	% of A			@ 15%	2,60,54,464.00	
2.5	Extra for				@ 4%	69,47,857.12	
2.5.1	Power wiring & plugs	% of A					
2.5.2	Lightning conductors						
a.	5 to 6 storeyed buildings	% of A			@ 0.33%	5,73,198.24	
2.5.3	Telephone conduits	% of A			@ 0.5%	8,68,482.14	
2.5.4	Data network conduits	% of A			@ 0.5%	8,68,482.14	
	Total C =	% of A			@ 29.33%	7,26,67,215.83	
	Sub Total D = A+B+C				@ 31%	28,14,75,929.43	
	Add Cost Index (E =)					8,72,67,637.81	
3 Passenger lifts							
3.1	Passenger lift 8 passenger 1.5 m/s G+4	nos.	1.00	4.00	18,00,000.00	72,00,000.00	
		floors	1.00	4.00	90,000.00	3,60,000.00	
3.2	Extra for additional floor					75,60,000.00	
3.3	Sub Total					0.00	
3.4	Add cost index					75,60,000.00	
	Total F =						
	Grand Total (D+E+F) =					37,62,93,466.25	

289

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

Annexure 2

ARE College Building 2

Type of Building -	College
Total Plinth Area -	12,857.29 sq.m
Plinth Area On/G. Floor -	2,295.72 sq.m
Total covered area-	12,053.05 sq.m
No. of storey-	G + 5
Floor height-	3.75 m

Refer Drg No. PTU-II A/PRE/AC/CB2- 01 TO 06

Sr.No.	Description	Unit	Qty	Noe	Rate	Amt	Explanation
1	2	3	4	5	6	7 = (4*5*6)	8
1 R.C.C. FRAMED STRUCTURE							
1.1	RCC framed structure upto six storeys						
1.1.1	Floor height 3.35m	sqm	12,857.29	1.0	13,200.00	16,97,16,228.00	
a.	Floors						
1.2	Extra for	sqm	12,857.29	1.33	150.00	25,71,458.00	
1.2.1	Every 0.3m additional height of floor above normal floor height of 3.35m.	sqm	12,857.29	1.33	150.00	25,71,458.00	
1.2.2	Every 0.3m deeper foundation over normal depth of 1.20m (on G.F. area only)	sqm	2,295.72	2.00	150.00	6,88,716.00	
1.2.3	Resisting Earthquake forces	sqm	12,857.29	1.0	630.00	81,00,092.70	
1.2.4	RCC Raft foundation	sqm	2,295.72	1.0	3,560.00	81,72,763.20	
1.2.5	Larger Module over 35 sqm	sqm	12,857.29	1.0	990.00	1,27,28,717.10	
1.2.6	Fire fighting	sqm	12,857.29	1.0	300.00	38,57,187.00	
1.2.6.1	With wet riser system	sqm	12,857.29	1.0	300.00	38,57,187.00	
1.2.7	Fire Alarm	sqm	2,295.72	1.0	300.00	6,88,716.00	
1.2.7.1	Automatic fire alarm system	sqm	2,295.72	1.0	300.00	6,88,716.00	
	Total A (1.1.1.a + 1.2.1) =					17,22,87,688.00	
	Total B (1.2.2 to 1.2.7) =					3,42,36,192.00	
2 SERVICES							
2.1	Internal water supply & sanitary installations	% of A			@ 4%	68,91,507.44	
2.2	External service connections	% of A			@ 5%	66,14,364.30	
2.3	Internal Electrical installation	% of A			@ 12.5%	2,15,35,960.75	
2.4	Internal Electrical installations for laboratories	% of A			@ 15%	2,58,43,152.90	
2.5	Extra for	% of A			@ 4%	68,91,507.44	
2.5.1	Power wiring & plugs	% of A			@ 4%	68,91,507.44	
2.5.2	Lightning conductors	% of A			@ 0.33%	5,68,648.35	
a.	5 to 8 storeyed buildings	% of A			@ 0.5%	8,61,438.43	
2.5.3	Telephone conduits	% of A			@ 0.5%	8,61,438.43	
2.5.4	Data network conduits	% of A			@ 29.33%	7,20,67,839.05	
	Total C =	% of A				27,85,91,817.05	
	Sub Total D = A+B+C				@ 31%	8,63,63,463.29	
	Add Cost Index (E =)						
3 Passenger lifts							
3.1	Passenger lift 8 passenger 1.5 m/s G+4	nos.	1.00	4.00	18,00,000.00	72,00,000.00	
3.2	Extra for additional floor	floors	1.00	4.00	90,000.00	3,60,000.00	
3.3	Sub Total					75,60,000.00	
3.4	Add cost index					0.00	
	Total F =					76,60,000.00	
	Grand Total (D+E+F) =					37,25,16,280.34	

2/0

PUNJAB TECHNICAL UNIVERSITY PHASE-I A
PRELIMINARY COST ESTIMATE

ARE Central Library & Canteen

Annexure 3

A

Type of Building -	Library	
Total Plinth Area -	5,516.71	sq.m
Plinth Area On G. Floor -	2,043.67	sq.m
Total covered area -	8,290.42	sq.m
No. of storey -	G + 2	
Floor height -	4.00	m

