

# Agenda Notes

**2015: 1<sup>st</sup> Meeting**

*of the*

## **Building & Works Committee**

Venue of the Meeting

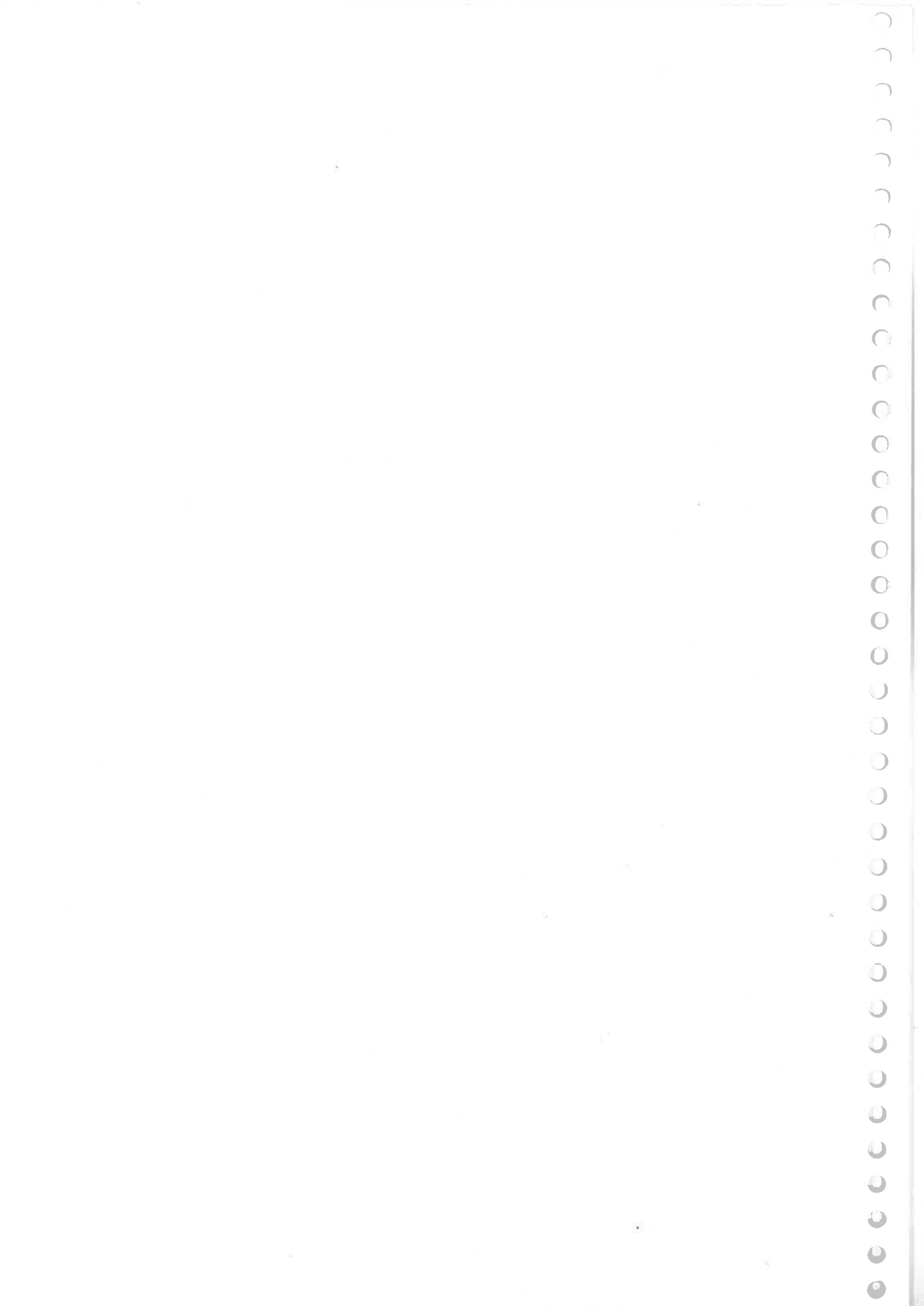
Conference Hall, PDPM IIITDM, Jabalpur

Date and Time of the Meeting

August 01, 2015 at 10:00 Hrs.



PDPM  
Indian Institute of Information Technology, Design  
and Manufacturing Jabalpur



Agenda for the 2015/1<sup>st</sup> Meeting ( 21<sup>st</sup> Meeting) of Buildings & Works Committee

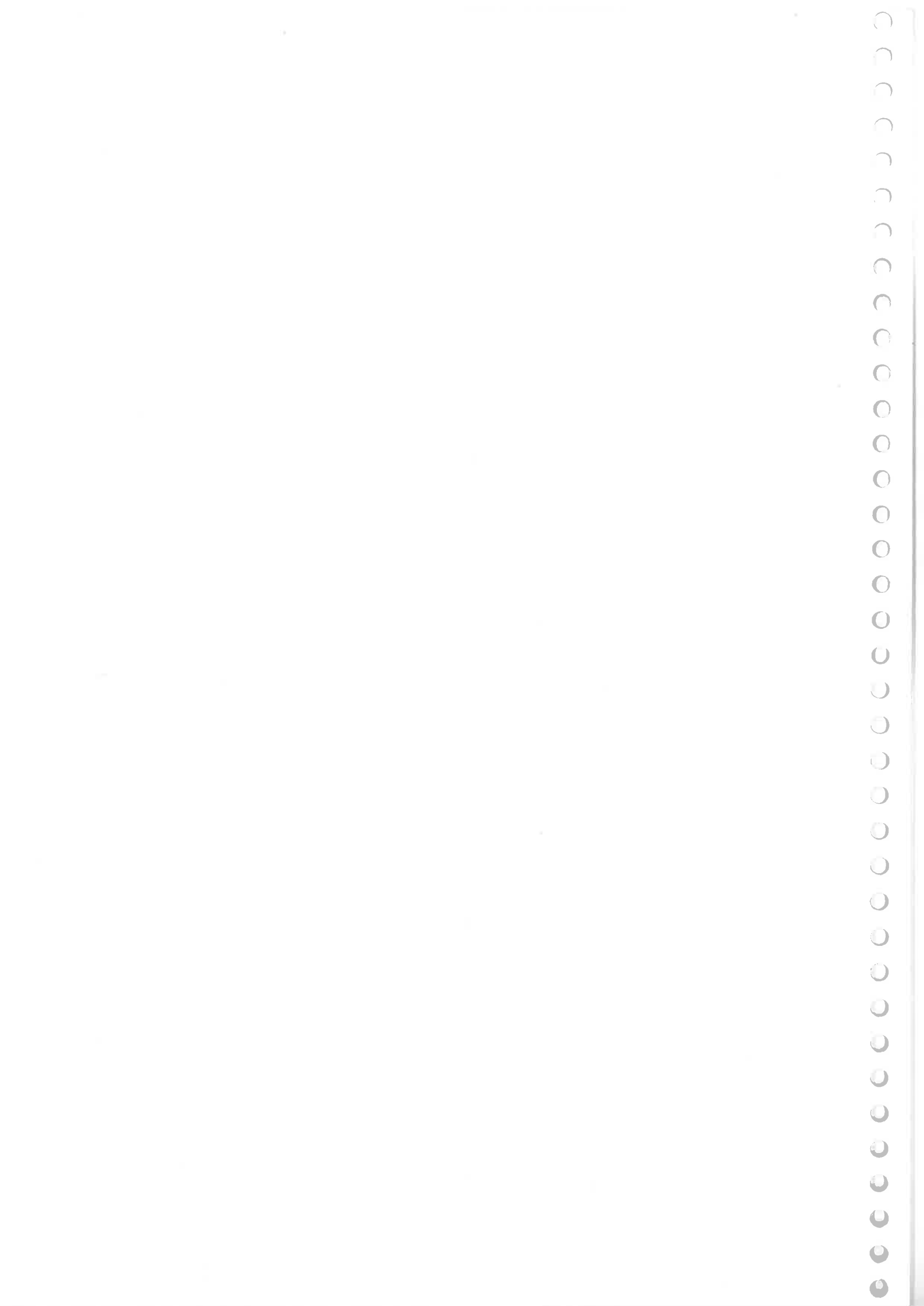
to be held on Saturday, August 01, 2015 at 10:00 Hrs.

Venue: Conference Hall, PDPM IIITDM, Jabalpur

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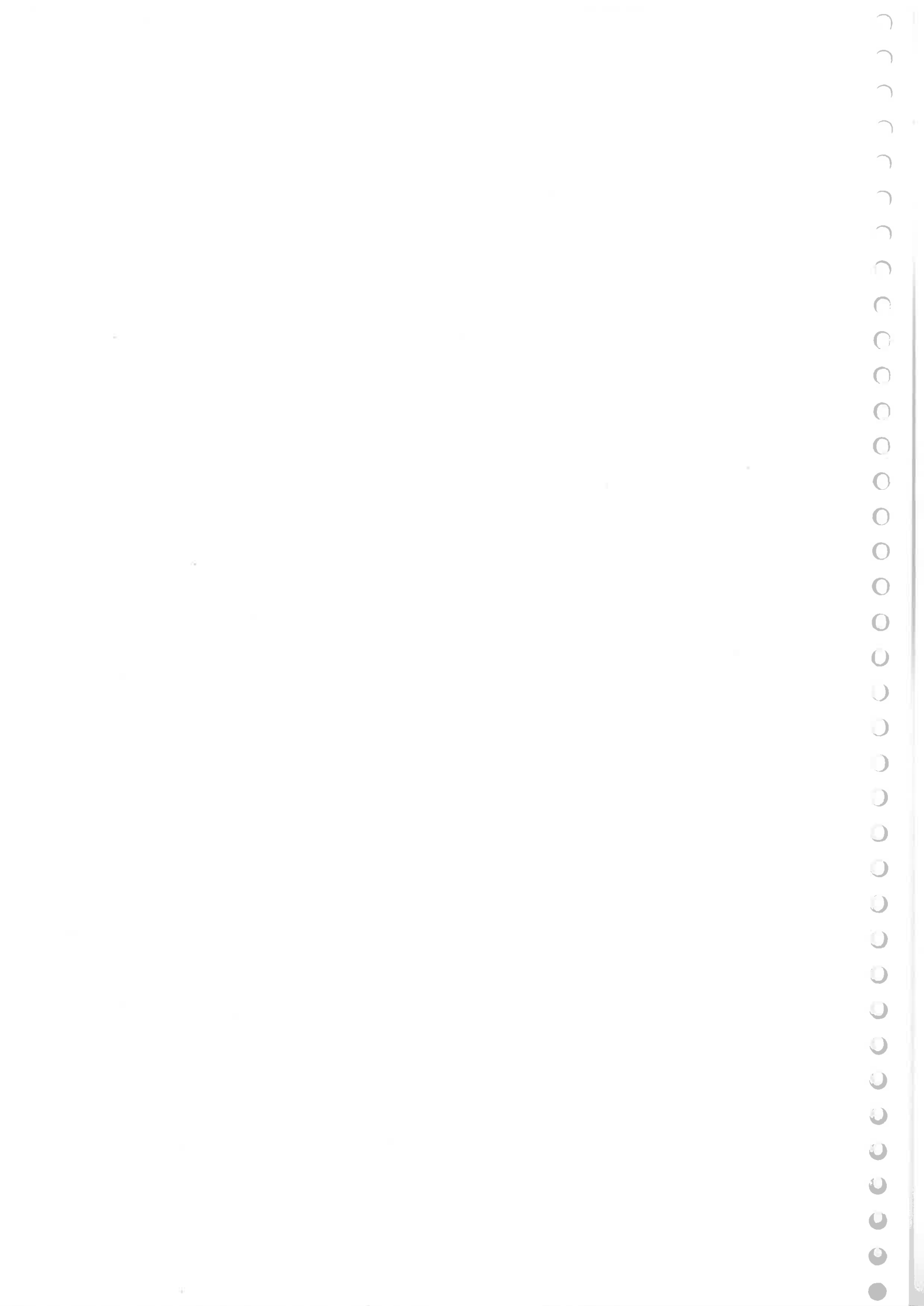
Item No.	Agenda Item	Page No.
B&WC/2015: 1.01	Opening remarks by the Chairman and welcome to new members.	1
B&WC/2015: 1.02	Confirmation of Minutes of 2014/1 <sup>st</sup> meeting of the Building & Works Committee (20 <sup>th</sup> meeting) held on <del>January 06, 2014.</del> <i>Aug 1 2015</i>	2 - 6
B&WC/2015: 1.03	To discuss and decide the mode of installation for 500KW Solar Power Plant at PDPM-IIITDM, Jabalpur. <i>estimates received from the CPWD for</i>	7 - 30
B&WC/2015: 1.04	To discuss the works of exterior and interior painting of Hall of Residence -1 and Hall of Residence - 3 at PDPM IIITDM, Jabalpur. <i>subsidies</i>	31 - 33
B&WC/2015: 1.05	To discuss the status of running construction projects at the campus and priorities the running and new projects.	34 - 37
B&WC/2015: 1.06	To discuss the Estimates for different Horticulture Development works received from the CPWD. <i>estimates received from the CPWD for</i>	38 - 66
B&WC/2015: 1.07	To discuss the issue related with annual maintenance of constructed buildings at the campus. <i>subsidies</i>	67
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*31/5/15*

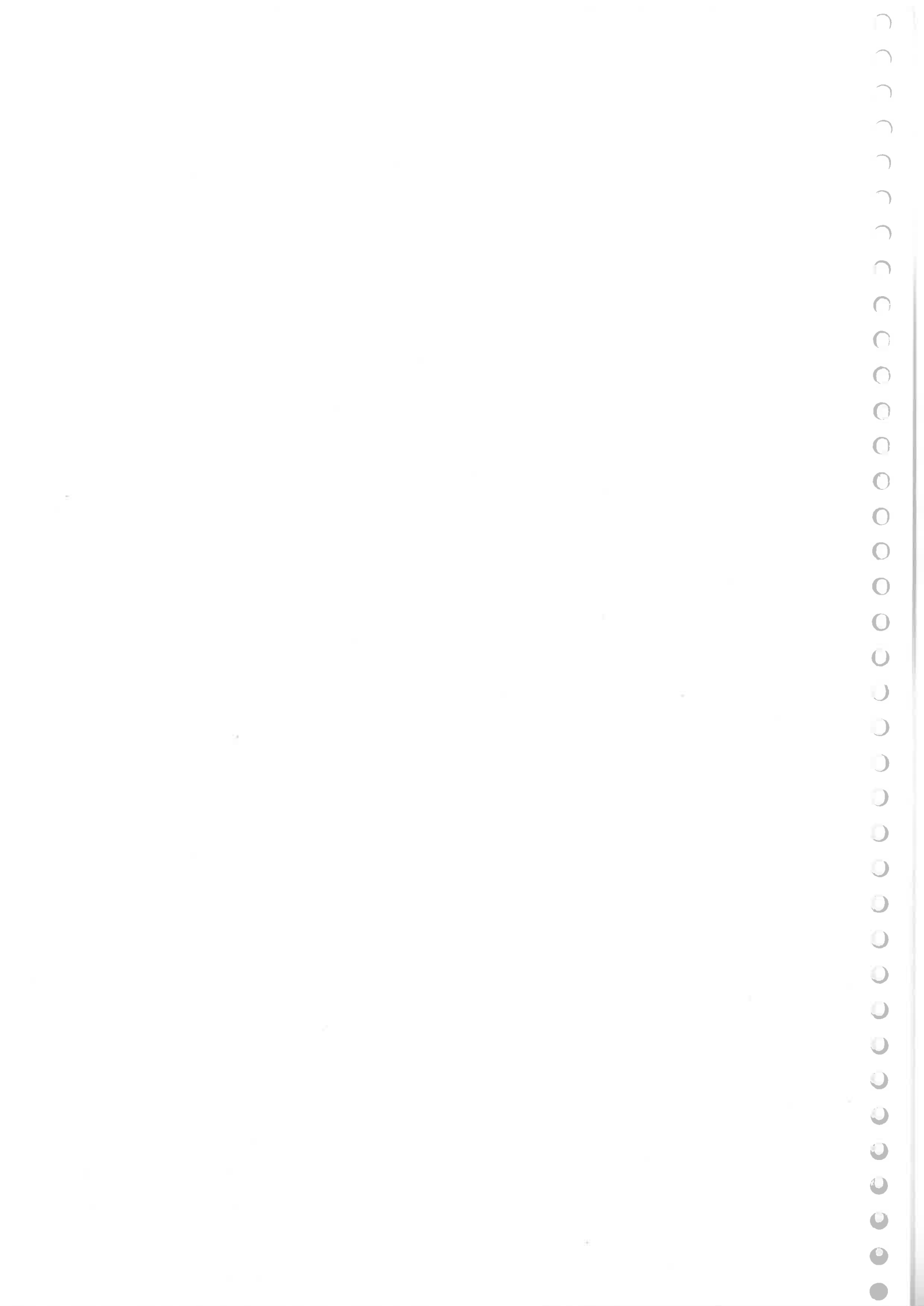


PDPM  
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,  
DESIGN & MANUFACTURING JABALPUR

B&WC/2015: 1.09	To consider the Preliminary cum Detailed Estimate of SITC 04 Nos. STPs of 150 KLD capacity.	69 - 76
B&WC/2015: 1.10	To discuss on the progress of the furniture procurement committees at the Institute.	77
B&WC/2015: 1.11	To consider the reporting items.	78 - 80
B&WC/2015: 1.12	Any other item with the permission of the chair.	81



<b>B&amp;WC/2015: 1.01</b>	<b>Opening Remarks by the Chairman and welcome to new members</b>  Opening remarks & welcome note for new members by the Chairman will be presented in the meeting itself.
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<b>B&amp;WC/2015: 1.02</b>	<p><b>Confirmation of the Minutes of 2014/ 1st Meeting of the B&amp;WC held on January 06, 2014.</b></p> <p>Minutes of the 20th meeting of B&amp;WC were circulated among the members the same are placed in <b>Annexure B&amp;WC/2015/1/A-1</b> (Page P- 03 to P- 06)</p> <p>No comments have been received from the members.</p> <p><b>The Building &amp; Works Committee is requested to confirm the same.</b></p>
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**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 1**



PANDIT DWARKA PRASAD MISHRA  
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,  
DESIGN & MANUFACTURING JABALPUR

Minutes of 2014/1<sup>st</sup> (20<sup>th</sup> B&WC) Meeting of Building & Works Committee of PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur held on January 06, 2014 at 11.30 Hours in Conference Hall of the Institute.

**Members / Invitees Present:**

- |     |   |   |
|-----|---|---|
| 1.  | Prof. Aparajita Ojha<br>Director, PDPM-IIITDM Jabalpur                                  | Chairperson   |
| 2.  | Prof. G. K. Sharma<br>Professor, IIT Gandhinagar  | Member  |
| 3.  | Prof. P. Tandon<br>Professor & Dean (P&D)<br>PDPM-IIITDM Jabalpur                       | Member  |
| 4.  | Er. P.R. Patil<br>SE, BCC, CPWD (CZ) Bhopal   | Member  |
| 5.  | Er. Dhruv Kumar Singh,<br>EE, MPPKVV Co. Ltd.   | (Nominee of Er. A. K. Pandey<br>SE, MPPKVV Co. Ltd.) Member |
| 6.  | Prof. P. N. Kondekar<br>Member, Campus Advisory Committee<br>PDPM IIITDM Jabalpur       | Special Invitee   |
| 7.  | Prof. Prabin Kumar Padhy<br>Member, Campus Advisory Committee<br>PDPM IIITDM Jabalpur   | Special Invitee   |
| 8.  | Prof. Sraban Kumar Mohanty<br>Member, Campus Advisory Committee<br>PDPM IIITDM Jabalpur | Special Invitee   |
| 9.  | Mr. Shekhar Chatterjee<br>Faculty-In-Charge Horticulture<br>PDPM-IIITDM Jabalpur        | Special Invitee   |
| 10. | Er. V. K. Dubey<br>Executive Engineer (Civil)<br>PDPM-IIITDM Jabalpur                   | Institute Engineer  |
| 11. | Shri R.P. Dwivedi<br>Registrar and Estate Officer                                       | Secretary   |

*Amber Singh*

**B&WC/2014:01:01**

**Opening Remarks by the Chairperson, B&WC**

Chairperson and the Director of the Institute Prof. Aparajita Ojha welcomed all the members. She introduced the nominees of the members and special invitees with the other members of the Committee. Chairperson requested the Secretary give a presentation on the progress of the ongoing construction works. The Chairperson also expressed her concern on the slow progress of some of the projects. The CPWD officials assured the members to expedite some projects by the month of March, 2014. It was informed by the CPWD members that NR II, NR III, Visitor hostel and Basketball court complex are likely to be completed by March, 2014.

**B&WC/2014:01:02**

**Confirmation of Minutes of 2013/2<sup>nd</sup> (19<sup>th</sup> B&WC / 2013) meeting of the Building & Works Committee held on 28 February, 2013.**

Minutes of the 2013/2<sup>nd</sup> (19<sup>th</sup> B&WC / 2013) meeting of B&WC held on February 28, 2013 were confirmed.

**B&WC/2014:01:03**

**To consider the Preliminary Estimate (P.E.) of Rs. 8,85,28,600.00 (Rs. eight crore eighty five lac twenty eight thousand & six hundred only) for the work of Ideation Studio and 04 No rooms for PG work space adjacent to Lecture Hall & Tutorial Complex**

The B&WC discussed at length the Preliminary Estimate for the above work as received from the Executive Engineer (Civil), JPD, CPWD, Jabalpur. On the query raised by some of the members, it was clarified by the Superintending Engineer (Civil), CPWD, Bhopal that the proposed structure shall be adjacent to the existing Lecture Hall & Tutorial Complex and shall be treated as 2<sup>nd</sup> phase construction for LHTC. It was also clarified by the Superintending Engineer (Civil), CPWD that per sq. mt. cost of the purposed building is on higher side because of the reasons like higher basic rates in the new DPAR, extra height of the structures, and provisions of features like air conditioning, firefighting system and different type of roofing. It was further clarified by the Superintending Engineer (Civil), CPWD, on a query raised by the Chairperson that some of the RCC work of newly proposed structure has already been done along with the work of Lecture Hall & Tutorial Complex to maintain continuity. After deliberation on proposed usage of the new structure, the proposal was accepted unanimously.

**The Committee recommended the Preliminary Estimate for the work of C/o. Ideation Studio and 04 No rooms for PG work space adjacent to Lecture Hall & Tutorial Complex, amounting to Rs. 8,85,28,600.00 (Rs. eight crore eighty five lac twenty eight thousand & six hundred only) including 1% for labour cess, 3% for contingencies to the Finance Committee for necessary consideration and onward recommendation to the BOG for accord of Administrative Approval and Expenditure Sanction.**

*Amal Singh*

**B&WC/2014:01:04**

**To consider the Preliminary Estimate for Rs. 1,36,51,087/- (Rs one crore thirty six lacs fifty one thousand eighty seven only) for the work of Construction of Director's Bungalow at PDPM-IIITDM, Jabalpur**

The Preliminary Estimate (PE) as received from M/s. Kanvinde Rai & Chowdhury and confirmed by the Executive Engineer (Civil), JPD, CPWD, Jabalpur was discussed at length. The chairperson asked the CPWD officials to recheck the plinth areas of Ground Floor and the first floor. It was also suggested by some of the members to mark on the drawings the boundary sizes around the proposed building. After deliberation on the usage of different spaces provided in the building, the proposal was accepted unanimously.

The Committee recommended the Preliminary Estimate for the work of C/o. Director's Bungalow at PDPM-IIITDM, Jabalpur amounting to Rs. 1,36,51,087/- (Rs one crore thirty six lacs fifty one thousand eighty seven only) including 1% for labour cess, 4% for service tax, 3% for contingencies and 4.5% (+ Ser. Tax) for Architect fees, to the Finance Committee for necessary consideration and onward recommendation to the BOG for accord of Administrative Approval and Expenditure Sanction.

**B&WC/2011:01:05**

**Reporting of items- Administrative and Financial Approval given by Director for Construction works taken up at the Institute level.**

The committee discussed at length and was satisfied with works executed / under execution/likely to execute at Institute level after the last B&WC meeting was held. Accord of Administrative Approval & Expenditure Sanction by the Director / Dean (Planning & Development) of the Institute on various projects was noted by the members.

**B&WC/2011:01:06**

**Any Other items with the permission of chair –**

**1. The Renumbering of B&WC Meetings.**

The proposal of new numbering system from B&WC meeting was considered by the committee. It was suggested that in the new system the numbering of B&WC meeting may be written continuously along with a suffix of the year of the meeting so that the year of meeting is also apparent along with the label of the meeting number.

**2. Proposal for Main Gate at the Institute campus.**

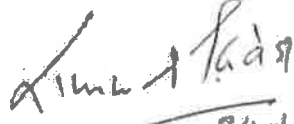
With due permission of the Chair, concept design and detailed estimates for the above work and different options of drawings as received from the consultant M/s Kanvinde Rai and Chowdhury were shown to the members. It was decided to discuss the matter in a Campus

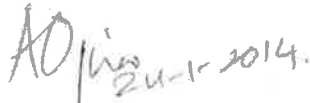
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Advisory Committee meeting of the Institute, as the detailed estimates were conveyed to the Institute authorities only one day in advance.

