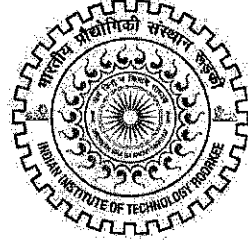


भारतीय प्रौद्योगिकी संस्थान रुड़की
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
रुड़की-247 667 / ROORKEE - 247 667



भवन एवं निर्माण समिति की 34वीं बैठक का कार्यवृत्त
MINUTES OF THE 34th MEETING OF
THE BUILDING & WORKS COMMITTEE

दिन और दिनांक: शुक्रवार, 12 अगस्त 2016
DAY & DATE: FRIDAY, THE 12TH AUGUST 2016

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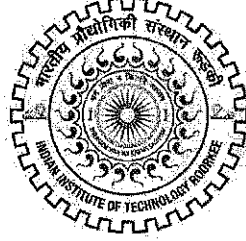
मुद्दा सं०/ Item No.	विवरण / Particulars	पृष्ठ सं०/ Page (s)
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34.4	<p>आईआईटी रूड़की के सहारनपुर कैम्पस में एसटीपी सहित सीवरेज प्रणाली और उपचार प्रवाह की रीसाइक्लिंग के निर्माण के प्रस्ताव पर विचार करना—जमा काम।</p> <p>To consider the proposal for construction Work of Sewerage system including STP and re-cycling of treated effluent at Saharanpur Campus of IIT Roorkee - Deposit work</p>	4
34.5	<p>बीओजी द्वारा संस्तुत फ्रेम वर्क प्लान-2013 के अनुसार अगले पांच साल के लिए निर्माण के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal for construction for the next five years as per Frame Work Plan-2013 approved by the BOG.</p>	4
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INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE - 247 667



Minutes of the 34th meeting of the Building & Works Committee held on 12th August 2016 at 11.00 A.M. in the Board Room of the Institute.

The following were present:

- | | |
|---|-------------------|
| 1. Prof. Pradipta Banerji, Director | - Chairman |
| 2. Prof. P.K. Ghosh, Deputy Director | - Member |
| 3. Prof. Z. Ahmad, Chairman, E&W | - Member |
| 4. Er. Manoj Kumar, Executive Engineer, UPCL
(on behalf of the Dy. G.M. UPCL, Roorkee) | - Member |
| 5. Prof. (Mrs.) Pushplata, Architecture & Planning | - Member |
| 6. Prof. Pradeep Kumar, Civil Engineering Department | - Member |
| 7. Prof. Pramod Agarwal, Electrical Engg. Department | - Member |
| 8. Er. Ajay Sharma, Institute Engineer | - Member |
| 9. Prof. U.P. Singh, Dean, Finance & Planning | - Special Invitee |
| 10. Shri Prashant Garg, Registrar | - Secretary |

Communication received from the following members for not attending the meeting:

1. Er. Pravendra Kumar, Director, MDC, U.P. Housing & Development, Lucknow
2. Er. Salek Chand
Engineer-in-Chief and HOD, UP PWD, Lucknow

The Chairman welcomed the members of the 34th meeting of the Building & Works Committee.



The B&WC also welcomed Prof. Pradeep Kumar, Department of Civil Engineering, new member and solicited his valuable contribution and active participation in its functioning.

Deliberations:

The B&WC has taken the following agenda items for discussion, deliberation and consideration:

Item No. 34.1: To confirm the minutes of the 33rd meeting of the Building & Works Committee held on 09.11.2015.

Having received no comments, the minutes of the 33rd meeting of the Building & Works Committee, as recorded and circulated, were **confirmed**.

Item No. 34.2 To receive a report on the actions taken to implement the decisions of the 33rd meeting of the Building & Works Committee held on 09.11.2015.

The Building & Works Committee **noted** the actions taken on the minutes of the 33rd meeting, as reported. **(Appendix 'A')**. The Chairman commented that this meeting of B&WC is being conducted after a span of 8 months. He advised that the meeting of B&WC be scheduled in such a way that at least two in a year be held preferably after six months. In case, there is no new proposal of construction, the progress of ongoing projects & status be placed in the meeting of the B&WC.