Refer Drg No. PTU-II/APRE/AC/LIB- 01 TO 06

Sr.No.	Description	Unit	Qty	Nos	Rate	Amt	Explanation
1	2	3	4	5	6	7 = (4*5*6)	8
1 R.C.C. FRAMED STRUCTURE							
1.1	RCC framed structure upto six storeys						
1.1.1	Floor height 3.35m						
a.	Floors	sqm	5,516.71	1.0	13,200.00	7,28,20,572.00	
1.2	Extra for						
1.2.1	Every 0.3m additional height of floor above normal floor height of 3.35m.	sqm	5,516.71	2.17	150.00	17,92,900.75	
1.2.2	Every 0.3m deeper foundation over normal depth of 1.20m (on G.F. area only)	sqm	2,043.67	1.33	150.00	4,08,734.00	
1.2.3	Every 0.3 m higher plinth over normal plinth height of 0.6 m (on G.F. area only)	sqm	2,043.67	1.00	150.00	3,08,550.50	
1.2.3	Resisting Earthquake forces	sqm	5,516.71	1.00	630.00	34,75,627.30	
1.2.4	RCC Raft foundation	sqm	2,043.67	1.00	3,560.00	72,75,465.20	
1.2.5	Stronger structural members to take heavy loads above 500 kg/sq.m upto 1000 kg/sq.m	sqm	5,516.71	1.00	850.00	46,89,203.50	
1.2.6	Larger Module over 35 sqm	sqm	5,516.71	1.00	990.00	54,61,542.90	
1.2.7	Fire fighting						
1.2.7.1	With wet riser system	sqm	5,516.71	1.00	300.00	16,55,013.00	
1.2.7.2	With sprinkler system	sqm	5,516.71	1.00	450.00	24,82,519.50	
1.2.8	Fire Alarm						
1.2.8.1	Automatic Fire alarm system	sqm	2,043.67	1.00	300.00	6,13,101.00	
	Total A (1.1.1.a + 1.2.1) =					7,46,13,601.75	
	Total B (1.2.2 to 1.2.8) =					2,63,67,456.90	
2 SERVICES							
2.1	Internal water supply & sanitary installations	% of A			⊕ 4%	29,84,540.11	
2.2	External service connections	% of A			⊕ 5%	37,30,675.14	
2.3	Internal Electrical Installation	% of A			⊕ 12.5%	93,28,687.84	
2.4	Extra for						
2.4.1	Power wiring & plugs	% of A			⊕ 4%	29,84,540.11	
2.4.2	Lighting conductors upto 4 storeyed buildings	% of A			⊕ 0.5%	3,73,067.51	
2.4.3	Telephone conduits	% of A			⊕ 0.5%	3,73,067.51	
2.4.4	Data network conduits	% of A			⊕ 0.5%	3,73,067.51	
	Total C =	% of A			⊕ 14.5%	2,01,45,046.74	
	Sub Total D = A+B+C				⊕ 31%	12,11,26,609.39	
	Add Cost Index (E = 1)						
3 Passenger lifts							
3.1	Passenger lift 8 passenger 1.5 m/s G+2	nos.	1.00	1.00	18,00,000.00	18,00,000.00	
						0.00	
3.3	Add cost index					18,00,000.00	
	Total F =						
	Grand Total (D+E+F) =					16,04,79,115.06	

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

ARE Seminar Hall

Annexure 4

A

Type of Building -	Seminar	
Total Plinth Area -	302.55	sq.m
Plinth Area On G. Floor -	302.55	sq.m
Total covered area-	265.20	sq.m
No. of storey-	G	
Floor height-	5.55	m

Refer Drg No. PTU-II/APRE/AC/SEM-01

Sr.No.	Description	Unit	Qty	Nos	Rate	Amt	Explanation
1	2	3	4	5	6	7 = (4*5*6)	8
1	R.C.C. FRAMED STRUCTURE						
1.1	RCC framed structure upto six storeys						
1.1.1	Floor height 3.35m						
a.	Floors	sqm	302.55	1.0	13,200.00	39,93,660.00	
1.2	Extra for						
1.2.1	Every 0.3m additional height of floor above normal floor height of 3.35m.	sqm	302.55	7.33	150.00	3,32,605.00	
1.2.2	Every 0.3m deeper foundation over normal depth of 1.20m (on G.F. area only)	sqm	302.55	2.00	150.00	90,765.00	
1.2.3	Resisting Earthquake forces	sqm	302.55	1.0	630.00	1,80,606.50	
1.2.4	RCC Raft foundation	sqm	302.55	1.0	3,560.00	10,77,078.00	
1.2.5	Stronger structural members to take heavy loads above 500 kg/sq.m upto 1000 kg/sq.m	sqm	43.69	1.0	850.00	37,136.50	
1.2.4	Larger Module over 35 sqm	sqm	302.55	1.0	990.00	2,99,524.50	
1.2.5	Fire fighting						
1.2.5.1	With wet riser system	sqm	302.55	1.0	300.00	90,765.00	
1.2.6	Fire alarm system						
1.2.6.1	Automatic fire alarm system	sqm	302.55	1.0	300.00	90,765.00	
	Total A (1.1.1.a + 1.2.1) =					43,26,465.00	
	Total B (1.2.2 to 1.2.6) =					18,76,640.60	
2	SERVICES						
2.1	Internal water supply & sanitary installations	% of A			@ 4%	1,73,058.60	
2.2	External service connections	% of A			@ 5%	2,16,323.25	
2.3	Internal Electrical Installation	% of A			@ 12.5%	5,40,808.13	
2.4	Extra for						
2.4.1	Power wiring & plugs	% of A			@ 4%	1,73,058.60	
2.4.2	Lightning conductors						
a.	upto 4 storeyed buildings	% of A			@ 0.5%	21,632.33	
2.4.3	Telephone conduits	% of A			@ 0.5%	21,632.33	
2.4.4	Data network conduits	% of A			@ 0.5%	21,632.33	
	Total C =	% of A			@ 14.5%	11,68,146.55	
	Sub Total D = A+B+C					73,71,261.05	
	Add Cost Index (E =)				@ 31%	22,85,067.83	
	Grand Total (D+E) =					96,56,338.88	

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

ARE O.A.T.

