

भवन एवं निर्माण समिति
की सैतीसवी बैठक का कार्यवृत्त

**MINUTES OF THE 37th MEETING OF THE
BUILDING & WORKS COMMITTEE**

14th NOVEMBER 2017



भारतीय प्रौद्योगिकी संस्थान रुड़की
रुड़की – 247 667 (भारत)

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE-247 667 (INDIA)**

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



भवन एवं निर्माण समिति की 37वीं बैठक का कार्यवृत्त

**MINUTES FOR THE 37th MEETING OF
THE BUILDING & WORKS COMMITTEE**

DAY & DATE: TUESDAY, THE 14th NOVEMBER 2017

सूची / INDEX

| Item No. | Particulars | Page (s) |
|-----------------|---|-----------------|
| 37.1 | भवन एवं निर्माण समिति की दिनांक 15.03.2017 को आयोजित 36वीं बैठक के कार्यवृत्त की पुष्टि करना । To confirm the minutes of the 36 th meeting of the Building & Works Committee held on 15.03.2017. | 1 |
| 37.2 | भवन एवं निर्माण समिति की दिनांक 15.03.2017 को आयोजित 36वीं बैठक के कार्यवृत्त पर की गई कार्रवाई की रिपोर्ट प्राप्त करना । To receive a report on the actions taken to implement the decisions of the 36 th meeting of the Building & Works Committee held on 15.03.2017. | 2 |
| 37.3 | आईआईटी रुड़की कैंपस के लिए प्राकृतिक गैस पाइप लाइन इन्फ्रास्ट्रक्चर के प्रस्ताव को अध्यक्ष, बीएण्डडब्ल्यूसी द्वारा प्रदान किये गये अनुमोदन को रिपोर्ट करना । To report regarding the approval accorded by the Chairman, B&WC to the proposal for Natural Gas Pipe Line Infrastructure for IIT Roorkee Campus. | 2 |
| 37.4 | आईआईटी रुड़की के एमआरसी, आज़ाद विंग, जीपी और एएन खोसला हॉस्टलों में आधुनिकीकरण और संशोधन के कार्य के लिए सीपीडब्ल्यूडी द्वारा प्रस्तुत प्रारंभिक अनुमान पर विचार करना । To consider the preliminary estimate as submitted by the CPWD for the Work of Modernization and Modification in MRC, Azad Wing, GP and AN Khosla Hostels at IIT Roorkee. | 2 |

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| 37.5 | <p>सरस्वती कुंज, विकास नगर, निर्माण पथ और गोविंद पुरी स्थित फैक्ट्री और ग्रुप 'ए' के निवासों के आधुनिकीकरण और संशोधन के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal for Modernization and Modification of residences of Faculty and Group 'A' Officers located at Saraswati Kunj, Vikas Nagar, Nirman Path and Govind Puri.</p> | 2 |
| 37.6 | <p>विज्ञान कुंज में गणित और मानविकी एवं सामाजिक विज्ञान (एचएसएस) विभागों के लिए नए ब्लॉक के निर्माण के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal for Construction of New Block for Mathematics and Humanities & Social Science (HSS) Departments at Vigyan Kunj.</p> | 3 |
| 37.7 | <p>आईआईटी रूड़की में आईसीसी भवन में केन्द्रीकृत एयर कंडीशनिंग सिस्टम के प्रावधान के संशोधित प्रारंभिक आकलन पर विचार करना।</p> <p>To consider the revised preliminary estimate for provision of Centralized Air Conditioning System in ICC building at IIT Roorkee.</p> | 3 |
| 37.8 | <p>विभिन्न विभागों और केंद्रों में शारीरिक रूप से विकलांग व्यक्तियों के लिए 18 नम्बर व्हील चेयर लिफ्टों की स्थापना के संशोधित प्रस्ताव पर विचार करना।</p> <p>To consider the revised proposal for installation of 18 nos. wheel chair lifts for physically challenged persons in various departments and centers.</p> | 3 |
| 37.9 | <p>प्रथम और द्वितीय व्याख्यान हॉल परिसर और दीक्षांत समारोह हॉल के लिए ठंडा जल शीतलक प्रणाली के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal for Chilled Water Cooling System for Lecture Hall Complex-I&II and Convocation Hall.</p> | 3 |
| 37.10 | <p>220 केवी रामनगर सबस्टेशन से 33 केवी आईआईटीआर सबस्टेशन तक भूमिगत केबल (3x300 वर्ग मीटर, 2 रन) (रु० 8.57 करोड़ की अनुमानित लागत पर यूपीसीएल से जमा कार्य) स्थापित करने के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal for laying dedicated 33 kV underground cable (3x300 Sq. mm, 2 run) from 220 kV Ram Nagar substation to 33 kV IITR substation (deposit work from UPCL at estimated cost of R. 8.57 Crores).</p> | 4 |
| 37.11 | <p>विज्ञान कुंज में 800 छात्रों की क्षमता वाले छात्रावास के निर्माण के लिए संशोधित अनुमान और योजनाओं के अनुमोदन पर विचार करना।</p> <p>To consider the revised estimate and approval of plans for the construction of Students' Hostel of 800 capacity at Vigyan Kunj.</p> | 4 |

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| 37.12 | विकास नगर में फैकल्टी और समूह 'अ' अधिकारियों के लिए मल्टी स्टोरी अपार्टमेंट्स के निर्माण के लिए संशोधित अनुमान और योजनाओं के अनुमोदन पर विचार करना। To consider the revised estimate and approval of plans for the construction of Multi Storey Apartments for Faculty and Group 'A' Officers at Vikas Nagar. | 4 |
| 37.13 | आईआईटी रुड़की में संपत्ति और निर्माण में रखरखाव और मरम्मत से संबंधित व्यय के संबंध में वित्तीय शक्तियों के प्रत्यायोजन पर विचार करना। To consider the delegation of financial powers with respect to the expenditure pertaining to maintenance and repair in Estate & Works at IIT Roorkee. | 4 |
| 37.14 | आईआईटी रुड़की के विभिन्न पुराने हॉस्टलों के शौचालयों ब्लॉक्स में आधुनिकीकरण, संशोधन और मरम्मत से संबंधित प्रस्ताव पर विचार करना। To consider the proposal related to modernization, modification and repairs in the toilets blocks of the various old hostels at IIT Roorkee. | 4 |
| 37.15 | पुराने स्क्वैश कोर्ट, पुराने स्टोर और 33 केवी सबस्टेशन के पास परित्यक्त ट्यूब वेल के निर्माण को ध्वस्त करने के प्रस्ताव पर विचार करना। To consider the proposal for demolishing the building of old Squash Court, old Store & an abandoned tube well at 33 kV substation at IIT Roorkee. | 5 |
| App. 'A' | आईआईटी रुड़की के एमआरसी, आजाद विंग, जीपी और एएन खोसला हॉस्टलों में आधुनिकीकरण और संशोधन के कार्य के लिए सीपीडब्ल्यूडी द्वारा प्रस्तुत प्रारंभिक अनुमान। Preliminary estimate as submitted by the CPWD for the Work of Modernization and Modification in MRC, Azad Wing, GP and AN Khosla Hostels at IIT Roorkee. | 6-24 |
| App. 'B' | आईआईटी रुड़की में आईसीसी भवन में केन्द्रीकृत एयर कंडीशनिंग सिस्टम के प्रावधान के संशोधित प्रारंभिक आकलन। Revised preliminary estimate for provision of Centralized Air Conditioning System in ICC building at IIT Roorkee. | 25-35 |
| App. 'C' | विभिन्न विभागों और केंद्रों में शारीरिक रूप से विकलांग व्यक्तियों के लिए 18 नम्बर व्हील चेयर लिफ्टों की स्थापना के संशोधित प्रस्ताव। Revised proposal for installation of 18 nos. wheel chair lifts for physically challenged persons in various departments and centers. | 36 |
| App. 'D' | प्रथम और द्वितीय व्याख्यान हॉल परिसर और दीक्षांत समारोह हॉल के लिए ठंडा जल शीतलक प्रणाली। Chilled Water Cooling System for Lecture Hall Complex-I&II and Convocation Hall. | 37-42 |

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| App. 'E' | 220 केवी रामनगर सबस्टेशन से 33 केवी आईआईटीआर सबस्टेशन तक भूमिगत केबल (3x300 वर्ग मीटर, 2 रन) (रु० 8.57 करोड़ की अनुमानित लागत पर यूपीसीएल से जमा कार्य)। Laying dedicated 33 kV underground cable (3x300 Sq. mm, 2 run) from 220 kV Ram Nagar substation to 33 kV IITR substation (deposit work from UPCL at estimated cost of R. 8.57 Crores). | 43-47 |
| App. 'F' | विज्ञान कुंज में 800 छात्रों की क्षमता वाले छात्रावास के निर्माण के लिए संशोधित अनुमान। To consider the revised estimate for the construction of Students' Hostel of 800 capacity at Vigyan Kunj. | 48-54 |
| App. 'G' | विकास नगर में फैकल्टी और समूह 'अ' अधिकारियों के लिए मल्टी स्टोरी अपार्टमेंट्स के निर्माण के लिए संशोधित अनुमान। Revised estimate for the construction of Multi Storey Apartments for Faculty and Group 'A' Officers at Vikas Nagar. | 55-69 |
| App. 'H' | आईआईटी रुड़की में संपत्ति और निर्माण में रखरखाव और मरम्मत से संबंधित व्यय के संबंध में वित्तीय शक्तियां। Delegation of financial powers with respect to the expenditure pertaining to maintenance and repair in Estate & Works at IIT Roorkee. | 70 |


07 DEC 2017

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



Minutes of the 37th meeting of the Building & Works Committee held on 14.11.2017 at 12.00 Noon in the Board Room of the Institute.

The following were present:

- | | |
|--|-------------------|
| 1. Prof. Ajit K. Chaturvedi, Director | - Chairman |
| 2. Prof. Z. Ahmad, Dean Infrastructure | - Member |
| 3. Er. Rajeev Garg, Superintending Engineer, IIT Kanpur | - Member |
| 4. Er. Amit Kumar, Deputy General Manager Uttarakhand Power Corporation Ltd., Roorkee | - Member |
| 5. Prof. (Mrs.) Pushplata, Architecture & Planning Deptt. | - Member |
| 6. Prof. N.K. Samadhiya, Civil Engg. Department | - Member |
| 7. Prof. N.P. Padhy, 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 |

The Chairman welcomed the members of the B&WC, with specific reference of external members - Er. Amit Kumar and Er. Rajeev Garg.

Deliberations:

The B&WC took up the following agenda items for discussion, deliberation and consideration:

Item No. 37.1: To confirm the minutes of the 36th meeting of the Building & Works Committee held on 15.03.2017.

Having received no comments, the minutes of the 36th meeting of the Building & Works Committee, as recorded and circulated, were confirmed.

Item No. 37.2: To receive a report on the actions taken to implement the decisions of the 36th meeting of the Building & Works Committee held on 15.03.2017.

The Building & Works Committee noted the actions taken on the minutes of the 36th meeting, as reported.

Item No. 37.3: To report regarding the approval accorded by the Chairman, B&WC to the proposal for Natural Gas Pipe Line Infrastructure for IIT Roorkee Campus.

Noted the status and ratified the approval given by the Chairman, B&WC. Further, advised that:

1. An MoU be signed with the agency before execution of the work with clear terms and conditions.
2. Domestic and Commercial connections be defined.

Item No. 37.4: To consider the preliminary estimate as submitted by the CPWD for the Work of Modernization and Modification in MRC, Azad Wing, GP and AN Khosla Hostels at IIT Roorkee.

The B&WC considered the proposal (**Appendix 'A'**) and recommended the same for the approval of FC/BoG.

Further, advised that in the award of work to CPWD it should be explicitly mentioned that in case of more than 10% escalation in the tendered cost, the Institute be informed in advance. The GST rates will be applicable as per Government rules.

Item No. 37.5: To consider the proposal for Modernization and Modification of residences of Faculty and Group 'A' Officers located at Saraswati Kunj, Vikas Nagar, Nirman Path and Govind Puri.

The B&WC considered the proposal and recommended the same for the approval of FC/BoG. Further, the following suggestions may be considered:

- (i) CPWD be asked to express their concurrence for carrying out the work in phases, as availability of houses in bulk will not be possible.
- (ii) In case CPWD refuses to carry out the work in phases, the work be carried out by IIT Roorkee.



07 DEC 2017

Item No. 37.6: To consider the proposal for Construction of New Block for Mathematics and Humanities & Social Science (HSS) Departments at Vigyan Kunj.

The B&WC considered the proposal and approved it in principle. It was suggested that an estimate for the same be put up before B&WC in its next meeting.

Item No. 37.7: To consider the revised preliminary estimate for provision of Centralized Air Conditioning System in ICC building at IIT Roorkee .

The B&WC considered the proposal and recommended the same for the approval of FC/BoG (Appendix 'B').

Item No. 37.8 To consider the revised proposal for installation of 18 nos. wheel chair lifts for physically challenged persons in various departments and centres.

The B&WC considered the proposal and recommended the same for the approval of FC/BoG (Appendix 'C').

Further, recommended ACP shielding for capsuling the lift to prevent extreme heat in the lifts.

Item No. 37.9 To consider the proposal for Chilled Water Cooling System for Lecture Hall Complex-I&II and Convocation Hall.

The B&WC considered and recommended the proposal for the approval of FC/BoG (Appendix 'D'). Further, the following suggestions were made:

- (i) Operational and maintenance cost for five years beyond warranty be incorporated while inviting the tenders/ estimates.
- (ii) Since Lecture Hall Complex-I was designed and constructed by NBCC and Lecture Hall Complex-II is under construction again by NBCC, the proposed work is recommended to be given to NBCC as their infrastructure is already available at the site.

Item No. 37.10: To consider the proposal for laying dedicated 33 kV underground cable (3x300 Sq. mm, 2 run) from 220 kV Ram Nagar substation to 33 kV IITR substation (deposit work from UPCL at estimated cost of Rs. 8.57 Crores).

The B&WC considered and recommended the proposal of UPCL at an estimated cost of Rs. 8.57 Crores (Appendix 'E') for the approval of FC/BoG.

Item No. 37.11: To consider the revised estimate and approval of plans for the construction of Students' Hostel of 800 capacity at Vigyan Kunj.

The B&WC considered the proposal and recommended the same for the approval of FC/BoG (Appendix 'F').

Item No. 37.12: To consider the revised estimate and approval of plans for the construction of Multi Storey Apartments for Faculty and Group 'A' Officers at Vikas Nagar.

The B&WC considered the proposal with an estimated cost of Rs. 58.21 crores and Rs. 112.42 crores for Phase I & II, respectively (Appendix 'G') and recommended the same for approval of FC/BoG.

Item No. 37.13: To consider the delegation of financial powers with respect to the expenditure pertaining to maintenance and repair in Estate & Works at IIT Roorkee.

The B&WC considered and recommended the proposal with some suggestions. The revised proposal (Appendix 'H') is recommended for the approval of FC/BoG.

Item No. 37.14: To consider the proposal related to modernization, modification and repairs in the toilets blocks of the various old hostels at IIT Roorkee.

The B&WC considered the proposal and recommended the same for the approval of FC/BoG.



Item No. 37.15: To consider the proposal for demolishing the building of old Squash Court, old Store & an abandoned tube well at 33 kV substation at IIT Roorkee.

The B&WC considered the proposal and recommended the same for approval of BoG.

It was suggested to follow due process of auction and evaluation of the said old unused abandoned structures from the authorised valuator be carried out.

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


07 DEC 2017

Subject: Administrative Approval and Expenditure Sanction (AA&ES) to the Work of Modernization and Modification in MRC, Azad Wing, GP and AN Khosla Hostel at IIT Roorkee.

The subject cited work has been awarded to CPWD vide our letter No. E&W/IE/193 dated July 14, 2017 after signing MOU on dated 7-6-2017. The preliminary estimate Rs. 7.93 Crores envisaged following provisions, ~~has been~~ submitted by the SE, CPWD, Dehradun Circle vide their letter No. 23(w)/49/DCC/1516 dated 23-8-2017.

| S.No. | Description | Amount in Rs. |
|-------|---------------------------------------|---------------|
| 1. | Civil & Electrical work | 64586732.00 |
| 2. | GST @18% Provision | 11625612.00 |
| | Sub Total (1+2) | 76212344.00 |
| 3. | Provision of labour cess @1% on (1+2) | 762123.00 |
| | Sub Total (1+2+3) | 76974467.00 |
| 4. | Add Contingency @3% (1+2+3) | 2309234.00 |
| | Grand Total (1+2+3+4) | 79283701.00 |
| | Say | 79300000.00 |

It is further highlighted that GST has been charged on the prevailing rates notified by the Government, however it is proposed that it would be paid as applicable and as per Government Notification issued from time to time during the currency of work.

As per condition no. 11 of the MOU we have to pay 20% of the sanctioned estimate as a first installment to the CPWD for this deposit work.

You are requested to kindly grant AA&ES to the preliminary estimate amounting to Rs. 7.93 Cr.

If approved an amount of Rs. 1.586 Cr may be released to the CPWD as per condition of the MOU.

Ady. Anand
31.8.17
Institute Engineer

Dear (fnp)

Director

Forwarded for administrative approval of Rs. 7.93 Cr and release of 20% to CPWD as per signed MOU.

[Signature]

डीन इन्फ्रास्ट्रक्चर
Dean Infrastructure

- 6 -

[Signature]

07 DEC 2017

Pl. examine -
Dean, F&P *[Signature]* 4/9/17

निदेशक/Director
भा. प्रौ. सं. रुड़की
I.I.T. Roorkee

भारत सरकार
कार्यालय अधीक्षण अभियन्ता
केंद्रीय लोक निर्माण विभाग



सत्यमेव जयते

2226
24-08-2017

Government of India
Office of Superintending Engineer
CENTRAL PUBLIC WORKS DEPARTMENT

पत्रांक: 23(w)/49/दे.के.परि./15/6

दिनांक 23 अगस्त, 2017

सेवा में,

The Dean
Infrastructure,
IIT, Roorkee (Uttarakhand)

विषय : Modernization and modification in MRC, Azad Wing, GP and A N Khosla hostel at IIT Roorkee, Roorkee, Uttarakhand.

