



National Institute of Technology Rourkela

MINUTES/ कार्यवृत्त



**29th Meeting of
Building & Works Committee**

29 वाँ भवन एवं निर्माण समिति बैठक

DATE : 08th November, 2017 (Wednesday)

TIME : 10.00 A.M.

VENUE: Board Room, NIT, Rourkela



राष्ट्रीय प्रौद्योगिकी संस्थान, राउरकेला
National Institute of Technology, Rourkela

Minutes of the 29th Building & Works Committee, National Institute of Technology, Rourkela held at 10.00 AM on 08.11.2017 (Wednesday) in the Board Room of the Institute.

Members Present:

1. **Prof. Animesh Biswas,**
Director & Chairman,
BWC, N.I.T., Rourkela
2. **Shri Ajaya Kr. Nayak, DGM**
PL No.917095
Civil Engineering, Town Engineering Department,
SAIL, RSP, Rourkela., Qr. No.C-2, Sector-1, Rourkela.
3. **Shri Vinod Kr Shrivastava, DGM**
PL. No.041492
Refrigeration & Air Conditioning, RSP,
SAIL, RSP, Rourkela
Qr. No.B/ 56, Sector-5, Rourkela-769 002
4. **Prof. C. R. Patra**
Professor, CE
NIT, Rourkela.
5. **Prof. J. Bera,**
Professor, CR &
Dean (PD), NIT, Rourkela.
6. **Er. S.K. Upadhyay,**
Registrar, BWC,
NIT, Rourkela

Invitees Present:

7. **Sri. B. K. Pati,**
Executive Engineer
PWD, Uditnagar, Rourkela- 12
8. **Prof. P. Sarkar,**
PIC(Civil Const.), NIT Rourkela
9. **Prof. R. Davis,**
PIC(Civil Maint), NIT, Rourkela
10. **Prof. S. Samanta,**
PIC(Elect. Const.), NIT Rourkela
11. **Prof. S. Karmakar,**
PIC(Elect. Maint.), NIT Rourkela
12. **Prof. S. Murugan,**
PIC(AC), NIT Rourkela
13. **Dr. A.K. Panda,**
Consultant (Civil), NIT Rourkela.
14. **Mr. Y.K. Sahu,**
Consultant (Electrical), NIT Rourkela
15. **Mr. M.S.P. Rao,**
Consultant (AC), NIT Rourkela
16. **Mr. Joydip Mondal**
Executive Engineer, NIT Rourkela

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Member Absent:

1. **Shri Sanjeev Kumar Sharma**
Director (NITs/Plg),
428-C, Shastri Bhawan,
Dept. of Secondary & Higher Education,
Ministry of Human Resource Development,
New Delhi- 110001

Invitee Absent:

1. **Mr. Rajesh Sahoo**
Engineer, Estate, NIT Rourkela



A) GENERAL AND PROCEDURAL MATTERS.

BWC: 29 (2017)-01: Welcome to the members by the Chairman.

The Director and Chairman BWC welcomed all the members to the meeting.

BWC: 29 (2017)-02: Confirmation of the minutes of the 28th Meeting of the BWC held on 12.04.2017.

The minutes of the 28th Meeting were sent to the members. No comments were received from the members.

BWC confirmed the minutes.

BWC:29 (2017)-03: To report on the action taken on the decisions made in the 28th Meeting of BWC held on 12.04.2017 and to discuss matters arising out of the minutes.

The report on the action taken on the decisions made in the 28th Meeting of the BWC held on 12.04.2017 is presented for BWC's consideration.

The BWC noted the above.

[Annexure-A1, Page No. 01]

B) REVIEW OF ONGOING PROJECTS:

BWC: 29 (2017)-04: Review of ongoing Civil Projects & Project in the Pipeline.

A report on the progress of ongoing Civil Projects is enclosed for perusal of the Committee.

The BWC noted the above with following observations.

BWC reviewed the supply of kitchen equipment by M/s Bestekloza and express dissatisfaction for delay in installation of kitchen equipment. Director advised Dean(PD) to have a meeting with Chief Warden and Executive Engineer (Estate Maint) and take necessary steps in consultation with supply for installation of the kitchen equipment. The action taken report will be reported to Director within 7 days.