Annexure 5

A

Type of Building -	OAT	
Total Plinth Area -	234.64	sq.m
Plinth Area On G. Floor -	234.64	sq.m
Total covered area-	-	sq.m
No. of storey-	G	
Floor height-	3.30	m

Refer Drg No. PTU- II A/PRE/AC/LIB-01

No.	Description	Unit	Qty	Nos	Rate	Amt	Explanation
	2	3	4	5	6	7 = (4*5*6)	8
1	R.C.C. FRAMED STRUCTURE						
1.1	RCC framed structure upto six storeys						
1.1	Floor height 3.35m						
1.1	Floors	sqm	234.64	1.0	9,150.00	21,46,956.00	
1.2	Deduction (per sq.m)						
2.1	RCC	cum	0.17	1.00	4,147.40	705.06	DSR- 5.33
2.2	Centering & Shuttering	sq.m	1.00	1.00	187.35	187.35	DSR- 5.9.4
2.3	Reinforcement	kg	200.00	0.17	42.70	1,451.80	DSR- 5.22.6
2.4	Brick coba	sq.m	1.00	1.00	536.40	536.40	DSR- 22.7
2.5	Ceiling Plaster	sq.m	1.00	1.00	62.15	62.15	DSR- 13.16
2.6	Oil Bound Distemper	sqm	1.00	1.00	41.55	41.55	DSR- 13.45.1
2.7	Total Deduction (per sq.m)					2,984.31	
2.8	Total Deduction Amount					7,00,238.03	
	Grand total (1.1.1 - 1.2.8.)					14,46,717.97	

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

AREA DETAILS

Cost of Airconditioning

No.	Building	Unit	Area/ Cost	Explanation
	2	3	4	5
	A C Areas			
	College Building 1	Sqm.	6,232.06	Refer Dwg nos. PTU-II A/PRE/AC/CB1-07-09 PTU-II A/PRE/AC/CB2-07-09 PTU-II A/PRE/AC/LIB-07-09 PTU-II A/PRE/AC/SEM-02
	College Building 2	Sqm.	6,090.22	
	Library	Sqm.	4,218.33	
	Seminar Hall	Sqm.	157.72	
	Total AC Areas		16,698.33	
	Refrigeration required @ 1TR / 130sqft.	TR	1,382.11	
	Refrigeration Provided	TR	1,382.11	
	Cost of refrigeration per TR	Rs	27,000.00	
	Total Cost = (5X1)	Rs	3,73,16,914.09	

27/4

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

AREA DETAILS

DSR Item no.	Item/ Specification	Building	Unit	Rate (INR)	Quantity	No.	Total Quantity	Amount (INR)	Remarks
NS	3.15 mm thick in aluminium window frame as per architectural specs.	Aluminium Louvers	sq.m	1,500.00	24.84	6 floors	149.04	4,05,571.95	Refer drawing no. PTU-II A/PRE/AC/CB 1-10-12 PTU-II A/PRE/AC/CB 2-10-12 PTU-II A/PRE/AC/LIB-07-09
		College Building 1			12.72	6 floors	76.34		
		College Building 2			6.00	3 floors	18.00		
		Library			9.00	3 floors	27.00		
		TOTAL					270.38		
Tile Cladding for corridor walls									
8.9.1.2 (-)11.22.1	Tile cladding of 8mm granite cladding of desired shade	College building 1	sq.m	1,092.75	1,884.77	1.00	1,884.77	41,19,158.28	Refer drawing no. PTU-II A/PRE/AC/CB 1-10-13 PTU-II A/PRE/AC/CB 2-10-12
		College building 2			1,884.77	1.00	1,884.77		
		TOTAL					3,769.54		
Acoustic treatment									
NS	Acoustic paneling for walls & ceiling	College Building 1-lecture hall	sq.m	2,500.00	294.84	6.00	1,767.84	1,01,19,500.00	Refer drawing no. PTU-II A/PRE/AC/CB 1-10-12 PTU-II A/PRE/AC/CB 2-10-12 PTU-II A/PRE/AC/SEM-02
		College Building 2-lecture hall			308.02	6.00	1,848.12		
		Seminar Hall			431.84	1.00	431.84		
		TOTAL					4,047.80		
DSR	A/A	College Building 1	sq.m	1,720.00	58.71	1.00	58.71	4,60,414.76	Refer Appendix 3 Refer drawing no. PTU-II A/PRE/AC/CB 1-10-12 PTU-II A/PRE/AC/CB 2-10-12 PTU-II A/PRE/AC/SEM-02
		College Building 2			54.74	1.00	54.74		
		Seminar Hall			154.23	1.00	154.23		
		TOTAL					267.68		
12.45.1 (-)13.41.1	False Ceiling with gypsum board	College Building 1	sq.m	502.1	2,425.22	1.00	2,425.22	9,229.66	42,50,721.76
		College Building 2			2,428.89	1.00	2,428.89		
		Library			4,218.33	1.00	4,218.33		
		Seminar			157.22	1.00	157.22		
		TOTAL					460.55		

22/5

PUNJAB TECHNICAL UNIVERSITY, PHASE II A
PRELIMINARY COST ESTIMATE

Annexure 6

DETAILS

Description	Unit	Quantity	Rate	Amount (INR)	Explanation
2	3	4	5	6 = (4*5)	7
Richer Specification					
Aluminium Louvers	sqm	270.38	1,500.00	4,05,571.95	See Appendix 1
Tile Cladding for corridor walls	sqm	3,769.53	1,092.75	41,19,158.28	
Acoustic treatment	sqm	4,047.80	2,500.00	1,01,19,500.00	
Pergolas	sqm	267.68	1,720.00	4,60,414.76	
False Ceiling	sqm	9,229.66	460.55	42,50,721.76	
Sub Total = A				1,93,65,388.74	
Air Conditioning					
Refrigeration Load	TR	1,382.11	27,000.00	3,73,16,814.09	See Appendix 2
Sub Total = B				3,73,16,914.09	
Grand Total (A+B) =				6,66,72,280.83	