उपरोक्त कार्य का संशोधित प्रारम्भिक अनुमान जिसकी अनुमानित लागत राशि ₹ 7,93,00,000/- (रुपये सात करोड़ तिरानब्बे लाख) मात्र 3% छुट-पुट खर्च (contingencies) सहित है, आपके कार्यालय को आवश्यक प्रशासनिक अनुमोदन एवं व्यय स्वीकृति हेतु प्रेषित किया जाता है।

इस प्रारम्भिक अनुमान को बनाने की आवश्यकता का विवरण अनुमान की History Sheet पर किया गया है। अतः अनुमान पर शीघ्र कार्यवाही कर आवश्यक प्रशासनिक अनुमोदन एवं व्यय स्वीकृति इस कार्यालय को सूचित करने की कृपा करें।

संलग्न : प्रारम्भिक अनुमान दो प्रतियों में।

23/8/17
(इं. आर.पी.यादव)
अधीक्षण अभियन्ता,
देहरादून केंद्रीय परिमण्डल
के.लो.नि.वि., देहरादून।

प्रतिलिपि:

1. कार्यपालक अभियन्ता, आई.आई.टी. रुड़की प्रोजेक्ट मंडल, केलोनिवि, रुड़की को अनुमान की प्रति सहित।

अधीक्षण अभियन्ता

1E
for m/a pl.

25/8/17

- 7 -

भारत सरकार
केन्द्रीय लोक निर्माण विभाग

राज्य— उत्तराखण्ड

मण्डल — आई.आई.टी. रुड़की परियोजना मण्डल

शाखा — भवन एवं सड़क

प्राक्कलन संख्या : / आई.आई.टी.आर.पी.डी. / 2017-18

कार्य का नाम — Modernization and modification in MRC, Azad Wing, GP and A N Khosla hostel at IIT Roorkee, Roorkee, Uttarakhand.

निधि:

मुख्य शीर्ष :
लघु शीर्ष : डिपॉजिट कार्य
विस्तृत शीर्ष :

यह प्रारम्भिक प्राक्कलन, जिसकी अनुमानित लागत मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित ₹ 7,93,00,000/- है, श्री अमन सचान, कार्यपालक अभियन्ता, आई.आई.टी. रुड़की परियोजना मण्डल, के०लो०नि०वि०, रुड़की द्वारा संरचित है और अग्रिम कार्रवाई हेतु श्री. हरबंस सिंह, कार्य. अभि.(यो.), देकेपरि, केलोनिवि, देहरादून द्वारा परिष्कृत किया गया है।

रिपोर्ट

इतिहास :

प्रारम्भिक प्राक्कलन जिसकी अनुमानित लागत राशि ₹ 7,93,00,000/- सक्षम अधिकारी से प्रशासनिक अनुमोदन एवं व्यय स्वीकृति प्राप्त करने हेतु तैयार किया गया है। The Dean Infrastructure ने अपने पत्रांक E&W/IE/193 Dated 14/07-2017 द्वारा विभिन्न कार्य Modernization and modification in MRC, Azad Wing and GP Hostel (136 rooms) एवं Modernization and modification in AN Khosla Married Hostel के प्रारम्भिक प्राक्कलन हेतु अनुरोध किया है जिन्हें के०लो०नि०वि० द्वारा कराया जाना प्रस्तावित है।

अभिकल्पन एवं विस्तार :

यह प्रारम्भिक प्राक्कलन संस्थान अभियन्ता, आई.आई.टी. रुड़की द्वारा दिये गये निर्देशों एवं दिनांक 01.08.2017 को हुई बैठक में किये गये निर्णयों को समाहित करते हुये निम्न छात्रावासों के Modernization and modification हेतु तैयार किया गया है।

1. ए.एन. खोसला छात्रावास : इस भवन में कुल 60 कमरे हैं। जिनमें Flooring, Finishing, renovation of toilet, Repair/Replace of damaged door/windows, Replacement of existing CI & GI lines तथा आवश्यक वैद्युत कार्य कराया जाने का प्रावधान है।
2. जी.पी. , आजाद विंग एवं एम.आर.चौपड़ा छात्रावास : तीनों भवनों को मिलाकर कुल 136 कमरों में कार्य करवाया जाना है। जिनमें Flooring, Finishing, renovation of toilet, Repair/Replace of damaged door/windows, Replacement of existing CI & GI lines तथा आवश्यक वैद्युत कार्य कराया जाने का प्रावधान है। एम.आर.चौपड़ा छात्रावास में सम्पूर्ण रूप से वैद्युत कार्य को कराये जाने का प्रावधान किया गया है।
3. कॉरिडोर एवं सीड़ियों में कोटा स्टोन का प्रावधान किया गया है।

विनिर्देश : कार्य के०लो०नि०वि० विनिर्देश 2009 (भाग— प्रथम एवं द्वितीय) एवं संशोधित पर्वियों के अनुसार कराया जायेगा।

दरें : डी०एस०आर० 2016 तथा बाजार दर पर आधारित है।

लागत : ₹ 7,93,00,000/- मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित।



क्रमशः...2

07 DEC 2017

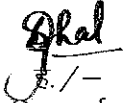
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विधि : निविदा आमन्त्रण के बाद अनुबन्ध द्वारा कार्य करवाया जायेगा।

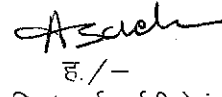
भूमि : उपलब्ध है।

कार्य प्रभारित कर्मचारी : इसकी पूर्ति आकस्मिक निधि से की जायेगी।


- समय :
1. निर्माण से पहले का समय — 1 माह
 2. निविदा प्रक्रिया — 1 माह
 3. निर्माण समय — 12 माह
 4. कुल समय — 14 माह


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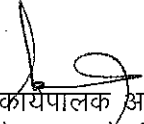
सहा. अभि/आईआईटीप्रोमं


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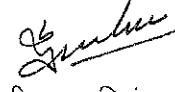
कार्य. अभि/आईआईटीप्रोमं



सहायक अभियंता (यो.)
देहरादून केन्द्रीय परिमंडल
केलोनिवि, देहरादून।



कार्यपालक अभियंता (यो.)
देहरादून केन्द्रीय परिमंडल
केलोनिवि, देहरादून।



अधीक्षण अभियंता
देहरादून केन्द्रीय परिमंडल
केलोनिवि, देहरादून।


07 DEC 2017


ABSTRACT OF COST

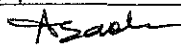
Name of Work : Modernization and modification in MRC, Azad Wing, GP and AN Khosla Hostel
at IIT Roorkee, Uttrakhand.

| Sl. No. | Description | Amount | Electrical Provison |
|---------|--|-------------|---------------------|
| (A) | Civil work- | | |
| 1 | BRICK WORK | 1096677.00 | |
| 1 | MARBLE & GRANITE WORK | 2190799.00 | |
| 2 | WOOD & PVC WORK | 7439560.00 | |
| 3 | STEEL WORK | 880633.00 | |
| 4 | FLOORING | 13170143.00 | |
| 5 | ROOFING | 370479.00 | |
| 5 | FINISHING | 9386418.00 | |
| 6 | REPAIRS TO BUILDINGS | 868059.00 | |
| 7 | DISMANTLING AND DEMOLISHING | 542219.00 | |
| 8 | SANITARY INSTALLATIONS | 8085516.00 | |
| 9 | WATER SUPPLY | 1496174.00 | |
| 10 | DRAINAGE | 314070.00 | |
| 11 | WATER PROOFING | 5395782.00 | |
| 12 | CREDIT ITEMS | -235900.00 | |
| | Total (A) | 51000629.00 | |
| | Add 19.61% Cost Index on DSR Item i.e. Rs. 4,19,15,912/- | 8219710.00 | |
| | Grand Total | 59220339.00 | |
| | Grand Total (Civil + Electrical) | | 64586732.00 |
| | Add GST @ 18% | | 11625612 |
| | Total | | 76212344.00 |
| | Add Labour cess @ 1% | | 762123.00 |
| | Total | | 76974467.00 |
| | Add contingencies @ 3% | | 2309234 |
| | Total Cost | | 79283701.00 |
| | Say | | 79300000.00 |


Sd/-
AEEP/IITRPD

Assistant Engineer (P)
Dehradun Central Circle
CPWD, Dehradun


Executive Engineer (P)
Dehradun Central Circle
CPWD, Dehradun


Sd/-
EE/IITRPD

Superintending Engineer
Dehradun Central Circle
CPWD, Dehradun

Abstract of Cost Original Estimate (Civil Works)

Name of work: Modernization and modification in MRC, Azad Wing, GP and A N Khosla hostel at IIT Roorkee, Roorkee, Uttarakhand

| Item No. | Description | Qty | Unit | Rate | Amount |
|--------------|--|---------------|------|---------|-------------------|
| | | For 196 Rooms | | | |
| SH 1: | BRICK WORK | | | | |
| 1.1 | Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 10 in superstructure above plinth level up to floor V level in all shapes and sizes in : | | | | |
| 1.1.1 | Cement mortar 1:6 (1 cement : 6 coarse sand) | 78.00 | cum | 5582.85 | 435462.00 |
| 1.2 | Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 10 in superstructure above plinth level up to floor V level. | | | | |
| 1.2.1 | Cement mortar 1:4 (1 cement :4 coarse sand) | 392.00 | sqm | 684.20 | 268206.00 |
| MR | Providing and laying in position C.C. in sunken floor of specified grade excluding the cost of centring & shuttering - All work upto floor V level. | | | | |
| | 1:5:10 (1 cement : 5 coarse sand : 10 graded brick aggregate 40 mm nominal size) | 98.00 | cum | 4010.30 | 393009.00 |
| | Sub-total | | | | 1096677.00 |
| SH 2: | MARBLE & GRANITE WORK | | | | |
| 2.1 | Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. | | | | |
| 2.1.1 | Granite of any colour and shade | | | | |
| 2.1.1.1 | Area of slab over 0.50 sqm. | 635.00 | sqm | 3113.30 | 1976946.00 |
| 2.2 | Providing edge strip of 100 mm width prepolished and premoulded fixed to stone slab with suitable adhesive . including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge. | | | | |
| 2.2.1 | Granite of any colour and shade | 529.00 | mtr | 245.70 | 129975.00 |
| 2.3 | Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/Granite / stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete. | 196.00 | each | 427.95 | 83878.00 |
| | Sub-total | | | | 2190799.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|--------------|---|---------|-------|----------|------------|
| SH 3: | WOOD & PVC WORK | | | | |
| 3.1 | Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia. & length (hold fast lugs or dash fastener shall be paid for separately). | | | | |
| 3.1.1 | Second class teak wood | 7.00 | cum | 92743.05 | 649201.00 |
| 3.2 | Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters. | | | | |
| 3.2.1 | 35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws. | 247.00 | sqm | 2488.95 | 614771.00 |
| 3.2.2 | 25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. Piano hinges IS: 3818 marked with necessary screws. | 980.00 | sqm | 2129.10 | 2086518.00 |
| 3.3 | Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured). | 1227.00 | sqm | 365.85 | 448898.00 |
| 3.4 | Providing and fixing wire gauge shutters using galvanized M.S. wire gauge of average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm, for doors, windows and clerestory windows with hinges and necessary screws: | | | | |
| 3.4.1 | 35 mm thick shutters. | | | | |
| 3.4.1.1 | With ISI marked stainless steel butt hinges of required size - Second class teak wood. | 247.00 | sqm | 3040.30 | 750954.00 |
| 3.5 | Providing & fixing curtain rod of 1.25 mm thick stainless steel tubes with two stainless steel brackets, end finials fixed with S.S screws and plastic sleeves etc, wherever necessary complete with rings all as approved by Engineer in charge | | | | |
| 3.5.1 | 25 mm dia. | 686.00 | metre | 472.40 | 324066.00 |
| 3.6 | Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete : | | | | |
| 3.6.1 | 300x16 mm | 196.00 | each | 212.45 | 41640.00 |
| 3.7 | Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete : | | | | |
| 3.7.1 | 300x10 mm | 196.00 | each | 99.70 | 19541.00 |
| 3.7.2 | 250x10 mm | 392.00 | each | 88.10 | 34535.00 |
| 3.7.3 | 150x10 mm | 1568.00 | each | 64.30 | 100822.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|----------|--|---------|-------|---------|-------------------|
| 3.8 | Providing and fixing aluminium pull bolt lock, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws bolts, nut and washers etc. complete. | 196.00 | each | 66.55 | 13044.00 |
| 3.9 | Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete : | | | | |
| 3.9.1.1 | 125 mm | 784.00 | each | 51.10 | 40062.00 |
| 3.9.1.2 | 100 mm | 784.00 | each | 45.10 | 35358.00 |
| 3.10 | Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete. | | | | |
| 3.10.1 | Twin rubber stopper | 392.00 | each | 38.00 | 14896.00 |
| 3.11 | Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames of cross-section 90 mm x 45 mm having single rebate of 32 mm x 15 mm to receive shutter of 30 mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. M.S. stay shall be provided at the bottom to steady] the frame. | 490.00 | metre | 415.50 | 203595.00 |
| 3.12 | Providing and fixing to existing door frames. | | | | |
| 3.12.1 | 30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames. | 160.00 | sqm | 2187.35 | 349976.00 |
| 3.13 | Providing and fixing fly proof stainless steel grade 304 wire gauge, to windows and clerestory windows using wire gauge with average width of aperture 1.4mm in both directions with wire of dia. 0.50 mm all complete. | | | | |
| 3.13.1 | With 2nd class teak wood beading 62X19 mm. | 1274.00 | sqm | 1343.55 | 1711683.00 |
| | Sub-total | | | | 7439560.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|--------------|--|---------|------|---------|------------------|
| SH 4: | STEEL WORK | | | | |
| 4.1 | Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side /top /centre hung, with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, including priming coat of approved steel primer, but excluding the cost of other fittings, complete all as per approved design (sectional weight of only steel members shall be measured for payment). | | | | |
| 4.1.1 | Fixing with 15x3 mm lugs 10 cm. long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3coarse sand : 6 graded stone aggregate 20 mm nominal size). | 5880.00 | kg | 113.60 | 667968.00 |
| 4.2 | Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer. | | | | |
| 4.2.1 | Fixing with 15x3 mm lugs 10 cm. long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size). | 1960.00 | kg | 74.05 | 145138.00 |
| 4.3 | Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows all complete with : | | | | |
| 4.3.1 | 4.0 mm thick glass panes. | 98.00 | sqm | 689.05 | 67527.00 |
| | Sub-total | | | | 880633.00 |
| SH 5: | FLOORING | | | | |
| 5.1 | Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) : | | | | |
| 5.1.1 | 25 mm thick. | 2290.00 | sqm | 1158.10 | 2652049.00 |
| 5.2 | Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete. | 327.00 | sqm | 1238.20 | 404891.00 |
| 5.3 | Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre . | 294.00 | sqm | 18.95 | 5571.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|--------------|---|---------|------|---------|--------------------|
| 5.4 | Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete | 4410.00 | sqm | 744.80 | 3284568.00 |
| 5.5 | Providing and laying rectified Glazed Ceramic floor tiles of size 300x300mm or more (thickness to be specified by the manufacturer), of 1stquality conforming to IS : 15622, of approved make, in colours White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4(1 Cement: 4 Coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete. | 980.00 | sqm | 822.45 | 806001.00 |
| 5.6 | Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08%and conforming to IS: 15622, of approved brand & manufacturer in all colours and shade in skirting, riser of steps, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints(Payment for grouting of joints to be made separately). | | | | |
| 5.6.1 | Size of Tile 600x600 mm | 490.00 | sqm | 1240.60 | 607894.00 |
| 5.7 | Providing and laying Vitrified tiles in floor with different sizes (thickness to be specified by the manufacturer), with water absorption less than0.08% and conforming to IS:15622 , of approved brand & manufacturer in all colours and shade, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS : 15477, in average 6 mm thickness, including grouting of joints (Payment for grouting of joints to be made separately). | | | | |
| 5.7.1 | Size of Tile 600x600 mm | 4625.00 | sqm | 1169.55 | 5409169.00 |
| | Sub-total | | | | 13170143.00 |
| SH 6: | ROOFING | | | | |
| 6.1 | Painting top of roofs with bitumen of approved quality @ 17 kg per 10 sqm impregnated with a coat of coarse sand at 60 cudm per 10 sqm including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete : - 15 - | | | | |
| 6.1.1 | With residual type petroleum bitumen of grade VG - 10 | 1960.00 | sqm | 102.50 | 200900.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|--------------|--|----------|-------|--------|------------------|
| 6.2 | Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i)Single socketed pipes. | | | | |
| 6.2.1 | 110 mm diameter | 392.00 | metre | 236.35 | 92649.00 |
| 6.3 | Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS :5382 leaving 10 mm gap for thermal expansion. | | | | |
| 6.4 | Bend 87.5° | | | | |
| 6.4.1 | 110 mm bend | 196.00 | each | 113.10 | 22168.00 |
| 6.5 | Shoe (Plain) | | | | |
| 6.5.1 | 110 mm Shoe | 196.00 | each | 98.00 | 19208.00 |
| 6.6 | Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm hardwood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete. | | | | |
| 6.1.1 | 110 mm | 196.00 | each | 181.40 | 35554.00 |
| | Sub-total | | | | 370479.00 |
| SH 7: | FINISHING | | | | |
| 7.1 | 12 mm cement plaster of mix : | | | | |
| 7.1.1 | 1:6 (1 cement: 6 fine sand) | 7030.00 | sqm | 160.35 | 1127261.00 |
| 7.2 | 15 mm cement plaster on the rough side of single or half brick wall of mix : | | | | |
| 7.2.1 | 1:6 (1 cement: 6 fine sand) | 5330.00 | sqm | 185.20 | 987116.00 |
| 7.3 | Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade | | | | |
| 7.3.1 | New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm). | 16660.00 | sqm | 96.80 | 1612688.00 |
| 7.4 | Applying priming coat : | | | | |
| 7.4.1 | With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood) | 1960.00 | sqm | 34.95 | 68502.00 |
| 7.5 | Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade: | | | | |
| 7.5.1 | Two or more coats on new work. | 19600.00 | sqm | 84.45 | 1655220.00 |
| 7.6 | Painting with synthetic enamel paint of approved brand and manufacture to give an even shade : | | | | |
| 7.6.1 | Two or more coats on new work. | 9800.00 | sqm | 78.40 | 768320.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|--------------|--|----------|-------|--------|-------------------|
| 7.7 | Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. | 36260.00 | sqm | 87.35 | 3167311.00 |
| | Sub-total | | | | 9386418.00 |
| SH 8: | REPAIRS TO BUILDINGS | | | | |
| 8.1 | Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground within 50 metres lead : | | | | |
| 8.1.1 | With cement mortar 1:4 (1 cement : 4 fine sand). | 2000.00 | sqm | 264.80 | 529600.00 |
| 8.2 | Renewing glass panes, with putty and nails wherever necessary including racking out the old putty: | | | | |
| 8.2.1 | Float glass panes of thickness 4 mm. | 98.00 | sqm | 637.90 | 62514.00 |
| 8.3 | Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete. | 21900.00 | sqm | 10.80 | 236520.00 |
| 8.4 | Dismantling W.C. Pan of all sizes including disposal of dismantled materials i/c malba all complete as per directions of Engineer-in- Charge. | 196.00 | each | 55.45 | 10868.00 |
| 8.5 | Hacking of CC flooring including cleaning for surface etc. complete as per direction of the Engineer-in-Charge. | 4900.00 | sqm. | 1.50 | 7350.00 |
| 8.6 | Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes within 50 metres lead as per direction of Engineer- in-Charge. (a) Internal Work - Exposed on wall | 1960.00 | metre | 2.00 | 3920.00 |
| 8.7 | Taking out existing wooden door shutter, repair by cutting, painting etc. and refixing of repaired door shutters to existing door frames, including replacement of hinges with screws, etc. as required, all complete as per the direction of the Engineer-in-charge. | 98.00 | each | 176.40 | 17287.00 |
| | Sub-total | | | | 868059.00 |
| SH 9: | DISMANTLING AND DEMOLISHING | | | | |
| 9.1 | Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. | | | | |
| 9.1.1 | Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix) | 20.00 | cum | 997.05 | 19941.00 |
| 9.1.2 | Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix) | 20.00 | cum | 615.15 | 12303.00 |
| 9.2 | Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R17C -or R.B. work) as per direction of Engineer in-charge. | 20.00 | sqm | 500.80 | 10016.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|---------------|--|----------|------|---------|------------------|
| 9.3 | Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.. | | | | |
| 9.3.1 | In cement mortar | 39.00 | cum | 842.75 | 32867.00 |
| 9.4 | Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : | | | | |
| 9.4.1 | Of area beyond 3 sq. metres | 294.00 | each | 216.40 | 63622.00 |
| 9.5 | Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead. | 12360.00 | sqm | 22.40 | 276864.00 |
| 9.6 | Dismantling of flushing cistern of all types (C.I./PVC/Vitreous China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead. | 196.00 | each | 391.20 | 76675.00 |
| 9.7 | Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars. | 2.00 | cum | 1337.40 | 2675.00 |
| 9.8 | Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved. | 392.00 | cum | 120.55 | 47256.00 |
| | Sub-total | | | | 542219.00 |
| SH 10: | SANITARY INSTALLATIONS | | | | |
| 10.1 | Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require: | | | | |
| 10.1.1 | White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap. | 196.00 | no. | 1817.35 | 356201.00 |
| 10.2 | Providing and fixing Stainless Steel A Isis 304 (18/8) kitchen sink as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : | | | | |
| 10.2.1 | 510x1040 mm bowl depth 250 mm. | 196.00 | no. | 4120.80 | 807677.00 |
| 10.3 | Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge. | 196.00 | each | 795.15 | 155849.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|-----------|---|---------|-------|---------|------------|
| 10.4 | Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete. | 196.00 | no. | 817.95 | 160318.00 |
| 10.5 | Providing and fixing soil, waste and vent pipes : | | | | |
| 10.5.1 | 100 mm dia. | | | | |
| 10.5.1.1 | Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905 | 1960.00 | metre | 925.55 | 1814078.00 |
| 10.6 | Providing and fixing plain bend of required degree. | | | | |
| 10.6.1 | 100 mm dia | | | | |
| 10.6.1.1 | Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905 | 392.00 | nos. | 307.10 | 120383.00 |
| 10.7 | Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe. | | | | |
| 10.7.1 | 100 mm dia | | | | |
| 10.7.1.1 | SS 304 grade coupling with EPDM rubber gasket. | 980.00 | each | 360.50 | 353290.00 |
| 10.7 | Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. : | | | | |
| 10.7.1 | For 100 mm dia pipe | 784.00 | nos. | 167.35 | 131202.00 |
| 10.8 | Providing and fixing double equal plain junction of required degree. | | | | |
| 10.8.1 | 100x100x100x100 mm | | | | |
| 10.8.1.1 | Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905 | 196.00 | nos. | 645.10 | 126440.00 |
| 10.9 | Providing and fixing terminal guard : | | | | |
| 10.9.1 | 100 mm | | | | |
| 10.9.1.1 | Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905 | 12.00 | no. | 355.85 | 4270.00 |
| 10.10 | Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors : | | | | |
| 10.10.1 | 100 mm inlet and 100 mm outlet | | | | |
| 10.10.1.1 | Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905 | 392.00 | no. | 677.60 | 265619.00 |
| 10.11 | Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete. | 196.00 | no. | 9685.70 | 1898397.00 |
| 10.12 | P/f Jaquar or equivalent Concealed stop 100 k-100053p | 588.00 | no. | 1150.00 | 676200.00 |
| 10.13 | P/f Jaquar or equivalent towel rail acm101n | 196.00 | no. | 1380.00 | 270480.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|---------------|---|---------|-------|---------|-------------------|
| 10.14 | Providing and fixing C.P. brass over head shower 150mm dia singl flow (body and face plate brass with crome plated) with rubit cleaning system CAT No.- OHS-1819 of jaquar or equivalent in parryware, hindware etc. as per approved by Engineer-in-Charge. | 196.00 | no. | 4822.00 | 945112.00 |
| | Sub-total | | | | 8085516.00 |
| SH 11: | WATER SUPPLY | | | | |
| 11.1 | Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe including painting with anticorrosive bitumastic paint, cutting chases and making good the wall: | | | | |
| 11.1.1 | 15 mm dia. nominal bore | 1176.00 | metre | 285.70 | 335983.00 |
| 11.1.2 | 20 mm dia. nominal bore | 1176.00 | metre | 316.20 | 371851.00 |
| 11.2 | Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete : | | | | |
| 11.2.1 | 15 mm nominal bore | 16.00 | each | 287.25 | 4596.00 |
| 11.3 | Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms. | | | | |
| 11.3.1 | 15 mm nominal bore | 784.00 | each | 492.55 | 386159.00 |
| 11.4 | Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 a) 15 mm nominal bore | | | | |
| 11.4.1 | 15 mm nominal bore | 588.00 | each | 492.55 | 289619.00 |
| 11.5 | Providing and fixing PTMT stop cock of approved quality and colour. | | | | |
| 11.5.1 | Concealed stop cock, 15 mm nominal bore, 108mm long. Weighing not less than 108 gms. | 588.00 | each | 161.40 | 94903.00 |
| 11.6 | Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour. | | | | |
| 11.6.1 | 15 mm nominal bore with 45 cm length. | 196.00 | each | 66.65 | 13063.00 |
| | Sub-total | | | | 1496174.00 |
| SH 12: | DRAINAGE | | | | |
| 12.1 | Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design : | | | | |
| 12.1.1 | With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 | 196.00 | each | 1602.40 | 314070.00 |
| | Sub-total | | | | 314070.00 |

