



Er. H.P. Singh
Executive Engineer

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ
PTU PUNJAB
TECHNICAL
UNIVERSITY

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

Ref. No. PTU/EC/649

Dated 07.07.2014

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

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

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

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

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

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

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

The Registrar,
Punjab Technical University,
Jalandhar.

Er. Jaswant Singh Pabla (Sp. Invitee),
(Electrical Expert)
House No. 2631, Sector-79,
Mohali.

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

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

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

Sub : Construction of new campuses of Punjab Technical University – 42nd meeting of the Standing Building Construction Committee.

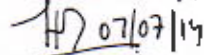
Dear Sir/Madam,

42nd meeting of the Standing Building Construction Committee shall be held under the Chairmanship of Dr. R. S. Khandpur, Director General, PGSC (Retd) at 1100 hours on 16.07.2014 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)

Executive Engineer

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

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Punjab Technical University Jalandhar

Kapurthala Campus : Jalandhar-Kapurthala Highway, Kapurthala-144601

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PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Sub : Agenda for the 42nd meeting of the Standing Building Construction Committee.

- Item No. 42.1 : To confirm the Minutes of 41st meeting of Standing Building Construction Committee held on 03.04.2014.
- Item No. 42.2 : Action taken on various items discussed during previous meeting of Standing Building Construction Committee.
- Item No. 42.3 : To discuss and approve the rough cost estimate for construction of proposed auditorium at main campus, Kapurthala.
- Item No. 42.4 : 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.
- Item No. 42.5 : 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, Sikhwala, Mukatsar Sahib.
- Item No. 42.6 : To discuss and approve the design basis reports submitted by the Architect for Structure, Electrical and Public Health works of Hostels and auditorium proposed to be constructed at main campus, Kapurthala.
- Item No. 42.7 : To discuss and approve the finishing schedules (internal and external) for Punjab Institute of Technology buildings at Arniwala, Sikhwala and auditorium & hostels for main campus, Kapurthala.
- Item No. 42.8 : To discuss and approve the revised estimate for raising, repairing and painting of existing boundary wall of main campus, Kapurthala.
- Item No. 42.9 : To discuss and approve the revised estimate for construction of boundary wall of Punjab Institute of Technology, Mansa.
- Item No. 42.10 : To discuss and approve the requirement and scheme for construction of buildings for Bank, Post office and shopping centre at main campus, Kapurthala.
- Item No. 42.11 : To discuss and approve the requirement and scheme for construction of major roads at main campus, Kapurthala.
- Item No. 42.12 : Any other point with the permission of the Chair.

PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

Agenda Note for the 42nd meeting of the Standing Building Construction Committee.

Item No. 42.1 : To confirm the Minutes of 41st meeting of Standing Building Construction Committee held on 03.04.2014.

The minutes of 41st meeting of Standing Building Construction Committee held on 03.04.2014 were circulated on 07.04.2014. The minutes circulated are to be confirmed.

Item No. 42.2 : Action taken on various items discussed during previous meeting of Standing Building Construction Committee.

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

- The concept plans of convention centre (auditorium) has been revised by the Architect based upon the discussions held in the previous meeting and rough cost estimate for the same is to be discussed in the present meeting. Building plans have been submitted to Chief Town Planner, Punjab for approval.
- The detailed designing and estimation for the works to be executed at Punjab Institute of Technology, Sikhwala and Punjab Institute of Technology, Arniwala based upon approved master plan and building plans has been started. Building plans for both the institutes have been submitted to Chief Town Planner, Punjab for approval.
- The detailed designing and estimation for the hostels to be constructed at main campus has been started by the Architect. Building plans have been submitted to Chief Town Planner, Punjab for approval.
- The detailed estimate for proposed Director's office at Punjab Institute of Technology, Kapurthala has been prepared and sent to PWD for vetting.
- Punjab State Council for Science and Technology has completed 'Energy Audit' for PTU's administrative building at main campus, Kapurthala and their report is awaited.

Item No. 42.3: To discuss and approve the rough cost estimate for construction of proposed auditorium at main campus, Kapurthala.

Based upon the approved concept plans of the auditorium proposed to be constructed at main campus, Kapurthala, the Architect has submitted rough cost estimate based upon plinth area rates of CPWD for an amount of Rs. 2175.97 lacs (Annexure-A).

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



Item No. 42.4 : 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.