296

PRELIMINARY COST ESTIMATE

AREA DETAILS

S.NO.	Building block/Function																								
	1			2			3			4			5												
	Covered Area	Additional Plinth area 1(a)-1(b)	Plinth area 1(a)-1(b)	Covered Area	Additional Area	Plinth area 1(a)-1(b)	Covered Area	Additional Area	Plinth area 1(a)-1(b)	Covered Area	Additional Area	Plinth area 1(a)-1(b)	Covered Area	Additional Area	Plinth area 1(a)-1(b)										
1	2,169.84	182.43	2,352.27	2,151.88	144.04	2,295.92	1,898.71	140.86	2,043.87	265.20	37.35	302.55	-	234.84	234.84										
2	1,874.48	128.19	2,000.87	1,991.41	124.84	2,086.05	1,397.73	39.63	1,437.36	-	-	-	-	-	-										
3	2,005.38	128.61	2,131.17	1,992.70	120.96	2,113.26	1,995.98	36.70	2,035.88	-	-	-	-	-	-										
4	1,974.48	128.19	2,100.87	1,991.41	124.84	2,086.05	-	-	-	-	-	-	-	-	-										
5	2,023.88	112.04	2,135.90	2,006.44	151.82	2,158.26	-	-	-	-	-	-	-	-	-										
6	1,998.84	145.00	2,141.84	1,979.41	138.84	2,117.95	-	-	-	-	-	-	-	-	-										
Total												2,170.02	262.22	2,432.24	2,370.02	262.22	2,632.24	2,370.02	262.22	2,632.24	302.55	37.35	340.90	234.84	234.84

10/20/2010
 10/20/2010
 10/20/2010
 10/20/2010

297

PLINTH AREA RATES AS ON 01-10-2007

ANNEXURE - I

B. No.	Description	Office/College/Hospital 3	Schools 4	Hostels 5	Residential 6
1.0	R.C.C. FRAMED STRUCTURE	Rates in Rs. per Sq. metre			
1.1	R.C.C. frames structure upto six storeys				
1.1.1	Floor height 3.35 mt.	13,200 ✓	9,150	9,100	9,000
1.1.2	Floor height 2.90 mt.				
1.2	EXTRAS FOR				
1.2.1	Every additional storey over six storeys upto nine storeys	310	310	310	310
1.2.2	Every additional storey over nine storeys upto twelve storeys	320	320	320	320
1.2.3	Every 0.3 mt. additional height of floor above normal floor height of 3.35 mt./ 2.90 mts.	150 ✓	150	150	150
1.2.4	Every 0.3 mt. higher plinth over normal plinth height of 0.6 mt. (on G.F. area only)	150	150	150	150
1.2.5	Every 0.30 mt. deeper foundations over normal depth of 1.20 metre (on G.F. area only)	150 ✓	150	150	150
1.2.6	Making stronger foundations to take load of one additional floor at a later date (on area of additional floor only)	1250	1250	1250	1250
1.2.7	Strip foundations in poor soil having bearing capacity less than 10 tonnes/sqmt.	286	286	286	286
1.2.8	Resisting Earthquake forces	630 ✓	630	630	630
1.2.9	R.C.C. Raft foundations (ground floor only)	3560 ✓	3560	3560	3560
1.2.10	Pile foundations upto a depth of 15 mts. (on G.F. area only)	6470	6470	6470	6470
1.2.11	Stronger structural members to take heavy load above 500 Kgs./sqm. upto 1000 Kgs./Sqm.	850 ✓	850	850	850
1.2.12	Larger modules over 35 sqm.	990	990	990	990
1.3	BASEMENT FLOOR				
1.3.1	Floor Height 3.35 mt. with normal water proofing treatment with bituminous felt	18035			

298

4

1.3.2	EXTRA FOR BASEMENT WITH	1144			
1.3.2.1	Mastic Asphalt W.P.T.				
1.3.2.2	Every 0.3 mt. addl. Height (above 3.35 mt.)	1274			
1.3.2.3	Reduction for very 0.5 m. less height of basement than normal height 3.35 mt.	(-) 728			
1.4	FIRE FIGHTING		300	300	300
1.4.1	With wet riser system	300 ✓	450	450	-
1.4.2	With sprinkler system	450			
1.5	FIRE ALARM SYSTEM				155
1.5.1	Manual Fire Alarm System		300	300	-
1.5.2	Automatic Fire Alarm System	300 ✓			
1.6	Operation Theatre (OPD) (Extra provision)	1235			
1.7	Pressurized mechanical ventilation system in the basements (with supply of Exhaust blowers)	50	50	50	

PLINTH AREA RATES

Description	Non-Residential			Residential		
	Office/College /Hospitals	Schools	Hostel	Type-I, II, III & servant Qtrs.	Type-IV Qtrs.	Type-V, VI and above
	3	4	5	6	7	8
2 Buildings of two storeys or more in Zone III & IV	286	286	286	286	286	286
Resisting earthquake forces in Zone II and single storey buildings in Zone III & IV	Nil	Nil	Nil	Nil	Nil	Nil
Stronger structural members to take heavy loads above 500 Kg /sqm. Up to 1000 Kg/sqmt.	850	850	850	850	850	850
Larger modules over 35 sqmt.	990	990	990	990	990	990
2.9 Fire-fighting	300	300	300	300	300	300
2.9.1 With wet riser system	450	450	450	450	450	450
2.9.2 With sprinkler system				155	155	155
2.10 Fire Alarm System						
2.10.1 a) Manual Fire Alarm system		300	300			
2.10.2 b) Automatic Fire Alarm System	300					
2.11 O.P.D. Operation Theatre etc.	1235					