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

Submitted for Approval please

  
24-1-2014  
(R. P. Dwivedi)  
Registrar & Secretary

  
24-1-2014  
(Prof. Aparajita Ojha)  
Chairperson



<b>B&amp;WC/2015: 1.03</b>	<p><b>To discuss and decide the mode for installation for 500 KW Solar Power Plant at PDPM-IIITDM, Jabalpur.</b></p> <p>In view to generate and utilize solar energy in the campus, the Expression of Interest (EOI) from expert agencies were called earlier by the Institute. Many agencies of this field submitted expressions of interest. Some of the agencies offered to install the Solar Power Plant in PPP mode and others in EPC mode.</p> <p><b>The B&amp;WC committee is requested to discuss and decide the mode for procurement of Solar Power Plant and its type (Roof top or ground floor in campus) and to suggest the source of funds for such procurement.</b></p> <p>The copies of same proposal cum estimate received earlier are annexed in <b>Annexure B&amp;WC/2015/1/A-2 (Page P- 08 to P- 30).</b></p>
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**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 2**



To  
Mr. R. P. Dwivedi  
Registrar  
Indian Institute of Information Technology,  
Design Manufacturing Technology  
Dumna Airport Road, Post – Khamaria  
Jabalpur – 482005

Sub: Expression of Interest for implementation of Solar power Plant of 500 kWp (integrated or / rooftop) project at PDPM IIITDM Jabalpur

Dear Sir,

We thank you for the opportunity to submit our expression of interest for implementation of Solar power Plant of 500 kWp (integrated or / rooftop ) project at PDPM IIITDM Jabalpur.

To give you a brief, ReNew power is one of the leading company in renewable energy space set up in early 2011 and is backed by Goldman Sachs, Asian Development Bank, Global Environment Fund, who has infused close to 390 million USD as equity investment into the company for the development of renewable energy projects across India and other emerging markets. Focused on renewable energy development in India, ReNew Power is aggressively pursuing capacity additions with around 460 MW of operational renewable energy projects and another 300 MW likely to be commissioned by the end of financial year 2014-15. Specifically with respect to Solar, we are developing various rooftop projects across India both as self-development as well as pure EPC deals for third parties.

The team at ReNew also boasts of people with rich experience in EPC, procurement, design (both DC and AC sides), handling regulatory issues and statutory approvals. With this experience and our skills and capabilities in developing and operating Solar & Wind projects, we now offer complete turnkey solar PV power plant as an EPC contractor.

In the reference of the captioned subject matter, we hereby submit our corporate profile along with solar services offered by us enclosed for your reference. We assure you the best services at all times and solicit appropriate time for explaining our proposal for implementation of solar rooftop project.

Yours faithfully,

For ReNew Solar Energy Private Limited

  
Shashank Adlakha

**ReNew Solar Energy Private Limited**

CIN - U40106DL2013PTC250153

Corporate Office: DLF Corporate Park, 6th Floor, Tower 4A, Mehrauli Gurgaon Road, Gurgaon – 122 002  
Regd. Office: 138, Ansal Chambers II, Bikaji Cama Place, Delhi-110 066, Phone – 0124-4896 670 Fax – 0124-4896 672  
Website – [www.renewpower.in](http://www.renewpower.in), Email Id - [info@renewpower.in](mailto:info@renewpower.in)

Techno-Commercial Offer for 500 KWp solar PV project at Jabalpur

Sr. No.	Particulars	Description	Remarks
1	Location of Solar Plant	IIITDM Campus, Jabalpur	
2	Plant Type	Roof/Ground Mounted Solar PV	Grid Connected (LT)
3	Installable Capacity	500 KWp	DC Capacity
4	No. of Modules	~2000 Nos.	250 Wp each or higher
5	Inverters	Grid Connected	Central or string inverters (depending upon whether it a ground mount or rooftop installation)
6	Mounting Arrangement	Fixed Type	Tilt angle as per latitude
7	Estimated Annual Energy Generation	Approx 800 MWh p.a.	Based on Meteonorm 7.1
8	Construction Timeline	16 – 20 Weeks	From Award of Contract to ReNew
9	Solar Module Frame Material	Anodized Aluminium Frame	
10	Module Type	Polycrystalline Silicon	
11	Junction Box	IP65	TUV Certified IEC 61215 and IEC 61730 Edition 1 & 2 Safety Requirements
12	Equipment		All materials used will have proven history of reliable and stable operation in external outdoor applications. Project will be designed to operate and perform in relative humidity up to 100% with temperatures between -10 Deg C and +85 Deg C and withstand wind speeds up to 180 km/hr from back side of the panel. The modules will comply with stringent quality norms and quality as per the requirements of IEC 61215

**Tentative / Estimated Quote – INR 400 Lakh + Applicable Taxes**

- This will be subject to site visit and detailed engineering



Reference No.:PROP01/EPC/500kWp/IIITDM/06.09.2014  
Date: 6th Sep 2014

To,  
Pt. Dwarka Prasad Mishra  
Indian Institute of Information Technology  
Design & Manufacturing,  
Jabalpur-Madhya Pradesh.

Kind Attn: Mr. R.P. Dwivedi

Sub:- Preliminary proposal for supply & installation of 500 KW Solar Power Plant at IIITDM campus Jabalpur in the state of Madhya Pradesh.

Dear Sir,

This is with reference to the EOI number IIITDM/B&W/12/08/22 dated 26.08.14 for 500 kW Solar Power Plant envisaged for development at your esteemed institution.

At the outset, we wish to thank you for giving us this opportunity to present our services before you. Alongside, I also wish to let you know more our company. Notably, Gensol is arguably the largest consultant for Solar Power Projects and enjoys an advisory portfolio of **1000+ MW** of Solar Projects, wherein we have been consultants to **Owners for 350 MW** of project (IL&FS, Essel Infra, Malpani Group, NALCO etc), **Lenders Engineer for 450+ MW** of projects (Central Bank of India, State Bank, PFC, L&T Infra Finance etc) and **Detailed Engineering for EPC for 100+ MW** of projects (Today Energy, L&T ECC, ABB etc). We are empanelled with MNRE as EPC contractor for rooftop solar power projects, and have a cumulative capacity of approximately 1 MW across India.

In this direction, we have enclosed the following for your kind perusal:

1. Preliminary Offer
2. Concept Design based on Preliminary Engineering
3. Gensol's Credentials for Detailed Engineering, Owners & Lenders Engineer
4. List of Drawings that we make for Rooftop Projects

Please feel free to contact us for any further inputs and we shall be happy to assist.

We assure you of our best attention and services at all times.

We look forward to our valuable association and conjoint growth with your organization.

For Gensol Consultants Pvt. Ltd.

*Ahmed Singh Jaggi*  
Ahmed Singh Jaggi  
Director



*Dean (P&D) /*  
*Dean (S)*

*AD/vis*  
*19-9-2014*

*[Signature]*  
*23-09-2014*

ECC

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*18-9-14*  
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*30/14*

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**V S ENVIORTECH PVT. LTD.**  
 Regd. Off. : 101, Tribhuvan Complex, Ishwar Nagar,  
 10th Milestone, Delhi Mathura Road, New Delhi-110065  
 E-Mail : info@vsenviortech.com  
 Web : www.vsenviortech.com

To ,

September 4, 2014

Mr. R. P. Dwivedi

The Registrar  
 Pt. Dwarka Prasad Mishra  
 Indian Institute of Information Technology,  
 Design & Manufacturing, Jubalpur,

Sub:- Supply and Installation of Solar Power Plant at PDPM IITDM Jubalpur.

Dear Sir,

We are pleased to submit our offer for your subject project as per details given below:

**1. Scope of Work**

Turnkey EPC services comprising of design and engineering, supply of all materials, installation, testing and commissioning of 500KW Solar Power Plant.

S. No.	Description	Amount
1	Solar PV Module 500KW (250Wp) IEC Approved	4,75,00,000.00 (Four Crore Seventy Five Lakh Only)
2	Grid Tied Solar Inverter	
2	Module Mounting Structure, Cables, Earthing, Data Logger & etc.	4,75,00,000.00 (Four Crore Seventy Five Lakh Only)
Total Amount		

**2. Price**

The total project cost is INR Rs. 4,75,00,000.00 (Four Crore Seventy Five Lakh Only.) All taxes and duties will be Extra.

**3. Operation & Maintenance**

A Service Level Agreement will be formed as per the wish of the client.

**4. Payment Terms**

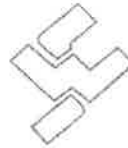
- i. 20 % Advance.
- ii. 30 % after project approval.
- iii. 30 % on material reach at site.
- iv. 10 % after site erection.
- v. 10 % at hand over the plant.





Sterling and Wilson Limited

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## 500kW Solar PV System Proposal

For

**Pandit Dwarka Prasad Mishra Indian Institute of Information Technology,**

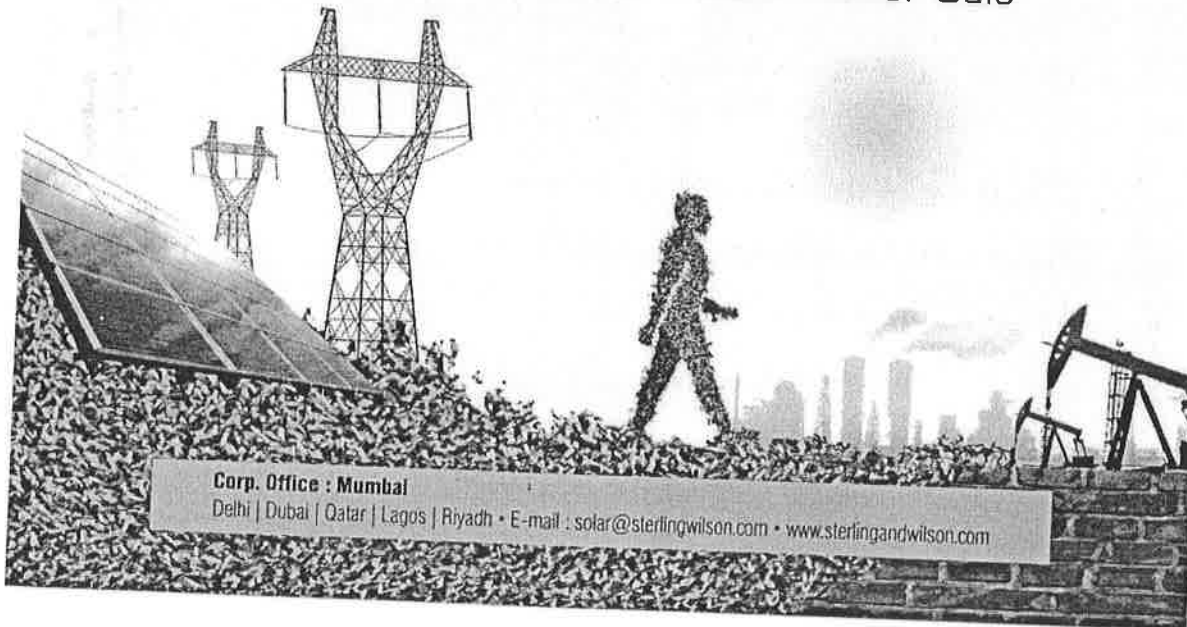
Design & Manufacturing

Dumna Airport Road, P.O.: Khamaria,

Jabalpur - 482 005,

Madhya Pradesh, India

Solar CSP | Solar Parks | Off-Grid Solution  
Turnkey EPC Solutions | Solar Power Sale



Corp. Office : Mumbai

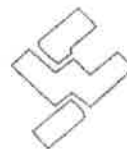
Delhi | Dubai | Qatar | Lagos | Riyadh • E-mail : [solar@sterlingwilson.com](mailto:solar@sterlingwilson.com) • [www.sterlingandwilson.com](http://www.sterlingandwilson.com)

## STERLING AND WILSON LTD

Universal Majestic, 9th Floor, Gautam Nagar, P. L. Lokhande Marg,  
Ghatkopar Mankhurd Link Road, Chembur (West), Mumbai - 400 043

# Sterling and Wilson Limited

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Ref: IIITDM/MP/EO-420

Mr. R.P. Dwivedi

Registrar

**Pandit Dwarka Prasad Mishra Indian Institute of Information Technology**

Mahgawa village, Near Dumna Airport

Jabalpur, Madhya Pradesh

Date: 18<sup>th</sup> Sep, 2014

**Sub: Commercial Offer for 500kW Solar PV Rooftop project on turnkey basis at Jabalpur, Madhya Pradesh with Multi-Crystalline modules**

Dear Sir

We thank you for the opportunity to offer our turnkey EPC services for 500kW rooftop project in **Jabalpur, Madhya Pradesh** with Multi-Crystalline modules. We are pleased to quote our lowest price for the following as below:

Description	Amount in Rs
Design, Engineering, Supply, Transportation, Installation and Commissioning of 500kWp Solar PV system on RCC roof	Rs 4,75,00,000/-

**Total Project Cost: Rupees Four Crore Seventy Five Lakhs only**

\*Foreign exchange rates considered 1 USD=60.5 INR; 1 Euro=83 INR, change will affect the imported items beyond 2% variation

Terms

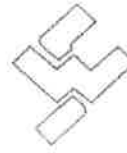
: The prices quoted are inclusive of all taxes and duties.

*This offer is strictly based on terms and conditions given in Annexure- 1*

We trust our offer takes care of your requirements of the projects. For any further clarification please feel free to call us.

# Sterling and Wilson Limited

Electrical Contracting | HVAC | DG Sets | Control Panels | T&D | Plumbing & Fire Fighting



Thanking you and assuring you of our best services at all times.

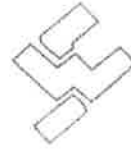
Yours truly  
For Sterling and Wilson Ltd

(Navneet Gupta)

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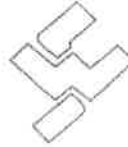
## Annexure 1

### TERMS AND CONDITIONS FOR 500kW SOLAR PV PROJECT IN JABALPUR

Term	Contract
1. Parties	<ul style="list-style-type: none"> <li>Developer: M/s. PDPM IIIT</li> <li>Contractor: M/s. Sterling and Wilson Limited</li> </ul>
2. Location	<ul style="list-style-type: none"> <li>Mahgawa village, Near Dumna Airport Jabalpur, Madhya Pradesh</li> </ul>
3. Project Scope	<ul style="list-style-type: none"> <li>Design, Engineering, Transportation, Supply, Erection, Installation, Testing and Commissioning of 500kWp solar project using Multi-Crystalline Module with String Inverters</li> </ul>
4. Customer Scope	<ul style="list-style-type: none"> <li>Electrical Spare Feeder for connecting Solar power</li> <li>Water Proof Control Room for Inverter</li> <li>Water and Electricity to be provided free of cost</li> <li>Covered place for store cum office</li> </ul>
5. Liasoning Scope	<ul style="list-style-type: none"> <li>CEIG approval to be in SWL Scope</li> </ul>
6. Delivery	<ul style="list-style-type: none"> <li>All components shall be delivered at site</li> <li>Imported components shall be cleared at customs, transported, delivered at site by the contractor</li> </ul>
7. Testing and Commissioning Process	<ul style="list-style-type: none"> <li>Contractor to develop a testing, commissioning and acceptance plan for approval by the Developer</li> </ul>
8. Operation and Maintenance	<ul style="list-style-type: none"> <li>O &amp; M charges shall be Rs. 5,00,000/-for the first year, exclusive of taxes and duties.</li> <li>O &amp; M takes effect from the date of commercial operation</li> </ul>
9. Payment Terms	<p><b>Offshore Supply:</b></p> <ul style="list-style-type: none"> <li>30% Advance against LOA /Work Order</li> <li>70% on 30 days from Bill of Laden, (to offer LC as payment security)</li> </ul> <p><b>Onshore Supply:</b></p> <ul style="list-style-type: none"> <li>30% Advance against LOA and PO</li> <li>10% against Engineering Drawings</li> <li>50% against Delivery of Material</li> <li>5% against Installation</li> <li>5% on commissioning</li> </ul>
10. Purchase Order	<p>The Purchase order will be split into three parts,</p> <ul style="list-style-type: none"> <li>Imported components to be sold on High Sea Sales basis</li> <li>Local Supply</li> </ul>

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	<ul style="list-style-type: none"> <li>• Services</li> </ul>
<b>11. Taxes</b>	<ul style="list-style-type: none"> <li>• The Project cost by Contractor shall be inclusive of all applicable Taxes and Duties levied in Overseas or in India</li> <li>• Any new taxes applied after LoA award, will be to Developer's account</li> <li>• LBT/Octroi/VAT (if levied) on the project will be extra</li> </ul>
<b>12. Price Basis</b>	<ul style="list-style-type: none"> <li>• C- Form to be provided</li> <li>• Relevant documents for CD/ED exemption to be provided</li> </ul>
<b>13. Warranties</b>	<ul style="list-style-type: none"> <li>• Modules come with manufacturer warranty of 25 years</li> <li>• Inverters come with manufacturer warranty of 5 Years.</li> <li>• All equipment supplied by us shall carry original equipment warranty terms. Our Warranties are not valid for any mishandling, abused wear and tear, sabotage/force majeure conditions.</li> </ul>
<b>14. Offer Validity</b>	<ul style="list-style-type: none"> <li>• Our offer will remain valid for your acceptance up to 30 days, and thereafter subject to our confirmation</li> </ul>
<b>15. Timeline</b>	<ul style="list-style-type: none"> <li>• The System will be installed within a 4-5 months' timeframe, from the time of Unhindered Site Access and Techno-Commercially clear order.</li> <li>• Subject to timely payment as per mutually agreed payment terms.</li> </ul>

## List of Makes

S. No	Description	Make proposed by SWL
1	DC Cables	KEI/Finolex/Leoni/Saichem
2	AC Cables	KEI/RPG/Finolex/Polycab
3	Inverters	Danfoss/Refusol / DELTA /AEG
4	Crystalline Modules	Jinko/ Canadian/ Renesola/ Alpex

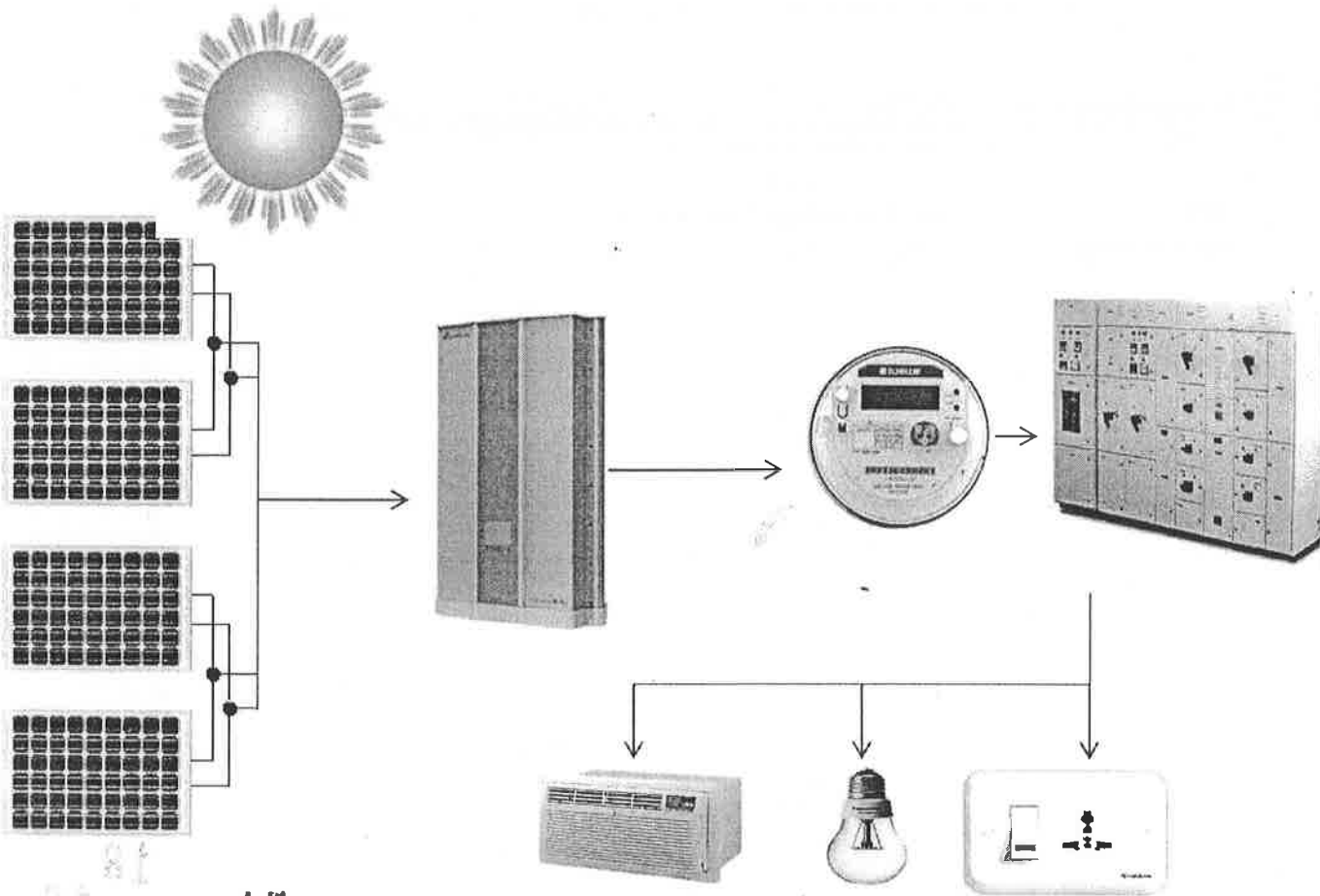
(5)



#### 4. Site details and System Description

**Site location: Dumna Airport Road, Khamaria, Jabalpur, Madhya Pradesh, India**

The proposed project of 500kWp solar power pack will be installed on the RCC roof. The power generated from the solar PV will be used for captive consumption. The energy generated during the day from Solar will be connected to the load for supplementing the Grid. The electricity generated from the solar panel will be fed to the Inverter, which will feed the load further.



**STERLING AND WILSON**
*Associates of Shapoorji Pullonji & Co. Ltd.*

Technical Offer for 500 kW Solar PV Project

Date: 18/09/2014

### 5. System Specifications

We propose to use 300W modules, 1660 in number and fourteen 30kW String Inverters.  
 (This is based on generic parameters and is subject to change during detailed engineering.)

#### 5.1 Typical Bill of Material (BoM)

Sr. No.	Particulars	Make
1	Solar Modules (300Wp)	yingli/ Canadian/ Equivalent
2	GI Module Mounting Structure	Local
3	Inverter	Danfoss//Refusol / DELTA / AEG / Voltwerk/Socomec
4	Cables	KEI/RPG/CCI/ Finolex
4	ACDB unit with Energy meter	SWL
5	25 X 3mm GI Flat	Standard Make
6	Earthing Kit	Standard Make
7	10mm GI Wire	Standard Make
8	MCCB	Havells/SIEMENS/Equivalent
9	installation Accessories	Standard Make

#### 5.1.1 Technical Standards followed:

System Components	Standards Followed
PV Modules	IEC 61215/ IEC 61730
Power Conditioners	IEC 61683/ IEC 60068-2
Charge Controller/ MPPT Units	IEC 62093/ IEC 60068-2
Cables	IEC 60189/ IS 694/ IS 1554
Switch/ Circuit Breakers/ Connectors	IS/ IEC 60947 part I, II, III
Junction Box/ Enclosure	IP 65 (for outdoor)/ IP 21 (for Indoor); IEC 62208
SPV System Design	IEC 62124/ IEEE 929
Installation	IEC 60364 – 7 -712

**STERLING AND WILSON**



Associates of Shapoorji Pallonji & Co. Ltd.

Technical Offer for 500 kW Solar PV Project

Date: 18/09/2014

### 5.2.2 Solar PV Module specifications

Please refer to **Annexure i** for details.

### 5.2.3 RFID Details

- Each PV module deployed will have RF identification tag. The following information will be mentioned in the RFID used on each modules (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions)
  - Name of the manufacturer of the PV module
  - Month & year of the manufacture
  - Country of origin
  - I-V curve for the module
  - Wattage,  $I_m$ ,  $V_m$  and FF for the module
  - Unique Serial No and Model No of the module
  - Date and year of obtaining IEC PV module qualification certificate
  - Name of the test lab issuing IEC certificate

### 5.2.4 Warranty

- Product warranty: 5 years
- Performance warranty: 90% within 10 years
- Performance warranty: 80% within 25 years



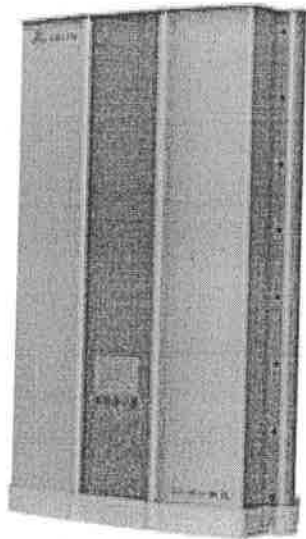
**STERLING AND WILSON**



Associates of Shapoorji Pallonji & Co. Ltd.