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.

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

Item No. 42.5 : 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, Sikhwala, Mukatsar Sahib.

The Architect has submitted design basis reports of Structure, Electrical and Public Health works in respect of Punjab Institute of Technology, Sikhwala, Mukatsar Sahib (Annexure-C). The same will be presented by the Architect in the meeting.

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

Item No. 42.6 : To discuss and approve the design basis reports submitted by the Architect for Structure, Electrical and Public Health works of Hostels and auditorium proposed to be constructed at main campus, Kapurthala.

The Architect has submitted design basis reports of Structure, Electrical and Public Health works for hostels and auditorium proposed to be constructed at main campus, Kapurthala (Annexure-D). The same will be presented by the Architect in the meeting.

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

Item No. 42.7 : To discuss and approve the finishing schedules (internal and external) for Punjab Institute of Technology buildings at Arniwala, Sikhwala and auditorium & hostels for main campus, Kapurthala.

The Architect will be presenting the finishing schedules (internal and external) for Punjab Institute of Technology buildings at Arniwala, Sikhwala and auditorium & hostels for main campus, Kapurthala.

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



Item No. 42.8 : To discuss and approve the revised estimate for raising, repairing and painting of existing boundary wall of main campus, Kapurthala.

In 41st meeting (Agenda item No. 41.10) of the Standing Building Construction Committee, scheme and estimate for raising, repairing and painting of existing boundary wall of main campus, Kapurthala for an amount of Rs. 43.14 lacs was approved. However, during the discussions held with PWD officers, it has been suggested by them that instead of painting the boundary wall with snowcem (as taken in the estimate), painting with silicon based paint should be done for longer durability. It is also suggested that APST's boundary wall should also be raised and painted. Accordingly, the estimate has been revised by the Architect to Rs.62.49 lacs (Annexure-E).

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

Item No. 42.9 : To discuss and approve the revised estimate for construction of boundary wall of Punjab Institute of Technology, Mansa.

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. At the time of approval of this estimate, the length of the boundary wall was considered as 4200 metre. However, as per site conditions, the actual length of the boundary wall is 4680 metre. Additionally, it is also proposed that painting of the pre-cast panel boundary wall portion, which is on the three sides of the campus, is also got done. This was not considered at the time of approval of earlier estimate. By considering all these factors, Architect has submitted a revised estimate for boundary wall for an amount of Rs. 350.87 lacs (Annexure-F). 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.

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

Item No. 42.10 : To discuss and approve the requirement and scheme for construction of buildings for Bank, Post office and shopping centre at main campus, Kapurthala.

Based upon the approvals accorded in previous building committee meetings, construction of three college buildings, two hostels, one library and one seminar hall for Punjab Institute of Technology, main campus, Kapurthala is in progress. Further, construction of hostels for 400 students and auditorium is being taken up. It is likely that strength of students will be more than one thousand in coming years. To take care of their needs, it has been suggested by senior officers of the University that building for housing Post office, Bank and a small shopping centre may be constructed. Architect has prepared concept plans for the same and will be presenting in the meeting.

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

Item No. 42.11 : To discuss and approve the requirement and scheme for construction of major roads at main campus, Kapurthala.

Presently, construction of three college buildings, two hostels, one library and one seminar hall for Punjab Institute of Technology, main campus, Kapurthala is in progress. Further, construction of hostels for 400 students and auditorium is being taken up. Thus, all round development of the campus is taking place. Under the circumstances, it is suggested that tree plantation for the complete campus is done at this stage. For proper development of the campus and green belts, it is proposed that all major roads of the campus are got constructed. The roads proposed to be constructed are being presented by the Architect.

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

Item No. 42.12 : Any other point with the permission of the Chair.

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ANNEXURE-A

PREAMBLE TO PRELIMINARY ESTIMATE

1. **State:** PUNJAB

2. **Name of Work**

2.1. Construction of Punjab Technical University, Kapurthala.

2.2. This preliminary estimate of probable cost of Rs. 217,596,646/- (Rs. Twenty one crore, seventy five lacs, ninty six thousand, six hundred & forty six only) excluding contingencies, cost of external development and departmental charges has been framed by Archigroup Architects (Regd.)

3. **History**

3.1. This preliminary estimate covers the probable cost of construction of Convention Centre. This scope of work was finalized in the meeting held on 7th May 2014 at Chandigarh. This estimate is submitted for accord of Administrative approval and expenditure sanction by the competent authority.