Note : Rates for items are applicable on entire plinth area except for items 1.2.4, 1.2.5, 1.2.6, 1.2.9, 1.5, 2.5.2, 2.5.3, 2.5.4 and 2.5.7

PLINTH AREA RATES

S. No.	Description	Office & College	Hospitals	Schools	Hostels	Type of Quarters				
						I	II	III	IV	V,VI & above
1	2	3	4	5	6	7	8	9	10	11
3.0	SERVICES.									
3.1	Internal water supply & sanitary installations	4%	10%	5%	15% with attached toilets, 10% with common toilets.	12%	12%	12%	12%	12%
						%age means percentage of building cost				
3.2	External service connections	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.3	Internal electric installations	12 ½%	12 ½%	12 ½%	12 ½%	12 ½%	12 ½%	12 ½%	12 ½%	12 ½%
						Note : The above does not include service connection Charges & electrification				
3.4	Internal electric installations for laboratories of schools	-	-	15% of building cost	-	-	-	-	-	-
3.5	Internal electric installations for terminal building and other allied structures in airports	15% of building cost	-	-	-	-	-	-	-	-
3.6	Extra for :									
3.6.1	Power wiring and plugs	4%	4%	-	-	-	-	-	-	-
3.6.2	Central Call bell system	1%	-	-	-	-	-	-	-	-
3.6.3	Lightening conductors									
3.6.3.1	Upto 4 storeyed building	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
3.6.3.2	5 to 8 storeys buildings	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%
3.6.3.3	Beyond 8 storeyed buildings	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
3.6.4	Telephone conduits	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
3.6.5	Centralized Intercom system	-	-	-	-	1%	1%	1%	1%	1%
3.6.6	Computer conduiting	0.5%	0.5%	0.5%	0.5%					
3.6.7	Quality assurance	1%	1%	1%	1%	1%	1%	1%	1%	1%

8

Sl. No.	Type of lift	Capacity/ Persons	Weight	Speed in M/Sec.	Travel	Doors	Control	Price (Rs. In lacs)	Addl. Price for each additional floor (Rs.)
1	2	3	4	5	6	7	8	9	10
4.0	LIFTS								
4.1	Passenger lifts								
4.1.1	Passenger lift	8	544 Kg.	1.0	G+4	Power operated	ACW VVVF	13.50	90,000.00
4.1.2	Passenger lift	8	544 Kg.	1.5	G+4	Power operated	ACW VVVF	18.00	90,000.00
4.1.3	Passenger lift	13	884 Kg.	1.0	G+4	Power operated	ACW VVVF	18.00	90,000.00
4.1.4	Passenger lift	13	884 Kg.	1.5	G+4	Power operated	ACW VVVF	19.00	90,000.00
4.1.5	Passenger lift	16	1088 Kg.	1.0	G+4	Power operated	ACW VVVF	17.00	1,10,000.00
4.1.6	Passenger lift	16	1088 Kg.	1.5	G+4	Power operated	ACW VVVF	19.50	1,10,000.00
4.1.7	Passenger lift	16	1088 Kg.	2.5	G+4	Power operated	ACW VVVF	57.00	1,10,000.00
4.1.8	Passenger lift (Bed lift)	20	1360 Kg.	0.75	G+4	Power operated	ACW VVVF	21.50	90,000.00
4.1.9	Passenger lift	20	1360 Kg.	1.5	G+4	Power operated	ACW VVVF	27.00	1,10,000.00
4.1.10	Passenger lift	20	1360 Kg.	2.5	G+4	Power operated	ACW VVVF	59.00	1,30,000.00
4.2	Goods lifts (2 speed)								
4.2.1		1 Ton	-	0.5	G+4			14.75	50,000.00
4.2.2		2 Ton	-	0.5	G+4			19.00	50,000.00
4.2.3		3 Ton	-	0.25	G+4			23.25	60,000.00

CS No.1 Dt. 12.8.2008

302

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 grid 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	Steel 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.
 - 3.1 Tube wells, pumps, open wells, treatment plant, extension of lines from source of local bodies, head works at water source etc.
 - 3.2 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.

(A.V.R.Bhat)

Executive Engineer (S&S)-III
CPWD, Nirman Bhawan,
New Delhi

(M.K.Tilak)

Superintending Engineer (TAS)
CPWD, Nirman Bhawan.

(SURESH KUMAR)
Chief Engineer (CSQ)
CPWD, Nirman Bhawan.

303

ANNEXURE - B

SCHEDULE OF FINISHES

A	List of Tasks to be executed before Tender
No.	Name of Task
1	Approval of Modified Service Reports, revised as per decisions taken in the Meeting of Standing Building Committee on 26.5.11
2	Approval of Finishing Schedule from Building Committee
3	Vetting of Structure Drawings form authority/institution as decided by the Building Committee.

1. COLLEGE BUILDINGS

- KOTA STONE: Lecture Halls, Tutorials, Research Laboratories, Coridor (Kota with 15% marble in pattern)
- GRANITE: Entrance Cores, Coridor (faculty area), Reception (faculty area)
- VTRIFIED TILES: Faculty Rooms, Toilets
- INTERLOCKING PAVERS: Entrance Courts
- PLASTIC EMULSION WITH PUTTY: All Areas except in toilets
- ACRYLIC WASHABLE DISTEMPER WITH PUTTY: Toilets, dry Canteen, Utility
- DRY DISTEMPER: Utilities

30/1

- WHITE (VERY LIGHT BISCUIT COLOR) STONE
- BLACK GRANITE COUNTERTOP

Corridor Walls

Research Labs, Canteen, Pantries

Entrance Courts (Kota with 20% granite in Pattern), Archives, Stores, Kitchen, Cafeteria, Service yard/ Service entry, Shops, OAT Steps, Stage (Kota with pattern of udaipur green & white marble)