| Item No. | Description | Qty | Unit | Rate | Amount |
|---------------|--|---------|------|---------|-------------------|
| SH 13: | WATER PROOFING | | | | |
| 13.1 | Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of: (i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) IIInd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area. (iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/ sqm) | 980.00 | sqm | 505.90 | 495782.00 |
| 13.2 | Removing the rising dampness in wall due by using the expansive aqua reactive water barrier and grouting system (CICO POLYGROUT or equivalent) . the treatment process carried out by using 12 mm diameter nipple spacing 150 to 300 mm in the near DPC. the grouting processing will be carried out by special one component high pressure grouting pump after Removing old Plaster, applying and providing minimum two coats elastomeric polymer modified cementious and applying and providing protection Plaster | 1960.00 | mtr | 2500.00 | 4900000.00 |
| | Sub-total | | | | 5395782.00 |
| 14 | CREDIT ITEMS | | | | |
| 14.1 | Credit for taking away the dismantled material (unserviceable) received from work such as reinforcement bras, GI pipesm CI or SCI pipes, MS tanks CI flushing cistern, M.S. Grills etc. as per direction of Engineer – in – charge. | 3920 | Kg. | -22.50 | -88200.00 |
| 14.2 | Credit for taking away dismantle material (unserviceable) of brass bibcok/ brass stop cock. | 100 | Kg. | -295.00 | -29500.00 |
| 14.3 | Door/Windows brocken styles/rails pieces chowkhats, shutters etc. | 2500 | Kg | -12.00 | -30000.00 |

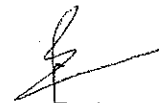



07 DEC 2017

| Item No. | Description | Qty | Unit | Rate | Amount |
|-------------|---|------|------|--------|-------------|
| 14.4 | M.S.Sections, Reinforcement bars, G.I.Pipe, C.I. or S.C.I. Pipe and fittings,C.I. Flushing cisterns. M.S. grills, M.S. doors/windowss,M.S. tanks etc. | 3920 | Kg. | -22.50 | -88200.00 |
| Sub-total | | | | | -235900.00 |
| Grand Total | | | | | 51000629.00 |


Sd/-
AE(P)/IITRPD


Sd/-
EE/IITRPD


Assistant Engineer (P)
Dehradun Central Circle
CPWD, Dehradun


Executive Engineer (P)
Dehradun Central Circle
CPWD, Dehradun


07 DEC 2017

MODIFIED PRELIMINARY ESTIMATE (Electrical Provision)

**Name of Work : Modernization and modification in MRC, Azad Wing, GP and AN Khosla
Hostel at IIT Roorkee, Uttarakhand.**

| Sl No | Name of Items | Qty | Rate | Unit | Amount |
|---------------|--|------|-------|------------------|-------------------|
| A | For MR Chaupra Hostel | | | | |
| 1 | Wiring for light/ fan/ exhaust fan/call bell point with steel conduit (modular type)-group A | 738 | 702 | Pt | 518076.00 |
| 2 | Wiring for twin control point with steel conduit (modular type) | 24 | 1094 | Pt | 26256.00 |
| 3 | Wiring for light/power plug point with steel conduit of the following sizes | | | | |
| a | 2 x 4 + 1 x 4 sqmm | 2550 | 237 | Mtr | 604350.00 |
| b | 2 x 6 + 1 x 6 sqmm | 1000 | 324 | Mtr | 324000.00 |
| c | 2 x 10 + 1 x 6sqmm | 850 | 392 | Mtr | 333200.00 |
| d | 2 x 1.5 + 1 x 1.5 sqmm | 1000 | 181 | Mtr | 181000.00 |
| 4 | S/F of two module stepped type fan regulator | 106 | 288 | Each | 30528.00 |
| 5 | S/F modular blanking plate | 50 | 23 | Each | 1150.00 |
| 6 | S/f of 5/15 AMP.with socket modular type i/c G.I. box and plate (Power) | 153 | 406 | Each | 62118.00 |
| 7 | S/f of 5 AMP.with socket modular type i/c G.I. box and plate (Light) | 153 | 313 | Each | 47889.00 |
| 8 | S/f 300 mm light duty exhaust fan | 106 | 2000 | Each | 212000.00 |
| 9 | S/f Brass batten holder | 306 | 100 | Each | 30600.00 |
| 10 | S/f call ball | 51 | 61 | Each | 3111.00 |
| 11 | S/F LED surface fitting | 36 | 3000 | Each | 108000.00 |
| 12 | S/f bulkhead fitting | 51 | 1000 | Each | 51000.00 |
| 13 | S/F of following way SP& N MCB DB complete | | | | |
| | a)8 way | 51 | 1061 | Each | 54111.00 |
| 14 | S/F of following way TP& N MCB DB complete | | | | |
| | a) 4 way (4+12), double door | 3 | 2198 | Each | 6594.00 |
| | b) 6 way (4+18), double door | 3 | 2659 | Each | 7977.00 |
| 15 | S/F 5 Amp to 32 Amp rating 240 volt 'C' series MCB,s complete | | | | |
| | a) single pole | 306 | 173 | Each | 52938.00 |
| | b) double pole | 102 | 463 | Each | 47226.00 |
| 16 | S/F single pole blanking plate | 25 | 23 | Each | 575.00 |
| 17 | S/F following rating, four pole isolator | | | | |
| | a)63 AMP | 3 | 859 | Each | 2577.00 |
| | b) 100 AMP | 3 | 1111 | Each | 3333.00 |
| 18 | S/F of 20 AMP modular Gyzer point with 20 AMP SPMCB | 51 | 986 | Each | 50286.00 |
| 19 | Provision of cables i/c laying complete as req | | | | |
| | 3 x 10sqmm | 100 | 202 | Mtr | 20200.00 |
| 20 | S/F 20/40 watt LED fitting with lamp | 106 | 2000 | Each | 212000.00 |
| 21 | S/f 120 watt LED Flood light fitting with lamp complete | 8 | 20500 | Each | 164000.00 |
| - 23 - | | | | Total (A) | 3155095.00 |


 07 DEC 2017

| | | | | | |
|-------|--|-------|------|-------|------------|
| B | For A. N Khosla , Azad wing and GP Hostel | | | | |
| 1 | Wiring for light/ fan/ exhaust fan/call bell point with steel conduit (modular type)-group A | 544 | 702 | Point | 381888.00 |
| 2 | S/F of 20 AMP modular Gyzer point with 20 AMP SPMCB | 136 | 986 | Each | 134096.00 |
| 3(i) | S/f of 15 AMP.with socket modular type i/c G.I. box and plate (Power) | 544 | 406 | Each | 220864.00 |
| 3(ii) | S/f of 5 AMP.with socket modular type i/c G.I. box and plate (Power) | 544 | 313 | Each | 170272.00 |
| 4 | S/f 300 mm light duty exhaust fan | 272 | 2000 | Each | 544000.00 |
| 5 | S/F of size steel conduit | | | | |
| | (a) 20 | 680 | 126 | Mtr | 85680.00 |
| | (b) 25 | 1360 | 147 | Mtr | 199920.00 |
| 6 | Supplying/drawing of following sizes FRLS PVC insulated copper conductor | | | | |
| | a) 3 x 1.5 | 680 | 50 | Mtr | 34000.00 |
| | b) 3 x 4 | 680 | 111 | Mtr | 75480.00 |
| | c) 3 x 6 | 680 | 162 | Mtr | 110160.00 |
| 7 | Box alongwith modular base & cover plate for modular switches in recess etc. as required. | | | | |
| a | 1 or 2 Module (75 mm X 75mm) | 600 | 175 | Each | 105000.00 |
| b | 4 Module (125 mm X 75mm) | 136 | 205 | Each | 27880.00 |
| c | 6 Module (200 mm X 75mm) | 136 | 258 | Each | 35088.00 |
| 8 | Box alongwith modular base & cover plate for modular switch box including connections but excluding modular. | | | | |
| a | 5/6 A Switch | 1000 | 84 | Each | 84000.00 |
| b | 2 Way 5/6 A Switch | 30 | 99 | Each | 2970.00 |
| | | Total | | (B) | 2211298.00 |
| | | | | | |
| | Total Amount | A+B | | | 5366393.00 |

AE(E)/HCESD

Assistant Engineer (P)
Dehradun Central Circle
CPWD, Dehradun

Sd/-
EE(E)/DCED

Executive Engineer (P)
Dehradun Central Circle
CPWD, Dehradun

07 DEC 2017

10/30/2017

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भारत सरकार
कार्यालय अधीक्षण अभियन्ता (वै.)
केन्द्रीय लोक निर्माण विभाग
20-सुभाष रोड, देहरादून-248001.
फोन: (का.) 0135-2710978
फैक्स: (का.) 0135-2710979
ईमेल: sepdcec@gmail.com



Government of India
Office of Superintending Engineer(E)
CENTRAL PUBLIC WORKS DEPARTMENT
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E-mail: sepdcec@gmail.com

पत्र सं: 20(13)/दे.के.वै.परि./2017/1061

दिनांक: 27/10/2017

सेवा में,

Dean,
Infrastructure
Indian Institute of Technology,
Roorkee.

विषय:- संशोधित प्रारम्भिक अनुमान प्रशासनिक स्वीकृति हेतु।

कार्य का नाम:- Provision of Centralized Air conditioning System in ICC Bldg. at IIT Roorkee.

सन्दर्भ:- इस कार्यालय के पत्र संख्या 20(13)/दे.के.वै.परि./2017/942 दिनांक 21.09.2017 के सन्दर्भ में।

उपरोक्त कार्य के लिए संशोधित प्रारम्भिक अनुमान रु. 4,09,34,076/- (चार करोड़ नौ लाख चौतीस हजार छियत्तर मात्र) दो प्रतियों में सक्षम अधिकारी से प्रशासनिक अनुमोदन एवं व्यय स्वीकृति प्रदान करने के लिए प्रेषित किया जा रहा है। कार्य की आवश्यकता का विवरण हिस्ट्री शीट में उल्लेखित है।

इस प्रारम्भिक अनुमान को 26.10.2017 को आई.आई.टी. रुड़की में हुई User Committee मीटिंग के दौरान लिये गये निर्णयों के अनुसार संशोधित कर तैयार किया गया है।

कृपया प्रशासनिक अनुमोदन एवं व्यय स्वीकृति प्रदान करते समय जिस लेखा शीर्ष को कार्य प्रभाय हो, सूचित करते हुए स्वीकृत अनुमान की एक प्रति अग्रिम कार्यवाही हेतु इस कार्यालय को वापस करने की कृपा करें।

संलग्नक उपरोक्तानुसार।

(568236)
अधीक्षण अभियन्ता (वै.)

देहरादून केन्द्रीय वैद्युत परिमण्डल,
के.लो.नि.वि. 20-सुभाष मार्ग
देहरादून-248001

प्रतिलिपि:

1. मुख्य अभियन्ता (उ.अं. IV), के.लो.नि.वि. देहरादून को सूचनार्थ।
2. कार्यपालक अभियन्ता (वै.), देहरादून केन्द्रीय वैद्युत मण्डल, के.लो.नि.वि. देहरादून को प्राक्कलन की प्रति सहित सूचनार्थ।
3. कार्यपालक अभियन्ता(सि.), रुड़की परियोजना मंडल, के.लो.नि.वि., आई.आई.टी. कैम्पस, रुड़की।

अधीक्षण अभियन्ता (वै.)

- 25 -

TH.

Government of India
CENTRAL PUBLIC WORKS DEPARTMENT

STATE — U.K.
BRANCH — E & M.