He expressed his concern on the report of action taken on item No. 33.4, as the action initiated not in exact consonance of the decision of the Board of Governors taken in its 48th meeting held on 23.11.2015 and reported in its 49th meeting held on 19.03.2016. He further advised that in future, the decision of the Board of Governors be considered in a holistic manner and cases be processed precisely as per the direction of the Board.

The Chairman, B&WC further emphasised that the B&WC is a recommending body to the BOG and the decision of the Board of Governors is final.



Item No. 34.3: To consider the proposal for the construction of STP at the IIT Roorkee campus.

The B&WC has taken a stock of progress on the earlier recommended STP project with odor less technology since its previous 33rd meeting held on 09.11.2015. The Detailed Project Report (DPR) prepared by the Consultant, so appointed for this purpose has been considered.

The B&WC expressed its concern at the new proposed site located near the Earthquake Engineering Department behind the Kasturba Bhawan on the following grounds:

1. The Kasturba Bhawan is located just near this proposed site which can be the cause of concern for hostel community.
2. Department of Earthquake Engineering and CBRI building exists in the vicinity, their administration can raise similar concern.
3. The site is a low level area and has lot of trees including of the teak wood.

Due to these reasons, the B&WC after due deliberations advised that the vacant chunk of land between old Teachers' Hostel and Shubhash Chandra Bose Club may be explored for construction of STP. The Consultant may be asked to visit the proposed alternate new site, access & evaluate the feasibility of construction of STP at site in the light of levels of the laid down Trunk Sewer Lines network as already terminated near this location. The revised approval be taken from the Director as the Chairman, B&WC.

Further advised that if this new proposed site found suitable, the local authority, who had earlier raised objection, be taken into confidence and obtain the necessary permission and all other clearances before commencement of the STP. Since, the construction of STP is required to be taken up on high priority, all the actions including location finalization and permission from city authority be taken up swiftly in consultation with the Consultant. The recommendations alongwith permission so obtained, be placed before the Board of Governors in its meeting scheduled to be held on 6th September 2016.

Item No. 34.4: To consider the proposal for construction Work of Sewerage system including STP and re-cycling of treated effluent at Saharanpur Campus of IIT Roorkee - Deposit work.

The B&WC after deliberation on the issue recommended that NBCC may be asked to complete the remaining work of STP and Sewerage System within its sanctioned cost as per MoU. However, it is further recommended that technology for covering parts of the STP to reduce odor may also be included in the STP of Saharanpur Campus. Additional, financial projected implication approximately of Rs. 20.00 lacs be approved for this purpose.

Item No. 34.5: To consider the proposal for construction for the next five years as per Frame Work Plan-2013 approved by the BOG.

The B&WC considered the proposal as per Master Plan-2013. The B&WC advised that the Institute Architect be asked to prepare the implementation plan of this Master Plan keeping in view of the need and priority of the Institute and the same be placed before the next meeting of the Board of Governors.

The Chairman, B&WC desired that since there is shortage of space for development of Centre of Excellence and other academic and research areas, therefore, the academic buildings be taken up on priority. Presently, the space housing the Student Club, Hobbies Club, Workshop etc. be taken up for planning such buildings. The present residential area of the Amod Kunj after suitably re-allocated its residences, be also included into the development of such Academic Areas.

It was observed that after the completion of Married hostel-cum- Transit accommodation buildings which are under construction, will provide the sufficient residential area for time being required for faculty.

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



Appendix 'A'
Item No. B&WC/34.2

Item No. 34.2 To receive a report on the action taken to implement the decision of the 33rd meeting of Building & Works Committee held on 9.11.2015.