Technical Offer for 500 kW Solar PV Project

Date: 18/09/2014



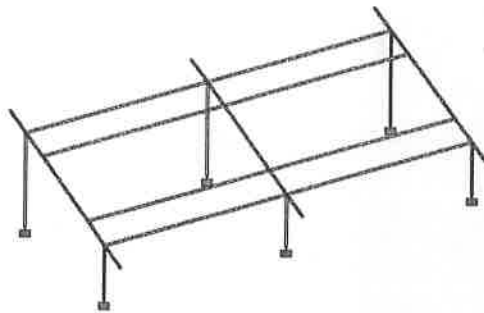
**IMAGE OF A TYPICAL STRING INVERTER**

**Typical specifications of solar inverter**

The inverter instead of converting direct current directly to 120 or 240 volts AC, high-frequency transformers employ a computerized multi-step process that involves converting the power to high-frequency AC and then back to DC and then to the final AC output voltage. Please refer to **Annexure ii** for details.



#### 4 Module Mounting Structure details



- The array structure is so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time it will withstand wind speed up to maximum 158 km/hr.
- The modules will be mounted with the tilting facility. The mounting structure shall be designed to withstand the module weight. The Mild Steel structure will be hot dipped galvanized as per IS Codes
- Modules are mounted on a non corrosive support structure suitable for extreme site conditions at an optimum tilt to maximize annual energy output.
- The structure is designed for easy replacement of any module and is in line with site requirements.
- The structure is designed for simple mechanical and electrical installation. It supports SPV modules at a given orientation, absorb and transfer the mechanical loads to the ground properly.
- Life of support Structures and Foundation shall last till 25 years in Indian climatic conditions
- Structure design shall be appropriate with proper factor of safety. Safety of the structures as per requirement of National Bldg Code/IS Code.
- The structure foundation may vary as per roof type and fabrication drawing will be finalized after site visit.
- We will provide the mounting structure design which shall be analyzed and approved by the customer.
- Based on the inputs provided by us, structural stability shall calculations be approved by the customer.



## 6 Design Softwares

**PSYST 5.21** is a preliminary design tool, allowing for grid, stand-alone or pumping system pre-sizing. It helps in calculating "Loss of load" probability, provides the PV-system component sizes, evaluates the monthly production and performances, and performs a preliminary economic evaluation of the PV system.

- ✓ SWL uses this software for system designing and loss estimation

**METEONORM 6.1** is a comprehensive meteorological reference, incorporating a catalogue of meteorological data and calculation procedures for solar applications and wind and irradiation analysis at any desired location in the world.

- ✓ SWL uses this software for estimating typical weather pattern in the area.

**UTOCAD-2011** is an software used for 3D CAD design, drafting, modeling, architectural drawing.

- ✓ SWL uses this software extensively for power plant SLD's, civil, structure and Foundation designing.

**UTOCAD LIGHT** is drafting software used to accurately and efficiently create, document, and optimize your 2D drawings

- ✓ SWL uses this software for preparing Civil, structure and electrical drawings

**STAAD PRO 8i** for enabling the creation of drawings and Building Information Modeling.

- ✓ SWL uses the software for mounting structure design and Finite Element Analysis, wind force analysis

**Google Sketch Pro 8** is a software used for preliminary three-dimensional modeling and rendering.

- ✓ SWL uses this software for 3 - D perspective views of Module general arrangement.

# YGE 72 Cell NH SERIES

Powered by **YINGLI**

YL310P-35b  
YL305P-35b  
YL300P-35b  
YL295P-35b  
YL290P-35b  
YL285P-35b  
YL280P-35b



## ABOUT YINGLI GREEN ENERGY

Yingli Green Energy Holding Company Limited (NYSE: YGE) is one of the world's largest fully vertically integrated PV manufacturers, which markets its products under the brand "Yingli Solar". With over 4.5GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance. We are the first renewable energy company and the first Chinese company to sponsor the FIFA World Cup™.

## PERFORMANCE

- High efficiency, multicrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.2%, minimizing installation costs and maximizing the kWh output of your system per unit area.
- Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.
- Top ranking in the "TÜV Rheinland Energy Yield Test" and the "PHOTON Test" demonstrates high performance and annual energy production.

## RELIABILITY

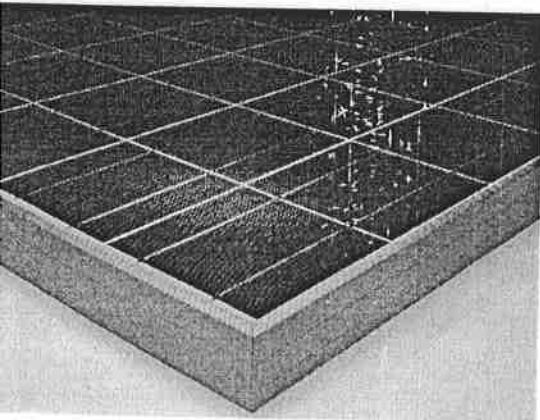
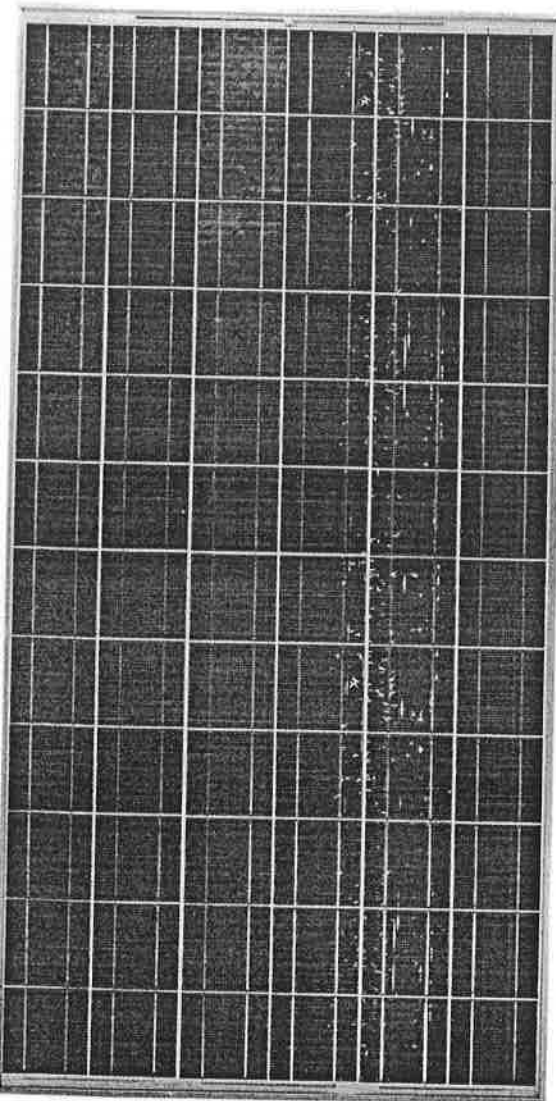
- Tests by independent laboratories prove that Yingli Solar modules:
  - ✓ Fully conform to certification and regulatory standards.
  - ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
  - ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.
- Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.

## WARRANTIES

- 10-year limited product warranty<sup>1</sup>.
  - Limited power warranty<sup>1</sup>: 10 years at 91.2% of the minimal rated power output, 25 years at 80.7% of the minimal rated power output.
- <sup>1</sup>In compliance with our Warranty Terms and Conditions.

## QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, MCS, CE, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, SA 8000, PV Cycle



# YINGLI 72 Cell MONO SERIES

Powered by **YINGLI**

YL310P-35b  
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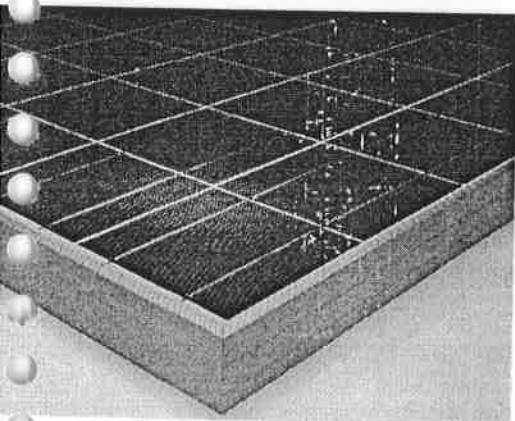
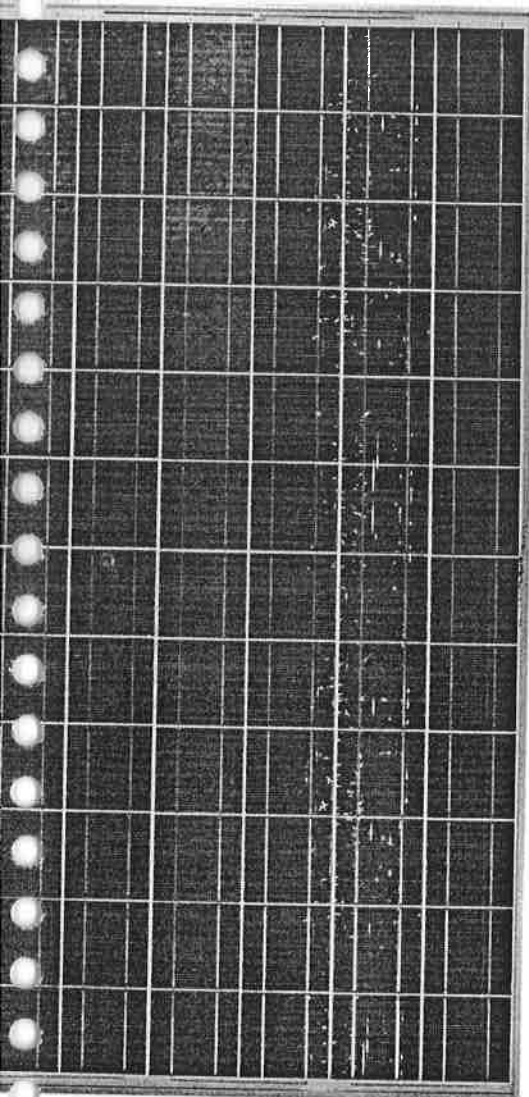
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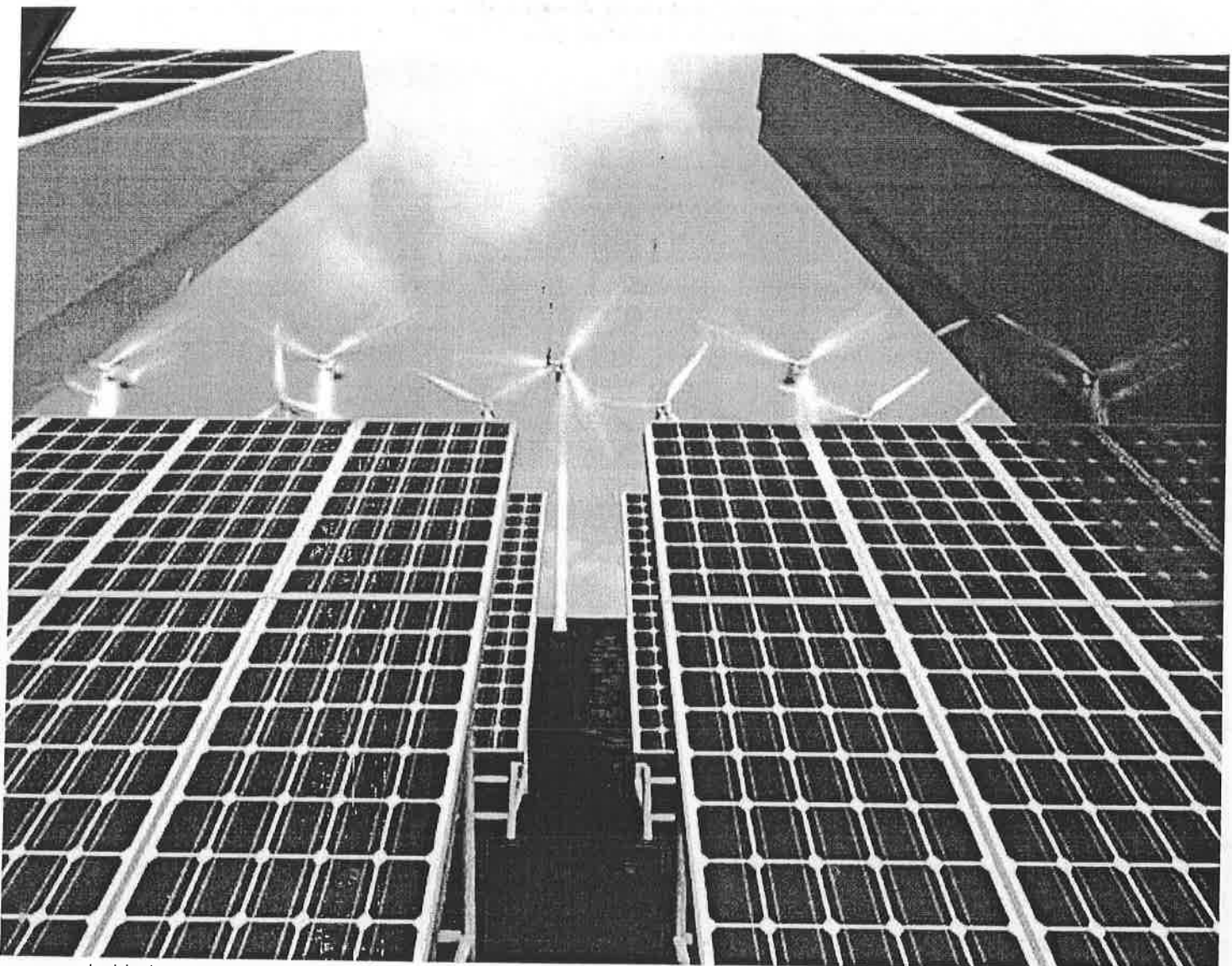
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## QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, MCS, CE, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, SA 8000, PV Cycle





the power behind competitiveness

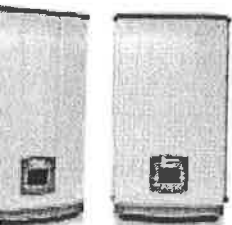
# Delta RPI Commercial Series

Grid - Tied Inverters

RPI - M12/M15A/M20A/M30

## Product Features

- High Efficiency up to 98.3%
- 2 sets of MPPTs
- Wide Voltage Range (200 ~ 1000Vdc)
- Reactive Power Control (0.8 lagging ~ 0.8 leading)
- IP-65 protection for outdoor environment
- 5" Graphical LCD Display
- VDE / Golden Sun / IEC certified
- Built-in Energy Logger
- Ergonomics handling design
- Built-in DC switch
- RS485 Communication Port



25



# RPI-Commercial Series

M15A / M20A / M30

Model	RPI-M12	RPI-M15A	RPI-M20A	RPI-M30
Model	Transformerless <sup>1</sup>	Transformerless <sup>1</sup>	Transformerless <sup>1</sup>	Transformerless <sup>1</sup>
Max. DC Power	15.0 kWp	19.0 kWp	25.0 kWp	38.0 kWp
Max. input voltage	1000 V	1000 V	1000 V	1000 V
DC voltage range	200 - 1000 V	200 - 1000 V	200 - 1000 V	200 - 1000 V
MPP voltage range	420 - 850 V	355 - 820 V	470 - 820 V	480 - 800 V
Start-up voltage	> 250 V	> 250 V	> 250 V	> 250 V
Nominal DC voltage	650 V	650 V	650 V	650 V
Max. input current per MPPT	20 A	22 A	22 A	34 A
Total input current	30 A	44 A	44 A	68 A
No. of independent MPP	2	2	2	2
Unbalanced input	33 / 67	33 / 67	33 / 67	33 / 67
Input connection type	4 pair MC4 <sup>2</sup>	4 pair MC4 <sup>2</sup>	4 pair MC4 <sup>2</sup>	6 pair MC4 <sup>2</sup>
DC disconnection switch	Yes (inbuilt)	Yes (inbuilt)	Yes (inbuilt)	Yes (inbuilt)
Rated output power	12000 VA	15000 VA	20000 VA	30000 VA
Max. output current	19 A	25 A	32 A	46 A
Nominal AC voltage	3 Ph, 400 V	3 Ph, 400 V	3 Ph, 400 V	3 Ph, 400 V
AC voltage range	400 V ± 20 % (320~480)	400 V ± 20 % (320~480)	400 V ± 20 % (320~480)	400 V ± 20 % (320~480)
Nominal Frequency	50 Hz	50 Hz	50 Hz	50 Hz
Frequency range	45 Hz - 55 Hz	45 Hz - 55 Hz	45 Hz - 55 Hz	45 Hz - 55 Hz
Power factor at rated power	Unity	Unity	Unity	Unity
Reactive power (adjustable)	0.8 lagging ~ 0.8 leading	0.8 lagging ~ 0.8 leading	0.8 lagging ~ 0.8 leading	0.8 lagging ~ 0.8 leading
Harmonics	<3% at rated power	<3% at rated power	<3% at rated power	<3% at rated power
No. of conductors (user selectable)	4/5 Wire (L1,L2,L3,N,PE)	4/5 Wire (L1,L2,L3,N,PE)	4/5 Wire (L1,L2,L3,N,PE)	4/5 Wire (L1,L2,L3,N,PE)
Maximum Efficiency	98.30%	98.30%	98.30%	98.20%
Euro Efficiency	97.70%	97.70%	97.70%	97.60%
Input-side disconnection device	Yes	Yes	Yes	Yes
Ground fault monitoring / Grid monitoring	Yes	Yes	Yes	Yes
DC reverse polarity protection	Yes	Yes	Yes	Yes
DC over voltage / current limitation protection	Yes	Yes	Yes	Yes
AC short circuit protection	Yes	Yes	Yes	Yes
AC over voltage / current limitation protection	Yes	Yes	Yes	Yes
DC / AC side surge protection - inbuilt	MOV	MOV	MOV	MOV
Communication Port	RS485	RS485	RS485	RS485
Graphical Display	5" LCD	5" LCD	5" LCD	5" LCD
Built-in Energy data logger	Yes	Yes	Yes	Yes
Emergency Power Off (EPO)	Yes	Yes	Yes	Yes
Dimension (H/W/D)	625 x 612 x 278 mm	625 x 612 x 278 mm	625 x 612 x 278 mm	960 x 612 x 278 mm
Weight (kg)	40	43	43	72
Operating temperature range	-20°C – 60°C (full power -20°C– 40°C)	-25°C – 60°C (full power -20°C– 40°C)	-25°C – 60°C (full power -20°C– 40°C)	-20°C – 60°C (full power -20°C– 40°C)
Relative Humidity	0-100%, non-condensing	0-100%, non-condensing	0-100%, non-condensing	0-100%, non-condensing
Operating elevation	< 2000 m	< 2000 m	< 2000 m	< 2000 m
Degree of Protection	IP65 (for electronics) / IP55 (for cooling area)	IP65 (for electronics) / IP55 (for cooling area)	IP65 (for electronics) / IP55 (for cooling area)	IP65 (for electronics) / IP55 (for cooling area)
Noise level (typical)	<55 dB (1m front panel)	<55 dB (1m front panel)	<55 dB (1m front panel)	<61 dB (1m front panel)
Self consumption at night	< 2 Watts	< 2 Watts	< 2 Watts	< 2 Watts
Certification	IEC 61683, IEC 60068-2(1,2,14,30), IP AS PER IEC 529, IEC 61000, IEC 62109, VDE-AR-N 4105, VDE 0126			
Standard Warranty Years	5	5	5	5

- 1 For thin-film module operation (negative / positive grounding), separate isolation transformer required
- 2 Mating MC4 connectors shall not be part of standard supply
- 3 Parallel operation of Inverters possible for large Power Plants

Sales / Application Engineering Support, please contact :

POWER SOLUTIONS (INDIA) PVT. LTD.,  
 3rd Floor, Ozone Manay Tech Park,  
 Madhav Village, Hosur Road,  
 Bangalore - 560068, INDIA



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Project Information	
Client Name	IIIT Jabalpur
DC Capacity (kWp)	498.0
AC Capacity (kW)	450.0
Module Rating (Wp)	300W
Inverter (KW )	30 KW
Annual Global Horizontal Solar Radiation (kwh/m2)	1871.40
Source of Radiation	Meteonorm-7.1.1
Latitude in degree decimal	23.20
Longitude in degree decimal	80
Tilt angle	8

Optical losses	%
Collector plain radiation	-4.60
Shadow Loss	0.60
IAM Loss	3.40
Soiling	2.00
<b>Array nominal energy</b>	
Due to irradiation level	2.60
Due to Temperature	9.10
Module Quality	0.50
Module Array Mismatch	1.00
Avg DC Ohmic losses	1.30
<b>Inverter losses</b>	2.00
<b>Plant downtime</b>	1.00
<b>Extra Losses other than Pvsyst</b>	
Power transformer losses	0.00
Inverter transformer losses	0.00
Inverter LT panel to inverter transformer	1.00
Day time Aux Consumption including MV cable loss	0.00
Night time Aux Consumption	0.00
Transmission line losses	0.00
Degradation considered during first year	2.65

Estimated Performance Parameters	
0th day PR (%) at Plant End metering point	76.01%
End of first year PR (%) at PV Plant Metering Point	75.75%
Energy Generated during first year at PV Plant metering point (kWh)	7,38,387
% CUF for at PV plant Metering Point (DC)	16.92%

Note: This is based on generic parameters and is subject to change during detailed engineering.



# Expression of Interest - Supply & Installation of 500 kWp Solar Power Plant

**Prepared for: Pt. Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (PDPM IIITDM), Jabalpur**

Submitted by Minda Industries Ltd.  
10<sup>th</sup> September, 2014

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1. BACKGROUND

Pt. Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (PDPIIITDM), Jabalpur has invited Expression of Interest (Eoi) for Supply and Installation of a 500 kW Solar Power Plant in their campus at Jabalpur. Minda Industries Limited (MIL), part of the Uno Minda group is pleased to submit its Expression of Interest(Eoi) for supply and installation of the solar system of 500 kwp on turnkey basis.

2. COMPANY PROFILE – MINDA INDUSTRIES LIMITED

The UNO MINDA- N .K MINDA Group is one of the World's leading players in the auto component sector, supplying a wide range of components to the most demanding original equipment manufacturers, in India as well as globally. The product Range of group includes Automotive Switches, Lighting, Horns, Batteries and Alternate Fuel Kits. We have representative offices in Japan, China Italy and 26 manufacturing locations spread across the country and two green field units in Indonesia and Vietnam, while another facility in Brazil is currently being explored.

The UNO MINDA-N.K MINDA Group has entered into non-Automotive businesses as well, in areas where the Group's strength lies in Manufacturing, Research & Development, Project Management and Execution, Quality Management, and Distribution can be duly leveraged. One of the areas being actively explored under this initiative is Renewable Energy, with specific emphasis on Solar-- providing a range of products and services including On grid Solar Power projects, Hybrid and Off Grid Power generation facilities, and appliances such as LED lights, Solar Lanterns and Home Lighting Systems.

3. ADVANTAGES OF SOLAR PV POWER PLANTS

- ✓ The cost of generation from Solar is constant during its lifetime of 25 years, thus free from energy cost escalation
- ✓ Offset the expensive and escalating grid power tariff resulting savings in Energy Bill
- ✓ Meets daytime energy demand by onsite Solar power generation
- ✓ The energy produced from Solar is cheaper than that of Diesel Generator (The cost of DG power generation is in the range of Rs. 15-17/unit)
- ✓ Long life of 25 years
- ✓ Solar plants are modular in nature, project capacity can be increased in future

MIL proposes to provide the following set of services to the client:

1. Site visit, site assessment & prediction of solar electricity generation
2. Design, Engineering, Procurement and Construction of 500 kWp capacity solar plant
3. Testing, commissioning and handing over of the system to MIL, Manesar

1. MAJOR SYSTEM COMPONENTS

PV module Technology	Poly-crystalline
Solar PV Array Capacity	500 kWp
Make	Reputed Make
Module rating	As per design
Module Power output Warranty	25 years (90% Power Output at the end of 12 <sup>th</sup> year and 80% Power Output at the end of 25 <sup>th</sup> year) back to back warranty from manufacturer
Grid Tie Inverter Model	Reputed Make
Capacity	As per design
Life	5 years back to back warranty from the manufacturer
Hybrid Mounting Structures	Galvanized Steel/Aluminum
Cables and other electrical accessories	As per design
Other Balance of System	As per design

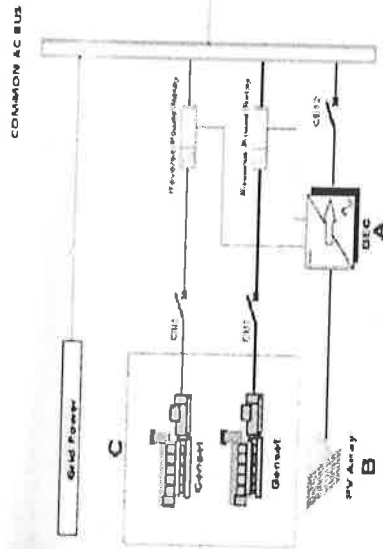
2. THEORY OF OPERATION

Solar Photovoltaic (PV) power generator consists of solar modules in series and parallel connections; these convert solar radiations into DC electrical power at the pre-determined range of voltages whenever sufficient solar radiation is available. The rooftop solar plant will operate in parallel to the primary source of electricity as solar power is infirm in nature and not sufficient to meet entire load. Utility grid power is the primary source of electricity, thus the solar plant is designed to run in parallel to the utility grid and feed the power to the load. As the load power requirement is more than generated solar PV power, the balance power shall come from the grid (when grid is available) or from the DG set (when grid is not available).