CIRCLE — D.C.E.C, D/DUN
DIVISION — D.C.E.D, D/DUN

Name of Work:- Provision of Centralized Air conditioning System in ICC Bldg. At IIT Roorkee.

This Estimate framed by Er. U. K. Goel, Executive Engineer(E), DCED, CPWD, Dehradun and processed by Er. Harshendra Kumar, Assistant Engineer (E), DCEC, CPWD, Dehradun of the probable cost of Rs. 4,09,34,076/- i/c 3% contingencies, GST @ 18% & 1% labour cess.

REPORT

HISTORY:- This preliminary estimate amounting to Rs. 4,09,34,076/- i/c 3% contingencies, GST @ 18% & 1% labour cess, has been prepared to obtain necessary Administrative Approval & Expenditure Sanction of the competent authority of IIT Roorkee. The requirement of work was given by The Dean, Infrastructure IIT, Roorkee vide their letter no. E&W/IE/193 Dated 14/07/2017. There after site inspection was made by the CPWD officers on dated 01/08/2017 and following observation has been made.

- (a) At present 04 Nos AC units has been installed in ICC building and it was informed by the IIT authorities that these plants are very old and are not in working condition and beyond the repair since their spare parts are not available in the market.
- (b) In most of the Labs Split ACs are installed which are very old and not fulfilling the temperature requirement and also completed their useful life.
- (c) The existing Aluminium electrical wiring and accessories is very old and need replacement.
- (d) In Lab area Central Air Conditioning System is not operational.
- (e) Common areas in computer centre does not have any False ceiling & have to be provided now.
- (f) It is felt that after the installation of new Air conditioning system all the existing false ceiling has to be dismantled and new false ceiling has to be provided.
- (g) It is also felt that after the all existing lighting fixtures has to be replace with the energy efficient LED fixtures.
- (h) The existing Fire alarm system has to be replaced with new addressable type intelligent Fire Alarm System as after the Air conditioning and false ceiling work new system of more capacity to be provided.

DESIGN & SCOPE:- In view of above observations following provisions has been made in this estimate:-

1. Supplying, installation, testing & commissioning of 225 HP (Approx.) VRV/VRF System i/c outdoor /indoor units piping/cabling work etc as reqd.
2. Wiring/Rewiring by FRLS copper conductor wire, modular accessories i/c distribution board etc as reqd.
3. LED type energy efficient lighting fixtures.
4. Supplying & Fixing of addressable type fire detection and fire alarm system.
5. Supplying, installation, testing & commissioning of Gas Fire Suppression System for research scholar lab & ground floor control room.
6. Supplying, installation, testing & commissioning of CCTV System.
7. Provision for false ceiling for entire building.

METHOD:- Through contract

RATE:- Market rate.

TIME:- 06 months after receipt of A/A & E/S.

T&P:- Nil.

COST:- Rs. 4,09,34,076/- i/c 3% contingencies, GST @ 18% & 1% labour cess,

Executive Engineer (E)
Dehradun Central Electrical Division
C.P.W.D., Dehradun

Superintending Engineer(E)
Dehradun Central Electrical Circle
C.P.W.D., Dehradun


Ph.

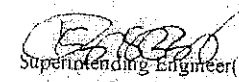
07 DEC 2017

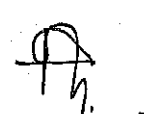
ABSTRACT OF COST

Name of work: Provision of Centralized Air conditioning System in ICC Bldg. At IIT Roorkee.

| S.N | Description | Amount |
|-----|-----------------------|----------|
| 1 | Electrical Provisions | 28732189 |
| 2 | Civil Provisions | 4613860 |
| | Total | 33346049 |
| | Add GST @ 18% | 6002289 |
| | Total | 39348338 |
| | Add contingency @ 3% | 1180450 |
| | Total | 40528788 |
| | Add labour cess @ 1% | 405288 |
| | Grand Total | 40934076 |


Executive Engineer (E)
Dehradun Central Electrical Division
C.P.W.D., Dehradun


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C.P.W.D., Dehradun


07 DEC 2017

ELECTRICAL WORKS

| Name of work: Provision of Centralized Air conditioning System in ICC Bldg. At IIT Roorkee. | | | | | |
|---|---|------|---------|----------|----------|
| Sl No | Item | Qty | Rate | Unit | Amount |
| SH:- I (Air Conditioning System) | | | | | |
| A (Electrical Provisions) | | | | | |
| 1.1 | Supplying installation testing and commissioning of VRF/VRV System i.e. indoor, outdoor units, piping, cabling/ bus-trunking/rising main within the building, wiring, electrical panel and also treated fresh air system. | 225 | 55000 | HP | 12375000 |
| | Total | | | | 12375000 |
| | Add-- cost index on PAR2012 @ 22% | | | | 2722500 |
| | Total (SH:- I) | | | | 15097500 |
| SH:- II (Electrical Work) | | | | | |
| | Bldg. cost 1826 sq.mtr. @ 23500/- per sq. mtr = 42841000 | | | | |
| 1 | provision for internal electrical installation | | 12.50% | Job | 5363875 |
| 2 | Extra for power points | | 4% | Job | 1716440 |
| 5 | Extra for Lightning Arrestor | | 1% | Job | 429110 |
| | Total | | | | 7509425 |
| | Add-- cost index on PAR2012 @ 22% | | | | 1652074 |
| | Total (SH:- II) | | | | 9161499 |
| SH:- III (CCTV System) | | | | | |
| 1 | Supplying installation testing and commissioning of IP based CCTV system for building security comprising of PTZ, Fixed camera, cabling, recording, display system and hardware and software support. | 1826 | 300 | sq. mtr. | 547800 |
| | Add-- cost index on PAR2012 @ 22% | | | | 120516 |
| | Total (SH:- III) | | | | 668316 |
| SH:- IV (Fire detection & PA System & Gas Suppression System) | | | | | |
| 1.1 | Provision for Automatic Fire detection & PA System i.e. audit, control cables, Fire control Panels etc complete as reqd. | 1826 | 500 | sq. mtr. | 913000 |
| 1.3 | STC of Gas Suppression System i.e. Cylinders (PES) approved & UL listed, piping. | | | | |
| 1.4 | Ground floor research scholar Lab 177 Centre | | | | |
| | Main system 1x120-ltr cylinder filled with HFC 227ea/HFC 125 with online standby system of 120-ltr Cylinder duly filled. | | | | |
| 1.5 | Ground floor control room 278 Centre | | | | |
| | Main system 2x120/110-ltr cylinder filled with HFC 227ea/HFC 125 with online standby system of 2x120-ltr. Cylinder duly filled. | | | | |
| | 6x100/120-ltr Manifold complete for making header of Gas Cylinders etc complete as reqd. | | | | |
| | Add-- cost index on PAR2012 @ 22% from 1.1 | | | | 206860 |
| | Total (SH:- IV) | | | | 3380260 |
| | Total (SH:- I+II+III+IV) | | | | 28307575 |
| | Hiring of consultant for HVAC, EI & Fans, CCTV System, fire detection @ 1.5% on Rs. 28307575/- | | | | 424614 |
| | Total (A) | | | | 28732189 |
| | (B) Civil Provision | 1 | 4613860 | Job | 4613860 |
| | Total (B) | | | | 4613860 |
| | Grand Total (A + B) | | | | 33346049 |

Executive Engineer (E)
Dehradun Central Electrical Division
C.P.W.D., Dehradun

Superintending Engineer(E)
Dehradun Central Electrical Circle
C.P.W.D., Dehradun

07 DEC 2017

(CIVIL WORK)
भारत सरकार
केन्द्रीय लोक निर्माण विभाग

संज्ञक- उत्तराखण्ड मण्डल - आई.आई.टी. रुड़की परियोजना मण्डल शाखा - भवन एवं

प्राक्कलन संख्या : 02/आई.आई.टी.आर.पी.डी. / 2017-18

कार्य का नाम -- Provision of centralized air conditioning system in ICC building i/c allied civil and electrical works.

निधि:

मुख्य शीर्ष
लघु शीर्ष
विस्तृत शीर्ष

सिपोजिट कार्य

यह प्रारम्भिक प्राक्कलन जिसकी अनुमानित लागत मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित 58 लाख रुपये मात्र है, श्री अमन सचान, कार्यपालक अभियन्ता, आई.आई.टी. रुड़की परियोजना मण्डल, के०ल०नि०वि० रुड़की द्वारा संरचित है।

रिपोर्ट

इतिहास :

यह प्रारम्भिक प्राक्कलन जिसकी अनुमानित लागत आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित 58 लाख रुपये मात्र है, सक्षम अधिकारी द्वारा प्रशासनिक अनुमोदन एवं व्यय स्वीकृति के लिए तैयार किया गया है। Dean, Infrastructure ने अपने पत्रांक E&W/IE/193 Dated 14/07/2017 के अनुसार Provision of centralized air conditioning system in ICC building i/c allied civil and electrical works. के०ल०नि०वि० द्वारा कराया जाना प्रस्तावित किया है।

अभिकल्पन एवं विस्तार :

यह प्रारम्भिक प्राक्कलन संस्थान अभियन्ता, आई.आई.टी. रुड़की द्वारा दिये गये निर्देश एवं दिनांक 01.08.2017 को हुई बैठक में किये गये निर्णयों को समाहित करते हुये तैयार किया गया है। इस प्राक्कलन में आई०सी०सी० भवन में सभी कम्प्यूटर प्रयोगशालाओं एवम् सार्वजनिक क्षेत्र में HVAC प्रणाली लगाने में मौजूदा false ceiling को तोड़कर नई false ceiling के कार्य कराये जाने का प्रावधान है एवम् इलेक्ट्रिकल वायरिंग को बदलने के समय खराब हुए क्षेत्र एवम् सम्पूर्ण भवन के आन्तरिक क्षेत्र में Plastic emulsion (one coat) से पेंटिंग करने का प्रावधान किया गया है।

इस परियोजना की लागत जो प्रारम्भिक प्राक्कलन में है उसमें निर्माण की लागत में समाहित वृद्धि के अलावा अन्य कारणों जैसे कि क्षेत्र में परिवर्तन, क्षेत्रीय डिजाइन और विनिर्देशों जैसा ग्राहक विभाग द्वारा परवर्ती तारीख में वांछित हों, के द्वारा बदलाव आ सकता है। मूल्य सूचकांक में बदलाव के कारण भी अनुमानित लागत में बदलाव आ सकता है। अतः यह प्रारम्भिक अनुमान तदनुसार बनाया गया है।

विनिर्देश : कार्य के०ल०नि०वि० विनिर्देश 2009 (भाग- प्रथम एवं द्वितीय) एवं संशोधित पत्रियों के अनुसार कराया जायेगा।

दरें : डी०एस०आर० 2016 तथा बाजार दर पर आधारित है।

लागत : रुपये 58 लाख मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित।


07 DEC 2017

विधि : निविदा आमन्त्रण के बाद अनुबन्ध द्वारा कार्य करवाया जाएगा।

भूमि : उपलब्ध है।

कार्य प्रभारित कर्मचारी : इसकी पूर्ति आकस्मिक निधि से की जायेगी।

समय : 1. निर्माण से पहले का समय
2. निविदा प्रक्रिया
3. निर्माण समय
4. कुल समय

} वेद्युल कार्यानुसार।

Shruti
21/08/17

सहायक कार्यपालक अभियन्ता
आई आई टी. रुड़की परियोजना उपमण्डल-II
कै०लो०नि०वि०, रुड़की।

Asael

कार्यपालक अभियन्ता
आई आई टी. रुड़की परियोजना मण्डल
कै०लो०नि०वि०, रुड़की।


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07 DEC 2017

ABSTRACT OF COST

Name of Work :- Provision of centralized air conditioning system in ICC building i/c
allied civil and electrical works (SH:-Provision of false ceiling in ICC building)

| Sl. No. | Description | Amount |
|------------|---------------------------------|-----------------------|
| (A) | Civil work- | |
| 1 | ROOFING | 3387201.00 |
| 2 | FINISHING | 8445.00 |
| 3 | REPAIRS TO BUILDINGS | 248625.00 |
| 4 | DISMANTLING AND DEMOLISHING | 29160.00 |
| 5 | ALUMINIUM WORK | 183989.00 |
| | Total(A) | 3857420.00 |
| | Cost Index@19.61% | 756440.06 |
| | Total(A) | 4613860.06 (A) |
| | Total(A) | 4613860.06 (A) |
| | Add GST @ 18% | 830494.81 |
| | Add Labour cess @ 1% | 46138.60 |
| | Total | 5490493.47 |
| | Add contingencies @ 5% | 274525.00 |
| | Total Cost | 5765018.47 |
| | Or Say | 5800000.00 |
| Say | 5800000.00 | |
| | Rs. Fifty eight lac only | |


Assistant Executive Engineer
IIT Roorkee Project Sub Division-2
IIT, Roorkee


Executive Engineer
IIT Roorkee Project Division
IIT, Roorkee


07 DEC 2017

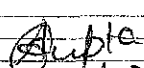
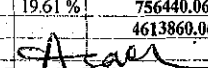
SCHEDULE OF QUANTITY

Name of Work :- Provision of centralized air conditioning system in ICC building i/c allied civil and electrical works

| Item No. | Description | Total Quantity | | Rate | Unit | Amount | DSR No. |
|----------|--|----------------|-----|---------|------|------------|---------|
| SH 1: | ROOFING | | | | | | |
| 1.1 | Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50 mm long with 6 mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the rate of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20mm and 30 mm long, the perimeter of | | | | | | |
| 1.1.1 | 12.5 mm thick tapered edge gypsum fire resistant board conforming to IS: 2095- Part I. | 205.00 | sqm | 922.05 | sqm | 189020.00 | 12.45.2 |
| 1.2 | Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 & 7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, in true horizontal level suspended on inter- locking metal T-Grid of hot dipped | | | | | | 26.22 |
| 1.2.1 | With 15 mm thick tegular edged light weight calcium silicate false ceiling tiles. | 650.00 | sqm | 1533.45 | sqm | 996743.00 | 26.22.1 |
| 1.3 | Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 & 7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, in true horizontal level suspended on inter- locking metal powder coated T-Grid of hot dipped galvanised iron section of 0.40 mm thick on Silhouette profile, rotary stitched double webbed white with 6 mm reveal profile (white/black), comprising of main-T runners of size 15x42 mm of length 3000 mm cross - T of size 15x42 | | | | | | |
| 1.3.1 | With 15 mm thick integral densified micro edge light weight calcium silicate false ceiling tiles | 1250.00 | sqm | 1761.15 | sqm | 2201438.00 | 26.23.1 |
| | Sub-total | | | | | 3387201.00 | |
| SH 2: | FINISHING | | | | | | |
| 2.1 | Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade: | | | | | | 13.60 |
| 2.1.1 | Two or more coats on new work. | 100.00 | sqm | 84.45 | sqm | 8445.00 | 13.60.1 |
| | Sub-total | | | | | 8445.00 | |

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07 DEC 2017

| Item No. | Description | Total Quantity | Rate | Unit | Amount | DSR No. | |
|------------|--|----------------|------|--|------------|-----------|----------|
| SH 3: | REPAIRS TO BUILDINGS | | | | | | |
| 3.1 | Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground within 50 metres lead : | | | | | | |
| 3.1.1 | With cement mortar 1:4 (1 cement : 4 fine sand). | 100.00 | sqm | 264.80 | sqm | 26480.00 | 14.1.1 |
| 3.2 | Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade : | | | | | | |
| 3.2.1 | One or more coats on old work. | 4500.00 | sqm | 55.25 | sqm | 248625.00 | 14.53.1 |
| | Sub-total | | | | 248625.00 | | |
| SH 4: | DISMANTLING AND DEMOLISHING | | | | | | |
| 4.1 | Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge. | 1200.00 | sqm | 24.30 | sqm | 29160.00 | 15.57 |
| | Sub-total | | | | 29160.00 | | |
| SH 5: | ALUMINIUM WORK | | | | | | |
| 5.1 | Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia. | | | | | | |
| 5.1.1 | Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic | 360.00 | kg | 355.20 | kg | 127872.00 | 21.1.1.1 |
| 5.2 | Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle | | | | | | |
| 5.2.1 | Pre-laminated particle board with decorative lamination on both sides. | 30.00 | sqm | 866.60 | sqm | 25998.00 | 21.2.2 |
| 5.3 | Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with | | | | | | |
| 5.3.1 | With float glass panes of 6 mm thickness | 30.00 | sqm | 1003.95 | sqm | 30119.00 | 21.3.2 |
| | Sub-total | | | | 183989.00 | | |
| Cost Index | | | | | | | |
| | | | | Total | 3857420.00 | | |
| | | | | 19.61 % | 756440.06 | | |
| | | | | Total | 4613860.06 | | |
| |  Assistant Executive Engineer IIT Roorkee Project Sub Division-2 IIT, Roorkee | | |  Executive Engineer IIT Roorkee Project Division IIT, Roorkee | | | |

07 DEC 2017

सन्दर्भ
Reference

भा0प्रौ0सं0/IIITR/संख्या/No.....

टिप्पणियाँ एवं आदेश
Notes and Order

Subject : Installation of Lift for disabled community in IIT Roorkee Campus.

As reported earlier the pilot project of installation of six nos. of hydraulic lifts had been completed. Later on seeking the comments of the users it was decided that the mechanical doors of these lift were replaced with the automatic door. The completed cost of these six lifts including the cost of replacement of mechanical door with automatic door has been worked out be Rs. 102.00 Lacs. The performance of these lift were observed over a period of more than year and simultaneously comments were also invited from the users. After seeking the comments and experience of users, it is felt that the hydraulic technology of these lifts may be replaced with established and traditional type of lift presently in use.

Steel Thus as per the site conditions it is proposed that we may install the lifts of establish technology such as gear less and room less. These lift would be installed after erecting a still structure at pre decided location in the various department. Accordingly the quotation were collected from the vendor dealing with such business of lifts. Estimated cost of this work including Civil, SITC of lifts and other allied works has been worked out to Rs.480.00 Lacs of 18 nos. of lifts (estimate enclosed). Details of specification, features and technology is also mentioned in the budgetary offer of the Company. Specification and feature of the lift are meeting the provision of IS 15330 for Installation and Maintenance of Lift for Handicapped Persons-Code of Practice.

You are requested to kindly accord additional approval of Rs. 160.00 Lacs so that we may float the tender for this work.

Submitted for consideration and approval.