The minutes of the 33rd meeting of the Building and Works Committee were circulated to the members on 9th November 2015. The status on action taken on the decision of the Building & Works Committee are reported as under :

Item No.	Abstract of the minutes	Status of action taken
33.3	B&WC recommended the proposal technically related to Planning, Design and Construction of odor less STP at IIT Roorkee Campus.	The consultant has been appointed. The item is placed at Agenda item no. 34.3.
33.4	The Building & Works Committee technically considered the proposal of replacement of Mechanical Doors System both for Phase I and Phase II of the proposal comprising the installation of lifts in rest of the 18 departments/centres. The BOG has also approved the proposal in its 49th meeting and further suggested that the negotiation with existing vendor M/s ThirdLeG Mobility Aids be carried out to reduced the cost for proposed replacement.	Accordingly the negotiations were carried out with the agency by the duly constituted committee. The cost of this replacement including the cost of by back of old material negotiated with the contractor is Rs.31.20 lacs against the quoted price of Rs. 32,83,175/-. The case has been submitted to the material management Department for placement of order. For rest of the 18 Nos. of lift of Phase -II it is decided that these lifts may be installed with room less and gear less technology by inviting the open tenders from various reputed Manufacturers. The tender document with gear less and room less technology is under preparation and tenders would floated soon. This decision is advisable because the cost of lifts with automatic door system etc. is coming at par with this technology.

33.5	The B&WC recommended that only net additional cost of Rs. 4.00 lacs be allowed for payment after adjustment on account of liquidated damages for the delay in completion of work and change of contractor from the projected revised estimation by the NBCC in respect of the construction of Multi Activity Centre (MAC) already completed.	The bill of the NBCC has been processed as per the approval granted by the B&WC and BOG.
33.6	The B&WC considered and technically approved the proposal for augmentation of electrical load for new buildings with a ceiling of Rs. 260.00 lacs	The Press tenders for this work had been invited and work has been allotted to M/s Chubay & Company (Agencies) Pvt. Ltd. Kanpur, who was the lowest bidder.
33.7	Letter of the Member Secretary, State Level Environment Impact Assessment compliance of the Environment provisions for the construction of building in the campus	The approval of SEIAA had been obtained vide their letter No. Nil dated 7 th March 2016 and placed at Appendix 'A' .



State Level Environment Impact Assessment Authority, Ajabpur Kala, Mothorowala Road,
Dehradun, Uttarakhand.
(Constituted by Ministry of Environment, Forests and Climate Change
Government of India.)

To,

Dated 07 March, 2016

Indian Institute of Technology
Roorkee
District- Haridwar

Sub: Regarding Environmental Clearance for Construction Project of Boys Hostel, Lecture Hall Complex,
Biotechnology Building, Girls Hostel, Staff Accommodation-I, Staff Accommodation-II and Multi
Activity Centre at I.I.T. Roorkee, Uttarakhand.

Ref- Your Application dated 07-05-2011 & Last information dated 22-01-2016.

Sir,

The above proposal seeking environmental clearance for construction of building in expansion mode of existing site and will be utilized for Boys Hostel, Lecture Hall Complex, Biotechnology Building, Girls Hostel, Staff Accommodation-I, Staff Accommodation-II and Multi Activity Centre. The SEAC undertook appraisal of the proposal 07-05-2011. The construction work of the above units with a built up area of 91847 m² has already been constructed. The affidavit regarding violation has been submitted by you assuring not to repeat it in future. The matter has also been referred to the designated agency of the State Govt. of Uttarakhand and legal action has already been initiated. Above project falls under schedule 8(a) of E.I.A. Notification dated 14-09-2006. This proposal is under B-2 Category. For the existing facility, it was observed that proponent has made due provision of water supply in storage tank. The water is being supplied by bore wells. Further internal roads have been built and provision of sanitation/waste disposal has been established. The various project details for expansion are:

- The Project proponent process to use conventional construction materials e.g. steels, Cement, Stone Aggregates. Temporary storage units would be erected in the construction site and transportation of construction materials would be restricted to non-peak hours. The dust pollution shall be suppressed by regular water sprinkling.
- Noise will be emitted mostly during construction phase due to construction machinery like batching plant, concrete pumps tower cranes, pile drivers DG sets and air compressors. The construction machineries and DG sets would be comply with desired acoustic standards of CPCB guidelines to negate effects of noise pollution and air emission. Noise emission due to vehicular movement within the site will be controlled by establishing green belt.
- The excavation surplus earth will be used for backfilling in the project site and also used for development of green belt/landscaping. The construction work would not damage local flora and fauna. There would be no felling of trees during the construction phase.
- Total power requirement for the project would be 2 MVA and would be meted out from regular supply by UPCL. DG sets (Capacities 250 KVA X 3, 125 KVA X 3 and 263 KVA x 1) would be installed as backup power supply. DG sets would have acoustic enclosures and have adequate stack height complying with CPCB norms.
- Water requirement during construction phase of the project would be met from Bore Well. Total domestic water requirement would be 635KLD of which fresh water requirement is 635 KLD and

remaining water requirement shall be met from treated waste water from STP. Waste water generated will be 540KLD

- STP of capacities 3 MLD would be installed treating waste water. Treated water would be used for flushing, green belt development, road washing, DG cooling and other miscellaneous purpose. 540 KLD treated waste water would be discharged to the sewage system. Water efficient fixtures and fitting will be used to optimize water use.
- Rain water harvesting measures and storm water management plan have been designed as per guidelines of CGWA to recharge the ground water at site. The project site would have well designed and adequate drainage system to avoid any kind of flooding. All building roof water would be brought down through rain water pipe. Three rainwater storage tank/pit have been proposed within the site premises for conserving the rainwater. The storm water from paved surface and road areas will be collected to rain water harvesting pits through desilting chamber and oil & grease trap.
- Waste generated during construction phase would be in the form of construction debris, which would be disposed off through authorized recyclers and also used in land development/land leveling. Guidelines of municipal solid waste (Management & Handling) Rules, 2000 (as amended from time to time) would be followed for disposal of municipal solid waste. Two-bin collection system for biodegradable and non-biodegradable waste would be adopted. Biodegradable waste would be sent to composting pit and non-biodegradable waste disposed off through authorized recyclers. The used oil from DG sets will be stored in HDPE drums and sold to authorized vendor. The disposal of e-waste will be follow guidelines of e-waste (management & handling) rules, 2011. STP sludge would be dried and used as organic manure.
- To achieve energy conservation, passive solar techniques would be followed for maximizing the use of sunlight. The use glazed windows, thermal storage wall, passive cooling system would be adopted, CFL lamps and solar lighting would be ensured in the common areas.
- The building material would be so chosen to achieve energy efficiency. The use of fly ash based light weight aerated concrete blocks, perforated bricks, steels manufactured from recycled content, saw dust based doors/window frame, pre cast thin lintels would be ensured.
- The fire alarm/fire detection system would be ensured as per NBC norms. Static storage tanks for firefighting, hydrant system, automatic sprinkler system and fire pumping system will be installed at project site. Fire safety certificate for the building has been obtained from designated authority.
- Project would provide direct employment to local people. Safety measures and health screening of workforce at site would be ensured.

It was observed that presently water demand for the existing facilities is being met from Existing bore well. The site is water scarce, hence regular water supply at the site will be through laying of pipe line, a part of which will tread through forest area. It was observed that use of ground water would require permission for CGWB. It was observed that DG sets beyond 1363KVA should not be permitted. The treated waste water should be put to in house use (green belt development and washing) during the operational phase and excess treated waste water may be drained toward the artificial pond created within the campus. It was digested that total coverage of green belt will be one third of plot area.

Based on the information submitted by the proponent & recommendation of SEAC, the State Environment Impact Assessment Authority (SEIAA) after through deliberation and examining all aspects of environmental safeguards hereby grants Environment Clearance subject to fulfillment/compliance of the following conditions:-

1. Construction Phase

1.1 The Environmental Clearance is being granted for the purpose of existing building construction project (Residential/non-residential) by IIT as per plan approved by Related Other Agencies. No further deviation in the approved plan and also land use change shall be done without prior approval of this Authority.

1.2 Consent to Establish shall be obtained from Uttarakhand Environment Protection and Pollution Control Board under relevant provisions of Central Air Act and Central Water Act before starting up of any construction activity at the site.