Reading area, AV Room, Meeting Room, Toilets, server Room

Balance Area, Entrance steps (sandblasted granite)

AHU

All areas except toilets, kitchen, AHU's and Utilities

Toilets, Kitchen, AHU

Utilities

Kitchen, Serving (cafeteria), Issue Counter

Toilets

Seminar hall, Stage, Entrance Foyer, Entrance Steps

All areas except toilets

2. LIBRARY

- KOTA STONE:

- VITRIFIED TILES:

- GRANITE:

- IPS:

- PLASTIC EMULSION WITH PUTTY:

- ACRYLIC WASHABLE DISTEMPER WITH PUTTY

- DRY DISTEMPER

- BLACK GRANITE COUNTERTOP

3. SEMINAR

- VITRIFIED TILES:

- GRANITE:

- PLASTIC EMULSION WITH PUTTY:

- ACRYLIC WASHABLE DISTEMPER WITH PUTTY:
- BLACK GRANITE COUNTERTOP:

Toilets

Toilets

4. EXTERNAL FINISH

- RED AND WHITE (very light biscuit color) SAND STONE
- As per elevation

5. MISCELLANEOUS

In seminar, AV room, meeting room and Lecture halls as required

As required

- SOUND INSULATION

- FALSE CEILING:

6. DOORS AND WINDOWS

- WINDOWS
- STRUCTURAL GLAZING
- DOORS

Anodized aluminum with reflective single glass

Anodized aluminum with reflective glass (single/double as required)

Aluminum Frames with laminated Flush Door shutters



Er. H.P. Singh
Executive Engineer

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

PTU PUNJAB
TECHNICAL
UNIVERSITY

Esst. Under Punjab Technical University Act 1956
(Punjab Act No. 1 of 1957)

Ref No PTU/CC/524

Dated 19-07-2011

Sh. Chander Mohan,
House No. 202, Sector 36-A, Chandigarh.

Sh. S.L. Kaushal,
Chief Architect/Punjab (Rctd),
2865, Sector 42-C, Chandigarh.

Dr. Nachhattar Singh,
Advisor to VC and Dean (P&D),
Punjab Technical University, Jalandhar.

Dr. Buta Singh,
Dean/Academics, Punjab Technical University, Jalandhar.

Sh. H.S. Bains,
Registrar, Punjab Technical University, Jalandhar.

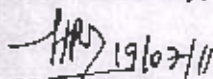
Sub : Construction of new campus of Punjab Technical University – 27th meeting of the
Standing Building Construction Committee.

Dear Sir,

Please find enclosed herewith minutes of the above said meeting for kind information and further necessary action please. Comments, if any, may please be forwarded within 10 days of issue of this letter.

Thanking you

Yours Sincerely,


(H. P. Singh)
Executive Engineer

Copy to :

- i. Dr. R. S. Khandpur, Director General, PGSC, SCO 60-61, Sector 34-A, Chandigarh for kind information please.
- ii. Sh. Rajiv Aggarwal, M/s Archigroup Architects, A-14, Sector-15, Noida -201301.
(Minutes of agenda items No. 27.1, 27.2, 27.4 to 27.7)

eINDIA 2010
AWARDS
Recognising excellence in ICT
Award of the Year

Punjab Technical University Jalandhar

Kapurthala Campus : Jalandhar-Kapurthala Highway, Post Bag No. 01, Kapurthala.

Mobile : 9501109042 www.ptu.ac.in E-Mail : exeptu@gmail.com

Enabled
City of the Year

Open & Distance Learning
Initiative of the Year

308

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Minutes of the 27th Meeting of the Building Construction Committee held on 13.07.2011 under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC in his office at Chandigarh.

Present :

1. Sh. Chander Mohan, Member/BOG,
 2. Sh. S.L. Kaushal, Chief Architect (Retd.), Punjab
 3. Dr. Nachhattar Singh, Advisor to VC and Dean (P&D), PTU
 4. Dr. Buta Singh, Dean/Academics, PTU
 5. Sh. H.S. Bains, Registrar, PTU
 6. Sh. H. P. Singh, Executive Engineer, PTU
 7. Sh. Rajiv Aggarwal, Architect
 8. Ms. Mansi Bedi, Architect
- } From Archigroup
} Architects, Noida.

Item No. 27.1 : To confirm the Minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011.

The minutes of 26th meeting of Standing Building Construction Committee held on 26.05.2011 were confirmed by all the members except for some comments received against item No. 26.3 (Para 3) from Sh. S. R. Aggarwal, Chief Engineer (Retd), special invitee in 26th meeting. The comments/observations received from Sh. Aggarwal were discussed in detail and the following was decided:

Para 1) i : Agreed

Para 1) ii : Agreed

Para 2) : CPVC will be used in chases as these pipes have longer life and other advantages over GI pipes.

Para 3) : It was decided that STP with FAB Technology will be provided for APIT campus, Kapurthala as provision for double piping for flushing system has not been kept in the buildings already constructed and treated water from STP will only be used for horticultural purposes. However, UV treatment system will be provided as per the requirements of Ministry of Environment. Considering the running and maintenance issues, it was decided that all STPs of PTU will be constructed with FAB technology as the same persons will be able to run and maintain all the STPs.

Item No. 27.2 : Action taken on various items discussed during previous meetings of Standing Building Construction Committee.

Action taken on various items discussed during previous meeting of Standing Building Construction Committee is as under:

209

- Three stage evaluation in respect of appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works were completed and discussed in the present meeting.
- The Architect has started detailed designing for structure, HVAC, Electrical, Plumbing and Fire Fighting systems of two towers, one library and one seminar hall of the proposed PIT at main campus, Kapurthala. The Architect presented schedule for completion of these activities in the present meeting.