4. **Design & Scope:**

4.1. The proposed buildings shall be constructed as RCC structure. The present estimate consists of:

4.1.1. Convention center: - The block is G+1 consisting of 800 capacity auditorium, 2 green rooms, 1 control room, 1 no. VIP lounge with kitchen, 1 no. VIP suites, Student's verandah with kitchen, 2 offices, toilets etc.

5. **Civil works:** Most of the items to be executed in these buildings are already included in the provisions in the PAR – CPWD for year 2012.

6. The salient features of various provisions are as under:

6.1. **Building:** - The building shall be of R.C.C. framed structure with raft and combined footing.

6.2. **Foundation:** - As per structural design based on soil investigation.

6.3. **Flooring :-**

Auditorium	Carpet
Stage	Wooden flooring
VIP lounge, suites, lobby, corridor	Granite
Staircase	Granite
Student's verandah	Kola stone
Toilets	Vitrified tiles

6.4. **Doors and windows: -**

6.4.1. Door frames shall be of Aluminium with pre-laminated shutter. Doors of auditorium shall be acoustic doors. Windows shall be of Aluminium sections & shutter as per architectural drawings. Structural glazing has been provided at places in the elevation. Fitting shall be steel or aluminum as per architect's requirements.

6.5. **Staircase Railing:** Stainless steel railing has been provided.

6.6. Toilets: Floor vitrified tiles and dado up to door level height with glazed ceramic tiles, vitreous china WC, washbasin and urinals.

6.7. Roofing: - Terrace shall have brick bat coba treatment and acoustical false ceiling shall be provided in auditorium as per architectural drawing & gypsum false ceiling in VIP lounge & suites.

6.8. Internal Finishing: cement plaster, oil bound distemper and acrylic emulsion paint and plastic emulsion with putty, doors shall be enamel/ spirit polish finish. Walls of auditorium will have acoustic paneling.

6.9. External Finishing: Weather proof paint, structural glazing, Stone cladding as per architectural drawings.

6.10. Furniture: Chairs of auditorium has been included in this estimate.

7. Services:

7.1. Following provisions have been made in this preliminary estimate.

7.1.1. Fire prevention system as/ NBC have been provided. Sprinklers system has been considered

7.1.2. Internal Electrical Installation, telephone data, networking, power plugs etc.

7.1.3. Video presentation & sound reinforcement system has been considered in this estimate.

8. Exclusions:

8.1. No provisions have been made in the preliminary estimate for interior decorations, façade lighting, for external development works like roads, rain water harvesting bulk services such as tube wells, pumps, extension of lines, HT- substation equipments, LT distribution system, DG sets, external lighting, IBMS and CCTV access control system etc.

9. Rates

9.1. Rates are based on CPWD PAR of 1.10.2012. For the items not covered under PAR 2007, rates have been derived from market rate analysis, PTU-III, Kapurthala approved estimates and CSR of Punjab.

10. T & P : No special T&P is required all other shall be arranged by the contractor.

11. Land : Available.

12. Method : By contract after call of tenders.

SUMMARY - PRELIMINARY ESTIMATE				
S. No.	Building / Component	Floor Area (Sq.m)	Total Cost of building in Rs	Reference
1	2	3	4	5
1	Convention centre	3,746.70	150,760,218.60	Raf. Detailed calculation
2	Other Building Expenses(Richer Specifications)		45,537,008.40	Ref. Annexure 1
3	AC cost		21,299,421.08	Ref. Annexure 2
4	Total (1+2+3)		217,596,646.08	
5	SAY		217,596,646	
Twenty one crore, seventy five lacs, ninety six thousand, six hundred & forty six only				