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1.3 The Site Lay out plan and Building plan should have been approved by the concerned Department/Agency of the State Government before work start up at the construction site. The structural design and other aspects of the building shall comply with guidelines of National Building Code. This shall be ensured by concerned Department of State Government/Accredited Agencies.

1.4 The building plan and structural design shall comply with requirements of Seismic Zone - IV as outlined in National Building Code.

1.5 The topsoil excavated during construction work shall be for backfilling/landscape development/green belt development. The same shall not be disposed off outside the boundaries of project site without approval of Competent Authority.

1.6 The onsite levelling and dressing should ensure minimal vegetation clearing and soil erosion. If necessary organic mulching should be done to avoid soil erosion. There shall not be any felling of green trees for the purpose of this project.

1.7 The disposal of muck should adhere to standard of general safety and health concerns of local people and also it should have no adverse effect on the neighbouring community. The muck shall not be disposed off in adjoining forest areas without meeting requirement of Forest (Conservation) Act, 1980.

1.8 Temporary storage units should be erected in the construction site and transportation of construction materials shall be restricted to non-peak hours. The dust pollution shall be suppressed by regular water sprinkling.

1.9 The use of ready mixed concrete/premixed concrete, curing agents and other such practices shall be adopted to minimize use of water on site.

1.10 All stacking and loading areas should be provided with proper gulland drains equipped with baffles to prevent runoff from the site to enter any adjoining water body. Construction spoils including bituminous materials must not be allowed to contaminate watercourse and dumpsites as such materials leach into ground water.

1.11 The water requirement during construction phase shall be met from regular water supply/private tankers. The use of ground water from tube wells shall be restricted to emergency purpose/additional requirement as approved by Central Ground Water Board. Construction work requiring water shall not be carried out during 30th April to 15th June in the year.

1.12 The soil and ground water samples shall be tested from accredited agencies and it shall be ensured that they comply with CPCB standards so as to ensure that there is no threat to groundwater quality by leaching of heavy metals and toxic contaminants.

1.13 DG sets shall be used only as backup power. The capacity of DG sets shall not exceed 1163 KVA and it should have stack height complying with CPCB norms.

1.14 Fixtures of showers, toilet flushing and drinking should be of low and flow either by use of aerators or pressure reducing devices/sensor based control. Dual plumbing system shall be installed separately for fresh water and waste water.

1.15 The use of glass may be reduced by up to 40 percent to reduce the electricity consumption and load on air conditioning. If necessary then use of high quality double glass may be encouraged with special reflective conditioning in windows.

1.16 The use of CFL and such other power saving devices shall be maximized. Common areas and landscape areas shall be illuminated with solar lighting system. At least 10 percent of the total power requirement after completion of construction unit shall be met from solar energy. It will increase to 33% in next five year.

1.17 Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, 2006 which is proposed to be mandatory for all air-conditioned spaces while non-air conditioned spaces while non-air-conditioned spaces should have appropriate thermal materials. The U values of the roof, external wall and fenestration shall also meet specifications of ECBC, 2006.

1.18 Rainwater harvesting for roof top and surface run off should be ensured as per the plan submitted before recharging the surface run off, pre-treatment must be done to remove suspended matter oil and other particles. The Bore well for rain water recharging should be kept at 5 meters above the highest ground water table.