Item No. 27.3 : To finalize the appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works.

In the bids invited for appointment of Architect for Architectural services for establishment of new Punjab Institute of Technology at Mansa, Ludhiana & Barnala, PTU's Regional campus at Mohali and other future works, M/s Archigroup Architects, Noida scored the highest overall score and is eligible for award of work/negotiations in terms of bid conditions. Committee negotiated the rates with the representative of M/s Archigroup Architects, Noida and after discussions, M/s Archigroup Architects, Noida reduced their rates from 2.04% to 2.00%.

Committee recommends award of this work to M/s Archigroup Architects, Noida at negotiated rates of 2.00%. All terms and conditions of tender will remain the same.

Item No. 27.4 : To discuss and approve the rough cost estimate (based upon plinth area rates of CPWD) submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.

The rough cost estimates for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road based upon plinth area rate of CPWD amounting to Rs. 97.71 Crores were approved.

Item No. 27.5 : To discuss and finalize the methodology/procedure to be adopted for invitation & finalization tenders, project management including supervision of works in respect of PIT Kapurthala works.

After approval of the Estimates by the BoG, tender will be invited as per the following system:

1. Open tenders in two packet systems will be invited for engagement of contractors.
2. All civil, internal electrical, Fire detection, lifts, plumbing works of all the buildings will be included in one package.

h

3. Specialized agencies will be engaged for specialized works such as external electrical works, fire fighting works, external development, Pump houses, STP, Air-Conditioning etc.
4. PTU is not inclined to appoint engineering staff for continuous supervision of works as there may be utilization problems for this staff after completion of the works. So, it was decided to engage supervision consultant, preferably a central Govt. PSU, through invitation of tenders for which EE/PTU was advised to prepare the bid document and present the same in the next meeting for discussions and approval.

Item No. 27.6 : To discuss and approve the 'Finishing Schedule' submitted by the Architect for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road.

The Architect presented the proposed 'Finishing Schedule' for two towers, one library and seminar hall of the proposed Punjab Institute of Technology (PIT) at PTU's main campus at Jalandhar-Kapurthala Road. After lot of discussions/deliberation, following finishing schedule has been approved:

1. COLLEGE BUILDINGS:

- | | |
|--|---|
| • KOTA STONE: | All areas except entrance cores, staircases, toilets & entrance courts (with 20% marble in Pattern) |
| • GRANITE: | Entrance cores & general staircase |
| • VITRIFIED TILES (NON SKID): | Toilets |
| • INTERLOCKING PAVERS: | Entrance Courts |
| • PLASTIC EMULSION WITH PUTTY | All Areas except in toilets |
| • ACRYLIC WASHABLE DISTEMPER WITH PUTTY | Toilets, dry Canteen, Utility |
| • DRY DISTEMPER | Utilities |
| • WHITE (VERY LIGHT BISCUIT COLOR) STONE | Corridor Walls |
| • BLACK GRANITE COUNTERTOP | Research Labs (Only on one side), Canteen, Pantries |

2. LIBRARY

- | | |
|--------------------|---|
| • KOTA STONE: | Entrance Courts (Kota with 20% granite in Pattern), entrance steps, All areas except toilets and general Staircase(Kota with 20% marble in Pattern) |
| • VITRIFIED TILES: | Toilets |
| • GRANITE: | General Staircase |

h

311

• IPS:	AHU
• PLASTIC EMULSION WITH PUTTY:	All areas except toilets, kitchen, AHU's and Utilities
• ACRYLIC WASHABLE DISTEMPER WITH PUTTY	Toilets, Kitchen, AHU
• DRY DISTEMPER	Utilities
• BLACK GRANITE COUNTERTOP	Kitchen, Serving (cafeteria), Issue Counter
3. SEMINAR HALL	
• VITRIFIED TILES:	Toilets
• KOTA STONE:	Seminar hall (carpet optional), Stage , Entrance Foyer (with 20% marble in Pattern), Entrance Steps
• PLASTIC EMULSION WITH PUTTY:	All areas except toilets
• ACRYLIC WASHABLE DISTEMPER WITH PUTTY:	Toilets
• BLACK GRANITE COUNTERTOP:	Toilets
4. EXTERNAL FINISH	
• RED AND WHITE (very light biscuit color) SAND STONE	As per elevation
5. MISCELLANEOUS	
• SOUND INSULATION	In seminar, AV room, meeting room and Lecture halls as required
• FALSE CEILING (Gypsum & Armstrong Boards):	As required
6. DOORS AND WINDOWS	
• WINDOWS	Anodized aluminum with reflective single glass
• STRUCTURAL GLAZING	Anodized aluminum with reflective glass (single/double as required)
• DOORS	Aluminum Frames with laminated Flush Door shutters

✓

312

Item No. 27.7 : Payment to the Architect for preparation of drawings and data to be submitted to Department of Town and Country Planning for approval of plans and to the Ministry of Environment and Forest for Environmental Clearance for APIT and PIT works at main campus.

It was informed to the committee that PTU is to submit drawings and data to the Department of Town and Country Planning for approval of plans and to the Ministry of Environment and Forest for Environmental Clearance for APIT and PIT works at main campus. All these drawings and data are to be prepared by the Architect but the same is not included in his scope of work. For performing similar work in respect of Phase-II (A) works, a payment of Rs. 6.00 lacs has been approved in 20th meeting of the Building Construction Committee (Agenda Item No. 20.7). The Architect has requested for similar payment in respect of APIT and PIT, Kapurthala works. The Committee agreed and approved payment on proportionate basis of the covered area of the proposed buildings in Phase II (B).