[Signature]
Institute Engineer

[Signature]
AEE (Elect.)-I

ADI (E)

Forwarded for approval of Rs 160.00 Lac in addition to Rs. 320.00 Lac already approved for installation of lifts for handicapped persons.

Dean (Infra)
Director

[Signature]
Forwarded for approval of additional amount of Rs. 160 Lakh.

[Signature]
11/9/17
अधिरक्षता (इफ्रा)
Dean (Infra.)

- 36 -

Dean, F&P

[Signature]
निदेशक/Director

[Signature]
07 DEC 2017

Minutes of the AC Committee meeting held on 4-10-2017 at 4:00 PM in the Office Associate Dean, Infrastructure (Elect./AC) cum Chairman, AC Committee.

Following were present:

- | | |
|--|--------------------|
| 1. Associate Dean, Infrastructure (Elect./AC), E&W | - Chairman |
| 2. Dr. Ravi Kumar, Prof. MIED | - Member |
| 3. Dr. Brajesh Kumar Kaushik, Associate Prof., E&C Engg. | - Member |
| 4. Executive Engineer (Elect.), E&W | - Member |
| 5. Assistant Executive Engineer (Elect) E&W | - Member Secretary |

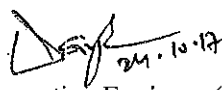
Following agenda item is placed before the Committee:


The AC Consultant M/S HCS, Noida has been appointed for Planning and Designing centralized air conditioning system. In the light of recent requirement of Air Conditioning of Convocation Hall as well as in Lecture Hall Complex-II, consultant was requested submit an energy efficient, economically viable and technologically sturdy system.

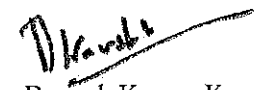
After site visits and requisite data collection and plans, the consultant submitted their preliminary report alongwith tentative idea of the cost involved for comprehensive air conditioning proposal of all the three buildings. The report of the consultant was received on dated 2-10-2017 through mail and same is deliberated in the meeting.

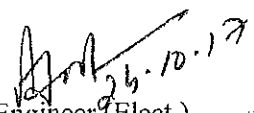
Committee after discussions over this report recommended as below:


- i. Instead of VRV/VRF technology, it is recommended that Chiller Plant technology be adopted for providing Centralized Air Conditioning System in LHC-I,II and Convocation Hall. It is further recommended that the Chiller Plant be planned in the area located between LHC-I and LHC-II.
- ii. The committee is of the opinion that instead of 4 nos. of 380 TR Water Cooled Screw Chillers we may install only three nos. of Chillers because the Convocation Hall may be considered as redundant in the overall proposal as the AC system shall not operate simultaneously in all the buildings.



Assistant Executive Engineer (Elect)
E&W


Dr. Ravi Kumar, Prof.
MIED


Dr. Brajesh Kumar Kaushik,
Associate Prof., E&C Engg


Executive Engineer (Elect.),
E&W


Associate Dean,
Infrastructure (Elect./AC), E&W


07 DEC 2017

Subject: Re: Proposal of Tower AC,s and Exhaust fans in SWP Hanger
To: D. P. Singh <singhdpaeaaad@iitr.ac.in>
Cc: Mukesh Kumar Pathak <mukesfee@iitr.ac.in>,
Institute Engineer <ie@iitr.ac.in>

Date: 10/02/17 03:47 AM
From: Harvex <subodh_kin@yahoo.com>

REP-592 - IIT Roorkee.doc (125kB)

Sir,

As per discussion in my first site meeting , Please find attached building wise Air Conditioning TR load & price comparison for each building & common AC plant for three building as per our discussion. if ant thing please call & discuss.

Regard,

Subodh Kumar
Principal & Sustainable Design Energy Consultant (MEP Services)

Harvex Consultancy Services

Address: 95A, Block-B2, Sai Apartment, Sector-71, Noida (UP) 201301

Tel +91-120-6540970,+91-98181-09305

Mobile +91-98101-28641

Email – subodh_kin@yahoo.com

Email – hcsdelhi@yahoo.in

This email is confidential and may contain legally privileged information. If you are not the intended recipient, you should not copy, distribute, disclose or use the information it contains. Please e-mail the sender immediately and delete this message from your system. E-mails are susceptible to corruption, interception and unauthorized amendment; we do not accept liability for any such changes, or for their consequences. You should be aware, that the company may monitor your emails and their content

From: D. P. Singh <singhdpaeaaad@iitr.ac.in>
To: Harvex <subodh_kin@yahoo.com>
Cc: Mukesh Kumar Pathak <mukesfee@iitr.ac.in>; Institute Engineer <ie@iitr.ac.in>
Sent: Friday, 8 September 2017 3:37 PM
Subject: Re: Proposal of Tower AC,s and Exhaust fans in SWP Hanger

Soft copy of Hanger already send. New LHC was send also.

D.P.Singh

On 09/05/17, Harvex <subodh_kin@yahoo.com> wrote:


07 DEC 2017

BASIS OF DESIGN

Location – Roorkee

Latitude – 30.19 Deg. North

Altitude – 682 Meter

- | | | | |
|-------|---|----------------------------|---------------|
| A. | Outside design conditions | DBT °C | WBT °C |
| | Summer / Monsoon / Winter | 40.6/32.2/5.6 | 23.9/26.7/3.3 |
| B. | Inside design conditions | DBT °C | RH |
| | Summer / Monsoon | 23.0 ± 1 | Around 60% |
| C. | Exposed roof: All exposed roof / terraces shall be insulated with 50 mm thick expanded polystyrene or equivalent material by client through their own agencies to get an overall heat transmission factor of 0.12 BTU/HR/SFT/°F. | | |
| D. | Make up water requirement: Soft and filtered water for makeup purposes shall be made available near the Cooling Tower, Expansion Tank & Air-washer by the client through their on agencies. | | |
| E. | Power Supply: Stabilised three phase four wire AC supply i.e. 415 Volts ± 10 % & 50 Hz ± 5 % with double earthing shall be made available in the plant room & in each air handling unit rooms, near exhaust AHUs / fans, axial flow fans, Air-washer etc. & Single-phase power supply with earthing within two meters from each Fan Coil Units & Inline Fans by the client through their own agency. | | |
| F | Heat Load Design Parameter | | |
| i) | Light Load | – 1 W / Sq Ft. | |
| ii) | Occupancy as per Furniture Layout. | | |
| iii) | Fresh Air | – As per ASHRAE / NBC 2016 | |
| iv) | Glass Solar Gain | – 0.51 | |
| v) | Glass U Factor | – 1.1 BTU/HR/SFT/°F. | |
| vi) | Wall U Factor | – 0.36 BTU/HR/SFT/°F. | |
| vii) | Partition Load | – 0.32 BTU/HR/SFT/°F. | |
| viii) | Ceiling / Floor Load | – 0.46 BTU/HR/SFT/°F. | |
| ix) | Exposed Roof | – 0.12 BTU/HR/SFT/°F. | |
| x) | Equipment Load | – As per Occupancy | |



07 DEC 2017

IIT
AT ROORKEE

1.00. Air Conditioning load

Based on the parameters given above, the total AC load works as below

| Sl No. | Building | Effective Area to be AC - SMT | TR | Effective TR After Diversity | Plant Room - Ht Side Each Building | Common Plant Room Ht Side Work |
|-------------|---------------------------|-------------------------------|------|------------------------------|---|---|
| 1 | Lecture Theatre | 4443 | 475 | 400 | 3 No. x 200 TR Water cooled Screw Chiller (2 Working + 1 Stand By) | 4 No. x 380 TR Water cooled Screw Chiller (3 Working + 1 Stand By) |
| 2 | Lecture Hall | 5718 | 610 | 500 | 3 No. x 250 TR Water cooled Screw Chiller (2 Working + 1 Stand By) | |
| 2 | Hanger - Convocation Hall | 2490 | 251 | 250 | 3 No. x 125 TR Water cooled Screw Chiller (2 Working + 1 Stand By) | |
| Gross Total | | 12651 | 1336 | 1150 | | |

As above price comparison (As per CPWD 2014 (E & M Work) PAR Item No. 6 & 13

| Sl No. | Building | Effective TR After Diversity | Plant Room - Ht Side Each Building | Working TR Machine | Stand By TR Machine | Per Ton Cost (Rs.) | Per Ton Stand By Cost (Rs.) | Total Cost (Rs.) |
|--------|----------|------------------------------|------------------------------------|--------------------|---------------------|--------------------|-----------------------------|------------------|
| | | | | | | 70000 | 48000 | |
| | | | | | | Per TR | Per TR | |

| | | | | | | | | |
|---|-----------------|-----|----------------------|-----|-----|----------|---------|----------|
| 1 | Lecture Theatre | 400 | 3 No. x 200 TR Water | 400 | 200 | 28000000 | 7600000 | 35600000 |
|---|-----------------|-----|----------------------|-----|-----|----------|---------|----------|

IIT
AT ROORKEE

| | | | | | | | | |
|-------------|------------------------------|------|--|-----|-----|----------|-------------------|-----------|
| | | | cooled Screw Chiller (2 Working + 1 Stand By) | | | | | |
| 2 | Lecture Hall | 500 | 3 No. x 250 TR Water cooled Screw Chiller (2 Working + 1 Stand By) | 500 | 250 | 35000000 | 9500000 | 44500000 |
| 3 | Hanger - Convocation Hall | 250 | 3 No. x 125 TR Water cooled Screw Chiller (2 Working + 1 Stand By) | 250 | 125 | 17500000 | 4750000 | 22250000 |
| Gross Total | | 1150 | | | | | Gross Total(Rs.) | 102350000 |

| Sl No. | Building | Effective TR After Diversity | Common Plant Room - Hi Side Each Building | Working TR Machine | Stand By TR Machine | Per Ton Cost (Rs.) 70000 Per TR | Per Ton Stand By Cost (Rs.) 38000 Per TR | Total Cost (Rs.) |
|-----------|----------|---------------------------------------|---|--------------------------|---------------------------|---------------------------------------|---|---------------------|
|-----------|----------|---------------------------------------|---|--------------------------|---------------------------|---------------------------------------|---|---------------------|

| | | | | | | | | |
|-------------|---------------------------------|------|--------------------------------|------|-----|----------|-------------------|----------|
| 1 | Lecture Theatre | 400 | 4 No. x 380 TR Water cooled | 1140 | 380 | 79800000 | 14440000 | 94240000 |
| 2 | Lecture Hall | 500 | Screw Chiller | | | | | |
| 3 | Hanger - Convocation Hall | 250 | (3 Working + 1 Stand By) | | | | | |
| Gross Total | | 1150 | | | | | Gross Total(Rs.) | 94240000 |

| | | | | | | | | |
|----------------------------|--|-----------|---------------|--|--|--|--|-----------|
| 4 | Building Management System (BMS) | 12651 SMT | =480 Rs./ SMT | | | | Total Cost 480 x 12651 = 6072480 (Rs.) | 6072480 |
| Total effective Cost (Rs.) | | | | | | | Total Cost (Rs.) including BMS | 100312480 |

Soft water requirement for Make up purpose --- 8000 Litres per hour
(For Cooling Towers Only)

2.00 ITEMS NOT INCLUDED IN SCOPE OF AC CONTRACTOR

(To Be Arranged By Client Through Their Own Agencies At Their Own Cost.)

- a) Housing of equipments:
- b) Stabilised three phase four wire AC supply i.e. 415 Volts \pm 10 % & 50 Hz \pm 5 % with double earthing shall be made available in the plant room & in each air handling unit rooms, near exhaust AHUs / fans, axial flow fans, Air-washer etc. & Single-phase power supply with earthing within two meters from each Fan Coil Units & Inline Fans by the client through their own agency.
- c) Any kind of exposed roof insulation work.
- d) Any kind of false ceiling work, return air boxing, wooden / aluminium frames for fixing grills / diffuser.
- e) Water softening plant if required.
- f) Makeup water connections with fittings and valves to makeup tank, expansion tank.
- g) Drain points in each AHU, AC Plant Room, near cooling tower and each Fan Coil Unit.
- h) Power and water for erection, testing and commissioning of the plant.
- i) Any kind of masonry shafts for laying pipes / cables / ducts etc.
- j) Fire signal from potential free contact from fire panel to be wired to each AHU room, Supply & Exhaust Fans, Air-washer etc.

Appendix 'E'
Item No. B&WC/37.10

OFFICE OF THE EXECUTIVE ENGINEER
Uttarakhand Power Corporation Ltd.
(A Govt. Of Uttarakhand Undertaking)
Electricity Distribution Division (Urban)
Koorkee - 247667
Phone: 01332-272409
Email: euddrke@yahoo.co.in



कार्यालय अधिशासी अभियन्ता
उत्तराखण्ड पावर कारपोरेशन लि०
(उत्तराखण्ड सरकार का उपक्रम)
विद्युत वितरण खण्ड (नगरीय)
रूडकी - 247667
दूरभाष: 01332& 272409

पत्रांक 4751 / वि० वि० ख० न० रू० / जमा भद

दिनांक - 25/10/2017

विषय:- रूडकी आई०आई०टी० मे 33 के०वी० Under ground लाईन का व्यय जमा कराने के सम्बन्ध में।

एसोसियेट डीन इन्फा (ई./ए.सी०)

आई०आई०टी०,

रूडकी।

महोदय,

आपके कार्यालय पत्रांक- 344, दिनांक- 23.08.2017, के सन्दर्भ मे रूडकी आई०आई०टी० मे 33 के०वी० Under ground लाईन का व्यय जमा कराने के सम्बन्ध में।

| | | | |
|----|-----------------------|-----|-------------|
| 1. | प्राक्कलन का कुल व्यय | रू० | 85736873.00 |
| | कुल योग | रू० | 85736873.00 |

कृपया उपरोक्त का भुगतान निम्नलिखित नियम एवं शर्तों के अधीन बैंक ड्राफ्ट जो अधिशासी अभियन्ता, वि० वि० ख० (न०) रूडकी के पक्ष में तथा पंजाब नैशनल बैंक शाखा सिविल लाईन, रूडकी पर देय हो, द्वारा दिनांक 21/11/17 तक करें, तथा भुगतान की रशीद मुख्य रोकडिया(रा०), से प्राप्त करें।

- 1 33 के०वी० लाईन को Under ground करने हेतु भूमि आवेदक द्वारा उपलब्ध करायी जायेगी।
- 2 33 के०वी० लाईन को Under ground करने हेतु यदि कोई/ भूमि सम्बन्धि विवाद उत्पन्न होता है तो Under ground लाईन का कार्य रोक दिया जायेगा जिसकी जिम्मेदारी सम्बन्धित आवेदक की होगी
3. 33 के०वी० लाईन को Under ground करने हेतु यदि कोई भूमि का मुआवजा देय अथवा सडक खुदान रिपेयर के अन्य खर्च की यदि सम्बन्धित विभाग द्वारा मांग की जाती है। तो उसका भुगतान आवेदक द्वारा देय होगा।

(अनूप कुमार)

अधिशासी अभियन्ता

पत्रांक - / वि० वि० ख० (न०) रू० / दिनांक

प्रतिलिपि हेड कैशियर, विद्युत वितरण खण्ड (न०) रूडकी को इस आशय के साथ प्रेषित है कि उपरोक्त प्राक्कलन राशि उपभोक्ता द्वारा खण्ड कार्यालय में जमा कराना सुनिश्चित करें जिसमें अग्रिम कार्यवाही की जा सकें

(अनूप कुमार)

अधिशासी अभियन्ता

IE for napt.

Myshtane

26-10-17

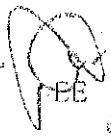
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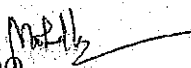
-43-

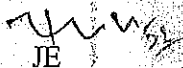
07 DEC 2017

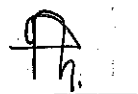
REPORT

1. ADMINISTRATIVE ORDER : E.E. E.D.D. Roorkee (Urban)
2. ONWHICH ESTIMATE IS FRAMED : IIT letter no. E&W/A.D.I(E/AC)/E-4/344
3. NAME OF ESTIMATE : Proposed 33kv cable D/B Ckt Underground cable
line from to 220 KV s/s Ramnagar to 33 KV s/s IIT
Roorkee.
4. AMT. OF ESTIMAT : 8.57 Cr.
5. ESTIMATE HEAD : Deposit
6. LOAD SANCTIONED : NA
7. ORDER & LOAD
8. FINANCIAL YEAR OF WORK : 2017-18
9. POSITION OF WORK SITE & ADDRESS : 220 KV S/S Ramnagar to 33/11kv IIT s/s rke.
10. PROFIT FROM ESTIMATE : for uninterrupted supply on request of IIT rke.
11. TECHNICAL BASE OF ESTIMATE : One no. main ckt and one no. spare ckt.
Proposed.
12. COMMERCIAL BASE OF ESTIMATE : The rates taken in this estimate are as per
current stock issue rates 2017-18
13. TOTAL SPECIFICATION OF ESTIMATE : 33kv XLPE Cable 3x300 mm proposed U/G
14. This is certify that the estimate has been framed as per norms prescribed by Deptt. & the
work will be carried out under supervision of E.E. E.D.D (U) Roorkee.