The grid connected solar inverter will convert the direct current (DC) provided by the solar panels to alternating current (415V, 50Hz, AC) and simultaneously synchronizing the AC output to the incoming grid power. The output of the inverter is connected to the main AC Bus of the existing building distribution board, where incoming grid feeder is connected.

In the event of grid failure, the solar system will be disconnected from the grid and the DG system shall be started through a changeover switch. Under this circumstance, the solar PV system shall be synchronized with DG where DG shall be providing the reference voltage to the solar inverter. During this time, solar plant will run in parallel to DG and feed the power to the load. When grid supply is restored the solar system shall be disconnected from DG and shall be again connected to main grid. Under this circumstance, the solar system shall be again synchronized with the grid and shall work in parallel to the grid. All the control operations shall be performed by the inverter connected to solar system. The load will be drawing power from the Solar first and the balance power shall be taken from Grid/DG.

All grid connected solar inverters are equipped with 'anti islanding' safety mechanism. Anti-islanding shuts down transmission of power from the solar panels to the grid during grid failure or other serious fluctuation in voltage or frequency. This prevents the hazardous condition of unexpected energizing of utility lines while workers are repairing power lines on the grid.



### 3. SOLAR PV MODULES

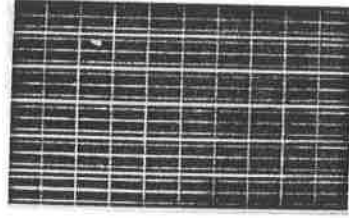
The system consists of solar PV module, mounting structures and grid tie string inverter with monitoring software. Light energy directly converted to the electrical energy in form of DC and goes to the inverter. The DC power converter to AC power through inverter and synchronized to the grid.

A solar photovoltaic module is the basic element of each photovoltaic system. It consists of number of solar cells arranged and connected in a definite pattern. It converts solar energy into electrical energy when sunlight falls on its surface.

The solar PV module is the most important part of a solar PV plant. It converts light into electricity directly, even under extreme weather conditions. It is environmentally-friendly, noiseless, and pollutant-free and produces no harmful residues. We have chosen reputed make poly-crystalline silicon modules for the Project,

as they are high-efficiency and are proven technology. Our chosen solar modules are certified to international specifications IEC 61215 ensuring international safety standards and reliable operation in harsh environments. Moreover these our selection of poly-crystalline technology for the Project is based on the following key factors:

- High efficiency among all PV modules technology, thus higher electricity production per m<sup>2</sup> installed area
- Most stable PV technology as to date
- Proven and most reliable technology
- More longevity compared to other technologies
- Lesser power degradation over a period of time

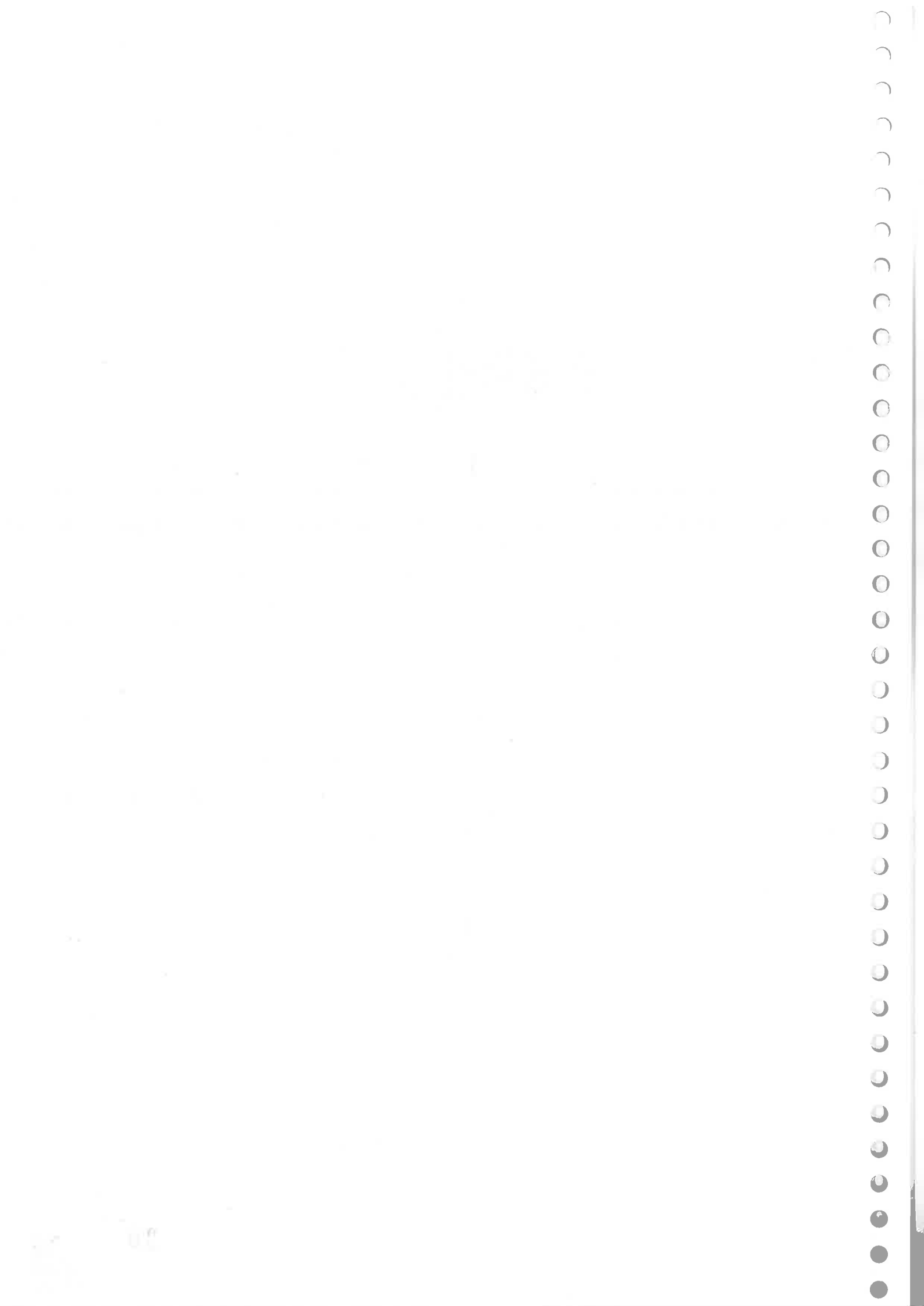


### 4. INVERTER

Power Conditioning Unit is a single / three phase output, bi-directional inverter system. PCU operates in parallel with the grid utility. Solar Photovoltaic panels convert solar energy into electrical energy as DC power. This DC power is used to charge the batteries through a charge controller and also used for the load through inverter.

### 5. CABLES

Sizes of cables between array interconnections, array to junction boxes, junction boxes to inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire power plant to the minimum. The bright annealed 99.97% pure bare copper conductors that offer low conductor resistance are used in the power plant. They result in lower heating of the cable thereby increase in life of the cable and also reduction in power losses in the system. These cables are insulated with a special grade PVC compound formulated for outdoor use. The skin coloration offers high insulation resistance and long life.



**B&WC/2015: 1.04**

**To discuss the external and interior painting works of Hall of Residence-1 and Hall of Residence -3 of PDPM IIITDM, Jabalpur.**

The following Preliminary cum Detailed Estimates for the above works have been framed at the Institute level on DSR 2014 including 3% contingencies.

The copies of the estimates are annexed in **Annexure B&WC/2015/1/A-3** (Page P- 32 to P- 33).

1. Painting (External & Internal) work of Hall of residence -3 of PDPM IIITDM Jabalpur amounting to Rs.22,96,050/-.
2. Painting (External & Internal) work of Hall of residence -1 of PDPM IIITDM, Jabalpur amounting to Rs.41,35,038/-.

**Total amount Rs.64,31,088/- (Sixty four lacs thirty one thousand eighty eight).**

The committee is requested to consider the above Preliminary cum Detailed Estimates and make the recommendation if the work is to be carried out at the Institute level or to transfer the works to the CPWD.

The committee is also requested to forward the recommendation to the Finance Committee for onward recommendation to the BOG for its approval.

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**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 3**





Name of work :Painting (External & Internal) work of Hall of residence-1 of PDPMIITDM Jabalpur.

Sl. No.	Particulars of Item	Unit	Quantity	Rate	Amount
13.46	Finishing walls with Premium Acrylic Smooth exterior paint with silicon additiv of required shade.				
13.46.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including priming coat of exterior primer applied @2.20 kg/10sqm).	Sqm.	16800	94.95	1595160
13.8	Providing and applying white cement based putty of average thickness 1mm, of approved brand and manufacturer,over the plastered wall surface to prepare the surface even and smooth compelte.	Sqm.	12000	89.65	1075800
14.1	Repairs to plaster of thickness 12mm to 20mm 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 wallls complete,including disposal of rubbish to the dumping ground within 50 meters lead:				
14.1.1	With cement mortar 1:4 (1 cement: 4 fine sand)	Sqm.	300	247.8	74340
14.42	White washing with lime to give an even shade:				
14.42.2	Old work (two or more coats)	Sqm.	13000	5.95	77350
14.5	Removing dry or oil bound distemper,waterproofing cement paint, exterior paints and the like by scraping ,sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	Sqm.	12000	9.9	118800
14.5	Painting with synthetic enamel paint of approved brand and manufacture to give an even*shade :				
14.54.1	One or more coats on old work ,	Sqm.	5500	48.5	266750
14.63	Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete as per manufacturer's specification.				
14.63.1	One or more coats on old work.	Sqm.	28000	28.8	806400
	Total Amount			Rs.	4014600
	Add contingencies @3%			Rs.	120438
	<b>Grand total amount</b>			<b>Rs.</b>	<b>4135038</b>

Say Rs. 41.35 Lacs

Name of work :Painting (External & Internal) work of Hall of residence-3 of PDPMIITDM Jabalpur.

Sl. No.	Particulars of Item	Unit	Quantity	Rate	Amount
14.1	Repairs to plaster of thickness 12mm to 20mm 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 meters lead:				
14.1.1	With cement mortar 1:4 (1 cement: 4 fine sand).	Sqm.	250	247.8	61950
14.5	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:				
14.54.1	One or more coats on old work.	Sqm.	5200	48.5	252200
14.63	Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete as per manufacturer's specification.				
14.63.1	One or more coats on old work.	Sqm.	35500	28.8	1022400
14.67	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				
14.67.2	Old work (one or more coats applied @ 0.83 ltr/10 sqm).	Sqm.	18500	48.25	892625
	Total Amount			Rs.	2229175
	Add contingencies @3%			Rs.	66875
	<b>Grand total amount</b>			Rs.	<b>2296050</b>

Say Rs. 22.96 Lacs

<b>B&amp;WC/2015: 1.05</b>	<p>To discuss the status of the running and new construction projects at the campus.</p> <p>The progress report as received from the CPWD showing the status of running projects up to July 18, 2015 is annexed in Annexure <b>B&amp;WC/2015/1/A-4</b> (Page P- 35 to P- 37).</p> <p>In a meeting between the Institute authorities and the CPWD officials held at IIITM Gwalior on July 20, 2015 it has been decided to keep on hold the following projects in view of the present paucity of funds.</p> <ol style="list-style-type: none"><li>1. C/o Technology incubation Centre at PDPM IIITDM, Jabalpur.</li><li>2. C/o Multiutility Centre at PDPM IIITDM, Jabalpur.</li><li>3. C/o Director Residence at PDPM IIITDM, Jabalpur.</li><li>4. C/o JWD office at PDPM IIITDM, Jabalpur.</li><li>5. C/o Swimming pool at PDPM IIITDM, Jabalpur.</li></ol> <p>The B&amp;WC is requested to confirm the decision and to request to Finance Committee to recommend to the BOG for its approval.</p>
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**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 4**



**STATUS OF WORKS OF IIITDM, AT JABALPUR AS ON 18/07/15**

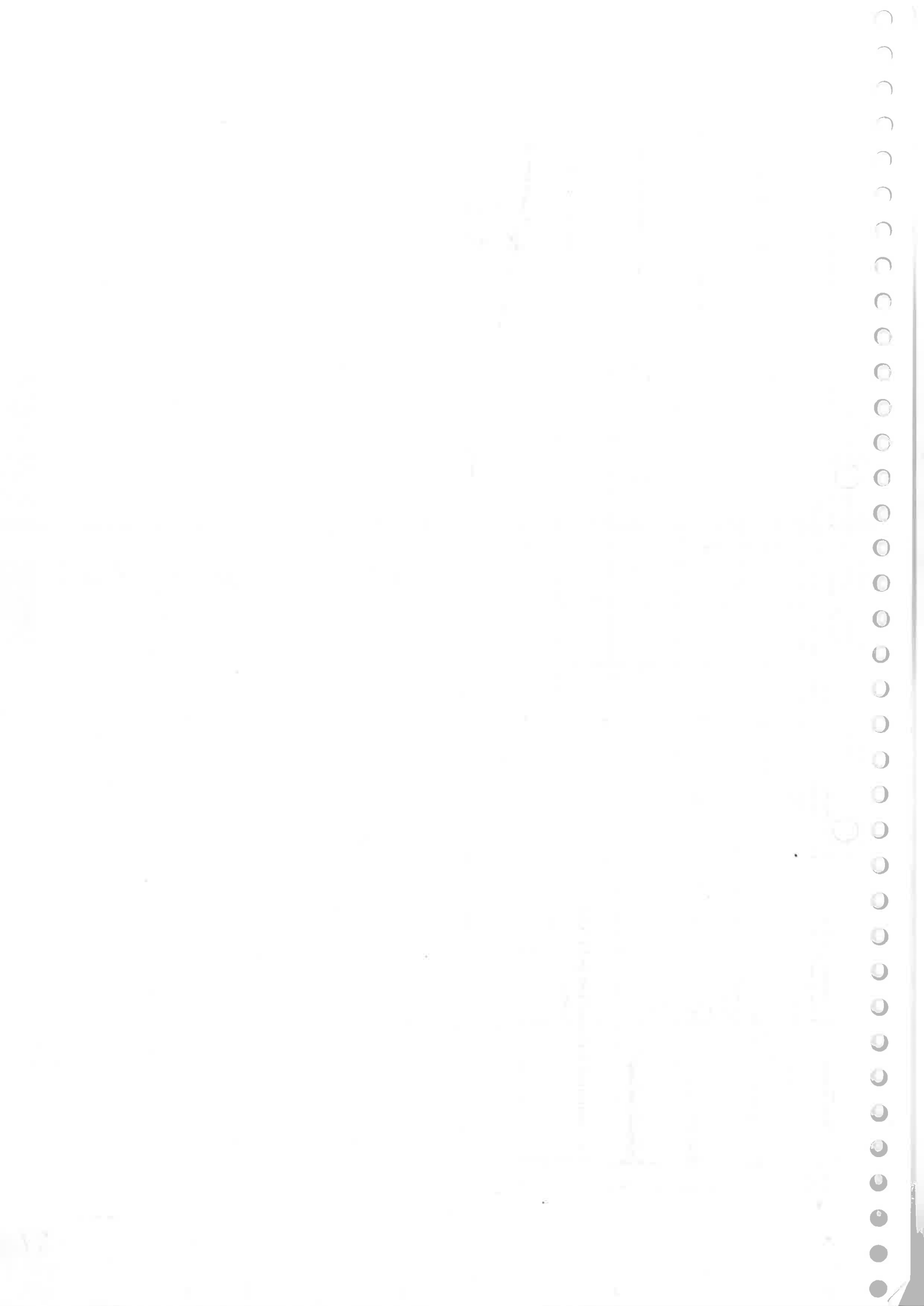
Sl. No.	Name of work	Consultant/ Construction Agency	A/A & E/S (Ref. & Amount)	1/3rd of A/A & E/S (Rs.)	Deposit Amount (Rs.)	Upto-date expenditure	Balance amount (Rs.)	Tendered amount (Rs.)	Date of start	Date of completion	%age progress	Tentative date of completion	Amount in Lakhs	Present status of work
<b>WORK IN PROGRESS.</b>														
1(a)	C/o Lecture Hall and Tutorial Complex for PDPM IIITDM at Jabalpur (MP)	M/s Architects Atelier Pvt. Ltd./ PD Agrawal	Rs. 3731.94 Dtd 17.08.2010	1243.98	3170.00 (-) 1680.00 Transferred to EE(E) 2490.00	3107.46	-69.25	2140.19	28.11.2011	27.02.2013	100%	30.04.2015	Work completed	
1 (b)	SH Acoustic wall panelling in lecture halls	M/s Architects Atelier Pvt. Ltd./ M/s Kamal Enterprises				131.79		131.32	25.07.2014	24.10.2014	100%	30.06.2015	Work completed	
2	C/o Narmada Residency-III (60 Nos flats) at PDPM IIIIT, Jabalpur (MP)	M/s Architects Atelier Pvt. Ltd/ Cicil Anthony	Rs. 2096.10 Dtd 30.03.2010	698.70	1800.00 (-) 270.00 (-) 1530.00 transferred to EE(E)	1666.55	133.45	1520.35	11.01.2012	10.04.2013	90%	30.08.2015	RCC work and Brick Work Completed plaster and flooring Completed. Fixing of doors and window is in progress. Sample Qtrs Completed	
3	C/o Library Cum Computer Center at PDPM-IIIITDM, Jabalpur	Datta & Datta/ Gupta Enterprises	Rs. 2289.70 Lacs. Dtd. 19.08.2011	763.23	950.00 (-) 165.00 (-) 785 transferred to EE(E)	1032.33	-82.53	1046.77	22.01.2013	21.04.2014	75%	30.09.2015	RCC,brick work and Plaster flooring completed false ceiling work, AC ducting, Painting & fixing of glass in window are in progress.	
4	C/o Rewa Residency-2A at PDPM IIIITDM, Jabalpur	M/s Kanvinde Rai / Gupta Enterprises	Rs. 1365.99 Dated 14.02.2012	455.33	1250.00 (-) 50.00 (-) 200.00 transferred to EE(E)	1213.47	36.53	1191.45	26.04.2013	25.07.2014	90%	15.08.2015	Civil work almost completed. Final painting & development work is in progress.	
5	C/o Married Student Housing (PG Hostel) for IIIT D&M at Jabalpur (M.P.) (Ph-I)	M/s Kanvinde Rai / Parmjeet Saini	Rs. 1237.00 Lacs. Dtd 19.08.2011	412.33	1384.00 (-) 250.00 (-) 1134.00 transferred to EE(E)	1245.35	138.65	1006.56	30-08-2013	29-11-2014	98%	30.07.2015	Civil work almost completed. Only fittings in bathroom pending due to lack of fund.	
7	C/o of Hall of Residence-7 (PG Hostel) (Phase-2) Single Seater Hostel at PDPM IIIITDM, Jabalpur.	M/s Kanvinde Rai & Choudhury/Parmjeet Construction	Rs. 2248.60 Dated 14.02.2012	749.53	1250.00 (-) 100.00 (-) 1150.00 transferred to EE(E)	1228.76	21.24	1804.09	29-09-2013	28-12-2014	90%	30.08.2015	RCC,95% Brick work 90% plaster 85% flooring Completed. Fixing of Aluminum window and door frame are in progress.	

Sl. No.	Name of work	Consultant/ Construction Agency	A/A & E/S (Ref. & Amount)	1/3rd of A/A & E/S (Rs.)	Deposit (Rs.)	-date expenditure	Balance amount (Rs.)	Tendered amount (Rs.)	Date of start	Date of completion	%age progress	Tendered date of completion	Present status of work
8	Road Network Ph II	Data & Data Associates/Paranjit Construction	1841.24 IITDM/B&W/13/05/634 Dated 02/05/2013	613.74667	800	876.45	-76.45	1781.43	06-10-2013	05-10-2014	60%	30.09.2015	RCC road almost completed construction of footpath and other services is in progress
9	C/A Hall of Residence-8 (Girls Hostel-) at PDPDM IITDM, Jabalpur	Data & Data Associates / Paranjit Saini	Rs 1433.93 Dated 14.02.2012	477.98	680.00 (-) 40.00 640.00 Transfer to EE(E)	731.37	-51.37	1159.55	28.03.2015	27-Mar-15	70%	31.10.2015	RCC completed, 90% Brick work, 80 % Plaster completed Flooring and fixing of door and window are in progress.
10	C/A Administrative Block at PDPDM IITDM, Jabalpur	M/s/Kanvinda Rai & Choudhury	Rs. 1379.15 Dated 14.02.2012	459.71	900.00 (-) 20.00 880.00 Transfer to EE(E)	921.17	-21.17	1170.87	11.04.2014	10-Apr-15	80%	30.08.2015	100% RCC, 90% Brick work, 90 % Plaster completed. Finishing work delayed due to non completion of AC work.
11	C/A Student Activity Centre-I at PDPDM IITDM, Jabalpur	Data & Data Associates	Rs 1722.37 Dated 14.02.2012	574.12	600.00 (-) 95.00 505.00 Transfer to EE(E)	662.49	-62.49	1167.32	27.06.2014	26-Jun-15	65%	30.10.2015	96% RCC, 80% Brick work, 75 % Plaster completed
12	Const of Footpath Sewerage Line Water Supply Line Storm Water drain and cable ducting along ring road	Data & Data Associates/ SC Gupta	305.07 Dated 02/05/2013	101.69	200	173.59	26.41	249.53	09.02.2014	08.09.2014	100%	30.05.2015	Work completed
13	Primary Health Centre at PDPDM IITDM, Jabalpur	Data & Data Associates	Rs 477.53 Dated 14.02.2012	159.18	400.00 (-) 20.00 380.00 Transfer to EE(E)	398.28	1.72	342.91	09.02.2015	30-May-15	100%	30.04.2015	Work completed
14	Development Work around LHIC	CPWD	99.4	33.13	50	42.47	7.53	95.68	30.05.2014	30-Nov-14	85%	15.07.2015	Details of grass paver drawing just received
<b>WORK SANCTIONED BUT NOT STARTED</b>													
1	C/A Ideation Studio and 4 Nos class room for PG work space, IWD office, Director Residence, Entrance Gate	CPWD	1177.84 Dated 24/03/2014	392									Tender called



Sl. No.	Name of work	Consultant/ Construction Agency	A/A & E/S (Ref. & Amount)	1/3rd of A/A & E/S (Rs.)	Deposit Amount (Rs.)	Upto-date expenditure	Balance amount (Rs.)	Tendered amount (Rs.)	Date of start	Date of completion	%age progress	Tentative date of completion	Present status of work
2	Technology Incubation Center	M/s Architects Atelier Pvt. Ltd	1706.63 dated 13/06/13	569	50								Detail Estimate and Architectural drawing is awaited from consultant
3	Multi Utility Center	M/s Architects Atelier Pvt. Ltd	1005.59 dated 13/06/13	335.2	50								Detail Estimate and Architectural drawing is awaited from consultant
4	Profession Lab Complex,	M/s Architects Atelier Pvt. Ltd	4443.23 dated 20/02/14										NIT is ready. Work could not started due to lack of fund
<b>PE submitted but sanction not received.</b>													
1	STP	CPWD	378.91 dated 20/06/14										Estimate submitted to IIITDM.

  
 Executive Engineer  
 JPD/CPWD Jabalpur



**B&WC/2015: 1.06**

**To discuss the Estimates for different Horticulture Development works as received from the CPWD.**

The following Preliminary cum Detailed Estimates for of different horticulture development works at the Institute, have been received from the CPWD for a total amount of Rs.1,72,32,950/- (One crore seventy two thousand thirty two lacs nine hundred fifty only). The copies of the estimates are annexed in **Annexure B&WC/2015/1/A-5** (Page P- 39 to P- 66).

S.No.	Name of Works	Amount
1	Development of Hort. work around Narmada Residency - II	2429000.00 24.29 Lacs
2	Development of Hort., work in the area attached to computer centre and library at IIITDM Jabalpur	3394300.00 33.94 Lacs
3	Development of Hort. Work in the area attached to Hall Residency -IV at IIITDM Jabalpur	2278000.00 22.78 Lacs
4	Development of Hort. Work in the area attached to Narmada Residency - III	2165100.00 21.65 Lacs
5	Development of Hort. Work in the area attached to Student Activity Centre at IIITDM Jabalpur	936900.00 9.36 Lacs
6	Development of Hort. Work in back side of Lecture Hall and Tutorial Complex at IIITDM Jabalpur	5901200.00 59.01 Lacs
7	Development of Hort. Work in the area between main road and Visitor Hotel in IIITDM Jabalpur	128450.00 1.28 Lacs
	<b>Total</b>	<b>1,72,32,950.00</b> <b>Say Rs. 172.32 Lacs</b>

**The B&WC committee is requested to consider the estimates and to approve the list of estimates for which the Administrative Approval and Estimate Sanction is to be communicated to the CPWD. The B&WC is further requested to request the Finance Committee to make its recommendation to the BOG for accord of Administrative Approval and Expenditure Sanction for such works.**

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**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 5**



Government of India  
Central Public Works Department  
Office of the Asstt. Director (Hort.)  
Jabalpur Hort. Sub division,  
PDPM-IIITDM, campus,  
Dumna Airport Road Post- Khamaria  
Jabalpur (M.P.) - 482005

File No. 54(2)/ADH/JHSD/2014-15/

264

Date: 30/12/2014.