Auditorium		Assembly		Refer Drg No. PTU-IV/PRE/AC/01-01 to 09			
Type of Building -							
Total Plinth Area -			3,746.70 sq.m				
Plinth area on ground floor			3,178.00 sq.m				
Total covered area-			3,821.50 sq.m				
No. of storeys-			G+1				
Floor height			13.50 m				
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 2 storeys						
1.1.1	Floor height 3.35m						
a.	Floors	sqm	3,746.70	1.0	23,500.00	88,047,450.00	
1.2	Extra for						
1.2.1	Every 0.3m additional height of floor above normal floor height of 3.35m.						
a.	Ceiling at 12.9m	sqm	430.69	31.83	270.00	3,701,780.55	Ceiling height at different levels. Refer dwg no. PTU-IV/PRE/AC/01-07 & 08
b.	Ceiling at 11.4m	sqm	264.23	26.83	270.00	1,914,346.35	
c.	Ceiling at 6.3m	sqm	300.29	9.83	270.00	797,269.95	
d.	Ceiling at 6m	sqm	638.30	8.83	270.00	1,522,345.50	
e.	Ceiling at 5.0m	sqm	327.95	6.50	270.00	575,552.25	
f.	Ceiling at 4.2m	sqm	274.53	2.83	270.00	210,015.45	
g.	Ceiling at 4m	sqm	607.36	2.17	270.00	355,305.60	
1.2.3	Every 0.3m deeper foundation over normal depth of 1.20m (on G.F. area only)	sqm	3,178.00	4.33	270.00	3,718,260.00	
1.2.4	Every 0.3m higher plinth over normal plinth height of 0.6 m. (on G.F. area only)						
a.	Plinth at 0.9m	sqm	1,274.00	1.00	270.00	343,980.00	
b.	Plinth at 1.6m	sqm	567.70	3.33	270.00	510,930.00	
1.2.5	Resisting Earthquake forces	sqm	3,746.70	1.00	1,140.00	4,271,238.00	
1.2.6	Large modules over 35 sq m	sqm	1,169.60	1.00	1,500.00	1,754,400.00	Auditorium & lounges
1.2.7	Fire fighting						
1.2.7.1	With wet riser system	sqm	3,746.70		500.00	1,873,350.00	
1.2.7.2	With sprinkler system	sqm	3,178.00		750.00	2,383,500.00	
1.2.8	Fire Alarm						
1.2.8.1	Automatic Fire alarm system	sqm	3,746.70		500.00	1,873,350.00	
	Total A (1.1.1.a + 1.2.1) =					97,124,065.65	
	Total B (1.2.3 to 1.2.8) =					16,729,008.00	
2	SERVICES						
2.1	Internal water supply & sanitary installations	% of A			@ 15%	14,568,609.85	
2.2	External service connections	% of A			@ 5%	4,856,203.28	
2.3	Internal Electrical Installation	% of A			@ 12.5%	12,140,509.21	
2.4	Extras for						
2.4.1	Data network conduits	% of A			@ 0.5%	485,620.33	
2.4.2	Power wiring & plugs	% of A			@ 4%	3,884,982.63	
2.4.3	Telephone conduits	% of A			@ 0.5%	485,620.33	
2.5	Lightning conductors						
2.5.1	Upto 4 storeyed building	% of A			@ 0.5%	485,620.33	
	Total C (2.1 to 2.5.1) =					36,907,144.98	
	Grand Total E = A+B+C					150,760,218.60	

OTHER BUILDING EXPENSES

Annexure-1

S. No.	Description	Unit	Quantity	Rate	Amount (INR)	Explanation
1	2	3	4	5	6	7
Richer Specifications						
1	Wooden Flooring	sqm	273.72	11,860.00	3,246,319.20	On stage
2	Carpet	sqm	935.00	2,058.61	1,924,800.35	Rates derived from preliminary estimate of auditorium submitted in 2007
3	Chairs	No.	800.00	5,800.00	4,640,000.00	
4	False ceiling & panelling					
4.1	Acoustic tiles for lobby (600x600) 0.9 NRC	sqm	305.60	2,282.24	699,734.78	
4.2	Acoustic ceiling for hall	sqm	1,208.72	3,847.44	4,650,477.68	Market rate analysis of Anubone ceiling for 0.9 & 0.7 NRC
4.3	Wall panelling	sqm	1,058.00	5,318.99	5,625,375.42	
5	PA system				1,250,000.00	
6	Stage lighting				3,000,000.00	Rates considered from acoustic report of auditorium submitted in 2007
7	Sound reinforcement system				10,000,000.00	
8	Video presentation system				10,500,000.00	
	Total				45,637,006.40	

Cost of Airconditioning						Annexure-2
S.No.	Building	Unit	Area	Refrigeration Provided @ 1 TR/100sq.ft	Cost @ 95,000/ TR	
1	2	3	4	5	6	
	AC areas	Sqm.	2,082.91	224.20	21,299,421.08	