[Annexure-A2, Page No.02-03]

BWC: 29 (2017)-05: Review of ongoing Electrical Projects & Project in the Pipeline.

A report on the progress of ongoing Electrical Projects is enclosed for perusal of the Committee.

The BWC noted the above and the following was decided.

Item No. 4. Installation of 10 nos. of Elevators by M/s OTIS

It was informed that 7 nos. of lifts have been received from M/s OTIS for 3 BHK apartment, Institute Main building, Golden Jubilee Building, LA-I and Chemical Engineering and RH. BWC Advised that 2 nos. of lifts must be commissioned on urgent basis for 3 BHK and Institute Main Building by 15th Dec., 2017.

[Annexure-A3, Page No. 04-07]

C) APPROVAL FOR PROJECTS: (PART-'A')

BWC: 29 (2017)-06: Proposal for New Projects.

1. Extension of Dining Hall of North & South Guest House.

During seminars and conference held in the Institute, it is observed that there is tremendous crowd and mix up of guests staying in the guest house, creating confusion and difficulty for the guests. In order to obviate this, it is proposed to provide separate dining halls adjacent to the existing kitchens of the above mentioned Guest Houses. Further, it is also proposed to construct one more floor over proposed Dining Hall of South Guest House which may be used as Interview Hall. Sketches showing the arrangements for both Hostels are enclosed. This will cost about **Rs.59.7 Lakh**, brief details of which is given below:

South Guest House

Built up area= 71.5sqm X2 =143 @30,000= Rs.42.9 Lakhs

North Guest House

Built up area= 56sqm @30,000 = Rs.16.8 Lakhs

Total = Rs.59.7 Lakhs

The BWC approved the proposal.

[Annexure-A-4, Page No.08-09]

2. Construction of Central Air Conditioning for Phase II Project (High end).

Presently, low-side air conditioning work of Lecture Hall No: II, Mechanical Science Building & Golden Jubilee building which has been awarded to M/s SPCL are under execution and are expected to be completed shortly. However, low side air conditioning work for Lecture Hall No: I has not been awarded so far.

It is now therefore proposed to install low side air conditioning for Lecture Hall Complex No- I; corresponding part of High-side work for Lecture Hall Complex No- I & II, consisting of Chillers, Primary & Secondary Chilled Water Pumps, Cooling Towers & Pumps, Electrical Panel etc. The

estimated cost will be **Rs.10.0 crores** approximately to be spent over a period of two years as detailed below:

<u>Name of Work</u>	<u>Estimated cost (In Crores)</u>	<u>Fund Allocation in Year</u>	
		<u>2017-18</u>	<u>2018-19</u>
Low side AC of LH-I &	Rs.10.0	Rs.5.00	Rs.5.00
High side AC of LH-I &II			

It is proposed to invite open tenders through advertisement in newspapers and NIT website.

In subsequent phase, HVAC work of balance academic buildings i.e. Golden Jubilee Building, Mechanical Science Building, Electrical Science Building, Bio-Technology Building, Mining & Ceramic Engineering Department Building, and Administrative Department Building (Eastern Side) etc. may be taken up.

BWC advised to take up the job in 2018-19. Since the low end equipment has been already installed in LH-II, the commissioning may be taken up in LH-II and then LH-I.

3. Construction of NIT Outreach Center Building at Bhubaneswar.

A plot of land, measuring 1.0 Acre has been allotted by Govt. of Odisha on 14.05.2014, in Mouza Chandrasekherpur at Bhubaneswar, in a prime location. It is observed that construction work for adjacent plot has been started by other Departments. In case the work is not started soon in our plot, there is every likely hood of cancellation of the lease by the Odisha Government.

Earlier, the BOG had approved construction of the above building for which selection of Architect was done and Work Order was issued to M/s Inform Architect, Bangalore. They have already gone ahead with preparation of detailed drawings, specification, BOQ and estimate etc. These are likely to be finalized soon. As soon as we receive the same, tendering action will be initiated.

The construction of the boundary wall has already been completed.