To,

Director,  
PDPM- Indian Institute of Information  
Technology, Design and Manufacturing  
Dumna Airport Road, Post- Khamaria  
Jabalpur (M.P.) 482005

Subject :- Estimates for different Hort. Development works in PDPM-IIITDM at Jabalpur (M.P.)  
During 2014-15.

\*\*\*\*\*

Please find enclosed herewith following Detailed/ Preliminary estimates for issue of Administrative Approval and Expenditure Sanction from competent authority The Scope and necessity of work explained in history sheet of the estimates.

So therefore you are requested to kindly accord the required approval for the following estimates so that the development of horticulture work can be start earliest-

S. No.	Name of Work	Amount
1	Development of Hort. work around Narmada Residency- II at IIITDM Jabalpur	24,29,000/-
2	Development of Hort. work in the area attached to computer centre and library at IIITDM Jabalpur	33,94,300/-
3	Development of Hort. work in the area attached to Hall Residency- IV at IIITDM Jabalpur	22,78,000/-
4	Development of Hort. work in the area attached to Narmada Residency – III at IIITDM Jabalpur	21,65,100/-
5	Development of Hort. work in the area attached to Student Activity Centre at IIITDM Jabalpur	9,36,900/-
6	Development of Hort. work in back side of Lecture Hall and Tutorial Complex at IIITDM Jabalpur	59,01,200/-

Dupty Director (Hort),  
Bhopal Hort Division,  
C. P.W.D., Bhopal (M.P)

Copy to.

1. The Superintending Engineer, Bhopal Central Circle, CPWD Bhopal as he desired. For his kind consideration Please.
2. Asstt. Director (Hort.), Jabalpur Hort. Sub Division, CPWD Jabalpur, M.P. for perusal the matter at his level.

Dupty. Director (Hort),

To place in the  
next BWC meeting  
Development plans  
may be ash-  
CPWD  
ADP's  
19-1-2015

**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTEMENT**

State: M.P.

Branch: Hort.

Estimate No. 08/ DD14/14PB/2014-15

Division: Horticulture Division Bhopal.

Sub-Division: Hort. Sub Division Jabalpur

**Note:-** The entries against each item below should be made in accordance with the classification Prescribed in appendix No. 4 C.P.W.D. code.

**Name of Work:-** Development of Horticulture work around Narmada Residency - II in, PDPM - IIITDM at Jabalpur M.P. During 2014-15.

**FUND**

Major Head	Minor Head	Detailed Head
Deposit work		


This estimate framed by Dr. . P.K. Tripathi Dy. Director (Hort.) , Bhopal Hort. Divn- CPWD , Bhopal M.P of the probable cost of Rs. 24,29,000 /- ( Rupees Twenty four lakhs twenty nine thousand ) only for above mentioned work.


**Report**

**History :** This estimate Amounting to Rs. 24,29,000 /- ( Rupees Twenty four lakhs twenty nine thousand ) only has been framed to cover the probable cost of above mentioned work, as directed by Superintending Engineer Bhopal Central circle CPWD and Executive Engineer (Civil), IIITDM in the meeting held on 28/11/2014 at site. Presently the entire area is full of building rubbish for which the item of excavation up to depth of 20 cm has been taken in the estimate. The entire area is also covered with stone mixed hard soil, hence for digging of holes, hedge beds and shrubbery beds, the item earth work (DSR Item 2.6.1) and mixing as well as filling with mixture of manure & Good earth have been taken in the estimate. For lawn area up to a depth of 15 cm. and for filling of holes, beds, the provision of good earth has been made in the estimate. Keeping in view the hardness of soil (to loose the texture of soil) a specific provision of Narmada sand 1" over the surface area has been made in the estimate. As per requirement the provision of other regular items such as trenching, supply of cow dung manure, carriage of materials by manual labour, removal of rubbish, spreading, flooding, fine dressing, supply of grass and grassing etc. have also been made in the estimate. To develop the landscape features the provision of extra quantity of good earth has also been made in the estimate. For beautification of premises the provision for different types of flowering, ornamental, hedge plant, edge plants and ground cover plants etc. have also been made in the estimate. To handover the garden area to client department in good maintain condition, a separate provision for maintenance of garden area for a period of 12 months has also been made in the estimate. The items for which the provisions are made in the estimate are essential and as per actual requirement at site.

Hence the estimate is framed to accord the Administrative Approval and Expenditure Sanction from the competent authority.

- Amount :-** Rs 24,29,000/- including 5 % Contingencies  
**Period :-** 14 months.(2 months for development of work & 12 months for maintenance )  
**Method :-** Through contract  
**Rates :-** DSR -2014 and Market Rate.  
**T& P :-** No specific T&P required  
**Land :-** Available

  
Asstt. Director (Hort.),  
Jabalpur Hort. Sub Divn,  
CPWD Jabalpur

  
Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal



**Abstract of Cost- Original Estimate  
(CPWD code Para 330-332)**

State: M.P.  
Branch: B R


Division: HDB  
Sub-Division: JHSD


Name of Work :- Development of Horticulture work around Narmada Residency - II in, PDPM-IIITDM at Jabalpur M.P during 2014-15

S.No.	Description of work	Quantity	Rate	Unit	Amount
1	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly drised	1175 Cum	267.50	cum	314312.50
2	Trenching in ordinary soil upto a depth of 15 cm Including removal and stacking of serviceable materials and then disposing of by spreading and neatly leveling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth. Sludge or manure)	705 Cum	41.05	cum	28940.25
3	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm. in depth. 1.5m. in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 cm. and lift up to 1.5m. disposed earth to be levelled and neatly dressed. (DSR Item 2.6.1)	465 Cum	155.60	cum	72354.00
	All kinds of soil				
4	Removal of rubbish by machinical transport inculding loading unloading and stacking with in a lead of 2 km.	1758 Cum	90.64	cum	159345.12
5	Supply and stacking of good earth at site of work including royalty and carriage with all leads and lifts (earth measured in stacks will be reduced by 20 % for payment.	1065 cum	484.35	cum	515832.75
6	Supply and stacking of cow dung mannure at site of work including royalty and carriage with all leads and lifts (mannure measured in stacks will be reduced by 8% for payment.	298 Cum	350.45	cum	104434.10
7	Supply and stacking of Narmada sand at site of work including royalty and carriage with all leads and lifts	118 Cum	1341.55	cum	158302.90
8	Spreeding of sludge, dump manuure and / or good earth is required thickness as per direction of officer-in-charge (cost of sludge, dump mannure and / or good earth to be paid separately.	941 Cum	27.85	cum	26206.85
9	Mixing earth and sludge or manure in the required proportion specified or directed by the officer-in-charge.	540 Cum	19.10	cum	10314.00
10	Filling mixture of earth and sludge or mannure in the desired proportion in trenches, flooding with water and lavelling (cost of supplying earth and sludge or mannure and mixing excluded.	465 Cum	9.55	cum	4440.75
11	Preparation of mounds of various size and shap by available excavated/ supplied earth in layers not exceeding 20 cm. in depth, breaking clods, watering of each layer, dressing etc, lead up to 50 m and lift upto 1.5 m. Compeleted as per direction of officer - in - charge.	75 Cum	238.80	cum	17910.00
12	flooding the ground with water including making kiaries and dismantling the same.	4700 Sqm	139.15	100 Sqm	6540.05
13	Fine dressing the ground.	4700 Sqm	194.05	100 Sqm	9120.35
14	Supply and stacking of selection No. 1 grass in turf at site of work including loading, unloading and stacking with all leads and lifts (grass should be lush green, free from weeds having proper roots.	940 Sqm	255.55	Sqm	240217.00
15	Grassing with selection No. 1 grass including watering and maintenace of the lawn for 30 days or more till the grass form a thick lawn , free from weeds and fit for mowing including supplying good earth, if needed (The grass and good earth shall be paid for separately				
			<b>Total (C.O.)</b>		<b>1,668,270.62</b>

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		1,668,270.62
			RATE	UNIT	AMOUNT
	In rows 5 cm. apart in both direction	4700 Sqm	931.10	100 Sqm	43761.70
16	Providing and planting of following plants				
i	Bottel Brush of ht. 8' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	100 Nos.	300.00	each	30000.00
ii	Pultophorum ferrigenum of ht 6' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	280.00	each	14000.00
iii	Chlorodendron enemy of ht. 1' & above Multi branched, bushy well developed having fresh and halthy faliage in big size P/bags or E/pots.	1400 Nos.	30.00	each	42000.00
iv	Murraya exotica of ht. 2½' & above, multi branched,well developed having fresh and helthy foliage in big size P/bags or E/plots.	1400 Nos.	60.00	each	84000.00
v	Chandni single of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	30 Nos.	70.00	each	2100.00
vi	Acalypha of different varieties of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	60 Nos.	40.00	each	2400.00
vii	Cassia biflora of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	70.00	each	1400.00
viii	Hamelia Dwarf of ht. 1½' & above, multi branched,well developed having fresh and helthy foliage in big size P/bags or E/plots	100 Nos.	80.00	each	8000.00
ix	Musanda of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	60 Nos.	125.00	each	7500.00
x	Pluneria alba of ht. 5' & above, multi branched,well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	600.00	each	30000.00
xi	Hibiscus (Hawain) of ht. 2' & above, multi branched,well developed having fresh and helthy foliage in big size P/bags or E/plots	60 Nos.	125.00	each	7500.00
xii	Asparagus of different varieties with multi sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	500 Nos.	60.00	each	30000.00
xiii	Dinella variegated having 4-5 sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	500 Nos.	60.00	each	30000.00
xiv	Duranta goldiana of ht. 6" & above, multi branched,well developed having fresh and helthy foliage in big size P/bags or E/plots	500 Nos.	14.00	each	7000.00
xv	Dracena (Song of India) of ht. 6" & above Multi branched, bushy well developed in big size P/bags or E/pots.	500 Nos.	60.00	each	30000.00
xvi	Opiopogum green having 10-12 suckers well developed having fresh and halthy faliage in big size P/bags or E/pots.	500 Nos.	50.00	each	25000.00
xvii	Syngonium golden with multi suckers well developed having fresh and halthy faliage in big size P/bags or E/pots.	500 Nos.	80.00	each	40000.00
xviii	Iresine red of ht. 6" & above, multi branched,well developed having fresh and helthy foliage in big size P/bags or E/plots.	500 Nos.	20.00	each	10000.00
xix	Ficus benjamina/blackii/rejnold plants of ht. 5' & above having circumference of foliage at centre more than 5' well developed having fresh and halthy faliage in big size P/bags or E/pots (20 inch).	50 Nos.	550.00	each	27500.00
xx	Cycus palm having 30-35 fresh, lush green leaves of more than 2' length in HDPE bags or trays or pots fresh and helthy.	10 Nos.	3500.00	each	35000.00
xxi	Budded Rose of ht 1.5 ft & above, different varieties multi branched well developed having fresh & helthy foliage in big size p.bags	200 Nos.	120.00	each	24000.00
			Total (C.O.)		2,199,432.32

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		2,199,432.32
			RATE	UNIT	AMOUNT
xxii	Canna dwarf of ht 1 ft & above different varieties having proper roots and well developed having fresh and healthy foliage in big size p.bags	150 Nos.	60.00	each	9000.00
17	Complete maintenace of the entire garden features in the garden area i.e lawn, trees, shurbs, hedge, flower beds, creepers etc. including hoeing ,pruning, replacement of plants, gap filling, watering, mowing of lawn, clipping of hedge, removal of garden waste, applying insecticide, pesticide and furtilizers (When ever required) Top dressing of lawn with good and mannure and maintenace of other garden related works as directed by officer-in-charge. (good earth, mannure, fertilizers, insecticide and pesticide etc. will be provided by the department (Except T&P & stock items) (1.16 Acre area for 12 months = 1.16 X 12 = 13.92 Acre)	13.92 Acre	7532.70	Per Acre/ Per month	104855.18
				<b>Total</b>	<b>2313287.50</b>
				<b>Add 5% contingencies</b>	<b>115664.38</b>
				<b>Grand Total</b>	<b>2428951.88</b>
				<b>Say</b>	<b>24,29,000.00</b>

  
 Assistant Director (Hort.)  
 Jabalpur Hortt. Sub Divn  
 CPWD Bhopal

  
 Dy. Director (Hort.)  
 Bhopal Hort. Division  
 CPWD, Bhopal

**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTEMENT**

State: M.P.

Division: Horticulture Division Bhopal.

Branch: Hort.

Estimate No. 09 / DDI-1 / MDB / 2014-15

Sub-Division: Hort. Sub Division Jabalpur

**Note:-** The entries against each item below should be made in accordance with the classification Prescribed in appendix No. 4 C.P.W.D. code.

**Name of Work:-** Development of Horticulture work in the area attached to Computer Center & Library, PDPM - IIITDM at Jabalpur M.P. During 2014-15.

**FUND**

Major Head	Minor Head	Detailed Head
Deposit work		


This estimate framed by Dr. . P.K. Tripathi Dy. Director (Hort.), Bhopal Hort. Divn- CPWD , Bhopal M.P of the probable cost of Rs.33,94,300 /-( Rupees Thirty three lacs ninety four thousand and three hundred ) only for above mentioned work.


**Report**

**History :** This estimate Amounting to Rs.33,94,300 /-( Rupees Thirty three lacs ninety four thousand and three hundred ) only has been framed to cover the probable cost of above mentioned work, as directed by Superintending Engineer Bhopal Central circle CPWD and Executive Engineer (Civil), IIITDM in the meeting held on 28/11/2014 at site. Presently a part of area is full of building rubbish for which the item of excavation up to depth of 20 cm has been taken in the estimate. While the remaining area is low level due to construction of roads etc. For lawn area up to a depth of 15 cm. and Preparation of mounds as well as for filling of planters, the provision of good earth has been made in the estimate. Keeping in view the hardness of soil (to loose the texture of soil) a specific provision of Narmada sand 1" over the surface area has been made in the estimate. As per requirement the provision of other regular items such as digging holes, preparation of beds, trenching, supply of cow dung manure, removal of rubbish, spreading, flooding, fine dressing, supply of grass and grassing etc. have also been made in the estimate. To develop the landscape features the provision of extra quantity of good earth has also been made in the estimate. For beautification of premises the provision for different types of flowering, ornamental, hedge plant, edge plants and ground cover plants etc. have also been made in the estimate. To handover the garden area to client department in good maintain condition, a separate provision for maintenance of garden area for a period of 12 months has also been made in the estimate. The items for which the provisions are made in the estimate are essential and as per actual requirement at site.

Hence the estimate is framed to accord the Administrative Approval and Expenditure Sanction from the competent authority.

**Amount :-** Rs 33,94,300/- including 5 % Contingencies  
**Period :-** 14 months.(2 months for development of work & 12 months for maintenance )  
**Method :-** Through contract  
**Rates :-** DSR -2014 and Market Rate.  
**T& P :-** No specific T&P required  
**Land :-** Available

  
Asstt. Director (Hort.),  
Jabalpur Hort. Sub Divn,  
CPWD Jabalpur

  
Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal

**Abstract of Cost- Original Estimate  
(CPWD code Para 330-332)**

State: M.P.  
Branch: B R

Division: HDB  
Sub-Division: JHSD


Name of Work :- Development of Horticulture work in the area attached to Computer Centre & Library,  
at PDPM-IIITDM Jabalpur (MP) during 2014-15


S.No.	Description of work	Quantity	Rate	Unit	Amount
1	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly drissed	720 Cum	267.50	cum	192600.00
2	Trenching in ordinary soil upto a depth of 15 cm Including removal and stacking of serviceable materials and then disposing of by spreading and neatly leveling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth. Sludge or manure)	780 Cum	41.05	cum	32019
3	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20%: 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if and with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately).				
	Holes 1.2 m dia and 1.2 m deep.	50 Nos.	211.90	Each	10595.00
	Holes 60 cm dia, and 60 cm deep.	200 Nos.	28.00	Each	5600.00
4	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 Parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50m lift upto 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).	297 Cum	116.55	Cum	34615.35
5	Removal of rubbish by machinical transport including loading unloading and stacking with in a lead of 2 km.	850 Cum	90.64	cum	77044.00
6	Supply and stacking of good earth at site of work including royalty and carriage with all leads and lifts (earth measured in stacks will be reduced by 20 % for payment.	830 cum	484.35	cum	402010.50
7	Supply and stacking of cow dung mannure at site of work including royalty and carriage with all leads and lifts (mannure measured in stacks will be reduced by 8% for payment.	222 Cum	350.45	cum	77799.90
8	Supply and stacking of Narmada sand at site of work including royalty and carriage with all leads and lifts	130 Cum	1341.55	cum	174401.50
9	Spreading of sludge, dump manuure and / or good earth is required thickness as per direction of officer-in-charge (cost of sludge, dump mannure and / or good earth to be paid separately.	1040 Cum	27.85	cum	28964.00
				<b>Total (C.O.)</b>	<b>1,035,649.25</b>

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		1,035,649.25
			RATE	UNIT	AMOUNT
10	Mixing earth and sludge or manure in the required proportion specified or directed by the officer-in-charge.	75 Cum	19.10	cum	1432.50
11	Preparation of mounds of various size and shap by available excavated/ supplied earth in layers not exceeding 20 cm. in depth, breaking clods, watering of each layer, dressing etc, lead up to 50 m and lift upto 1.5 m. Completed as per direction of officer - in - charge.	75 Cum	238.80	cum	17910.00
13	flooding the ground with water including making kiaries and dismantling the same.	5200 Sqm	139.15	100 Sqm	7235.80
14	Fine dressing the ground.	5200 Sqm	194.05	100 Sqm	10090.60
15	Supply and stacking of selection No. 1 grass in turf at site of work including loading, unloading and stacking with all leads and lifts (grass should be lush green, free from weeds having proper roots.	1040 Sqm	255.55	Sqm	265772.00
16	Grassing with selection No. 1 grass including watering and maintenace of the lawn for 30 days or more till the grass form a thick lawn , free from weeds and fit for mowing including supplying good earth, if needed (The grass and good earth shall be paid for separately				
	In rows 5 cm. appart in both direction	5200 Sqm	931.10	100 Sqm	48417.20
17	Providing and fixing of Haridwar Pebbles of size 2" to 2.5" dia in natural colour.	50 Qts	1000.00	Qts	50000.00
18	Providing and planting of following plants				
i	Amaltash of ht. 6' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	300.00	each	6000.00
ii	Neem of ht. 6' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	10 Nos.	300.00	each	3000.00
iii	Kadamb of ht. 6' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	250.00	each	5000.00
iv	Acalypha of different varieties of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	100 Nos.	40.00	each	4000.00
v	Hamelia Dwarf of ht. 1½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	200 Nos.	80.00	each	16000.00
vi	Ixora of different varieties of ht. 2' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	110.00	each	5500.00
vii	Musanda of ht. 2½' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	125.00	each	6250.00
viii	Motia of ht. 1½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	70.00	each	3500.00
ix	Pluneria alba of ht. 5' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	600.00	each	15000.00
x	Hibiscus (Hawain) of ht. 2' & above, multi branched well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	125.00	each	6250.00
xi	Asparagus of different varieties with multi sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	500 Nos.	60.00	each	30000.00
			Total (C.O.)		1,537,007.35

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		1,537,007.35
			RATE	UNIT	AMOUNT
xii	Chlorodendron enemy of ht. 1' & above Multi branched, bushy well developed having fresh and healthy foliage in big size P/bags or E/pots.	2000 Nos.	30.00	each	60000.00
xiii	Chandni dwarf of ht. 1' & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/plots	500 Nos.	70.00	each	35000.00
xiv	Dinella variegated having 4-5 sucker well developed having fresh and healthy foliage in big size P/bags or E/pots.	500 Nos.	60.00	each	30000.00
xv	Duranta goldiana of ht. 6" & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/plots	2000 Nos.	14.00	each	28000.00
xvi	Dracena (Song of India) of ht. 6" & above Multi branched, bushy well developed in big size P/bags or E/pots.	500 Nos.	60.00	each	30000.00
xvii	Ficus Panda of ht. 1' & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/plots.	200 Nos.	60.00	each	12000.00
xviii	Opiopogum green having 10-12 suckers well developed having fresh and healthy foliage in big size P/bags or E/pots.	1000 Nos.	50.00	each	50000.00
xix	Syngonium golden with multi suckers well developed having fresh and healthy foliage in big size P/bags or E/pots.	1000 Nos.	80.00	each	80000.00
xx	Iresine red of ht. 6" & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/plots.	1000 Nos.	20.00	each	20000.00
xxi	Topiary of golden bottle brush of ht. 6' & above having more than 5-6 balls of more than 1' dia well developed having fresh and healthy foliage in big size P/bags or E/pots.	10 Nos.	2800.00	each	28000.00
xxii	Ficus blackii/rejnd plants of ht. 5' & above having circumference of foliage at centre more than 5' well developed having fresh and healthy foliage in big size P/bags or E/pots (20 inch).	40 Nos.	550.00	each	22000.00
xxiii	Cycus palm having 30-35 fresh, lush green leaves of more than 2' length in HDPE bags or trays or pots fresh and healthy.	10 Nos.	3500.00	each	35000.00
xxiv	Furcaria variegated having 8-10 leaves of length more than 1½' well developed in big size P/bags or E/pots.	25 Nos.	400.00	each	10000.00
xxv	Raphis palm of ht. 2' & above having 8-10 suckers well developed having fresh and healthy foliage in big size P/bags or E/pots.	50 Nos.	380.00	each	19000.00
xxvi	Murraya exotica of ht. 2½' & above, multi branched, self supported, well developed having fresh and healthy foliage in big size P/bags or E/plots.	1000 Nos.	60.00	each	60000.00
xxvii	Budded Rose of ht 1.5 ft & above, different varieties multi branched well developed having fresh & healthy foliage in big size p.bags	200 Nos.	120.00	each	24000.00
xxviii	Canna dwarf of ht 1 ft & above different varieties having proper roots and well developed having fresh and healthy foliage in big size p.bags	100 Nos.	60.00	each	6000.00
19	Providing and dispay of following potted plants.				
i	Auracaria coocki of hight 2½' and above, well developed, established and full of helthy & lushgreen foliage in 12" size asbastos/Cement pots.	50 Nos.	400.00	each	20000.00
ii	Aricea plam of hight, 5' and above with 5-6 suckers of equal hight well developed, established and full of helthy & lushgreen foliage in 12" size asbastos/ Cement pots.	50 Nos.	450.00	each	22500.00
iii	Furcaria variegated having 8-10 leaves of length more than 1½' well developed in 14" size asbastos/cement pots.	50 Nos.	600.00	each	30000.00
			Total (C.O.)		2,158,507.35

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		2,158,507.35
			RATE	UNIT	AMOUNT
iv	Raphis palm of ht. 2' & above having 8-10 suckers well developed having fresh and halthy foliage in 12" size asbestos/cement pots.	50 Nos.	450.00	each	22500.00
v	Croton of different varities of hight, 1' & above, multi branched, well developed, established and full of helthy & lushgreen foliage in 10" size earthen pots.	100 Nos.	100.00	each	10000.00
vi	Diffenbachia tropicsnow of Hight 2' and above having 6-8 helthy and fresh leves, well developed and established in the 10" earthen pots.	100 Nos.	150.00	each	15000.00
vii	Bougainvillia of hight 2' and above having 15-20 branches, bushy, well developed and established having fresh and helthy foliage in 14" asbestos/ Cement pots.	50 Nos.	400.00	each	20000.00
19	Compelete maintenace of the entire garden features in the garden area i.e lawn, trees, shurbs, hedge, flower beds, creepers etc. including hoeing ,pruning, replacement of plants, gap filling, watering, mowing of lawn, clipping of hedge, removal of garden waste, applying insecticide, pesticide and fertulizers (When ever required) Top dressing of lawn with good and mannure and maintenace of other garden related works as directed by officer-in-charge. (good earth, mannure, fertulizers, insecticide and pesticide etc. will be provided by the department (Except T&P & stock items)				
i	(1.28 Acre area for 12 months = 1.28 X 12 = 46.20 Acre)	15.36 Acre	7532.70	Per Acre/ Per month	115702.27
ii	Potted plants				
	(a) In asbestos/ cement pots 200 x 12 Month	2400 Nos.	27.48	Per pot/ Per month	65952.00
	(b) In earthen pots 250 x 12 Month	3000 Nos.	275.00	Per pot/ Per month	825000.00
				<b>Total</b>	<b>3232661.62</b>
				<b>Add 5% contingencies</b>	<b>161633.08</b>
				<b>Grand Total</b>	<b>3394294.70</b>
				<b>Say</b>	<b>33,94,300.00</b>

  
 Assistant Director (Hort.)  
 Jabalpur Hortt. Sub Divn  
 CPWD Bhopal

  
 Dy. Director (Hort.)  
 Bhopal Hort. Division  
 CPWD, Bhopal



**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTEMENT**

State: M.P.