✓

42/11

R

PUNJAB TECHNICAL UNIVERSITY

Subject: **Submission of Drawings of Phase-II to JDA for approval and to PCB for Environment Clearance.**

Before starting construction above approvals are mandatory. We have given an undertaking to State Level Environment Impact Assessment Authority that Environment Clearance shall be obtained before starting construction and on this undertaking, violation on our behalf in case of Phase-I was condoned.

Architects were requested to supply plans vide Reference No.PTU/const/Phase-II/160-167/3618 dated 04/09/2008. Four sets of plans indicating following requirement of JDA were asked for vide No.PTU/const/Phase-II/277/6869 dated 17/03/2009:-

- (a) Site Plan
- (b) Plans, Elevations and sections of proposed Buildings.
- (c) Water Supply, drainage plans. Scheme for fire safety and electrical system for air conditioning.

Architects vide their Reference No.AA@/PTU/3002 dated 08/04/2009 (Annexure 'A') submitted that supply of drawings is not in their scope and demanded extra fee for it which works out to Rs.12.00 lacs approximately. A meeting was convened with them under the Chairmanship of Dean (Academics) on 21/04/2009 (minutes issued vide Ref.No.PTU/const/PH/II (M)/310-314 dated 29/04/2009) in which they were intimated that preparation of Drawings and Reports is already contained in the Agreement and there is no question of paying any additional fees. They were informed of the same position vide Ref. No.PTU/const/PH-II/309/7651 dated 24/04/2009 (Annexure 'B'). All the time they were requested to supply the plans without any delay.

When the plans were not forthcoming, a meeting was convened with them under the Chairmanship of V.C. on 12/05/2009 in which above position was explained. Sh.S.L.Kaushal Advisor (Architecture) who has been associated with the Project right from the beginning stated in the meeting that much work is not involved which has to be done in any case for the preparation of the final plans. However Sh.S.S.Bains Principal Chitkara School of Architecture Rajpura stated that Municipal Drawings are different and payment of Architects on man-hour basis can be considered. It was desired by the V.C. that a Comprehensive Note be put up for his decision. In the meantime the Architects will supply the plans and data to avoid further delay in the submission of the same.

A photocopy of the clause 2.0 of the Contract Agreement defining scope of the work is enclosed as Annexure 'C'.

Put up for decision please.

Dean (Academics)

Chief Engineer

July 19/5/09

V.C

2009/05/19

1. श्री. मोहन. मोहन इन्डिया
2. श्री. मोहन. मोहन इन्डिया
3. श्री. पी.पी.एस. इन्डिया

314

P.T.O

19/5

314

1

18/5/09
 19/5/09
 Chief Engg
 18-05-09
 A7
 Date
 18-05-09

10/06/09

The committee met on 5-6-2009 at Chandigarh. It is observed that preparation of drawings for Municipal (JDA) approval is not in the scope of the Architect as per the Agreement. Architect has to do extra work and has to prepare as many as 28 d as reported by him. For extra work, extra fee was negotiated with him. The committee recommends that a lump sum amount of Rs 6.0 lacs may be paid to him which is acceptable to him.

10/06/09
10/06/09
10/06/09

Res
5/6/09

Director
5.6.2009

Chang
5/6

Above Report of the committee constituted vide v.c. as per his orders on fore page is submitted for acceptance so that the same is conveyed to the Architects.

Dean (Academics)
Reginald

10/6/09

Chang
CE

CE
11/06

315

6002-90-80-2009
127

10/06/09



A. N. Chowdhry
Chief Engineer (Construction)

PTU PUNJAB
TECHNICAL
UNIVERSITY

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

Rel No. PTU/Const/Vis-1/309/17651

Date 24-04-2009

M/S Archigroup Architects,
5 M4 Sikha Complex,
Preet Vihar Community Centre,
Vikas Marg-Delhi.

Subject: Submission of Drawings for PTC.

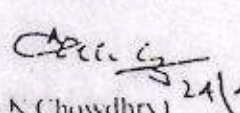
Dear Sir,

Kindly refer to your Reference No. AMRI-PTU Phase II-3002 Dated 8/4/2009. The preparation of Drawings, Plans and Reports desired by the University vide No. PTU/Const/Phase II/277/6869 Dated 17/3/2009 is already contained in the scope of work as per the Agreement signed by the University with M/S Archigroup. No additional drawings are required. Therefore there is no question of paying any additional fees. No charges for supplying drawing of Phase-I for approval from PUDA are pending.

You are requested to supply the drawings immediately as approval from JDA and clearance from State Environment Authority is getting delayed.

Thanking you,

Yours sincerely,


(A.N. Chowdhry)
Chief Engineer.

Subject: Payment to M/s Archigroup Architect for approval of drawings

A lump sum amount of Rs-6 lac has already been approved in the 20th meeting of Standing Building Construction Committee for submission of drawing of phase II for approval from JDA, PPCA and Environmental Clearance. (copy enclosed). The construction wing certified that the approval from JDA is under process. The Chief Engineer has already recommended to release 75% payment for the said job.

The matter has been discussed with Chief Engineer by COF.

In view of above if approved Rs 4,50,000/- may be release to M/s Archigroup Architect for Extra work.

~~Sd/- (SA)~~

The matter has been discussed by CE with CoF. As the details are not available in the file. However, if it is approved by/record in view of the said outcome of the meeting CoF may kindly indicate so that the file is kept in view of 'A' on n/p-3.

Sd/-
25/8/07

Tarek
25/8/07

~~Sd/-~~

Chief Engineer has informed that 75% of the claim has been recommended for payment and 25% has been withheld which will be issued/released after approval of JDA.

Sd/-
25/8

~~Suppl~~

In view of the discussion of COF & CE as recorded above, the case may be considered for approval as per 'x' pt.

Submitted for approval.

Tarek
25/8/07

Sd/-
Srinivas

V.C. 4/9/07
K. V. 2/09
COF