E.E. E.D.D. Roorkee (Urban)


SDO
EDSD Roorkee-1


JE
6No. S/S



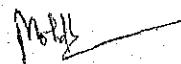
07 DEC 2017


Estimate for Laying Double ckt Line to IIT S/S from 220kv S/S Ramnager with Separate Bay (Approx Lenth 2x4.9km)

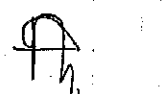
| S.No. | Name of Items | Unit | Qty. | Rate | Amount |
|-------|---|--------------|-------|------------|--------------------|
| 1 | Centralized material | | | | |
| 1 | Earthing rod | Nos. | 50 | 320.00 | 16000.00 |
| 2 | 33 KV XLPE Cable of size 3x300sq.mm (4900X2)+10% | Mtr. | 10780 | 1520.00 | 16385600.00 |
| 3 | GI Wire 6swg | Kg. | 50 | 60.00 | 3000.00 |
| 4 | 33KV Piller Resistance metering Cubical | Nos. | 1 | 114150.00 | 114150.00 |
| 5 | Total | | | | 16518750.00 |
| 6 | Decentralized material | | | | |
| 7 | GI Pipe 6" dia | Mtr. | 300 | 2000.00 | 600000.00 |
| 8 | 33 KV Heat Shrinkable Cable Jointing Kit/straight through | Nos. | 44 | 70000.00 | 3080000.00 |
| 9 | 33 KV Heat Shrinkable Cable Jointing kit I/D | Nos. | 4 | 24000.00 | 96000.00 |
| 10 | 33 KV Heat Shrinkable Cable Jointing kit O/D | Nos. | 4 | 28000.00 | 112000.00 |
| 11 | Total | | | | 3888000.00 |
| 12 | labour | | | | |
| 13 | carriage of stock material from store roorkee to site of work with loading & unloading | MT | 25 | 4000.00 | 100000.00 |
| 14 | laying of Double ckt of size 3x300sqmm and 1.5mtr. Depth and 50cm apart with trenchless technology including laying in trench with suitable size of HDPE Pipe including making marking of Laying route of Cable | Mtr. | 10480 | 3500.00 | 36680000.00 |
| 15 | Laying of Cable in GI Pipe 6inch dia at Points of road crossing and Bridge crossing and making marking of Laying the cable | mtr. | 300 | 300.00 | 90000.00 |
| 16 | earthing of Cable and metering cubical by MS earth rod and connecting the earth with the help of GI wire | Nos. | 50 | 200.00 | 10000.00 |
| 17 | filling & fixing of cable jointing kit I/D and O/D | Nos. | 8 | 5000.00 | 40000.00 |
| 18 | filling & fixing of cable straight through jointing kit | Nos. | 44 | 12000.00 | 528000.00 |
| 19 | Construction of Room at 220kv S/S (Size 8x10x8 sq.ft) for 33kv PRMC | Job | 1 | 150000.00 | 150000.00 |
| 20 | Installation of 33kv PRMC complete with all Connection | Job | 1 | 10000.00 | 10000.00 |
| 21 | Total B | | | | 37608000.00 |
| 22 | GST 18% | | | | 6769440.00 |
| 23 | Total | | | | 44377440.00 |
| 24 | | TOTAL | | | 64784190.00 |
| 25 | Supervision charges @ 18.45% | | | | 11952683.06 |
| 26 | | TOTAL | | | 76736873.06 |
| 27 | Cutting and Repairing and complete marking of Cable route and other miscellaneous Charges to be deposited to concerned authorities due to Laying of Cable. | LS | | 5000000.00 | 5000000.00 |
| 28 | Cost of 1no. 33kv Bay at 220 kv S/S for Independent Feeder for IIT. | job | 1 | 4000000.00 | 4000000.00 |
| 29 | G.Total | | | | 85736873.06 |

Note :- Rates mentioned at serial no. 27 & 28 are Provisional. Rates will be charged at actuals as intimated by concerned authorities at the time of execution of work


E.E.


S.D.O.


J.E.


07 DEC 2017

A grayscale satellite map from Google Maps showing a dense urban area in India. The map includes labels for various locations such as SALEMPUR, Unnamed Road, Nand Vihar Colony, Ramnagar, Electrical Power House, Roorkhee, Fatehpur, Kalsiya Marg, Nehru, Roorkhee - Fatehpur, Kalsiya Marg, Chow, Indian Chamber Overpass, Bank Railway St., BEC Center, ground, Rahimpur, and J.E. raman (upcl). A scale bar at the bottom indicates 200 m. A small inset box shows a walking distance of 1 h 1 min and 4.9 km.

via unnamed roads
Mostly flat

1 h 1 min
4.9 km

Poorkeel (U)

1800
(2005)

JE
(Gnos/s)

07 DEC 2017

कार्य एवं सम्पदा
भारतीय प्रौद्योगिकी संस्थान रुड़की

पत्रांक: E&W/A.D.I(E/AC)/E-4/ 344

दिनांक: अगस्त 23, 2017

अधिकांशी अभियन्ता

Executive Engineer

विद्युत वितरण खण्ड रुड़की

Electricity Distribution Division

उ० पा० का० लि० रुड़की

U.P.C.Ltd., Roorkee

विषय: भारतीय प्रौद्योगिकी संस्थान, रुड़की की विद्युत आपूर्ति हेतु 33 के. वी. की भूमिगत विद्युत लाइन
डाले जाने के सम्बन्ध में।

Regarding 33 KV under ground line for I.I.T. Roorkee

Sir,

IIT Roorkee has highly sophisticated equipment in many research labs, which require continuous power supply to complete running tasks. To take care of this issue, IIT Roorkee proposes that a dedicated feeder be provided. You are therefore requested to submit an estimate of this dedicated 10MVA feeder (in addition to the existing feeder, which shall be used as alternate arrangement) employing under ground cable from 220KV Ram Nagar sub station to 33KV IIT Roorkee sub station.

Early action in the matter shall be highly appreciated.

M. P. Das
एसोसियेट डीन इन्फ्रा (ई./ए. सी.)

Associate Dean Infra(E/AC)

प्रतिलिपि:

1. अधीक्षक अभियन्ता, उ०पा०का०लि० रुड़की को इस अनुरोध के साथ प्रेषित कि कृपया उक्त पर सम्बन्धित अधिकारी को उचित निदेशन का कष्ट करें।

EE/AC/1/2017
Date No.
11/08/2017
AB (B)/DA/IR
LST/DA/IR
TA/DA/IR
D.S.

SD-1
Infra



भारत सरकार

GOVERNMENT OF INDIA

मुख्य परियोजना प्रबंधक
आई. आई. टी. रूड़की परियोजना अंचल
केंद्रीय लोक निर्माण विभाग
रूड़की-247667

CHIEF PROJECT MANAGER
IIT ROORKEE PROJECT ZONE
CENTRAL PUBLIC WORKS DEPARTMENT
ROORKEE- 247 667

प्रारंभिक प्राक्कलन
PRELIMINARY ESTIMATE

कार्य का नाम—

NAME OF WORK: C/o 800 Capacity Students Hostel at IIT
Roorkee, Roorkee, Uttarakhand

अनुमानित लागत—

ESTIMATE COST: Rs. 125.67 Crore(s)

भारत सरकार
केन्द्रीय लोक निर्माण विभाग

राज्य— उत्तराखण्ड

मण्डल — आई.आई.टी. रुड़की परियोजना मण्डल-1

शाखा — भवन एवं सड़क

प्राक्कलन संख्या : 06/आई.आई.टी.आर.पी.डी.-1/2017-18

कार्य का नाम — C/o 800 Capacity Students Hostel at IIT Roorkee, Roorkee, Uttarakhand.

निधि:

मुख्य शीर्ष :
लघु शीर्ष : डिपॉजिट कार्य
विस्तृत शीर्ष :

यह प्रारम्भिक प्राक्कलन, जिसकी अनुमानित लागत मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित ₹ 125.67 करोड़ है, श्री अमन सचान, कार्यपालक अभियन्ता, आई.आई.टी. रुड़की परियोजना मण्डल-1, के०लो०नि०वि०, रुड़की द्वारा संरचित है।

रिपोर्ट

इतिहास :

यह प्रारम्भिक प्राक्कलन जिसकी अनुमानित लागत सहित ₹ 125.67 करोड़ है, सक्षम अधिकारी द्वारा प्रशासनिक अनुमोदन एवं व्यय स्वीकृति के लिए तैयार किया गया है। The Dean, Infrastructure ने अपने पत्रांक E&W/IE/267 Dated 29/08/2017 द्वारा निम्न कार्य C/o 800 Capacity Students Hostel at IIT Roorkee, Roorkee, Uttarakhand के०लो०नि०वि० द्वारा कराया जाना प्रस्तावित किया है।

अभिकल्पन एवं विस्तार :

यह प्रारम्भिक प्राक्कलन ग्राहक विभाग के माध्यम से उनके द्वारा नियुक्त वास्तुकार के ई-मेल दिनांक 26.10.2017 एवं 1.11.2017 के साथ संलग्न विवरण पर आधारित कर बनाया गया है। यह मान लिया गया है कि वास्तुकार द्वारा संलग्न विवरण आई.आई.टी. रुड़की द्वारा अनुमोदन पश्चात ही के.लो.नि.वि. को अग्रसारित किया गया है।

उपरोक्त भवन G+10/S+10 फ्लोर है जिसमें कि 800 एकल आवासीय कमरों का प्रावधान किया जाना है। यह प्राक्कलन आर.सी.सी. फ्रेम्ड स्ट्रक्चर पद्धति पर बना है। भवन का कुल कुर्सी क्षेत्रफल 28,627 वर्ग मी. है तथा तल से तल की ऊँचाई 3.05 मीटर है। यह संरचना भूकम्प के जोन 4 के लिए परिकल्पित है। इस भवन में आन्तरिक जल व्यवस्था, सेनेटरी व्यवस्था, कापर वायरिंग के साथ विद्युत व्यवस्था का प्रावधान किया गया है। उपरोक्त भवन में बाँउड़ी वॉल/गेट तथा बाह्य विकास का भी प्रावधान किया गया है। सोलर वाटर हीटिंग की सुविधा का प्रावधान किया गया है।

भवन का विस्तार निम्न प्रकार है--

| RCC Framed Structure | | | |
|----------------------|--------------|--------------|--------------|
| S.No | Floor No. | Plinth Area | Floor height |
| 1. | Ground Floor | 2,777.00 Sqm | 3.05 mtr |
| 2. | 1st Floor | 3,228.00 Sqm | 3.05 mtr |
| 3. | 2nd Floor | 3,378.00 Sqm | 3.05 mtr |
| 4. | 3rd Floor | 3,378.00 Sqm | 3.05 mtr |
| 5. | 4th Floor | 2,876.00 Sqm | 3.05 mtr |
| 6. | 5th Floor | 2,729.00 Sqm | 3.05 mtr |
| 7. | 6th Floor | 2,740.00 Sqm | 3.05 mtr |
| 8. | 7th Floor | 2,579.00 Sqm | 3.05 mtr |
| 9. | 8th Floor | 1,804.00 Sqm | 3.05 mtr |
| 10. | 9th Floor | 1,059.00 Sqm | 3.05 mtr |



| | | | |
|---------------------------|-------------|----------------------|----------|
| 11. | 10th Floor | 1,059.00 Sqm | 3.05 mtr |
| Total | | 27,607.00 Sqm | |
| 12. | Stilt Floor | 1,020.00 Sqm | 3.05 mtr |
| Total Covered Area | | 28,627.00 Sqm | |

ग्राहक विभाग के साथ हुई चर्चा तथा उनके द्वारा दिये गये निर्देशानुसार हॉस्टल भवन में एयर कूलिंग का प्रावधान किया जाना है। अतः वास्तुकीय सलाहकार द्वारा दिये गये प्रारम्भिक प्राक्कलन में इस हेतु 4.32 करोड़ का प्रावधान किया गया है, जो कि प्रति छात्र लगभग 54000 रुपये आता है। जो कि इसकी कम उपयोगिता को देखते हुए काफी अधिक प्रतीत होता है, अतः एयर कूलिंग सिस्टम की उपयोगिता पर पुनर्विचार की आवश्यकता है।

इस परियोजना की लागत जो प्रारम्भिक प्राक्कलन में है उसमें निर्माण की लागत में संभावित वृद्धि के अलावा अन्य कारणों जैसे कि क्षेत्र में परिवर्तन, क्षेत्रीय डिजाइन और विनिर्देशों जैसा ग्राहक विभाग द्वारा परवर्ती तारीख में वांछित हो, के द्वारा बदलाव आ सकता है। मूल्य सूचकांक में बदलाव के कारण भी अनुमानित लागत में बदलाव आ सकता है। अतः यह प्रारम्भिक अनुमान तदनुसार बनाया गया है।

विनिर्देश : कार्य के 0लो0नि0वि0 विनिर्देश 2009 (भाग- प्रथम एवं द्वितीय) एवं संशोधित पर्वियों के अनुसार कराया जायेगा।

दरें : डी0एस0आर0 2016 तथा बाजार दर पर आधारित है।

लागत : ₹ 125.67 करोड़ मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित।

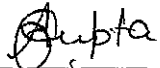
विधि : निविदा आमन्त्रण के बाद अनुबन्ध द्वारा कार्य करवाया जायेगा।


भूमि : ग्राहक विभाग द्वारा बाधारहित भूमि उपलब्ध करायी जायेगी।


कार्य प्रभारित कर्मचारी : इसकी पूर्ति आकस्मिक निधि से की जायेगी।

| | | | |
|--------------|---------------------------|---|--------|
| समय : | 1. निर्माण से पहले का समय | — | 1 माह |
| | 2. निविदा प्रक्रिया | — | 3 माह |
| | 3. निर्माण समय | — | 24 माह |

कुल समय — 28 माह


सहायक कार्यपालक अभियंता
आई.आई.टी. रुड़की परियोजना उपमंडल-2
के0लो0नि0वि0, रुड़की


कार्यपालक अभियंता
आई.आई.टी. रुड़की परियोजना मंडल-1
के0लो0नि0वि0, रुड़की


मुख्य परियोजना प्रबन्धक
आई.आई.टी. रुड़की परियोजना अंचल
के0लो0नि0वि0, रुड़की

BRIEF SPECIFICATION

Name of Work: C/o 800 Capacity Students Hostel at IIT Roorkee, Roorkee, Uttarakhand

- | | | |
|-----------------------------------|---|---|
| 1. Foundation | : | Pile foundation. |
| 2. Superstructure | : | RCC framed structure with brick wall in cement mortar- 1:6 in filler wall. |
| 3. Door & Frame | : | T- Iron/Pressed steel door frame with 35 mm thick non decorative flush door shutter and flush door shutter with aluminium sheet for toilets. |
| 4. Windows | : | Standard steel tubular section/Aluminum windows and stainless steel wire gauge. |
| 5. Flooring | : | Vitrified tile flooring (600x600) in all rooms & Corridors. Granite/Marble flooring in staircases. Anti-skid ceramic tile flooring (300x300) in toilets with ceramic glazed tiles on dado. |
| 6. Railing | : | Stainless steel railing. |
| 7. Roofing | : | Terrace: Brick coba treatment/Cool coat treatment. |
| 8. Finishing | : | External – Acrylic smooth exterior/texture finish over plastered surface with cement based wall putty. Internal – All walls and ceilings to be treated with based wall putty followed with coat of acrylic/ distemper. Synthetic enamel paint on all wood work and steel work. |
| 9. Water Supply | : | As per CPWD specifications |
| 10. Sanitary Installations | : | As per CPWD specifications |
| 11. Drainage | : | As per CPWD specifications |
| 12. Boundary Wall/Gate | : | 2.40 m high Brick wall in CM (1:6) with M.S. spikes on top and M.S. gate. |




07 DEC 2007


GENERAL ABSTRACT


Name of work: C/o 800 Capacity Students Hostel at IIT Roorkee, Roorkee, Uttarakhand

| Description | Civil work | Electrical work | Development | Furniture | Total |
|----------------------|----------------|-----------------|---------------|---------------|------------------|
| 1.0 Hostel | 781,673,638.00 | 240075715.00 | 12450179.00 | 44640000.00 | 1,078,839,532.00 |
| Total: | 781,673,638.00 | 240,075,715.00 | 12,450,179.00 | 44,640,000.00 | 1,078,839,532.00 |
| dd 3% contingenceis: | 23,450,209.00 | 7,202,271.00 | 373,505.00 | 1,339,200.00 | 32,365,186.00 |
| Add 1% Labour cess | 7,816,736.00 | 2,400,757.00 | 124,502.00 | 446,400.00 | 10,788,395.00 |
| Total: | 812,940,583.00 | 249,678,743.00 | 12,948,186.00 | 46,425,600.00 | 1,121,993,113.00 |
| GST@12% | 97,552,870.00 | 29,961,449.00 | 1,553,782.00 | 5,571,072.00 | 134,639,174.00 |
| Total: | 910,493,453.00 | 279,640,192.00 | 14,501,968.00 | 51,996,672.00 | 1,256,632,287.00 |

| | |
|-----|---|
| SAY | Rs. 1,256,700,000.00 Only |
| | Rupees One Hundred Twenty Five Crore Sixty Seven Lakh(s) Only |


Assistant Executive Engineer
IIT Roorkee Project Sub-Division -2
C.P.W.D., Roorkee


Executive Engineer
IIT Roorkee Project Division -1
C.P.W.D., Roorkee


Chief Project Manager
IIT Roorkee Project Zone
C.P.W.D., Roorkee

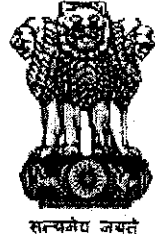
ABSTRACT OF COST

Name of work: C/o 800 Capacity Students Hostel at IIT Roorkee, Roorkee, Uttarakhand

| Total Covered Area | | | | Floor to Floor Height | | | |
|-------------------------------|--|--------------|---------|-----------------------|---------------------|----------------|---------------|
| | Ground Floor | 2,777.00 | Sqm | 3.05 | mtr | | |
| | 1st Floor | 3,228.00 | Sqm | 3.05 | mtr | | |
| | 2nd Floor | 3,378.00 | Sqm | 3.05 | mtr | | |
| | 3rd Floor | 3,378.00 | Sqm | 3.05 | mtr | | |
| | 4th Floor | 2,876.00 | Sqm | 3.05 | mtr | | |
| | 5th Floor | 2,729.00 | Sqm | 3.05 | mtr | | |
| | 6th Floor | 2,740.00 | Sqm | 3.05 | mtr | | |
| | 7th Floor | 2,579.00 | Sqm | 3.05 | mtr | | |
| | 8th Floor | 1,804.00 | Sqm | 3.05 | mtr | | |
| | 9th Floor | 1,059.00 | Sqm | 3.05 | mtr | | |
| | 10th Floor | 1,059.00 | Sqm | 3.05 | mtr | | |
| | Total | 27,607.00 | Sqm | | | | |
| | Stilt Floor | 1,020.00 | Sqm | 3.05 | mtr | | |
| | Total Covered Area | 28,627.00 | Sqm | | | | |
| Original Preliminary Estimate | | | | | | | |
| Sl. No. | Item of work | Qty | Unit | Rate | Per | Amount | PAR 2012 Item |
| | CIVIL WORK | | | | | | |
| SH-I | RCC Framed Structure | | | | | | |
| 1 | RCC construction (upto six storey) | | | | | | |
| 1.1 | Floor height 2.9 mt. | 27607.00 | sq.mtr. | 16500.00 | sq.mtr. | 455,515,500.00 | 1.1.2(A) |
| 2 | Extra for: | | | | | | 1.2 |
| 2.1 | Every additional storey over six storeys upto nine storeys | 7123.00 | sq.mtr. | 560.00 | sq.mtr. | 3,988,880.00 | 1.2.1 |
| 2.2 | Every additional storey over nine storeys upto twelve storeys | 2118.00 | sq.mtr. | 580.00 | sq.mtr. | 1,228,440.00 | 1.2.2 |
| 2.3 | Every 0.3 mt. additional height of floor above normal floor height of 2.9 mtr | | | 270.00 | sq. mtr | | 1.2.3 |
| | GF to 10th floor= 3.05-2.90m=0.150m, 0.150/0.3*270 | 27607.00 | sq.mtr. | 135.00 | sq.mtr. | 3,726,945.00 | |
| | | | | | | 464,459,765.00 | (A) |
| | Extra for: | | | | | | |
| 3 | Resisting Earth-quake forces | 28627.00 | sq.mtr. | 1140.00 | sq.mtr. | 32,634,780.00 | 1.2.8 |
| 4 | Pile foundation up to a depth of 15 mts(on GF area only) | 3797.00 | sqm | 11750.00 | sq.mtr. | 44,614,750.00 | 1.2.10 |
| 6 | Stilt Portion | | | | | | 1.8 |
| 6.1 | Stilt Portion of Multistorey RCC structure (up to ht of 3.35m) Applicable area only | 1020.00 | sqm | 9850.00 | sq.mtr. | 10,047,000.00 | 1.8.1 |
| 7 | Overhead tank without independent staging | 80000.00 | ltr | 15.00 | ltr | 1,200,000.00 | 5.1 |
| 8 | Underground Tank | 200000.00 | ltr | 15.00 | ltr | 3,000,000.00 | 5.5 |
| 9 | Providing Equipments for main kitchen & canteen Pantry, Exhaust & Inlet Fan system with Chimney,Wet store etc. | 1.00 | Lot | 8,000,000.00 | Each | 8,000,000.00 | LS |
| 10 | Boundary Wall with heavy duty Iron Gate: | 436.00 | mtr | 8000.00 | mtr | 3,488,000.00 | LS |
| | | | | | | 567,444,295.00 | (B) |
| SH-II | Services: (for Civil) | | | | | | |
| 1 | Internal water supply & sanitary installations on 'A' | 464459765.00 | A.cost | 10.00% | % | 46,445,977.00 | 3.1 |
| 2 | External Service Connections | 464459765.00 | A.cost | 5.00% | % | 23,222,988.00 | 3.2 |
| 3 | Quality Assurance on 'B' | 567444295.00 | B.cost | 1.00% | % | 5,674,443.00 | 3.6.7 |
| | | | | | Total | 642,787,703.00 | |
| | | | | | Add Cost Index @122 | 138,885,935.00 | |
| | | | | | Total of CIVIL Work | 781,673,638.00 | |

Ph.