Earlier, the BWC in its 28th Meeting (12.04.2017) had approved in principle an estimate of Rs. 15 Crores for construction of the proposed building.

On 27.10.2017, the representative of M/s Inform Architects gave a presentation on the plans of the above proposed building, floor wise (four floors). During the course of discussion, NIT gave few suggestions for incorporation, such as provision of ramp for physically challenged persons, provision of split AC instead of centralized AC, provision of 2 nos suites for VIPs, interview room etc. It was decided to keep provision for G+6 floor construction, for which foundation is to be suitably designed and keep provision for parking as per norms of Bhubaneswar Development Authority. However, it was decided to take up present construction (Phase-I) with four floors. Accordingly, M/s Inform Architects have modified the drawings and estimate. The details of the drawings for proposed four floor construction are given in the enclosure. The estimate amounts to Rs. 21. 69 Crores, (considering construction upto four floors), details of which are also enclosed

The BWC approved the proposal and decided to award the contract to CPWD.

[Annexure-A-5, Page No.10-16]

4. Power System Augmentation & Power Backup DG Set

Now institute contract demand is 2.5 MVA which will be enhanced to another 0.5 MVA as notified by M/s WESCO Limited. We have 1.75 MVA of our DG Capacity. So for complete break up, we need 3*750 KVA DG sets and also it is proposed to shift all DG to MRSS and the total capacity of the DG will be injected to RMS through power transformer for better load sharing between the DG. The Whole Project cost approx Rs.4.0 crores. This is necessary for uninterrupted power supply to Academic Buildings.

BWC advised to have a brain storming session with Senior Professors of the Institute and the recommendation may be put up in the next meeting.

5. Installation of 1000kWp Grid Connected Solar Power Plant

It is proposed to install 1000 kWp Grid Connected Solar Power Plant on ground to cater to 2.5 MW maximum demand power requirement of the institute from own Green energy generation. Space on the west end of Campus is earmarked for the installation of Solar Plant with a provision for expansion to 2000 kWp capacity later.



It can be installed by owning the plant at an estimated cost of Rs.8.00 crores or on entering into a Power purchase agreement for 25 years with outside agency on Build Own and Operate Scheme.

BWC did not approve the proposal to implement the project at the present stage and further advised that the roof top project of 500 kWp should be taken up first as decided in the BWC meeting vide resolution no. BWC:28(2017)-09 (4) dated 12.04.2017

"One work order has been placed by Solar Energy Corporation of India (SECI) on successful bidder for "Design, Manufacture, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance of Roof Top Solar PV System" for 500 kWp capacity on subsidy plan on RESCO mode.

*NIT, Rourkela has to enter into a Power Purchase Agreement for 25 Years with Tariff plan of **Rs.5.39** per kWh with M/s Jackson, New Delhi.*

The BWC approved the proposal.

6. Construction of a multipurpose Indoor Stadium for the Institute

FC vide resolution no. FC-41(2017)-10 dated 15/09/2017 decided the followings.

"The FC recommended the proposal in principle and advised the administration to complete the design and tendering etc before 31.03.2018, so that the work can be started from new financial year 2018-19. However, the ongoing projects should be given priority and emphasis should be on the projects under construction. No new projects except Hostel should be taken in the current financial year. Also budgetary constraints should be kept in mind while taking up new projects. A detailed presentation will be made in the next FC meeting".

There is a demand from the students of our Institute for construction of a multipurpose indoor stadium in our Institute. During monsoon and winter season, there is no facility in our Institute for practicing and conducting tournaments for indoor games. Considering the above, it is proposed to construct a multipurpose indoor stadium having following facilities:

<u>Description</u>		<u>No of Facility</u>
• Badminton Court	-	3 Nos.
• Basket Ball Court	-	1 Nos.
• Table Tennis Hall	-	1 Nos.
• Squash Court	-	2 Nos.
• Carrom Room	-	1 Nos.
• Gymnasium Hall	-	1 Nos.
• Chess, Billiard/ Snooker	-	2 Nos.