Branch: Hort.

Estimate No. 10/ DDH/14 DB/2014-15

Division: Horticulture Division Bhopal.

Sub-Division: Hort. Sub Division Jabalpur

Note:- The entries against each item below should be made in accordance with the classification Prescribed in appendix No. 4 C.P.W.D. code.

Name of Work:- Development of Horticulture work in the area attached to Hall of residence IV in PDPM – IIITDM at Jabalpur M.P. During 2014-15.

**FUND**

Major Head	Minor Head	Detailed Head
Deposit work		


This estimate framed by Dr. P.K. Tripathi Dy. Director (Hort.) , Bhopal Hort. Divn- CPWD , Bhopal M.P of the probable cost of Rs.22,78,000 /- ( Rupees Twenty two lakhs seventy eight thousand ) only for above mentioned work.


**Report**

**History :** This estimate Amounting to Rs.22,78,000 /- ( Rupees Twenty two lakhs seventy eight thousand ) only has been framed to cover the probable cost of above mentioned work. as directed by Superintending Engineer Bhopal Central circle CPWD and Executive Engineer (Civil), IIITDM in the meeting held on 28/11/2014 as site. Presently the entire area is full of building rubbish/ natural stone for which the item of excavation up to depth of 20 cm has been taken in the estimate. The entire area is also covered with stone mixed hard soil, hence for digging of holes, The item earth work and mixing as well as filling with mixture of manure & Good earth have been taken in the estimate. A part of available area is low level in which the item trenching and filling earth has been taken in the estimate. For lawn area up to a depth of 15 cm. and for filling of holes, beds, the provision of good earth has been made in the estimate. Keeping in view the hardness of soil (to loose the texture of soil) a specific provision of Narmada sand 1" over the surface area has been made in the estimate. As per requirement the provision of other regular items such as trenching, Supply of cow dung manure, carriage of materials by manual labour, removal of rubbish, spreading, flooding, fine dressing, supply of grass and grassing etc. have also been made in the estimate. To develop the landscape features the provision of extra quantity of good earth has also been made in the estimate. For beautification of premises the provision for different types of flowering, ornamental, hedge plant, edge plants and ground cover plants etc. have also been made in the estimate. To handover the garden area to client department in good maintain condition, a separate provision for maintenance of garden area for a period of 12 month has also been made in the estimate. The items for which the provision are made in estimate and as per actual requirement at site.

Hence the estimate is framed to accord the Administrative Approval and Expenditure Sanction from the competent authority.

- Amount :-** Rs 22,78,000/- including 5 % Contingencies  
**Period :-** 14 months.(2 months for development of work & 12 months for maintenance )  
**Method :-** Through contract  
**Rates :-** DSR -2014 and Market Rate.  
**T& P :-** No specific T&P required  
**Land :-** Available

  
Asstt. Director (Hort.),  
Jabalpur Hort. Sub Divn,  
CPWD Jabalpur

  
Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal

**Abstract of Cost- Original Estimate  
(CPWD code Para 330-332)**

State: M.P.  
Branch: B R

Division: HDB  
Sub-Division: JHSD


**NAME OF WORK:** - Development of Horticulture work in back side of Lecture Hall and Tutorial Complex in PDPM - IIITDM at Jabalpur M.P during 2014-15


S.No.	Description of work	Quantity	Rate	Unit	Amount
1	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly drissed	640 Cum	267.50	cum	171200.00
2	Trenching in ordinary soil upto a depth of 15 cm Including removal and stacking of serviceable materials and then disposing of by spreading and neatly leveling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth. Sludge or manure)	690 Cum	41.05	cum	28324.5
3	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm. in depth. 1.5m. in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 cm. and lift up to 1.5m. disposed earth to be levelled and neatly dressed. All kinds of soil	170 Cum	155.60	cum	26452.00
4	Removal of rubbish by machinical transport inculding loading unloading and stacking with in a lead of 2 km.	925 Cum	90.64	cum	83842.00
5	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 Parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50m lift upto 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).	270 Cum	105.20	Cum	28404.00
6	Supply and stacking of good earth at site of work including royalty and carriage with all leads and lifts (earth measured in stacks will be reduced by 20 % for payment.	853 cum	484.35	cum	413150.55
7	Supply and stacking of cow dung mannure at site of work including royalty and carriage with all leads and lifts (mannure measured in stacks will be reduced by 8% for payment.	227 Cum	350.45	cum	79552.15
8	Supply and stacking of Narmada sand at site of work including royalty and carriage with all leads and lifts	115 Cum	1341.55	cum	154278.25
9	Carriage of materials by manual labour including loading, unloading and stacking for a lead less than 0.50 km			cum	
	i. Good earth	50 Cum	103.64	cum	5182.00
	ii. Cow dung mannure	10 Cum	82.91	cum	829.10
	iii. Sand	10 Cum	103.64	cum	1036.40
			<b>Total (C.O.)</b>		<b>992,250.95</b>

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		992,250.95
			RATE	UNIT	AMOUNT
10	Spreading of sludge, dump manure and / or good earth is required thickness as per direction of officer-in-charge (cost of sludge, dump manure and / or good earth to be paid separately.	920 Cum	27.85	cum	25622.00
11	Mixing earth and sludge or manure in the required proportion specified or directed by the officer-in-charge.	245 Cum	19.10	cum	4679.50
12	Filling mixture of earth and sludge or manure in the desired proportion in trenches, flooding with water and levelling (cost of supplying earth and sludge or manure and mixing excluded.	170 Cum	9.55	cum	1623.50
13	Preparation of mounds of various size and shape by available excavated/ supplied earth in layers not exceeding 20 cm. in depth, breaking clods, watering of each layer, dressing etc, lead up to 50 m and lift upto 1.5 m. Completed as per direction of officer - in - charge.	75 Cum	238.80	cum	17910.00
14	flooding the ground with water including making kiaries and dismantling the same.	4600 Sqm	139.15	100 Sqm	6400.90
15	Fine dressing the ground.	4600 Sqm	194.05	100 Sqm	8926.30
16	Supply and stacking of selection No. 1 grass in turf at site of work including loading, unloading and stacking with all leads and lifts (grass should be lush green, free from weeds having proper roots.	920 Sqm	255.55	Sqm	235106.00
17	Grassing with selection No. 1 grass including watering and maintenance of the lawn for 30 days or more till the grass form a thick lawn , free from weeds and fit for mowing including supplying good earth, if needed (The grass and good earth shall be paid for separately				
	In rows 5 cm. apart in both direction	4600 Sqm	931.10	100 Sqm	42830.60
18	Providing and fixing of Haridwar Pebbles of size 2" to 2.5" dia in natural colour.	10 Qts	1000.00	Qts	10000.00
19	Providing and planting of following plants				
i	Bottle Brush of ht. 8' & above, multi branched, self supported, well developed having fresh and healthy foliage in big size P/bags or E/plots	40 Nos.	300.00	each	12000.00
ii	Gulmohar of ht. 8' & above, multi branched, self supported, well developed having fresh and healthy foliage in big size P/bags or E/plots	30 Nos.	300.00	each	9000.00
iii	Lagerstroemia flosregini of ht. 5' & above, multi branched, self supported, well developed having fresh and healthy foliage in big size P/bags or E/plots	30 Nos.	250.00	each	7500.00
iv	Chandni variegated of ht. 2½' & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/pots.	50 Nos.	70.00	each	3500.00
v	Acalypha of different varieties of ht. 2½' & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/pots	100 Nos.	40.00	each	4000.00
vi	Cassia biflora of ht. 2½' & above, multi branched, self supported, well developed having fresh and healthy foliage in big size P/bags or E/plots	10 Nos.	70.00	each	700.00
vii	Hamelia Dwarf of ht. 1½' & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/plots	100 Nos.	80.00	each	8000.00
viii	Ixora of different varieties of ht. 2' & above, multi branched, well developed having fresh and healthy foliage in big size P/bags or E/plots	50 Nos.	110.00	each	5500.00
			<b>Total (C.O.)</b>		<b>1,395,549.75</b>

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		1,395,549.75
			RATE	UNIT	AMOUNT
ix	Musanda of ht. 2½' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	125.00	each	6250.00
x	Calliandra of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/pots.	25 Nos.	70.00	each	1750.00
xi	Motia of ht. 1½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/pots.	50 Nos.	70.00	each	3500.00
xii	Pluneria alba of ht. 5' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/pots.	20 Nos.	600.00	each	12000.00
xiii	Tecoma gauri chaudi of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/pots.	10 Nos.	80.00	each	800.00
xiv	Bauhinia tomentosa of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	10 Nos.	150.00	each	1500.00
xv	Hibiscus (Hawain) of ht. 2' & above, multi branched well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	125.00	each	3125.00
xvi	Asparagus of different varieties with multi sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	1000 Nos.	60.00	each	60000.00
xvii	Chlorodendron enemy of ht. 1' & above Multi branched, bushy well developed having fresh and halthy faliage in big size P/bags or E/pots.	2000 Nos.	30.00	each	60000.00
xviii	Chandni dwarf of ht. 1' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	1000 Nos.	70.00	each	70000.00
xix	Dinella variegated having 4-5 sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	1000 Nos.	60.00	each	60000.00
xx	Duranta goldiana of ht. 6" & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	2000 Nos.	14.00	each	28000.00
xxi	Dracena (Song of India) of ht. 6" & above Multi branched, bushy well developed in big size P/bags or E/pots.	1000 Nos.	60.00	each	60000.00
xxii	Opiopogum green having 10-12 suckers well developed having fresh and halthy faliage in big size P/bags or E/pots.	1000 Nos.	50.00	each	50000.00
xxiii	Syngonium golden with multi suckers well developed having fresh and halthy faliage in big size P/bags or E/pots.	1000 Nos.	80.00	each	80000.00
xxiv	Iresine red of ht. 6" & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots.	1000 Nos.	20.00	each	20000.00
xxv	Cycus palm having 30-35 fresh, lush green leaves of more than 2' length in HDPE bags or trays or pots fresh and helthy.	20 Nos.	3500.00	each	70000.00
xxvi	Putranjeeva of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/pots.	1200 Nos.	60.00	each	72000.00
xxvii	Budded Rose of ht 1.5 ft & above, different varieties multi branched well developed having fresh & helthy foliage in big size p.bags	100 Nos.	120.00	each	12000.00
				<b>Total (C.O.)</b>	<b>2,066,474.75</b>

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		2,066,474.75
			RATE	UNIT	AMOUNT
20	Complete maintenace of the entire garden features in the garden area i.e lawn, trees, shurbs, hedge, flower beds, creepers etc. including hoeing ,pruning, replacement of plants, gap filling, watering, mowing of lawn, clipping of hedge, removal of garden waste, applying insecticide, pesticide and fertulizers (When ever required) Top dressing of lawn with good and mannure and maintenace of other garden related works as directed by officer-in-charge. (good earth, mannure, fertilizers, insecticide and pesticide etc. will be provided by the department (Except T&P & stock items) (1.14 Acre area for 12 months = 1.14 X 12 = 13.68 Acre)	13.68 Acre	7532.70	Per Acre/ Per month	103047.34
				<b>Total</b>	<b>2169522.09</b>
				<b>Add 5% contingencies</b>	<b>108476.10</b>
				<b>Grand Total</b>	<b>2277998.19</b>
				<b>Say</b>	<b>22,78,000.00</b>

  
 Assistant Director (Hort.)  
 Jabalpur Hortt. Sub Divn  
 CPWD Bhopal

  
 Dy. Director (Hort.)  
 Bhopal Hort. Division  
 CPWD, Bhopal

**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTEMENT**

State: M.P.

Branch: Hort.

Estimate No. 11 / DD14 / 14DB / 2014-15

Division: Horticulture Division Bhopal.

Sub-Division: Hort. Sub Division Jabalpur

**Note:-** The entries against each item below should be made in accordance with the classification Prescribed in appendix No. 4 C.P.W.D. code.

**Name of Work:-** Development of Horticulture work in the area attached to Narmada Residency - III, at PDPM - IIITDM at Jabalpur M.P. During 2014-15.

**FUND**

Major Head	Minor Head	Detailed Head
Deposit work		

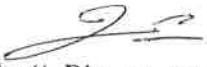
This estimate framed by Dr. . P.K. Tripathi Dy. Director (Hort.) , Bhopal Hort. Divn- CPWD , Bhopal M.P of the probable cost of Rs.2165100 /-( RupeesTwenty one lakhs sixty five thousand one hundred) onlyfor above mentioned work.


**Report**

**History :** This estimate Amounting to Rs.2165100 /-( RupeesTwenty one lakhs sixty five thousand one hundred) only has been framed to cover the probable cost of above mentioned work, as directed by Superintending Engineer Bhopal Central circle CPWD and Executive Engineer (Civil), IIITDM in the meeting held on 28/11/2014 at site. Presently the entire area is full of building rubbish for which the item of excavation up to depth of 15 cm has been taken in the estimate. The entire area is also covered with stone mixed hard soil, hence for digging of holes, hedge beds and shrubbery beds, the item earth work (DSR Item 2.6.1) and mixing as well as filling with mixture of manure & Good earth have been taken in the estimate. For lawn area up to a depth of 15 cm. and for filling of holes, beds, the provision of good earth has been made in the estimate. Keeping in view the hardness of soil (to loose the texture of soil) a specific provision of Narmada sand 1" over the surface area has been made in the estimate. As per requirement the provision of other regular items such as trenching, supply of cow dung manure, carriage of materials by manual labour, removal of rubbish, spreading, flooding, fine dressing, supply of grass and grassing etc. have also been made in the estimate. To develop the landscape features the provision of extra quantity of good earth has also been made in the estimate. For beautification of premises the provision for different types of flowering, ornamental, hedge plant, edge plants and ground cover plants etc. have also been made in the estimate. To handover the garden area to client department in good maintain condition, a separate provision for maintenance of garden area for a period of 12 months has also been made in the estimate. The items for which the provisions are made in the estimate are essential and as per actual requirement at site.

Hence the estimate is framed to accord the Administrative Approval and Expenditure Sanction from the competent authority.

- Amount :-** Rs 21,65,100/- including 5 % Contingencies  
**Period :-** 14 months.(2 months for development of work & 12 months for maintenance )  
**Method :-** Through contract  
**Rates :-** DSR -2014 and Market Rate.  
**T& P :-** No specific T&P required  
**Land :-** Available

  
**Asstt. Director (Hort.),  
Jabalpur Hort. Sub Divn,  
CPWD Jabalpur**

  
**Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal**

**Abstract of Cost- Original Estimate  
(CPWD code Para 330-332)**

State: M.P.  
Branch: B R

Division: HDB  
Sub-Division: JHSD


Name of work :- Development of Horticulture work in the area attached to Narmada Residency - III, at PDPM-IIITDM at Jabalpur (MP) during 2014-15


S.No.	Description of work	Quantity	Rate	Unit	Amount
1	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly drised	900 Cum	267.50	cum	240750.
2	Trenching in ordinary soil upto a depth of 15 cm Including removal and stacking of serviceable materials and then disposing of by spreading and neatly leveling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth. Sludge or manure)	675 Cum	41.05	cum	27708.
3	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm. in depth. 1.5m. in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 cm. and lift up to 1.5m. disposed earth to be levelled and neatly dressed. (DSR Item 2.6.1)	319 Cum	155.60	cum	49636.4
4	All kinds of soil				
4	Removal of rubbish by machinical transport inculding loading unloading and stacking with in a lead of 2 km.	1332 Cum	90.64	cum	120732.4
5	Supply and stacking of good earth at site of work including royalty and carriage with all leads and lifts (earth measured in stacks will be reduced by 20 % for payment.	938 cum	484.35	cum	454320.31
6	Supply and stacking of cow dung mannure at site of work including royalty and carriage with all leads and lifts (mannure measured in stacks will be reduced by 8% for payment.	244 Cum	350.45	cum	85509.81
7	Supply and stacking of Narmada sand at site of work including royalty and carriage with all leads and lifts	113 Cum	1341.55	cum	151595.15
8	Carriage of materials by manual labour including loading, unloading and stacking for a lead less than 0.50 km			cum	
	i. Good earth	100 Cum	103.64	cum	10364.00
	ii. Cow dung mannure	25 Cum	82.91	cum	2072.75
	iii. Sand	25 Cum	103.64	cum	2591.00
9	Spreading of sludge, dump manuure and / or good earth is required thickness as per direction of officer-in-charge (cost of sludge, dump mannure and / or good earth to be paid separately.	901 Cum	27.85	cum	25092.85
10	Mixing earth and sludge or manure in the required proportion specified or directed by the officer-in-charge.	394 Cum	19.10	cum	7525.40
11	Filling mixture of earth and sludge or mannure in the desired proportion in trenches, flooding with water and lavelling (cost of supplying earth and sludge or mannure and mixing excluded.	319 Cum	9.55	cum	3046.45
12	Preparation of mounds of various size and shap by available excavated/ supplied earth in layers not exceeding 20 cm. in depth, breaking clods, watering of each layer, dressing etc, lead up to 50 m and lift upto 1.5 m. Completed as per direction of officer - in - charge.	75 Cum	238.80	cum	17910.00
13	flooding the ground with water including making kiaries and dismantling the same.	4500 Sqm	139.15	100 Sqm	6261.75
				<b>Total (C.O.)</b>	<b>1,205,117.08</b>





NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		1,859,618.
			RATE	UNIT	AMOUNT
xviii	Murraya-exotica of ht. 2½' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots.	1500 Nos.	60.00	each	90000
xix	Budded Rose of ht 1.5 ft & above, different varieties multi branched well developed having fresh & helthy foliage in big size p.bags	100 Nos.	120.00	each	12000
19	Compelete maintenace of the entire garden features in the garden area i.e lawn, trees, shurbs, hedge, flower beds, creepers etc. including hoeing ,pruning, replacement of plants, gap filling, watering, mowing of lawn, clipping of hedge, removal of garden waste, applying insecticide, pesticide and futilizers (When ever required) Top dressing of lawn with good and mannure and maintenace of other garden related works as directed by officer-in-charge. (good earth, mannure, fertilizers, insecticide and pesticide etc. will be provided by the department (Except T&P & stock items)  (3.85 Acre area for 12 months = 3.85 X 12 = 46.20 Acre)	13.32 Acre	7532.70	Per Acre/ Per month	100335..
				<b>Total</b>	<b>2061954..</b>
				<b>Add 5% contingencies</b>	<b>103097..</b>
				<b>Grand Total</b>	<b>2165052.1</b>
				<b>Say</b>	<b>21,65,100.0</b>

  
 Assistant Director (Hort.)  
 Jabalpur Hortt. Sub Divn  
 CPWD Bhopal

  
 Dy. Director (Hort.)  
 Bhopal Hort. Division  
 CPWD, Bhopal

**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTEMENT**

State: M.P.

Division: Horticulture Division Bhopal.

Branch: Hort.

Estimate No. 12 | VDH / MDB / 2014-15

Sub-Division: Hort. Sub Division Jabalpur

**Note:-** The entries against each item below should be made in accordance with the classification Prescribed in appendix No. 4 C.P.W.D. code.

**Name of Work:-** Development of Horticulture work in the area attached to Student Activity Center at PDPM - ITDM at Jabalpur M.P. During 2014-15.

**FUND**

Major Head	Minor Head	Detailed Head
Deposit work		


This estimate framed by Dr. P.K. Tripathi Dy. Director (Hort.), Bhopal Hort. Divn- CPWD, Bhopal M.P of the probable cost of Rs. 9,36,900/- ( Rupees Nine lacs thirty six thousand nine hundred) only for above mentioned work.


**Report**

**History :** This estimate Amounting to Rs. 9,36,900/- ( Rupees Nine lacs thirty six thousand nine hundred) only has been framed to cover the probable cost of above mentioned work, as directed by Superintending Engineer Bhopal Central circle CPWD and Executive Engineer (Civil), IIITDM in the meeting held on 28/11/2014 at site. Presently a part of area is full of building rubbish for which the item of excavation up to depth of 20 cm has been taken in the estimate. While the remaining area is low level due to construction of roads etc. The upper layer of entire area is also covered with stone mixed hard soil, hence for digging of holes, hedge beds and shrubbery beds, the item earth work (DSR Item 2.6.1) and mixing as well as filling with mixture of manure & Good earth have been taken in the estimate. For lawn area up to a depth of 15 cm. and for filling of holes, beds, the provision of good earth has been made in the estimate. Keeping in view the hardness of soil (to loose the texture of soil) a specific provision of Narmada sand 1" over the surface area has been made in the estimate. As per requirement the provision of other regular items such as trenching, supply of cow dung manure, removal of rubbish, spreading, flooding, fine dressing, supply of grass and grassing etc. have also been made in the estimate. To develop the landscape features the provision of extra quantity of good earth has also been made in the estimate. For beautification of premises the provision for different types of flowering, ornamental, hedge plant, edge plants and ground cover plants etc. have also been made in the estimate. To handover the garden area to client department in good maintain condition, a separate provision for maintenance of garden area for a period of 12 months has also been made in the estimate. The items for which the provisions are made in the estimate are essential and as per actual requirement at site.

Hence the estimate is framed to accord the Administrative Approval and Expenditure Sanction from the competent authority.

- Amount :-** Rs 9,36,900/- including 5 % Contingencies  
**Period :-** 14 months.(2 months for development of work & 12 months for maintenance )  
**Method :-** Through contract  
**Rates :-** DSR -2014 and Market Rate.  
**T& P :-** No specific T&P required  
**Land :-** Available

  
Asstt. Director (Hort.),  
Jabalpur Hort. Sub Divn,  
CPWD Jabalpur

  
Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal

**Abstract of Cost- Original Estimate  
(CPWD code Para 330-332)**

State: M.P.  
District: B R

Division: HDB  
Sub-Division: JHSD

**Name of Work :** Development of Horticulture work in the area attached to Student Activity Centre at PDPM-IITDM at Jabalpur M.P during 2014-15

No.	Description of work	Quantity	Rate	Unit	Amount
1	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly drressed	220 Cum	267.50	cum	58850.00
2	Trenching in ordinary soil upto a depth of 15 cm Including removal and stacking of serviceable materials and then disposing of by spreading and neatly leveling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth. Sludge or manure)	165 Cum	41.05	cum	6773.25
	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm. in depth. 1.5m. in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 cm. and lift up to 1.5m. disposed earth to be levelled and neatly dressed. (DSR Item 2.6.1)	89 Cum	155.60	cum	13848.40
	All kinds of soil				
	Removal of rubbish by machinical transport inculding loading unloading and stacking with in a lead of 2 km.	337 Cum	90.64	cum	30545.68
	Supply and stacking of good earth at site of work including royalty and carriage with all leads and lifts (earth measured in stacks will be reduced by 20 % for payment.	554 cum	484.35	cum	268329.90
	Supply and stacking of cow dung mannure at site of work including royalty and carriage with all leads and lifts (mannure measured in stacks will be reduced by 8% for payment.	85 Cum	350.45	cum	29788.25
	Supply and stacking of Narmada sand at site of work including royalty and carriage with all leads and lifts	55 Cum	1341.55	cum	73785.25
	Spreading of sludge, dump manuure and / or good earth is required thickness as per direction of officer-in-charge (cost of sludge, dump mannure and / or good earth to be paid separately.	605 Cum	27.85	cum	16849.25
	Mixing earth and sludge or manure in the required proportion specified or directed by the officer-in-charge.	89 Cum	19.10	cum	1699.90
	Filling mixture of earth and sludge or mannure in the desired proportion in trenches, flooding with water and lavelling (cost of supplying earth and sludge or mannure and mixing excluded.	89 Cum	9.55	cum	849.95
	Flooding the ground with water including making kiaries and dismantling the same.	2200 Sqm	139.15	100 Sqm	3061.30
			<b>Total (C.O.)</b>		<b>504,381.13</b>

NO.	SUB HEAD & ITEM OF WORK	QUANTITY	Total (B/F)		504,381.13
			RATE	UNIT	AMOUNT
12	Fine dressing the ground.	2200 Sqm	194.05	100 Sqm	4269.10
13	Supply and stacking of selection No. 1 grass in turf at site of work including loading, unloading and stacking with all leads and lifts (grass should be lush green, free from weeds having proper roots.	440 Sqm	255.55	Sqm	112442.00
14	Grassing with selection No. 1 grass including watering and maintenace of the lawn for 30 days or more till the grass form a thick lawn , free from weeds and fit for mowing including supplying good earth, if needed (The grass and good earth shall In rows 5 cm. appart in both direction	2200 Sqm	931.10	100 Sqm	20484.20
15	Providing and planting of following plants				
i	Bottal palm of ht. 8' & above having circumference of stems at bottom more than 30 cm, well developed having fresh and halthy faliage in big size P/bags or E/pots.	10 Nos.	1000.00	each	10000.00
ii	Hamelia Dwarf of ht. 1½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or	25 Nos.	80.00	each	2000.00
iii	Ixora of different varieties of ht. 2' & above, multi branched, well developed having fresh and helthy foliage in big size	25 Nos.	110.00	each	2750.00
iv	Musanda of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	125.00	each	2500.00
v	Pluneria alba of ht. 5' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size	20 Nos.	600.00	each	12000.00
vi	Bauhinia tomentosa of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or	20 Nos.	150.00	each	3000.00
ii	Hibiscus (Hawain) of ht. 2' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or	25 Nos.	125.00	each	3125.00
ii	Chlorodendron enemy of ht. 1' & above Multi branched, bushy well developed having fresh and halthy faliage in big size	500 Nos.	30.00	each	15000.00
k	Duranta goldiana of ht. 6" & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or	500 Nos.	14.00	each	7000.00
	Ficus rejnold plants of ht. 5' & above having circumference of foliage at centre more than 5' well developed having fresh and halthy faliage in big size P/bags or E/pots (20 inch).	50 Nos.	550.00	each	27500.00
	Cycus palm having 30-35 fresh, lush green leaves of more than 2' length in HDPE bags or trays or pots fresh and helthy.	10 Nos.	3500.00	each	35000.00
i	Murraya exotica of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or	700 Nos.	60.00	each	42000.00
i	Budded Rose of ht 1.5 ft & above, different varieties multi branched well developed having fresh & helthy foliage in big	50 Nos.	120.00	each	6000.00
	Providing and display of following plants.				
	Auracaria coocki of hight 2½' and above, well developed, estblished and full of helthy & lushgreen foliage in 12" size	20 Nos.	400.00	each	8000.00
	Arica plam of hight, 5' and above with 5-6 suckers of equal hight well developed, estblished and full of helthy & lushgreen foliage in 12" size asbastos/Cement pots.	20 Nos.	450.00	each	9000.00
			<b>Total (C.O.)</b>		<b>826,451.43</b>

SUB HEAD & ITEM OF WORK		Total (B/F)		826,451.43	
	QUANTITY	RATE	UNIT	AMOUNT	
iii	Croton of different varieties of hight, 1' & above, multi branched, well developed, established and full of helthy & lushgreen foliage in 12" size asbostos pots.	50 Nos.	100.00	each	5000.00
iv	Ficus rejnold of hight, 4' & above having circumference of falilage more than 4', round top, well developed having fresh	20 Nos.	600.00	each	12000.00
9	Compelete maintenace of the entire garden features in the garden area i.e lawn, trees, shurbs, hedge, flower beds, creepers etc. including hoeing ,pruning, replacement of plants, gap filling, watering, mowing of lawn, clipping of hedge, removal of garden waste, applying insecticide, pesticide and furtilizers (When ever required) Top dressing of lawn with good and mannure and maintenace of other garden related works as directed by officer-in-charge. (good earth, mannure, fertilizers, (3.85 Acre area for 12 months = 3.85 X 12 = 46.20 Acre)	6.48 Acre	7532.70	Per Acre/ Per month	48811.90
				<b>Total</b>	<b>892263.33</b>
				<b>Add 5% contingencies</b>	<b>44613.17</b>
				<b>Grand Total</b>	<b>936876.49</b>
				<b>Say</b>	<b>9,36,900.00</b>

Assistant Director (Hort.)  
Jabalpur Hortt. Sub Divn  
CPWD Bhopal

Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal

Govt. of India  
Central Public Works Department

State : M.P

Branch : Horticulture

Division : Bhopal

Sub Division : Jabalpur

No - 13/ DDH / MDB / 2014-15

Note : the entries against each item below should be made in accordance with the classification prescribed in Appendix No-4 , C.P.W.D Code.