07 DEC 2017



भारत सरकार

GOVERNMENT OF INDIA

मुख्य परियोजना प्रबंधक
आई. आई. टी. रूड़की परियोजनाअंचल
केंद्रीय लोक निर्माण विभाग
रूड़की-247667

CHIEF PROJECT MANAGER
IIT ROORKEE PROJECT ZONE
CENTRAL PUBLIC WORKS DEPARTMENT
ROORKEE- 247 667

प्रारंभिक प्राक्कलन
PRELIMINARY ESTIMATE

कार्य का नाम—

NAME OF WORK: C/o Faculty Housing (Phase-I, 60 Flats) at IIT
Roorkee, Roorkee, Uttarakhand

अनुमानित लागत—

ESTIMATE COST: Rs. 58.21 Crore(s)

07 DEC 2017

भारत सरकार
केन्द्रीय लोक निर्माण विभाग

राज्य— उत्तराखण्ड

मण्डल — आई.आई.टी. रुड़की परियोजना मण्डल-I

शाखा — भवन एवं सड़क

प्राक्कलन संख्या : 04/आई.आई.टी.आर.पी.डी.-1/2017-18

कार्य का नाम — C/o Faculty Housing (Phase-I, 60 Flats) at IIT Roorkee, Roorkee, Uttarakhand

निधि:

मुख्य शीर्ष :
लघु शीर्ष : डिपॉजिट कार्य
विस्तृत शीर्ष :

यह प्रारम्भिक प्राक्कलन, जिसकी अनुमानित लागत मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित ₹ 58.21 करोड है, श्री अमन सचान, कार्यपालक अभियन्ता, आई.आई.टी. रुड़की परियोजना मण्डल-1, के0लो0नि0वि0, रुड़की द्वारा संरचित है।

रिपोर्ट

इतिहास :

यह प्रारम्भिक प्राक्कलन जिसकी अनुमानित लागत सहित ₹ 58.21 करोड है, सक्षम अधिकारी द्वारा प्रशासनिक अनुमोदन एवं व्यय स्वीकृति के लिए तैयार किया गया है। The Dean Infrastructure ने अपने पत्रांक E&W/IE/267 Dated 29/08/2017 द्वारा निम्न कार्य C/o Faculty Housing at IIT Roorkee, Roorkee, Uttarakhand के0लो0नि0वि0 द्वारा कराया जाना प्रस्तावित किया है। यह कार्य 3 Phase में कराया जाना है जिसमें कि कमशः Phase - I में 60 Flats, Phase - II में 120 Flats एवं Phase - III में 120 Flats का निर्माण प्रस्तावित है। यह प्राक्कलन Phase - I, 60 Flats सम्बन्धी निर्माण कार्य हेतु तैयार किया गया है।

अभिकल्पन एवं विस्तार :

यह प्रारम्भिक प्राक्कलन ग्राहक विभाग के माध्यम से उनके द्वारा नियुक्त वास्तुकार के ई-मेल दिनांक 26.10.2017, 28.10.2017 एवं 30-10-2017 के साथ संलग्न नक्शे तथा अन्य विवरण पर आधारित कर बनाया गया है। यह मान लिया गया है कि वास्तुकार द्वारा संलग्न नक्शे तथा अन्य विवरण जो कि जी.पी.आर.ए. मानकों से भिन्न हैं, आई.आई.टी. रुड़की द्वारा अनुमोदन पश्चात ही के.लो.नि.वि. को अग्रसारित किया गया है।

उपरोक्त भवन G+10/S+10 फ्लोर है जिसमें कि 60 फ्लैट्स का प्रावधान किया जाना है। यह प्राक्कलन आर.सी.सी. फ्रेम्ड स्ट्रक्चर पद्धति पर बना है। भवन का कुल कुर्सी क्षेत्रफल 14,712.13 वर्ग मी. है तथा तल से तल की ऊँचाई 3.00 मीटर है। यह संरचना भूकम्प के जोन 4 के लिए परिकल्पित है। इस भवन में आन्तरिक जल व्यवस्था, सेनेटरी व्यवस्था, कापर वायरिंग के साथ विद्युत व्यवस्था का प्रावधान किया गया है। उपरोक्त भवन में बाँडूरी वॉल/गेट,गार्ड रूम,सब-स्टेशन, DG set (125 kVA) तथा बाह्य विकास का प्रावधान किया गया है।

भवन का विस्तार निम्न प्रकार है—

| RCC Framed Structure | | | |
|----------------------|--------------|-------------|--------------|
| S.No | Floor No. | Plinth Area | Floor height |
| 1. | Ground Floor | 171.00 Sqm | 3.00 mtr |
| 2. | 1st Floor | 1331.27 Sqm | 3.00 mtr |
| 3. | 2nd Floor | 1342.63 Sqm | 3.00 mtr |
| 4. | 3rd Floor | 1331.27 Sqm | 3.00 mtr |
| 5. | 4th Floor | 1342.63 Sqm | 3.00 mtr |
| 6. | 5th Floor | 1331.27 Sqm | 3.00 mtr |
| 7. | 6th Floor | 1342.63 Sqm | 3.00 mtr |



BRIEF SPECIFICATION

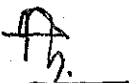
**Name of Work: C/o Faculty Housing (Phase-I, 60 Flats) at IIT Roorkee,
Roorkee, Uttarakhand**

1. **Foundation** : Pile foundation.
2. **Superstructure** : RCC framed structure with brick wall in cement mortar 1:6 in filler wall.
3. **Door & Frame** : Powder coated Aluminum Doors and window frames with 35 mm thick non decorative flush door shutter and flush door shutter with aluminium sheet for toilets.
4. **Windows** : Powder coated Aluminum section/Aluminum windows and stainless steel wire gauge.
5. **Flooring** : Entrance Lobby, Living/Dining, Bed Rooms, Study room & Balcony fully glazed vitrified homogenous tile flooring.

Anti-skid ceramic tile flooring with spacer in toilets with ceramic glazed tiles upto ceiling.

Passage, Corridor & Staircase : Granite/Marble Stone
6. **Kitchen** : Modular Type
7. **Railing** : Stainless steel railing.
8. **Roofing** : Brick coba/Cool Coat treatment on terrace with SCI rain water pipes.
9. **Finishing** : External – Premium Acrylic Smooth exterior paint with Silicone additives/texture paint of required shade over cement based wall putty

Internal – Wall painting with acrylic emulsion paint, Synthetic enamel paint on all wood work and Aluminum work.
10. **Water Supply** : As per CPWD specifications
11. **Sanitary Installations** : As per CPWD specifications
12. **Drainage** : As per CPWD specifications
13. **Lifts** : Passenger lift 13 persons 884 kg 1.0m/sec speed

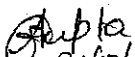



GENERAL ABSTRACT


Name of work: C/o Faculty Housing (Phase-I, 60 Flats) at IIT Roorkee, Roorkee, Uttarakhand


| Description | Civil work | Electrical work | Development | Special Provisions | Total |
|-----------------------|-----------------------|-----------------------|---------------------|----------------------|-----------------------|
| 1.0 Tower Phase -I | 382,308,151.00 | 95160104.00 | 6298799.00 | 12000000.00 | 495,767,054.00 |
| 2.0 Sub Station | 3,126,022.00 | | | | 3,126,022.00 |
| 3.0 Gate Cabin | 804,906.00 | | | | 804,906.00 |
| Total: | 386,239,079.00 | 95,160,104.00 | 6,298,799.00 | 12,000,000.00 | 499,697,982.00 |
| add 3% contingenceis: | 11,587,172.00 | 2,854,803.00 | 188,964.00 | 360,000.00 | 14,990,939.00 |
| Add 1% Labour cess | 3,862,391.00 | 951,601.00 | 62,988.00 | 120,000.00 | 4,996,980.00 |
| Total: | 401,688,642.00 | 98,966,508.00 | 6,550,751.00 | 12,480,000.00 | 519,685,901.00 |
| GST@12% | 48,202,637.00 | 11,875,981.00 | 786,090.00 | 1,497,600.00 | 62,362,308.00 |
| Total: | 449,891,279.00 | 110,842,489.00 | 7,336,841.00 | 13,977,600.00 | 582,048,209.00 |

| | |
|-----|--|
| SAY | Rs. 582,100,000.00 Only |
| | Rupees Fifty Eight Crore Twenty One Lakh(s) Only |


Assistant Executive Engineer
IIT Roorkee Project Sub Division -2
Central P.W.D., Roorkee


Executive Engineer
IIT Roorkee Project Division -I
Central P.W.D., Roorkee


Chief Project Manager
IIT Roorkee Project Zone
Central P.W.D., Roorkee


07 DEC 2017

ABSTRACT OF COST

Name of work: C/o Faculty Housing (Phase-I, 60 Flats) at IIT Roorkee, Roorkee, Uttarakhand

| Total Covered Area | | | | Floor to Floor Height | |
|---------------------------|--|--|--|-----------------------|------------|
| Towers | | | | | |
| Ground Floor | | | | 171.56 | Sqm |
| 1st Floor | | | | 1,331.27 | Sqm |
| 2nd Floor | | | | 1,342.63 | Sqm |
| 3rd Floor | | | | 1,331.27 | Sqm |
| 4th Floor | | | | 1,342.63 | Sqm |
| 5th Floor | | | | 1,331.27 | Sqm |
| 6th Floor | | | | 1,342.63 | Sqm |
| 7th Floor | | | | 1,331.27 | Sqm |
| 8th Floor | | | | 1,342.63 | Sqm |
| 9th Floor | | | | 1,331.27 | Sqm |
| 10th Floor | | | | 1,342.63 | Sqm |
| Total | | | | 13,541.06 | Sqm |
| Stilt Floor | | | | 1,171.07 | Sqm |
| Total Covered Area | | | | 14,712.13 | Sqm |

| Original Preliminary Estimate | | | | | | | |
|-------------------------------|---|--------------|---------|----------|---------|----------------------------|---------------|
| Sl. No. | Item of work | Qty | Unit | Rate | Per | Amount | PAR 2012 Item |
| CIVIL WORK | | | | | | | |
| SH-I | RCC Framed Structure | | | | | | |
| 1 | RCC construction (upto six storey) | | | | | | |
| 1.1 | Floor height 2.9 mt. | 13541.06 | sq.mtr. | 16000.00 | sq.mtr. | 216,656,960.00 | 1.1.2(A) |
| 2 | Extra for: | | | | | | 1.2 |
| 2.1 | Every additional storey over six storeys upto nine storeys | 4016.53 | sq.mtr. | 560.00 | sq.mtr. | 2,249,257.00 | 1.2.1 |
| 2.2 | Every additional storey over nine storeys upto twelve storeys | 2673.90 | sq.mtr. | 580.00 | sq.mtr. | 1,550,862.00 | 1.2.2 |
| 2.3 | Every 0.3 mt. additional height of floor above normal floor height of 2.9 mtr | | | 270.00 | sq. mtr | | 1.2.3 |
| | GF to 10th floor= 3.00-2.90m=0.100m, 0.100/0.3*270 | 13541.06 | sq.mtr. | 90.00 | sq.mtr. | 1,218,695.00 | |
| | | | | | | 221,675,774.00 | (A) |
| | Extra for: | | | | | | |
| 3 | Resisting Earth-quake forces | 14712.13 | sq.mtr. | 1140.00 | sq.mtr. | 16,771,828.00 | 1.2.8 |
| 4 | Pile foundation up to a depth of 15 mts(on GF area only) | 1342.63 | sqm | 11750.00 | sq.mtr. | 15,775,903.00 | 1.2.10 |
| 5 | Larger modules over 35 sqm. | 0.00 | sqm | 1500.00 | sq.mtr. | - | 1.2.12 |
| 6 | Stilt Portion | | | | | | 1.8 |
| 6.1 | Stilt Portion of Multistorey RCC structure (up to ht of 3.35m) Applicable area only | 1171.07 | sqm | 9850.00 | sq.mtr. | 11,535,040.00 | 1.8.1 |
| 7 | Overhead tank without independent staging Fire+Domestic+Flushing | 100000.00 | ltr | 15.00 | ltr | 1,500,000.00 | 5.1 |
| 8 | Underground Tank | 200000.00 | ltr | 15.00 | ltr | 3,000,000.00 | 5.5 |
| 9 | Boundary Wall with heavy duty Iron Gate: | 328.00 | mtr | 10000.00 | mtr | 3,280,000.00 | LS |
| | | | | | | 273,538,545.00 | (B) |
| SH-II | Services: (for Civil) | | | | | | |
| 1 | Internal water supply & sanitary installations on 'A' | 221675774.00 | A.cost | 12.00% | % | 26,601,093.00 | 3.1 |
| 2 | External Service Connections | 221675774.00 | A.cost | 5.00% | % | 11,083,789.00 | 3.2 |
| 3 | Quality Assurance on 'B' | 273538545.00 | B.cost | 1.00% | % | 2,735,385.00 | 3.6.7 |
| | | | | | | Total | |
| | | | | | | 313,958,812.00 | |
| | | | | | | Add Cost Index @122 | |
| | | | | | | 68,349,339.00 | |
| | | | | | | Total of CIVIL Work | |
| | | | | | | 382,308,151.00 | |

Ph.