• Yoga Hall	-	1 Nos.
• Locker Room	-	1 Nos.
• Film and Photography Room	-	1 Nos.
• First Aid Room	-	1 Nos.
• Recreational Hall	-	1 Nos.
• Adjoining Open Air Theater	-	1000 seating capacity

Recently, a team of officers of our Institute visited IIT, Kanpur and collected data and other information pertaining to the playing facilities being provided in their Indoor Stadium. It is now proposed to construct a multipurpose indoor stadium in our Institute in line with that of IIT, Kanpur but of smaller magnitude. A plan showing the details of our requirements for the indoor stadium is also enclosed. An estimate has been prepared and this amounts to **Rs.31.0 Crores** (Approx)

It is proposed to entrust the entire of work of finalization of plan, specification and other details including construction of the same through Central PWD, Sambalpur branch. Incidentally, the Executive Engineer, CPWD, Sambalpur visited our campus and joint site inspection with regard to location of the stadium was organized on 11.10.2017 after discussion with NIT officials.

They have consented to entrust an expert Consulting Architect to finalize the plan and detail requirements on all India design competition basis. Thereafter, they would be in a position to submit detailed estimate to us. A MOU will be signed between CPWD and NIT for the above mentioned work.

The BWC will be kept informed about the detailed estimate.

The BWC decided to award the above content to CPWD. The detail presentation will be made in FC/BOG meeting scheduled on 28th Nov., 2017. The designing part will be completed in current FY 2017-18 and actual work will be started in next FY 2018-19.

[Annexure-A-6, Page No.17-23]

7. Installation of Heat Exchanger for Condenser Cooling of Central Air Conditioning System with Swimming Pool Circulation Water:

Induced draft cooling towers have been installed on roof top of AC Plant for cooling the condensers of the existing central air conditioning system. During the execution of central air conditioning system, for laboratory study purpose as an alternative to cooling towers, underground pipelines have been laid upto swimming pool for circulating the swimming pool water for cooling the condensers with help of a heat exchanger. The heat exchanger has been procured separately. The cost estimate for



installation of heat exchanger works out to Rs.1.74 lakhs (copy enclosed in annexure).

The BWC did not approve the proposal and advised PIC(AC) to do it from Departmental operating grant.

[Annexure-A-7, Page No.24-25]

8. Construction of a Sewerage Treatment plant for the Institute

Over the years, there has been large scale increase in the population of students, staff and faculty members, resulting in large increase in sewage quantity. Accordingly, buildings have been built up both academic buildings and residential buildings which are nearing completion. Further, renovation and upgradation of old and existing buildings including toilets have also been done. Presently, sewerage disposal is being done through individual septic tanks. For hostel, as a temporary arrangement, **0.18 MLD Sewerage Treatment Plant** has been installed for some of the Hostels only. Therefore, there is urgent necessity of installation of a **Centralized Sewerage Treatment Plant** and disposal facility, either mechanized or construction of Oxidation Pond etc. But since construction of Oxidation Pond involves large open space, and poses mosquitos menace, unhygienic surrounding conditions, mechanized Sewerage Treatment Plant is recommended. During the progress review meeting held on 11.10.2017, the matter was discussed in detail and it was opined to take up the construction of Sewerage Treatment Plant, following the state of the art technology. It is therefore necessary to appoint a Consultant for the same to draw specifications, BOQ and prepare tender documents. The BWC will be kept posted on the details of the estimate etc.

The BWC approved the proposal for appointment of consultant.

9. Construction of two Lawn tennis Court and one Basketball court.

The existing lawn tennis court and basketball court are damaged. Students are facing difficulties in practicing, organizing tournaments etc. As such, there is demand for construction of lawn tennis court and basketball court. In view of the above, it is proposed to construct two new lawn tennis court and one basketball court with asphalt base and synthetic flooring. An estimate has been prepared and this amounts to Rs.91.15 lakhs.

The BWC approved the proposal.

[Annexure-A-8, Page No.26-32]

Two handwritten signatures are present at the bottom right of the page. The first signature is a stylized 'h' or 'r' shape, and the second is a more complex, cursive signature.

10. Out let Bakery in market complex, CCD.

There is demand for construction of an out let Bakery in market complex and out let of Café coffee day. An official of café Coffee day visited our institute and identified two locations. Out of these two locations, one is to be finalized.