Name of Work : Development of Horticulture work in back side of Lecture Hall and Tutorialn Complex in, PDPM - IIITDM at Jabalpur M.P during 2014-15.

Major head	Minor Head:	Detailed Head:
Deposit		

This estimate framed by Dr. . P.K. Tripathi Dy. Director (Hort.) , Bhopal Hort. Divn- CPWD , Bhopal M.P of the probable cost of Rs. 59,01,200 /- ( Rupees Fifty nine lakhs one thousand two hundred) only for above mentioned work.


### Report


**History :** This estimate Amounting to Rs. 59,01,200 /- ( Rupees Fifty nine lakhs one thousand two hundred) only has been framed to cover the probable cost of above mentioned work. This estimate has been framed for development of horticulture work in back side of Lecture Hall and Tutorial complex as directed by Chief Engineer CZ-II CPWD and Director IIITDM in the meeting held on 31/10/2014 at site. As since the area in front of this building presently is not available. The Topography of the area taken in this estimate is uneven, due to which in some area the item excavation is taken while in remaining area filling work has been taken in the estimate. It was also decided in the meeting that required quantity of rubbish received from excavation or earth work has to be filled in the depressed area towards Pulia and remaining quantity of rubbish to be dumped along with internal roads or where ever is required in the campus of institute.

The entire area is covered with stone mixed hard soil, hence for digging of holes, hedge beds and shrubbery beds, the item of earth work (DSR Item 2.6.1) has been in the estimate. The surrounded area is full of building rubbish for which the item excavation up to a depth of 15 cm has been taken in the estimate. For entire lawn area up to a depth of 15 cm. and for filling of holes, beds, the provision of good earth has been made in the estimate. Keeping in view the hardness of soil (to loose the texture of soil) a specific provision of Narmada sand 1" over the surface area has been made in the estimate. As per requirement the provision of other regular items such as trenching, supply of cow dung manure, carriage of materials by manual labour, spreading, mixing, filling of mixture, flooding, fine dressing, supply of grass and grassing etc. have also been made in the estimate. To develop the landscape features the provision of extra quantity of good earth has also been made in the estimate. For beautification of premises the provision for different type of flowering, ornamental, hedge plant, edge plants and ground cover plants etc. have also been made in the estimate. To handover the garden area to client department in good maintained condition, a separate provision for maintenance of garden area for a period of 12 months has also been made in the estimate. The items for which the provisions are made in the estimate are essential and as per actual requirement at site of work.

Hence the estimate is framed to accord the Administrative Approval and Expenditure Sanction from the competent authority.

Amount : Rs 59,01,200/- including 5 % Contingencies  
Period : 14 months.(2 months for development of work & 12 months for maintenance )  
Method : Through contract  
Rates : DSR -2014 and Market Rate.  
T& P : No specific T&P required  
Land : Available

  
Asstt. Director (Hort.),  
Jabalpur Hort. Sub Divn,  
CPWD Jabalpur

  
Dy. Director (Hort.)  
Bhopal Hort. Division  
CPWD, Bhopal

## Abstract of Cost – Original Estimate

(C.P.W.D Code Para 330-332)

(C.P.W.D-3)

State : M.P  
Branch : Horticulture

Division : BHOPAL  
Sub Division : Jabalpur

Name of Work : Development of Horticulture work in back side of Lecture Hall and Tutorial Complex in  
PDPM - IIITDM at Jabalpur M.P during 2014-15


Sl. No	Items	Quantity	Rate	Unit (Per)	Amount
1	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly drissed	1630 Cum	267.50	cum	436025.00
2	Trenching in ordinary soil upto a depth of 15 cm Including removal and stacking of serviceable materials and then disposing of by spreading and neatly leveling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth. Sludge or manure)	1225 Cum	41.05	cum	50286.25
3	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm. in depth. 1.5m. in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 cm. and lift up to 1.5m. disposed earth to be levelled and neatly dressed. All kinds of soil	685 Cum	155.60	cum	106586.00
4	Removal of rubbish by machinical transport inculding loading unloading and stacking with in a lead of 2 km.	1295 Cum	90.64	cum	117378.80
5	Supply and stacking of good earth at site of work including royalty and carriage with all leads and lifts (earth measured in stacks will be reduced by 20 % for payment.	2952 cum	484.35	cum	1429801.20
6	Supply and stacking of cow dung mannure at site of work including royalty and carriage with all leads and lifts (mannure measured in stacks will be reduced by 8% for payment.	661 Cum	350.45	cum	231647.45
7	Supply and stacking of Narmada sand at site of work including royalty and carriage with all leads and lifts	383 Cum	1341.55	cum	513813.65
8	Carriage of materials by manual labour including loading, unloading and stacking for a lead less than 0.50 km			cum	
	i. Good earth	200 Cum	103.64	cum	20728.00
	ii. Cow dung mannure	50 Cum	82.91	cum	4145.50
	iii. Sand	50 Cum	103.64	cum	5182.00
9	Spreading of sludge, dump manuure and / or good earth is required thickness as per direction of officer-in-charge (cost of sludge, dump mannure and / or good earth to be paid separately.	3061 Cum	27.85	cum	85248.85
10	Mixing earth and sludge or manure in the required proportion specified or directed by the officer-in-charge.	935 Cum	19.10	cum	17858.50
11	Filling mixture of earth and sludge or mannure in the desired proportion in trenches, flooding with water and lavelling (cost of supplying earth and sludge or mannure and mixing excluded.	685 Cum	9.55	cum	6541.75


12	Preparation of mounds of various size and shap by available excavated/ supplied earth in layers not exceeding 20 cm. in depth, breaking clods, watering of each layer, dressing etc, lead up to 50 m and lift upto 1.5 m. Completed as per direction of officer - in - charge.	250 Cum	238.80	cum	59700.00
13	flooding the ground with water including making kiaries and dismantling the same.	15300 Sqm	139.15	100 Sqm	21289.95
14	Fine dressing the ground.	15300 Sqm	194.05	100 Sqm	29689.65
15	Supply and stacking of selection No. 1 grass in turf at site of work including loading, unloading and stacking with all leads and lifts (grass should be lush green, free from weeds having proper roots.	3060 Sqm	255.55	Sqm	781983.00
16	Grassing with selection No. 1 grass including watering and maintenace of the lawn for 30 days or more till the grass form a thick lawn , free from weeds and fit for mowing including supplying good earth, if needed (The grass and good earth shall be paid for separately				
	In rows 5 cm. appart in both direction	15300 Sqm	931.10	100 Sqm	142458.30
17	Providing and fixing of Haridwar Pebbles of size 2" to 2.5" dia in natural colour.	50 Qts	1000.00	Qts	50000.00
18	Providing and planting of following plants				
i	Bottel Brush of ht. 8' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	300.00	each	6000.00
ii	Gulmohar of ht. 8' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	70 Nos.	300.00	each	21000.00
iii	Lagertroemia flosregini of ht. 5' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	250.00	each	5000.00
iv	Michelia Champa of ht. 5' & above multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	300.00	each	6000.00
v	Pultophorum ferrigenum of ht 6' & above, multi branched, self supported, well developed having fresh and helthy foliage in big size P/bags or E/plots	20 Nos.	280.00	each	5600.00
vi	Chandni single of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	70.00	each	3500.00
vii	Acalypha of different varieties of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	200 Nos.	40.00	each	8000.00
viii	Cassia biflora of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	70.00	each	1750.00
ix	Hamelia Dwarf of ht. 1½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	200 Nos.	80.00	each	16000.00
x	Ixora of different varieties of ht. 2' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	110.00	each	5500.00
xi	Musanda of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	125.00	each	6250.00



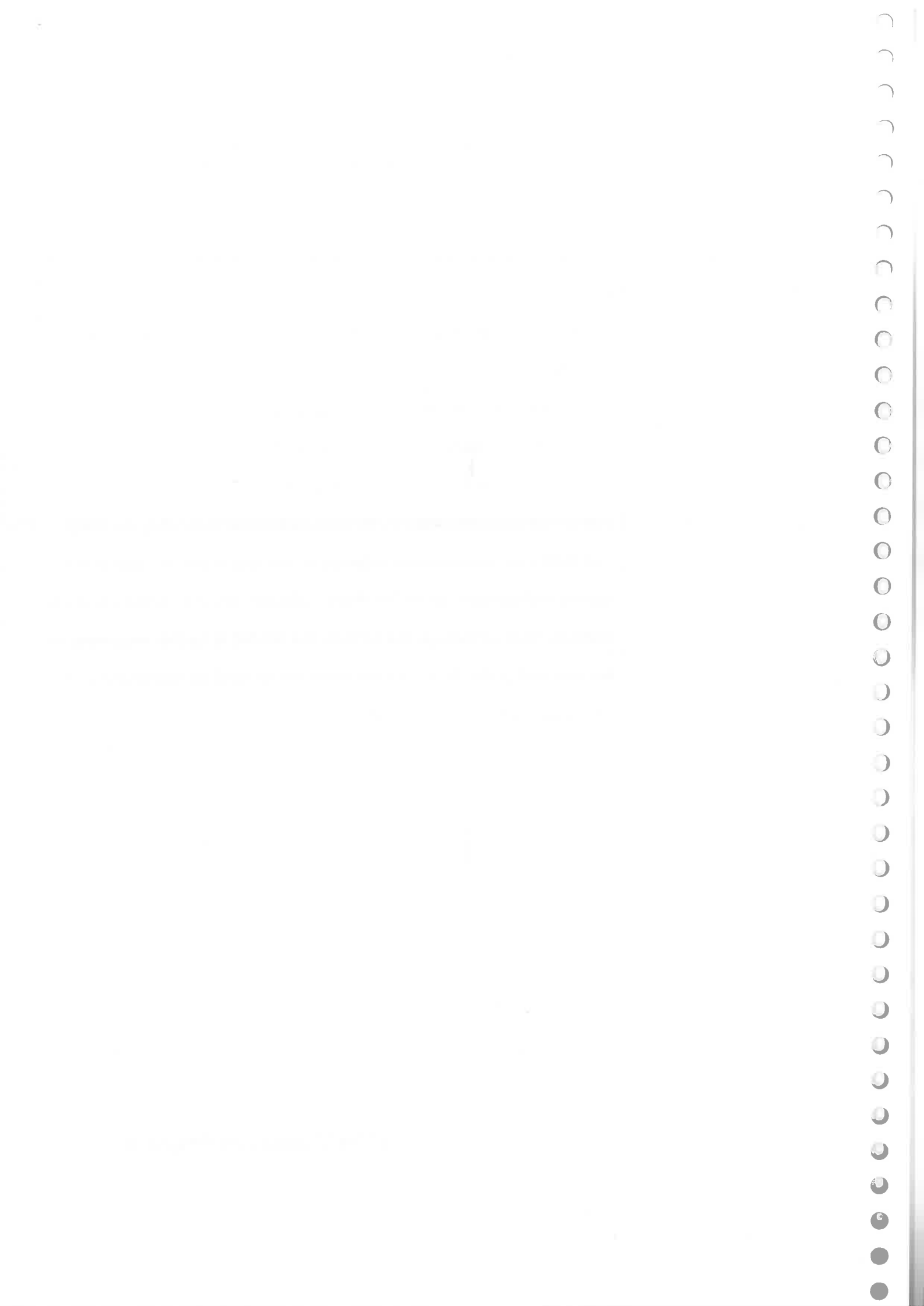
xii	Jatropha of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	70.00	each	3500.00
xiii	Motia of ht. 1½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	70.00	each	3500.00
xiv	Pluneria alba of ht. 5' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	600.00	each	15000.00
xv	Tecoma gauri chaudi of ht. 2½' & above , multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	80.00	each	2000.00
xvi	Bauhinia tomentosa of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	150.00	each	3750.00
xvii	Hibiscus (Hawain) of ht. 2' & above, multi branched well developed having fresh and helthy foliage in big size P/bags or E/plots	50 Nos.	125.00	each	6250.00
xviii	Asparagus of different varieties with multi sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	1500 Nos.	60.00	each	90000.00
xix	Chlorodendron enemy of ht. 1' & above Multi branched, bushy well developed having fresh and halthy faliage in big size P/bags or E/pots.	1500 Nos.	30.00	each	45000.00
xx	China orange of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	25 Nos.	100.00	each	2500.00
xxi	Chandni dwarf of ht. 1' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	1000 Nos.	70.00	each	70000.00
xxii	Dinella variegated having 4-5 sucker well developed having fresh and halthy faliage in big size P/bags or E/pots.	1500 Nos.	60.00	each	90000.00
xxiii	Duranta goldiana of ht. 6" & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots	3000 Nos.	14.00	each	42000.00
xxiv	Dracena (Song of India) of ht. 6" & above Multi branched, bushy well developed in big size P/bags or E/pots.	1500 Nos.	60.00	each	90000.00
xxv	Ficus Panda of ht. 1' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots.	500 Nos.	60.00	each	30000.00
xxvi	Opiopogum green having 10-12 suckers well developed having fresh and halthy faliage in big size P/bags or E/pots.	1500 Nos.	50.00	each	75000.00
xxvii	Syngonium golden with multi suckers well developed having fresh and halthy faliage in big size P/bags or E/pots.	1500 Nos.	80.00	each	120000.00
xxviii	Iresine red of ht. 6" & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots.	2000 Nos.	20.00	each	40000.00
xxix	Bottal palm of ht. 8' & above having circumference of stems at bottom more than 30 cm. well developed having fresh and halthy faliage in big size P/bags or E/pots.	20 Nos.	1000.00	each	20000.00
xxx	Topiary of golden bottle brush of ht. 6' & above having more than 5-6 balls of more than 1' dia well developed having fresh and halthy faliage in big size P/bags or E/pots.	25 Nos.	2800.00	each	70000.00

xxxi	Ficus benjamina/blackii/rejnold plants of ht. 5' & above having circumference of foliage at centre more than 5' well developed having fresh and healthy foliage in big size P/bags or E/pots (20 inch).	60 Nos.	550.00	each	33000.00
xxxii	Cycus palm having 30-35 fresh, lush green leaves of more than 2' length in HDPE bags or trays or pots fresh and helthy.	20 Nos.	3500.00	each	70000.00
xxxiii	Furcaria variegated having 8-10 leaves of length more than 1½' well developed in big size P/bags or E/pots.	50 Nos.	400.00	each	20000.00
xxxiv	Raphis palm of ht. 2' & above having 8-10 suckers well developed having fresh and healthy foliage in big size P/bags or E/pots.	50 Nos.	380.00	each	19000.00
xxxv	Murraya exotica of ht. 2½' & above, multi branched, well developed having fresh and helthy foliage in big size P/bags or E/plots.	1000 Nos.	60.00	each	60000.00
xxxvi	Budded Rose of ht 1.5 ft & above, different varieties multi branched well developed having fresh & helthy foliage in big size p.bags	400 Nos.	120.00	each	48000.00
xxxvii	Canna dwarf of ht 1 ft & above different varieties having proper roots and well developed having fresh and healthy foliage in big size p.bags	250 Nos.	60.00	each	15000.00
19	Compelete maintenace of the entire garden features in the garden area i.e lawn, trees, shurbs, hedge, flower beds, creepers etc. including hoeing ,pruning, replacement of plants, gap filling, watering, mowing of lawn, clipping of hedge, removal of garden waste, applying insecticide, pesticide and furtilizers (When ever required) Top dressing of lawn with good and mannure and maintenace of other garden related works as directed by officer-in-charge. (good earth, mannure, fertilizers, insecticide and pesticide etc. will be provided by the department (Except T&P & stock items)  (3.78 Acre area for 12 months = 3.78 X 12 = 45.36 Acre)	45.36 Acre	7532.70	Per Acre/ Per month	341683.27
<b>Total</b>					<b>5620147.12</b>
<b>Add 5% Contingency Charges</b>					<b>281007.36</b>
<b>Grand Total</b>					<b>5901154.48</b>
<b>Say Rs.</b>					<b>59,01,200.00</b>

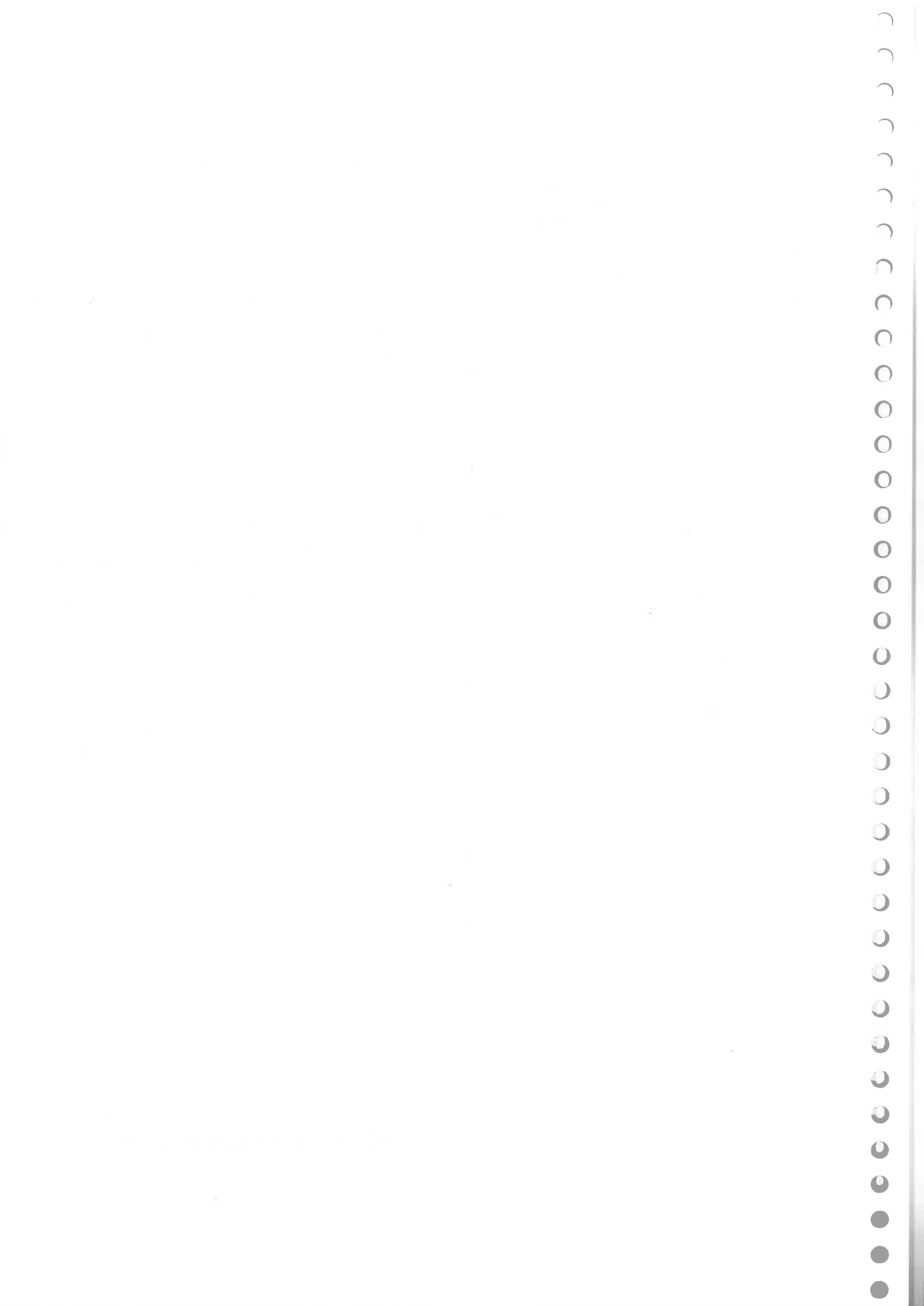
  
**Asstt Director (Hort.)**  
 Jabalpur Hortt. Sub Divn  
 CPWD Jabalpur

  
**Dy. Director (Hort.)**  
 Bhopal Hort. Division  
 CPWD, Bhopal

<b>B&amp;WC/2015: 1.07</b>	<p><b>To discuss the issue related with annual maintenance of existing buildings.</b></p> <p>The following buildings were completed in the year as mentioned against their names.</p> <table border="0"><tr><td>1.</td><td>Core Lab Complex</td><td>May, 2009</td></tr><tr><td>2.</td><td>Hall of Residence -1</td><td>August, 2010</td></tr><tr><td>3.</td><td>Hall of Residence-3</td><td>July, 2011</td></tr></table> <p>The annual maintenance works for these buildings is required to be started. <b>The B&amp;WC is requested to deliberate on the issue and to suggest if the annual maintenance works for these buildings are to be taken up at the Institute level or through the CPWD. The B&amp;WC is further requested to recommend to the Finance Committee for onward recommendation for necessary approval from the BOG.</b></p>	1.	Core Lab Complex	May, 2009	2.	Hall of Residence -1	August, 2010	3.	Hall of Residence-3	July, 2011
1.	Core Lab Complex	May, 2009								
2.	Hall of Residence -1	August, 2010								
3.	Hall of Residence-3	July, 2011								



<b>B&amp;WC/2015: 1.08</b>	<p><b>To discuss the proposal for Food Court at the campus.</b></p> <p>A Food Court is to be developed at the campus which shall be open to students, faculties and their family members.</p> <p><b>The B&amp;WC is requested to deliberate on the issue and to suggest an appropriate location and a suitable agency to run the Food Court.</b></p>
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**B&WC/2015: 1.09**

**To consider the Preliminary cum Detailed Estimate of SITC 04 Nos. STPs of 150 KLD capacity.**

An Preliminary cum Detailed Estimate for an amount of **Rs. 2,06,75,755/- (Two crore six lacs seventy five thousand seven hundred fifty five) (i.e half of the value of the estimate)** for **02 Nos. of STPs** has been received from the CPWD for the above said work. The copy of the preliminary cum Detailed Estimate is annexed as **Annexure B&WC/2015/1/A-6** (Page P- 70 to P- 76).