07 DEC 2017

Preliminary Estimate for Multi Storey Faculty Housing in IIT Roorkee Campus

Sub Head:- ESS Building, No.of Units=1 (G+1) Storey, Floor Ht. 4.5 m

| S.No. | Description | Qty. | Rate | Unit | Amount | Remarks |
|-------|--|------------|------------|------------|-------------------|--------------------|
| 1.1 | R.C.C frame structure upto 6 storeys upto 2.90 metre | 130.00 | 14500.00 | Sqm | 1885000.00 | 1.1(B) 1.1.2(B) |
| 1.2 | Extra for 1.6 height above normal height (4.5-2.9)*270/0.3 | 130.00 | 1440 | Sqm | 187200.00 | 1.2.3 |
| | Total Building cost A (1.1+1.2) | | | | 2072200.00 | (A) |
| 1.3 | Resisting Earthquake forces | 130.00 | 1140 | Sqm | 148200.00 | 1.2.8 |
| | TOTAL (1.1+1.2+1.3) | | | | 2220400.00 | (I) |
| 2. | Service (Electrical) | | | | | |
| 2.1 | Internal Electric Installation on "A" | 2072200.00 | 12.5 | % | 259025.00 | 3.3 |
| 2.3 | Power Wiring & Power Plug on "A" | 2072200.00 | 4 | % | 82888.00 | 3.6.1 |
| | Total III | | | | 341913.00 | (III) |
| | Total (I+II+III) | | | | 2562313.00 | (B) |
| 4.0 | Additional 22% cost over PAR 01.10.2012 Items | 2562313.00 | 22 | % | 563708.86 | |
| | Grand Total | | | | 3126022.00 | |
| | | | Say | Rs. | 3126022 | |

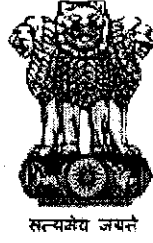

 07 DEC 2017

Preliminary Estimate for Multi Storey Faculty Housing in IIT Roorkee Campus

Sub Head:- Gate Cabin 3 units, Floor Ht. 3 m, Total Area= 34 Sqm

| S.No. | Description | Qty. | Rate | Unit | Amount | Remarks |
|-------|--|-----------|------------|------------|------------------|-------------------------------|
| 1.1 | R.C.C frame structure upto 6 storeys upto 2.90 metre | 34.00 | 14500.00 | Sqm | 493000.00 | PAR 01.10.2012 1.1.2(B) |
| 1.2 | Extra for 0.10m height above normal height (3-2.9)*270/0.3 | 34.00 | 90 | Sqm | 3060.00 | 1.2.3 |
| | TOTAL | | | | 496060.00 | (A) |
| | | | | | 496060.00 | (I) |
| 2.0 | Service (Civil Work) | | | | | |
| 2.1 | Internal water supply and sanitary installation on "A" | 496060.00 | 12.00 | % | 59527.00 | 3.1 |
| 2.2 | External service connection on "A" | 496060.00 | 4.00 | % | 19842.00 | 3.2 |
| | Total (2.1+2.2) | | | | 79369.00 | (II) |
| 3.0 | Service (Electrical) | | | | | |
| 3.1 | Internal Electric Installation on "A" | 496060.00 | 12.50 | % | 62008.00 | 3.3 |
| 3.2 | Power Wiring & Power Plug on "A" | 496060.00 | 4.00 | % | 19842.00 | 3.6.1 |
| 3.3 | Telephone Conduits on "A" | 496060.00 | 0.50 | % | 2480.00 | 3.6.4 |
| | Total III | | | | 84330.00 | (III) |
| | Total (I+II+III) | | | | 659759.00 | (B) |
| 5.0 | Additional 22% cost over PAR 01.10.2012 Items | 659759.00 | 22 | % | 145146.98 | |
| | Grand Total | | | | 804906.00 | |
| | | | Say | Rs. | 804906 | |
| | | | | | | |





भारत सरकार

GOVERNMENT OF INDIA

मुख्य परियोजना प्रबंधक
आई. आई. टी. रूड़की परियोजनाअंचल
केंद्रीय लोक निर्माण विभाग
रूड़की-247667

CHIEF PROJECT MANAGER
IIT ROORKEE PROJECT ZONE
CENTRAL PUBLIC WORKS DEPARTMENT
ROORKEE- 247 667

प्रारंभिक प्राक्कलन
PRELIMINARY ESTIMATE

कार्य का नाम—

NAME OF WORK: C/o Faculty Housing(Phase-II,120 Flats) at IIT
Roorkee, Roorkee, Uttarakhand

अनुमानित लागत—

ESTIMATE COST: Rs.112.42 Crore(s)

भारत सरकार
केन्द्रीय लोक निर्माण विभाग

राज्य— उत्तराखण्ड

मण्डल — आई.आई.टी. रुड़की परियोजना मण्डल-1

शाखा — भवन एवं सड़क

प्राक्कलन संख्या : 05/आई.आई.टी.आर.पी.डी.-1/2017-18

कार्य का नाम — C/o Faculty Housing (Phase-II, 120 Flats) at IIT Roorkee, Roorkee, Uttarakhand

निधि:

मुख्य शीर्ष :
लघु शीर्ष : डिपॉजिट कार्य
विस्तृत शीर्ष :

यह प्रारम्भिक प्राक्कलन, जिसकी अनुमानित लागत मूल्य सूचकांक, आकस्मिक व्यय, लेबरसेस एवं जीएसटी सहित ₹ 112.42 करोड़ है, श्री अमन सदान, कार्यपालक अभियन्ता, आई.आई.टी. रुड़की परियोजना मण्डल-1, के०लो०नि०वि०, रुड़की द्वारा संरचित है।

रिपोर्ट

इतिहास :

यह प्रारम्भिक प्राक्कलन जिसकी अनुमानित लागत सहित ₹ 112.42 करोड़ है, सक्षम अधिकारी द्वारा प्रशासनिक अनुमोदन एवं व्यय स्वीकृति के लिए तैयार किया गया है। The Dean Infrastructure ने अपने पत्रांक E&W/IE/267 Dated 29/08/2017 द्वारा निम्न कार्य C/o Faculty Housing at IIT Roorkee, Roorkee, Uttarakhand के०लो०नि०वि० द्वारा कराया जाना प्रस्तावित किया है। यह कार्य 3 Phase में कराया जाना है जिसमें कि क्रमशः Phase - I में 60 Flats, Phase - II में 120 Flats एवं Phase - III में 120 Flats का निर्माण प्रस्तावित है। यह प्राक्कलन Phase - II, 120 Flats सम्बन्धी निर्माण कार्य हेतु तैयार किया गया है।

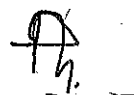
अभिकल्पन एवं विस्तार :

यह प्रारम्भिक प्राक्कलन ग्राहक विभाग के माध्यम से उनके द्वारा नियुक्त वास्तुकार के ई-मेल दिनांक 26.10.2017, 28.10.2017 एवं 30-10-2017 के साथ संलग्न नक्शे तथा अन्य विवरण पर आधारित कर बनाया गया है। यह मान लिया गया है कि वास्तुकार द्वारा संलग्न नक्शे तथा अन्य विवरण जो कि जी.पी.आर.ए. मानकों से भिन्न हैं, आई.आई.टी. रुड़की द्वारा अनुमोदन पश्चात् ही के.लो.नि.वि. को अग्रसारित किया गया है।

उपरोक्त भवन G+10/S+10 फ्लोर है जिसमें कि 120 फ्लैट्स का प्रावधान किया जाना है। यह प्राक्कलन आर.सी.सी. फ्रेड स्ट्रक्चर पद्धति पर बना है। भवन का कुल कुर्सी क्षेत्रफल 29,424.26 वर्ग मी. है तथा तल से तल की ऊँचाई 3.00 मीटर है। यह संरचना भूकम्प के जोन 4 के लिए परिकल्पित है। इस भवन में आन्तरिक जल व्यवस्था, सेनेटरी व्यवस्था, कापर वायरिंग के साथ विद्युत व्यवस्था का प्रावधान किया गया है। उपरोक्त भवन में बाँडूरी वॉल/गेट, गार्ड रूम तथा बाह्य विकास का प्रावधान किया गया है।

भवन का विस्तार निम्न प्रकार है—

| RCC Framed Structure | | | |
|----------------------|--------------|------------------|--------------|
| S.No | Floor No. | Plinth Area | Floor height |
| 1. | Ground Floor | 343.12 Sqm | 3.00 mtr |
| 2. | 1st Floor | 2662.54 Sqm | 3.00 mtr |
| 3. | 2nd Floor | 2685.26 Sqm | 3.00 mtr |
| 4. | 3rd Floor | 2662.54 Sqm | 3.00 mtr |
| 5. | 4th Floor | 2685.26 Sqm | 3.00 mtr |
| 6. | 5th Floor | 2662.54 Sqm | 3.00 mtr |
| 7. | 6th Floor | 2685.26 Sqm | 3.00 mtr |
| 8. | 7th Floor | 2662.54 Sqm | 3.00 mtr |
| 9. | 8th Floor | - 64 2685.26 Sqm | 3.00 mtr |



07 DEC 2017

BRIEF SPECIFICATION

**Name of Work: C/o Faculty Housing (Phase-II, 120 Flats) at IIT Roorkee,
Roorkee, Uttarakhand**

1. **Foundation** : Pile foundation.
2. **Superstructure** : RCC framed structure with brick wall in cement mortar 1:6 in filler wall.
3. **Door & Frame** : Powder coated Aluminum Doors and window frames with 35 mm thick non decorative flush door shutter and flush door shutter with aluminium sheet for toilets.
4. **Windows** : Powder coated Aluminum section/Aluminum windows and stainless steel wire gauge.
5. **Flooring** : Entrance Lobby, Living/Dining, Bed Rooms, Study room & Balcony fully glazed vitrified homogenous tile flooring.

Anti-skid ceramic tile flooring with spacer in toilets with ceramic glazed tiles upto ceiling.

Passage, Corridor & Staircase : Granite/Marble Stone
6. **Kitchen** : Modular Type
7. **Railing** : Stainless steel railing.
8. **Roofing** : Brick coba/Cool Coat treatment on terrace with SCI rain water pipes.
9. **Finishing** : External – Premium Acrylic Smooth exterior paint with Silicone additives/texture paint of required shade over cement based wall putty

Internal – Wall painting with acrylic emulsion paint, Synthetic enamel paint on all wood work and Aluminum work.
10. **Water Supply** : As per CPWD specifications
11. **Sanitary Installations** : As per CPWD specifications
12. **Drainage** : As per CPWD specifications
13. **Lifts** : Passenger lift 13 persons 884 kg 1.0m/sec speed

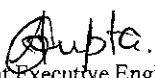


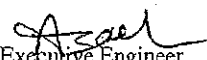
GENERAL ABSTRACT

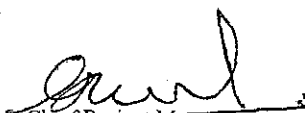
Name of work: C/o Faculty Housing (Phase-II, 120 Flats) at IIT Roorkee, Roorkee, Uttarakhand

| Description | Civil work | Electrical work | Development | Special Provisions | Total |
|-----------------------|----------------|-----------------|---------------|--------------------|------------------|
| 1.0 Tower Phase -I | 751,852,344.00 | 176570209.00 | 11855350.00 | 24000000.00 | 964,277,903.00 |
| 2.0 Gate Cabin | 804,906.00 | | | | 804,906.00 |
| Total: | 752,657,250.00 | 176,570,209.00 | 11,855,350.00 | 24,000,000.00 | 965,082,809.00 |
| add 3% contingenceis: | 22,579,718.00 | 5,297,106.00 | 355,661.00 | 720,000.00 | 28,952,484.00 |
| Add 1% Labour cess | 7,526,573.00 | 1,765,702.00 | 118,554.00 | 240,000.00 | 9,650,828.00 |
| Total: | 782,763,541.00 | 183,633,017.00 | 12,329,565.00 | 24,960,000.00 | 1,003,686,121.00 |
| GST@12% | 93,931,625.00 | 22,035,962.00 | 1,479,548.00 | 2,995,200.00 | 120,442,335.00 |
| Total: | 876,695,166.00 | 205,668,979.00 | 13,809,113.00 | 27,955,200.00 | 1,124,128,456.00 |

| | |
|-----|--|
| SAY | Rs. 1,124,200,000.00 Only |
| | Rupees One Hundred Twelve Crore Forty Two Lakh(s) Only |


Assistant Executive Engineer
IIT Roorkee Project Sub Division -2
Central P.W.D., Roorkee


Executive Engineer
IIT Roorkee Project Division -I
Central P.W.D., Roorkee


Chief Project Manager
IIT Roorkee Project Zone
Central P.W.D., Roorkee



07 DEC 2017

ABSTRACT OF COST

Name of work: C/o Faculty Housing (Phase-II, 120 Flats) at IIT Roorkee, Roorkee, Uttarakhand

| Total Covered Area | | | | Floor to Floor Height | | | |
|-------------------------------|---|--------------|---------|-----------------------|---------------------|----------------|---------------|
| Towers 1 and 2 | | | | | | | |
| Ground Floor | | | | 343.12 | Sqm | 3.00 | mtr |
| 1st Floor | | | | 2,662.54 | Sqm | 3.00 | mtr |
| 2nd Floor | | | | 2,685.26 | Sqm | 3.00 | mtr |
| 3rd Floor | | | | 2,662.54 | Sqm | 3.00 | mtr |
| 4th Floor | | | | 2,685.26 | Sqm | 3.00 | mtr |
| 5th Floor | | | | 2,662.54 | Sqm | 3.00 | mtr |
| 6th Floor | | | | 2,685.26 | Sqm | 3.00 | mtr |
| 7th Floor | | | | 2,662.54 | Sqm | 3.00 | mtr |
| 8th Floor | | | | 2,685.26 | Sqm | 3.00 | mtr |
| 9th Floor | | | | 2,662.54 | Sqm | 3.00 | mtr |
| 10th Floor | | | | 2,685.26 | Sqm | 3.00 | mtr |
| Total | | | | 27,082.12 | Sqm | | |
| Stilt Floor | | | | 2,342.14 | Sqm | 3.00 | mtr |
| Total Covered Area | | | | 29,424.26 | Sqm | | |
| Original Preliminary Estimate | | | | | | | |
| Sl. No. | Item of work | Qty | Unit | Rate | Per | Amount | PAR 2012 Item |
| CIVIL WORK | | | | | | | |
| SH-I | RCC Framed Structure | | | | | | |
| 1 | RCC construction (upto six storey) | | | | | | |
| 1.1 | Floor height 2.9 mt. | 27082.12 | sq.mtr. | 16000.00 | sq.mtr. | 433,313,920.00 | 1.1.2(A) |
| 2 | Extra for: | | | | | | 1.2 |
| 2.1 | Every additional storey over six storeys upto nine storeys | 8033.06 | sq.mtr. | 560.00 | sq.mtr. | 4,498,514.00 | 1.2.1 |
| 2.2 | Every additional storey over nine storeys upto twelve storeys | 5347.80 | sq.mtr. | 580.00 | sq.mtr. | 3,101,724.00 | 1.2.2 |
| 2.3 | Every 0.3 mt. additional height of floor above normal floor height of 2.9 mtr | | | 270.00 | sq.mtr | | 1.2.3 |
| | GF to 10th floor= 3.00-2.90m=0.100m, 0.100/0.3*270 | 27082.12 | sq.mtr. | 90.00 | sq.mtr. | 2,437,391.00 | |
| | | | | | | 443,351,549.00 | (A) |
| | Extra for: | | | | | | |
| 3 | Resisting Earth-quake forces | 29424.26 | sq.mtr. | 1140.00 | sq.mtr. | 33,543,656.00 | 1.2.8 |
| 4 | Pile foundation up to a depth of 15 mts(on GF area only) | 2685.26 | sqm | 11750.00 | sq.mtr. | 31,551,805.00 | 1.2.10 |
| 5 | Stilt Portion | | | | | | 1.8 |
| 5.1 | Stilt Portion of Multistorey RCC structure (up to ht of 3.35m) Applicable area only | 2342.14 | sqm | 9850.00 | sq.mtr. | 23,070,079.00 | 1.8.1 |
| 6 | Overhead tank without independent staging Fire+Domestic+Flushing | 100000.00 | ltr | 15.00 | ltr | 1,500,000.00 | 5.1 |
| 7 | Boundary Wall with heavy duty Iron Gate: | 308.00 | mtr | 10000.00 | mtr | 3,080,000.00 | LS |
| | | | | | | 536,097,089.00 | (B) |
| SH-II | Services: (for Civil) | | | | | | |
| 1 | Internal water supply & sanitary installations on 'A' | 443351549.00 | A.cost | 12.00% | % | 53,202,186.00 | 3.1 |
| 2 | External Service Connections | 443351549.00 | A.cost | 5.00% | % | 22,167,577.00 | 3.2 |
| 3 | Quality Assurance on 'B' | 536097089.00 | B.cost | 1.00% | % | 5,360,971.00 | 3.6.7 |
| | | | | | Total | 616,827,823.00 | |
| | | | | | Add Cost Index @122 | 135,024,521.00 | |
| | | | | | Total of CIVIL Work | 751,852,344.00 | |

Preliminary Estimate for Multi Storey Faculty Housing in IIT Roorkee Campus

Sub Head:- Gate Cabin 3 units, Floor Ht. 3 m, Total Area= 34 Sqm

| S.No. | Description | Qty. | Rate | Unit | Amount | Remarks |
|-------|--|-----------|------------|------------|------------------|-------------------------------|
| 1.1 | R.C.C frame structure upto 6 storeys upto 2.90 metre | 34.00 | 14500.00 | Sqm | 493000.00 | PAR 01.10.2012 1.1.2(B) |
| 1.2 | Extra for 0.10m height above normal height (3-2.9)*270/0.3 | 34.00 | 90 | Sqm | 3060.00 | 1.2.3 |
| | TOTAL | | | | 496060.00 | (A) |
| | | | | | 496060.00 | (I) |
| 2.0 | Service (Civil Work) | | | | | |
| 2.1 | Internal water supply and sanitary installation on "A" | 496060.00 | 12.00 | % | 59527.00 | 3.1 |
| 2.2 | External service connection on "A" | 496060.00 | 4.00 | % | 19842.00 | 3.2 |
| | Total (2.1+2.2) | | | | 79369.00 | (II) |
| 3.0 | Service (Electrical) | | | | | |
| 3.1 | Internal Electric Installation on "A" | 496060.00 | 12.50 | % | 62008.00 | 3.3 |
| 3.2 | Power Wiring & Power Plug on "A" | 496060.00 | 4.00 | % | 19842.00 | 3.6.1 |
| 3.3 | Telephone Conduits on "A" | 496060.00 | 0.50 | % | 2480.00 | 3.6.4 |
| | Total III | | | | 84330.00 | (III) |
| | Total (I+II+III) | | | | 659759.00 | (B) |
| 5.0 | Additional 22% cost over PAR 01.10.2012 Items | 659759.00 | 22 | % | 145146.98 | |
| | Grand Total | | | | 804906.00 | |
| | | | Say | Rs. | 804906 | |
| | | | | | | |



07 DEC 2017

Appendix 'H'
Item No. B&WC/37.13

Delegation of financial powers with respect to the expenditure in Estate & Works.

| Sl. No. | Description of Jobs | Approving Officer | Maximum delegated amount (Rs) |
|---------|--|---|-------------------------------|
| 1. | Approval, placing of work order and processing of Bills | Group 'A' Officers of AEE level | 10,000/- |
| 2. | Approval, placing of work order and processing of Bills | Executive Engineer | 50,000/- |
| 3. | (a) Approval, placing of work order and processing of Bills (b) Approval of Placing of Work Order for works more than Rs. 5,00,000/- and up to Rs. 50,00,000/- . Bills shall be processed by the Institute Engineer through Associate Dean Infrastructure. | Institute Engineer Dean Infrastructure | 5,00,000/- 50,00,000/- |
| 4. | Placing of work order of more than Rs. 50,00,000/- and upto Rs. 2,00,00,000.00 by the Dean Infrastructure with prior permission/ Approval from Director. Bills shall be processed by the Institute Engineer through Associate Dean Infrastructure and Dean Infrastructure. | Director | 2,00,00,000.00 |
| 5. | All works of value more than Rs. 2,00,00,000.00. Bills shall be processed by the Institute Engineer through Associate Dean Infrastructure and Dean Infrastructure. | Building & Works Committee (B&WC), Finance Committee (FC) and Board of Governors (BOG) | - |
| 6. | Variation on the contract cost | 1. Upto 20% maximum by Dean Infrastructure The Director can allow variation beyond 20% with ceiling of 50%. However, in exceptional cases, the Director can allow upto 100%, if due justification is provided. | - |
| 7. | Extra Items | Dean Infrastructure on the recommendations of the Institute Engineer | - |
| 8. | Time Extension | 1. For works upto Rs. 2.00 crore, Dean Infrastructure 2. For works more than Rs. 2.00 crore, Director | - |