This will cost about Rs.21.5 Lakh, brief details of which is given below:

Café Coffee Day Outlet

Built up area= 80sqm @20,000= Rs.16 Lakhs

Out let Bakery

Built up area= 25sqm @20,000 Rs.5.0 Lakhs

Total=Rs.21.0 Lakhs

The BWC approved the proposal.

11. Construction of Nursery for plants in the campus.

Every year, our Institute buys no. of plants from different nurseries for beautification and maintaining the horticulture and landscaping of the campus. In view of the above, it is proposed to construct a nursery in the campus for supply of plants. This will cost about Rs.20 lakh.

The BWC approved the proposal.

12. Permission for Seva Café by M/s Akshaya Patra Foundation.

At present there is no separate pure vegetarian restaurant in our institute campus. In view of large number of students & staff being vegetarian, permission for opening a counter of Seva Café by M/s Akshaya Patra foundation is required and this will cost about Rs.6.0 Lakh, brief details of which is given below:

Built up area= 30sqm @20,000= Rs.6.0 Lakhs

The BWC approved the proposal.

D) DEVIATION, EXTRA ITEMS FOR VARIOUS WORKS & POINTS FOR INFORMATION OF BWC[PART-'D']:

BWC: 29 (2017)-07: Proposal for approval of Deviation and extra items for various works:

1. Status of Major Projects (Phase-II)

Our Institute has undertaken the following major construction works as described below:

- 1000 Seated Hostel



- Lecture Hall Complex- II
- Mechanical Science Building
- Golden Jubilee Building
- Faculty Residence (2BHK-72, 3BHK-48 & 1BHK-150)

The above works have been awarded to M/s Shapoorji Pallonji & Co Pvt. Ltd. vide Work Order dated- 22.02.2013 at value of **Rs.302.82 crores**. Though the initial completion period was 2 years, it was extended upto 31.12.2016. During the course of construction, payment to the contractor could not be made regularly because of paucity of fund, starting from end of the year 2015 onwards. This resulted in slow down of progress of work by the contractor. Considering the above, further time extension has been given upto 08.02.2018, on the request of the contractor. Till date, payment of **Rs.214.07 crores** has been made to the contractor and bills amounting to **Rs.8.38 crores** are under process for payment.

At present, the works on Hostel and Faculty Residence (3BHK) are completed; Lecture Hall Complex II, Mechanical Science Building, Faculty Residence (2BHK) are expected to be completed by December 2017 and balance buildings (i.e. Golden Jubilee Building and Faculty Residence (Small) are in various stages of construction.

M/s Shapoorji Pallonji & Co Pvt. Ltd. have indicated during the recent Progress Review Meeting held on 11.10.2017 that cash flow requirement for 3rd Quarter (October, November & December- 2017) is **Rs.15.1 crores** and 4th Quarter (January, February & March 2018) is **Rs.24.4 crores** totaling **Rs.39.5 crores** (except claims given by M/s SPCL).

M/s SPCL have already submitted the following claims pertaining to the above works:

I. Price Variation Adjustment:

They have submitted a cumulative bill amounting to **Rs.13.49 crores** towards the above works vide their letter, dated 10.10.2017 (copy enclosed at **Annexure-A8**).

A committee was constituted under the Chairmanship of Prof. C.R. Patra, Advisor, Construction. The recommendation of the committee is enclosed.

It was decided that as per the recommendation of the committee, the case will be taken up afterwards.

[Annexure-A-9, Page No.33-37]

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II. Reimbursement of unutilized overhead cost:

M/s Shapoorji Pallonji & Co Pvt. Ltd. have submitted a claim for reimbursement of **Rs.58.03** crores on account of underutilization of their mobilized resources and additional interest burden on mobilization advances etc. vide their letter, dated 30.08.2016 (copy enclosed at Annexure-A8)

A committee has been constituted to look in to the matter. It was informed the report is still awaited.

The BWC noted the above.