It was informed to the CE (CZ) CPWD Bhopal during a meeting between Institute authorities and officials from the CPWD, held at IIITM Gwalior on 20.07.2015, that presently only 02 Nos. STPs are required at the campus for the balance portion of laid sewer lines in the campus. It was also informed to the that the sanction. One STP at hostel area has already been communicated to the CPWD. The CE (CZ) CPWD informed that the sanction of half the value of the Preliminary cum Detailed Estimate may be communicated against the instant estimate for balance 02 Nos. STP. It was also informed by the CE (CZ) CPWD that the higher value of the estimate is because of the civil works included in the estimate.

**The B&WC committee is requested to consider the estimate for which the Administrative Approval and Estimate Sanction is to be communicated to the CPWD. The B&WC is further requested to request the Finance Committee to make its recommendation to the BOG for accord of Administrative Approval and Expenditure Sanction for such works.**





**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 6**





सत्यमेव जयते

कायालय मुख्य अभियंता (मध्य अंचल)  
केन्द्रीय लोक निर्माण विभाग  
निर्माण सदन, 52 ए, अरेरा हिल्स, भोपाल - 11  
फोन नं. 0755.2679311-12 फैक्स नं. 2679310  
ईमेल: ceccpwd12@yahoo.com



CPWD

सं. 23(5)/मु.अ.(म.अं.)/EE (E) (P) /2015 / 1716 - 18

दिनांक 25/06/2015

To,  
The Director,  
IIITDM Campus,  
Near Dumna Air port Road,  
Jabalpur (MP)-482005

**Sub:** Preliminary estimate for the work of C/o sewerage treatment plant of 150 KLD capacity with EBR System for IIITDM, Jabalpur (M.P.).


Sir,

Enclosed please find herewith a Preliminary Estimate in duplicate for the above noted work amounting to Rs. 4,13,51,509/- including contingencies for obtaining Administrative Approval & Expenditure Sanction from the Competent Authority.

It is requested that one copy of the estimate duly countersigned in token of acceptance may please be return to this office indicating the necessary head of account to which the cost is debitable.


This issues with the approval of Chief Engineer (CZ), CPWD, Bhopal.

Encl.: P.E. No. 08/CE(CZ)/2015-16 (In duplicate)

  
कार्यापालक अभियंता (वै)(यो),  
म.अं., के.लो.नि.वि., भोपाल

Copy to:

1. The Superintending Engineer (E) BCEC, C.P.W.D., Bhopal. Encl: As above.
2. The Executive Engineer, JPED, C.P.W.D., Jabalpur. Encl: As above.

  
कार्यापालक अभियंता (वै)(यो),  
म.अं., के.लो.नि.वि., भोपाल



सत्यमेव जयते

भारत सरकार  
कार्यालय मुख्य अभियंता (मध्य अंचल)  
केन्द्रीय लोक निर्माण विभाग  
निर्माण सदन, 52 ए, अरेरा हिल्स, भोपाल - 11  
फोन नं. 0755.2679311-12 फैक्स नं. 2679310  
ईमेल: ceczcpwd12@yahoo.com



CPWD

## Preliminary Estimate

Name of work :- Construction of sewerage treatment plant of 150 KLD capacity with EBR system for IIITDM, Jabalpur (M.P.).

Estimated Cost: Rs. 4,13,51,509/- including contingencies.

Head of Account: Deposit work

सहायक अभियंता (वै.)(यो),  
म.अं., के.लो.नि.वि., भोपाल

कार्यपालक अभियंता (वै.)(यो)  
म.अं., के.लो.नि.वि., भोपाल

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**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTMENT**

State - M.P.  
Branch: B & R

Division – JPED, Jabalpur

Detailed Estimate No. : /SE/BCEC/

Name of Work:- Construction of sewerage treatment plant of 150 KLD capacity with EBR system for IIITDM , Jabalpur (M.P.)

Major Head	Minor Head	Detailed Head
<b>Deposit Work</b>		

This Preliminary estimate has been prepared by Er. Sunil Yadav , Executive Engineer , Jabalpur Project Electrical Division CPWD, Jabalpur and processed by Er. N.S. Rawat Executive Engineer (E) Central Zone CPWD, Bhopal for the probable cost Rs. 4,13,51,509/-(Rs. Four Crore Thirteen Lakh Fifty One Thousand Five Hundred Nine Only) including 3% contingencies.

**// REPORT//**

**HISTORY :-** This Preliminary estimate amounting to Rs. 4,13,51,509/- including 3% contingencies has been framed to cover the probable cost of above mentioned work to obtain administrative Approval and expenditure sanction from the component authority.

**DESIGN & SCOPE:-** The 4 Nos. STP of 150KLD capacity with EBR system.


The preliminary estimate has been framed based on actual quotation having equalization tank treated filtered tank etc. and RCC tank. The filter water will be reused for horticulture operation. The EBR technology is having following advantage over the conventional MBBR technology -

1. Requires lesser space(approx 40%) compare to any other technology.
2. Low power consumption (approx 30%) compare to any other technology.
3. Sustainable technology in cold and hot climate.
4. Higher MLSS formation in lesser time.
5. High quality treated water “ No deformation on Storage.
6. This system sense automatically through the Auto device which operate the Deionization ratio in the different stages. Through this system EBR Reactor self analyze through its own intelligent auto detection system.


**SPECIFICATIONS:-** The work shall be carried out as per CPWD specification up to date correction slip & manufacturer specification.


**RATES** : Based on Market Rate  
**COST** : 4,13,51,509/-i/c 3% contingencies  
**T&P** : No special T & P required.  
**LAND** : Available with client department .  
**W.C. ESSTT.** : Shall be met out of contingencies  
**METHOD** : By contract after call of tenders  
**TIME** : 6 Months after award of tender.


Assistant Engineer(E)  
JCESD, CPWD, Jabalpur

  
Assistant Engineer (E) (P)  
BCEC, CPWD, Bhopal

Assistant Engineer (E) (P)  
CZ, CPWD, Bhopal

  
Executive Engineer(E)  
JPED, CPWD, Jabalpur

  
Executive Engineer (E) (P&A)  
BCEC, CPWD, Bhopal

  
Executive Engineer (E) (P)  
CZ, CPWD, Bhopal

## GENERAL ABSTRACT OF COST


**Name of work:- Construction of sewerage treatment plant of 150 KLD capacity with EBR system for IIITDM , Jabalpur (M.P.)**

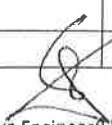
S.No.	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
n/w	<p>Supplying of Sewage Treatment Plant based on EBR(Electromagnetic Bio Reactor) With sewage handling capacity 150 KLD All the equipment, Piping ,pumps ,blowers &amp; electrical are to be housed on a platform and each treated water tanks shall also be connected with each others i/c MS puddle flanges, inlet, outlet, overflow vents, MS covers, drain channel with MS grading strip to house pumps etc. complete in all respect as per technical specifications and parameters given below.</p> <p>discharge standard after treatment ;</p> <p>pH : 6.0-8.5</p> <p>BOD : Less than 15 Mg/L</p> <p>COD : Less than 25 Mg/L</p> <p>S.Solids : Less than 10 Mg/L</p> <p>Oil &amp; Grease : NIL.</p>				
1	Supplying of centrifugal type mono block, self priming with impeller and completed with valves suction and delivery headers , mounting skid with fan cooled induction motor with capacity 10cum/hr. @ 5 M head.	8	No	26000	208000
2	Supplying of Air Grid. The aeration tank should be equipped with air grid for handling 150 m3/hr or suitable air flow at 0.8 kg max. press. & 40 deg. cent max temp., supply sufficient air for the treatment process & maintain adequate circulation velocity, prevent solids from settling. MOC air grid should be suitable to handle flow, pressure and temperature of the air flow.	4	SET	245000	980000
3	Supplying of Air Blower twin lube , positive displacement type , rotator air blowers of suitable type with V-Belt drive, vfd, belt guard, base plate inlet filter silencer, check valve, relief valve, pressure gauge and all other necessary accessories 150 cum/hr@ 3 m. head or suitable capacity.	8	Nos.	205000	1640000
4	Supplying of pumps with suitable size submerged type along with dust proof motor set of capacity 10 cum/hr @15 M head. Complete with valves, header, flanges, mounting skid etc.	8	No.	45200	361600
5	Supplying of non-clog, self priming pumps complete with valves, suction & delivery head with fan cooled induction motor. capacity 10 cum /hr @5M. head. Complete with valves, header, flanges, mounting skid etc.	8	Nos.	45500	364000
6	Providing of Bio chamber with bio reaction , settler ,solar plate sludge dryer and electro -chlorination with auto process with sewage handling capacity of 100 kld. Should be interconnected with cake chipper with auto operation in series as bio reaction-settler-dryer.	8	Nos	615000	4920000
7	Providing of regeneration chamber with Tx series v-guard section with having capacity 150 KLD with painted body complete (inside & outside)through anti corrosive paint for removal of precipitates . Outer portion shall be highly smooth finish. Reaction and digestion capability shall be 79% per cycle supported by ionic change for low and high BOD as per site requirement. Regeneration cycle shall be of 720000 ltrs should be non derivative with all type of fittings i/c two way system. It shall be capable for precipitation with auto cake chipper and collector, connected with bio chamber for auto operation.	8	Nos.	915500	7324000


S.No.	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
8	Supplying of Course, stainless steel bar screen of 1100 x 900 mm or suitable size one working one standby shall have opening 5 mm size placed at 50 degree slope, shall have capacity 4 times of average flow.	4	set	47500	190000
9	Supplying of non-clog type pumps complete with valves, mounting skid, suction and delivery head with an cooled induction motor, capacity 10 cum/hr 5 M, head.	8	No	32000	256000
10	Supplying of electro-magnetic bio reactor, IBZ of capacity 150KLD (1x1) self system complete unit of conical reactor. It should be based on single operation of emf. High frequency dish type complying with GMP, Efficiency of recovery 78%, power control through VPCB With electromagnetic reactor, low voltage DC operation, continuous exchange, magnetic induction intensity should be uniform through the chambers of producer and receiver, EMF @ 0.9% per sqcm	8	set	915500	7324000
11	<p>Fabrication, supplying of cubical type compartmentalized L.T. panel made out of 14 SWG CRCA sheet, front openable, dust and vermin proof duly painted with powder coated paint having 4 strip aluminum Bus Bar of suitable capacity duly sleeved with heat shrinkable sleeve i/c</p> <p>connection, interconnection with aluminum strip/ copper flexible wire etc. complete as reqd. i/c following switchgears in existing cubical panel (Size : Depth of panel 300mm) INCOMER: Area should not be less than 2.50 sq mtr, CPRI approved)</p> <p>a). FP MCCB 100 Amp. 25 KA Ics-1cu (Thermal magnetic release) Make : GE/C&amp;S/Havells/Standard)-</p> <p>b). 0-500 Volt, Volt meter 96X96mm with S-S &amp; CT's</p> <p>(Make: AE/Rishab)-1 set.</p> <p>c). 0-100 Amp. Amp meter 96X96mm with S-S</p> <p>(Make: AE/Rishab)-1 set</p> <p>d). Indicating Lamp</p> <p>(Make: L&amp;T/BCH)-1 set</p> <p>e ) EDI Module Controller- make - IBZ</p> <p>f) Two way signal port - IBZ</p> <p>g) Data analoger - IBZ</p> <p>i) On line Ph controller</p> <p><b>OUTGOING</b></p> <p>a). 32 Amp TPN MCB</p> <p>(Make: C&amp;S/Havells/GE/Standard)-8 No's.</p> <p>b). D.O.L starter 5 Hp</p> <p>(Make: C&amp;S/L&amp;T/BCH)-2 no's.</p> <p>c). D.O.L starter 5Hp</p> <p>(Make: C&amp;S/L&amp;T/BCH)-6 No's.</p>	4	No	572000	2288000
12	Supplying of high volter along with displayer set. It shall be operate through SMPS /AMPS (switch mode power supply Or automatic power supply). High - volter shall be connected with all type of accessories capable to grout in any surface. Digital displayer should be movable type operated on single-phase current supply. Analoger shall be installed inside the system	4	No.	267900	1071600




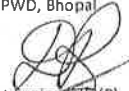
S.No.	DESCRIPTION	UNIT	RATE	AMOUNT	
13	Supply of post Bio reactor, EDI with following specifications:- MOC: ODMS, IDSS DIA : 1000MM HEIGHT: 1500MM TEMP: 50-60 Deg cent. RETENTION : 0.31Hrs	8	Nos.	755900	6047200
<b>CIVIL WORK DETAIL:-</b>					
1	Equalization tank of 25 cum complete with Excavation, reinforce cement concrete, all material, labour, machinery, curing, all lead and lifts, pillars, posts, struts, plastering, water proofing, T& P etc complete as required	4	job	580000	2320000
2	Treated water tank of 15 cum. complete with Excavation, reinforce cement concrete, all material, labour, machinery, curing, all lead and lifts, pillars, posts, struts, plastering, water proofing, T& P etc. complete as required	4	job	446000	1784000
3	Construction of control room of size 3m x 4m and 3.5m height with brick work complete with plastering and white washing etc. complete as required.	4	job	211800	847200
4	As per the CPWD specification -Constructing fried masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1'4 (1 element : 4 coarse sand) in side cement plaster 0.91m deep with SFRC cover & frame (heavy Duty HD-20 grade designation)	24	nos	67000	1608000
5	As per the CPWD specification - As per the CPWD specification - the sewer pipe connecting from source to the STP:- Providing, laying and joining glazed stoneware pipes SP-I with stiff mixture of cement mortar in the proportion of 1:1 (cement : fine sand) including testing of joints etc. -200smm.orAs per the requirement.	80	Mtr	2700	216000
<b>G.TOTAL</b>					39749600
				Labour Cess @ 1%	397496
				Total	40147096
				Add Contingencies @ 3%	1204412.88
				<b>Total</b>	<b>41351508.88</b>
				<b>Say Rs.</b>	<b>41351509</b>

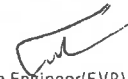
  
Assistant Engineer(E)  
JCESD, CPWD, Jabalpur

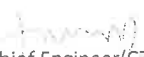
  
Executive Engineer(E)  
JPED, CPWD, Jabalpur

  
Assistant Engineer(E)(P)  
BCEC, CPWD, Bhopal

  
Executive Engineer(E)(P&A)  
BCEC, CPWD, Bhopal

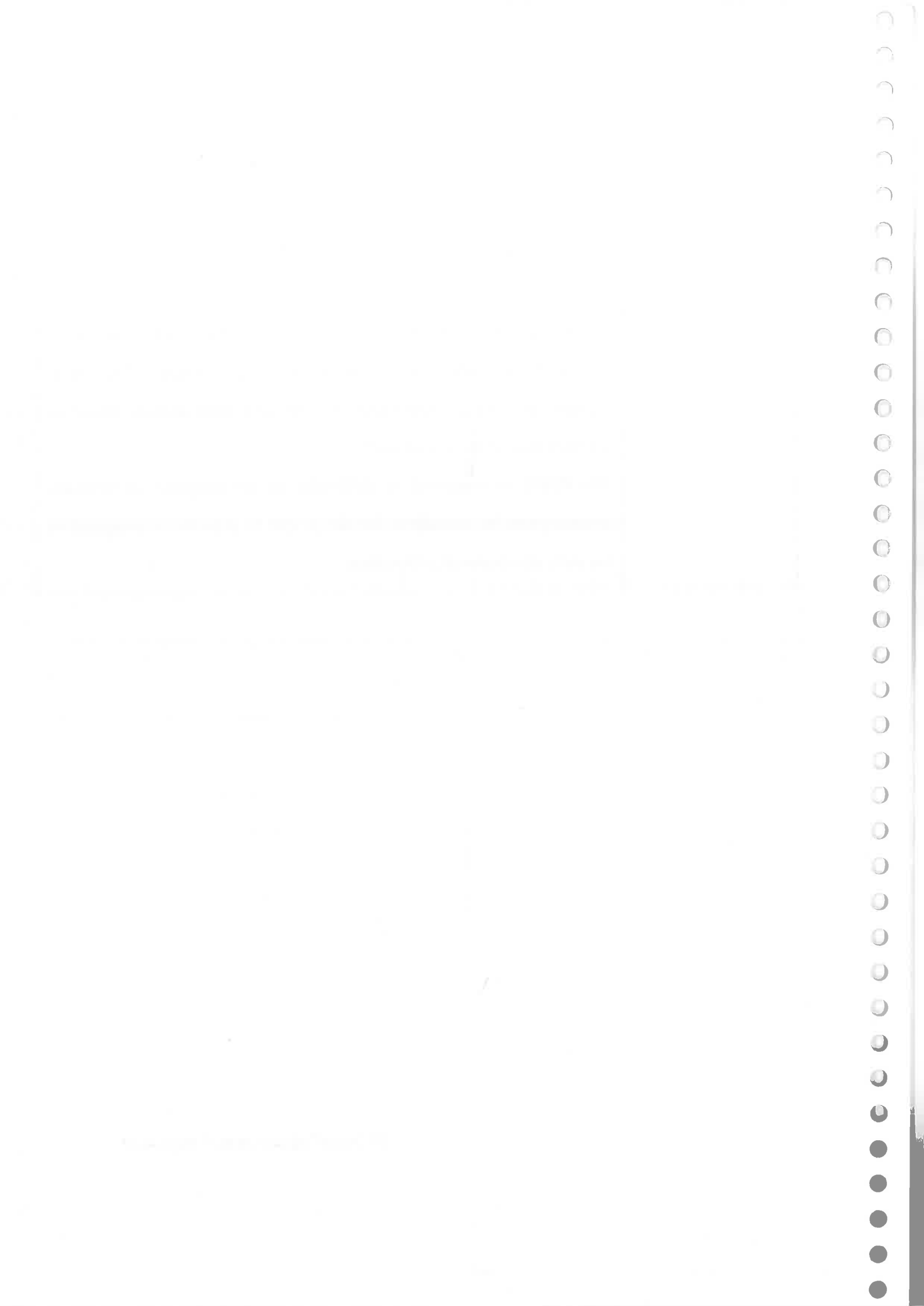
  
Assistant Engineer(E)(P)  
CZ, CPWD, Bhopal

  
Executive Engineer(E)(P)  
CZ, CPWD, Bhopal

  
Chief Engineer(CZ)  
CPWD, Bhopal



<b>B&amp;WC/2015: 1.10</b>	<p><b>To discuss on the progress of the furniture procurement committees at the Institute.</b></p> <p>Some committees have been constituted at the Institute for procurement of furniture for completed buildings like Visitors' Hostel, Lecture Hall &amp; Tutorial Complex etc. The progress report of these committees shall be placed on the table during the meeting itself.</p> <p><b>The B&amp;WC is requested to deliberate on the progress on furniture procurement for completed buildings and to provide its suggestions for early procurement of furniture.</b></p>
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<b>B&amp;WC/2015: 1.11</b>	<p><b>Reporting items.</b></p> <ol style="list-style-type: none"><li><b>1. Works taken up at the Institute level since 20th meeting of B&amp;WC held on 06.01.2014:</b>  A list of minor works executed / under execution at the Institute level for which A/A &amp; E/S was accorded by the Director / Dean P&amp;D is annexed in <b>Annexure B&amp;WC/2015/1/A-7</b> (Page P- 79 to P- 80).</li><li><b>2. Ratification of the decision taken by the Director to convert the bitumen pavement to the cement concrete pavement in the work of C/o. Road Network (Phase – II) i/c drainage, rain harvesting, cable &amp; DWC for streetlight etc. at PDPM IIITDM, Jabalpur.</b>  On suggestions received from the CE (CZ) CPWD, Bhopal for conversion of the proposed bitumen pavement into cement concrete pavement with a justification of longer life of the later, the Director provided the approval for the same with a condition to complete the works within the sanctioned value of A/A &amp; E/S  The <b>B&amp;WC</b> is further requested to recommend to the Finance Committee for onward recommendation for necessary ratification of the decision from the BOG.</li></ol>
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**B&WC 21<sup>st</sup> Meeting**

**2015 / 1<sup>st</sup> Meeting**

**Annexure – 7**





**List of Minor Works for which A/A & E/S**  
**Accorded by the Director & Dean (P&D) PDPM-IIITDM, Jabalpur**  
**During the period January 01, 2014 to 31 July, 2015**

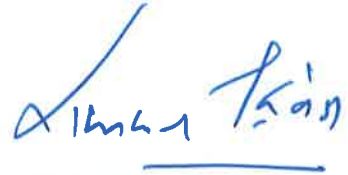
Sl. No.	Name of Works / Projects	Amount A/A. & E/S.
1	SITC of Water Purifier at Lecture Hall & Tutorial Complex of IIITDM Jabalpur.	1,97,000/-
2	P/F M.S.Grills in openings of existing ornamental boundary wall (remaining portion) and miscellaneous repair works at PDPM IIITDM Jabalpur.	13,94,716/-
3	Supplying and Installation of Centralised Water Softener near RCC OH tank at PDPM IIITDM Jabalpur.	11,16,118/-
4	Renovation of Toilets at Hall of Residence-1 of PDPM IIITDM, Jabalpur.	3,65,018/-
5	Aluminum Partition for making Labs at L-7 of PDPMIIITDM Jabalpur.	3,64,657/-
6	P/F Aluminium grill and PVC door shutters at Hall of Residence-I.	32,749/-
7	Making platform and M.S. enclosure for water cooler at Hall-I of PDPM IIITDM Jabalpur.	41,118/-
8	Removing and refixing of aluminum partition at Hall of Residence-I & Workshop annexi.	23,403/-
9	SITC of Water Purifier at Mess & Dining Hall of PDPM IIITDM Jabalpur.	1,97,000/-
10	Supply of good earth to develop Football fields.	1,14,961/-
11	P/F Aluminium partition for making chambers (15 Nos.) at L-8.	13,72,285/-
12	Supply and fixing of toilet fittings for Hall-3	34,298/-
13	Mosquito and pest control treatment at the buildings of PDPM IIITDM Jabalpur (for 2015).	2,83,571/-
14	P/F M.S. door with grill at the terrace of Hall of Residence-I, III & IV of PDPM IIITDM Jabalpur.	2,56,417/-
15	SITC of Water Purifier at Core Lab Complex of PDPM IIITDM Jabalpur.	1,97,000/-
16	Providing Bricks and Sand at Site for making partition wall to install softener plant..	61,787/-
17	Making M.S. stair for sub-station building.	35,055/-
18	Providing of M.S. Tree Guard (100 Nos.) at PDPM IIITDM Jabalpur.	3,54,374/-

Sl. No.	Name of Works / Projects	Amount A/A. & E/S.
19	Replacement of broken sheet of OTS roofing at Hall-3 of PDPM IIITDM Jabalpur.	78,296/-
20	Painting of Facilities Block and all toilets (only) of Hall of Residence-I of PDPM IIITDM Jabalpur.	1,73,685/-
21	Providing of 02 Nos. 5-HP submersible pump set for V. H. and NR-II at PDPM IIITDM Jabalpur.	1,16,820/-
22	Aluminum partition for making faculty chambers at LHTC of PDPM IIITDM Jabalpur.	2,86,834/-
23	P/F stainless steel Smoke Exhaust System with filter, ducting, blower etc. at Mess & Dining Hall (G.F. & F.F.) of PDPM IIITDM, Jabalpur.	8,83,642/-
24	Painting (external) on Grit Wash of Core Lab Complex, Workshop anexi, L-7, L-8, L-9 & Mechatronics Lab of PDPM IIITDM Jabalpur.	9,43,339/-
25	P/F barbed wire fencing to raised the height of existing brick masonry boundary wall behind the Hall-3.	1,84,136/-
26	Supply of sanitary & water supply fittings for day to day maintenance of civil work.	63,985/-
27	SITC of water purifier-2 at Mess & Dining Hall of PDPM IIITDM Jabalpur.	1,97,000/-
28	Supply of auto closing concealed urinal flush valve for toilets of Core Lab Complex.	37,800/-
29	SITC of new 10HP submersible pump for bore behind Core Lab Complex and 01 No. monoblock pump for the Institute.	70,000/-
30	Supply of Dustbin at Mess & Dining Hall of PDPM IIITDM Jabalpur.	98,769/-
31	Providing & laying of CPVC pipeline for supplying of RO water and disposal of waste water at Core Lab, Mess & Dining Hall and replacement of damage pipeline near ATM building.	99,974/-
32	P/F Sun film on the glass of windows of Halls of Mess & Dining Hall of PDPM IIITDM Jabalpur.	28,592/-
33	Extension of Canteen-1 (hexagonal) of PDPM IIITDM Jabalpur	3,42,994/-
<b>Total Amount</b>		<b>1,00,47,393/-</b>

Say Rs. 100.47 Lacs

B&WC/2015: 1.12

Any other Item with the Permission of the Chair.



(R. P. Dwivedi)

Officer-In-Charge Estate

Registrar

Secretary, B&WC