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- 1.19 The storm water management shall be so designed as to avoid discharge of water directly to the forest areas/ adjoining locality which may lead to water logging in nearby areas. The storm water shall be put to use for recharging of aquifers and also pond creation within the campus.
- 1.20 One third of the total project site area shall be converted into green belt. The green belt shall not include kitchen garden, flower pots and grasses/herbs in the area. It shall comprise of tree stand of aesthetic/fruit/limber value. Quality planting material has to be used during plantation as per standards of State Forest Department. Green belt should have sal associates and selection of species should be done with consult of Forest Department.
- 1.21 Acoustic enclosures shall be provided with all construction machineries and DG set on site complying with Noise levels of CPCB standards. The ambient air quality and noise levels as per CPCB norms shall be ensured through a monitoring system as approved by UEPPCB.
- 1.22 The construction debris may be used for land fill or disposed through authorized vendors. The hazardous substances generated during construction activity shall be disposed off as required by hazardous waste (management, Handling) Rules 1989 (as amended from time to time) efforts shall be maximized for use of low toxicity substitutes and low VOC materials.
- 1.23 The construction work shall be restricted to Sunset to Sunset period in a day. Any construction activity beyond this period shall be subject to approval of Competent/Designated Authority from time to time.
- 1.24 The vehicles used at the construction site should comply with emission norms and noise level standards of CPCB and State Transport Department. They should be operated only during non-peak hours. Battery operated trolleys should be allowed for internal movement during operational phase.
- 1.25 All necessary efforts shall be made to ensure safety and hygiene of workforce. First Aid facility shall be established and trained manpower to deal with emergency cases shall be engaged. The labour force engaged on site shall be screened for health from time to time.
- 1.26 Adequate drinking water and sanitation facility has to be provided on site for the workforce. Provision should be made for supply of domestic fuel to the workforce so that they do not remain dependent on adjoining forest areas for fuel wood.
- 1.27 The use of plastics during construction activity shall be bare minimum and effort to use timber substitute materials should be maximized.
- 1.28 The fire safety arrangements and emergency exit plan should be as per the norms of the concerned regulatory authority/agency.
- 1.29 The entire site after construction activities should carry signages of garbage collection points environment awareness.

2: Operation Phase

- 2.1 STP of capacity 3.0 MLD shall be installed for treating waste water up to tertiary level. Sewage Treatment Plant shall be complying with parameters of CPCB/UEPPCB guidelines. Treated waste water should be used for flushing, green belt development, road washing, DG cooling and other miscellaneous purposes. The excess treated waste water may be drained towards the artificial pond created within the campus.
- 2.2 The installation of sewage treatment plant shall be certified by an independent expert and a report in this regard should be submitted to the UEPPCB. Necessary measure should be made to mitigate the odour problem from STP.
- 2.3 Guidelines of municipal solid waste (Management & Handling) Rules, 2000 (as amended from time to time) shall be followed for disposal of solid waste. Two bin collection system for bio degradable and non-biodegradable waste should be adopted. Bio degradable waste shall be sent to composting pit and non-biodegradable /inert waste disposal off through authorized recycler. STP sludge shall be dried and used as organic manure.
- 2.4 Energy consumption measures like installation of CFLS/TFLS for the external lighting area shall be ensured. The disposal of used CFLS/TFLS should be properly collected and disposed off as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.
- 2.5 DG sets shall be used only in emergency purpose. The use of solar energy and inverter shall be ensured and maximized as backup power.

2.6 A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.

2.7 The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available in the office of SEIAA, Uttarakhand. The advertisement should be made within 7 days from the day of issue of the clearance letter.

2.8 The SEIAA Uttarakhand reserves the right to withdraw the Environmental Clearance subject to any change in the Government policy by the Central Government or State Government of Uttarakhand as may be applicable to this project.

2.9 If this Environmental Clearance is transferred then fresh Environment Clearance is to be obtained under EIA notification dated 14.09.2006. However, no activity shall be undertaken till the Environmental Clearance is transferred in the his name and he is lawfully bound to Comply with the conditions of the Environmental Clearance.

Yours Faithfully


(M.A. Khan)
Chairman

7/5/2016

Copy for information and necessary action to:

- 1) Secretary, Environment, Forests and Environment and Climate Change, Indira Paryavaran Bhawan, Aliganj, Jor Bagh Road 3rd Floor, Vayu Wing, New Delhi.
- 2) Principal Secretary, Environmental and Forests, Government of Uttarakhand, Dehradun.
- 3) APCCF, Regional office (Central) MOEF, Pearson Road, F.R.I. Campus, Dehradun
- 4) Principal Chief Conservator of Forests, Uttarakhand
- 5) Member Secretary, UEPPCB, Dehradun
- 6) Guard File.