[Annexure-A-10, Page No.38-39]

2. Extra Items for Construction of Major Project Phase (II)

The work order for the above work was issued to M/s Shapoorji Pallonji Co (P) Ltd. at Value of Rs.302.82 crores. During the course of the execution, it has been found necessary to execute some items which are not contained in the BOQ. As such, these become extra items. Since most of the items are substitute items, no additional fund is necessary. The extra items statements are given in the Annexure.

a) Civil

During the course of execution, it is decided to provide some additional items such as pre finished nosing Granite Stone, PVC Board, D.I bend, D.I tee, D.I Collar etc. which were not envisaged in the original scope of work. Hence these have become extra items. Since most of the extra items are substitute items, no additional fund is necessary. The estimated cost of the same comes to **Rs.36.43 Lakhs.**

[Annexure-A-11, Page No.40-41]

b) HVAC

During the course of execution, it was required to provide thermal insulation of various chilled water pipelines etc. which were not envisaged in the original scope of work. Hence these have become extra items. The estimated cost of the same comes to **Rs.36.47 Lakhs.**

[Annexure-A-11, Page No.42-43]

The BWC noted the above.

BWC: 29 (2017)-08: Any other item with the permission of the chair:

1. Safety of Electrical Science Building

Electronics Science Building was constructed by M/s UPRNN and handed over in the year 2013-14. The cladding material is falling down at regular intervals and basement of the ground floor is full of water. The leakage water is coming from the side walls.

Since the safety of the building is at stake, BWC may consider on the above issue and suggest suitable action.

BWC deliberating on the letter given by HOD(EE) and decided to engage CPWD for assessment of safety & ventilation of the building. Further it was decided to write a letter by Registrar to M/s Arch-en-design for suitable solution of the problem faced by the Institute.

[Annexure-A-12, Page No.44-45]

2. Technical Consultancy for HAVC

The IIT-Madras has been requested for rendering technical consultancy service for provision of central air conditioning system in (i) Auditorium of TIIR building and (ii) Lecture Hall - I & Lecture Hall - II buildings. On behalf of IIT-Madras, Prof. M.P. Maiya, Professor & Head of Refrigeration & Air Conditioning Lab. visited above proposed sites and forwarded their offer of consultancy fees as follows. Copy of the letter of offer is enclosed.

Consultancy Fees: Rs 18.00 lakhs plus GST @ 18%

No. of Visits Proposed: 8 Visits (Total 15 days)

Additional Visit: Rs. 20,000/- plus GST per additional visit and

Rs 5,000/- plus GST per additional day of stay beyond total 15 days stay.

Accommodation: Free accommodation and lodging at NIT.

BWC approved the proposal for appointment of Prof. M.P. Maiya, Professor, IIT Madras as consultant for the above project. Director & Chairman, BWC was authorized to decide the Terms & Conditions of the contract.

[Annexure-A-13, Page No.46-49]

3. Development of infrastructural facilities of Hostel

Ministry was sanctioned Rs. 3 Crore for development infrastructural facilities of hostel such as toilets, mess and kitchen facilities, furniture and other facilities. An estimate of Rs. 3.59 crore was made to improve the above mentioned infrastructure facilities in different hostels based on the requirement. Tendering process for the above mentioned work is in progress.

The BWC noted the above.

4. Renewal of Empanelment of Civil Contractors

The empanelment of contractors was approved by BWC vide resolution no. BWC-19(2013)-12(2) dated 06.09.2013 and BOG vide resolution no.

BOG-36(2013)-08 dated 20.09.2013 up to 31.10.2016 for 16 nos. of Electrical Contractors and 63 nos. of Civil Contractors.

33 nos. of Civil contractors submitted all necessary documents for renewal of registration for further three more years, List of contractors is enclosed in the Annexure.

The BWC approved the proposal.


[Annexure-A-14,Page No.50-51]

5. Comments given by MHRD

BWC considered the comments given by MHRD. It was decided that no new project will be taken up in current financial year. But designing and other work will be completed so that it can be started from the FY 2018-19 and Director advised Dean(PD) to complete the of ongoing projects before March, 2018.

[Annexure-A-15,Page No.52-53]


(S. K. Upadhyay)
Registrar & Secretary
Building & Works Committee


(A. Biswas)
Director & Chairman
Building & Works Committee