

GURU GHASIDAS VISHWA VIDYALAYA,

BILASPUR (C.G.) 495009



(A Central University Established by the Central University Act, 2009 N0.25 of 2009)

Engineering Section- Phone 260207

Tender Notice No 06/Engg./2010, Dt. 08/01/2010

TENDER-FORM

NAME OF WORK

कैम्पस डेवलपमेंट के अंतर्गत भवन / सड़क / खेल
मैदान / पार्किंग / शेड / पार्टीशन / फ्लोरिंग / वाटर
प्रूफिंग / सिलिंग / सेनेटरी वाटर सप्लाई से संबंधित
रिनोवेशन एवं लघु स्पेशल निर्माण कार्य

Name Of Contractor

Due date of receipt of Tender 30-01-2010

Up to 3.00 p.m.

(Only by Registered post/speed post services)

Cost of Tender Form

1000/-

(कृपया निविदाकर्ता प्रत्येक पृष्ठ पर सील लगावें एवं हस्ताक्षर करें)

GURU GHASIDAS VISHWAVIDYALAYA,

BILASPUR (C.G.) 495009

Tender Notice No 06/Engg./2010, Dt. 08/01/2010

CERTIFICATE OF TENDER FORM

It is hereby certified that:

- 01- This tender form contains 66 of pages from SI. No. 01 to 66 including this page.
- 02- The last date & time for issue of the tender form to the eligible contractor according to notification 06/ Engineering/2010/dated 08-01-2010 of this tender form.
- 03- Sealed tenders should reach the office chamber of the under signed latest by 3.00 P.M. on 30-01-2010 and shall be opened on the same working day at 4.00 p.m.
- 04- No word /sentence is being corrected/inserted, omitted or overwritten in this tender documents.

UNIVERSITY ENGINEER
Guru Ghasidas Vishwavidyalaya
Bilaspur (C.G.)

REGISTRAR
Guru Ghasidas Vishwavidyalaya
Bilaspur (C.G.)

PRESS TENDER NOTICE

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)

क्र. 06/यां0/2010 बिलासपुर,

दिनांक 08/01/2010

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0) की ओर से निम्नलिखित सामग्री प्रदाय/कार्य हेतु दिनांक 30/1/10 को 3.00 बजे तक रजिस्टर्ड/स्पीड पोस्ट के माध्यम से ही मुहरबंद निविदा आमंत्रित की जाती है। निविदा प्रपत्र दिनांक 13/01/10 से 27/01/10 तक किसी भी कार्यालयीन दिवस पर विश्वविद्यालय यंत्री, गुरु घासीदास विश्वविद्यालय के कार्यालय में आवेदन पत्र के साथ आयकर, वाणिज्यकर, सर्विस कर उपयुक्त श्रेणी में ठेकेदारी पंजीयन/अधिकृत विक्रेता/अनुभव प्रमाण पत्र प्रस्तुत कर प्राप्त किया जा सकता है, परंतु ऐसे निविदा प्रपत्र मूल्य की राशि 1000.00 डी.डी. के रूप में निविदाकर्ता को निविदा के साथ जमा करना होगा। निविदा दिनांक 30/01/10 को सायं 4.00 बजे प्रशासनिक यंत्री कार्यालय से कार्यालयीन दिवसों में संपर्क कर प्राप्त की जा सकती है। निविदा प्रपत्र की राशि रु0 1000.00 डी.डी. (वापसी योग्य नहीं) के रूप में (कुलसचिव के नाम से देय) ली जावेगी।

क्र.	कार्य का नाम	ठेके की अनु.राशि	अमानत राशि	समय अवधि	ठेकेदार की श्रेणी
1	जल प्रदाय मरम्मत/सेने. फीटिंग सामग्रियों प्रदाय कार्य	10 लाख	30,000	01 वर्ष के लिये	अधिकृत /डिस्ट्रीब्यूटर/ निर्माता फर्म
2	भवन निर्माण सामग्री प्रदाय कार्य	04 लाख	12,000	---	---
3	कारपेंटरी सामग्री प्रदाय कार्य	05 लाख	15,000	---	---
4	रंग-पेंट सामग्रियों प्रदाय कार्य	10 लाख	30,000	---	---
5	विद्युत सामग्रियों प्रदाय कार्य	15 लाख	45,000	---	---
6	ए.सी./वाटर कूलर का (AMC) एवं कूलर रिपेयरींग कार्य	07 लाख	21,000	---	अनुभवी फर्म
7	सबमर्सिबल पंप प्रदाय एवं मरम्मत कार्य	03 लाख	9,000	---	पंप के डीलर
8	लिलोनियम फ्लोरिंग कार्य	03 लाख	9,000	---	अधि.डीलर/डिस्ट्री./निर्माता फर्म
9	ट्रांसफार्मर प्रदाय एवं लगाने का कार्य (2U-200KVA)	05 लाख	15,000	---	CPWD/CGPWD/CSEB/MES/BSNL / RAILWAY उचित श्रेणी में पंजीकृत ठेकेदार
10	विद्युत कार्य लघु एवं स्पेशल	15 लाख	30,000	---	---
11	फारेस्ट्री टीचिंग विभाग के अंतर्गत ग्लास हाउस निर्माण कार्य	05 लाख	15,000	---	CPWD/CGPWD/CSEB/MES/BSNL / RAILWAY उचित श्रेणी में पंजीकृत ठेकेदार एवं समान कार्य का अनुभवी
12	कैम्पस डेवलपमेंट के अंतर्गत भवन/सड़क/खेल मैदान/ पार्किंग /शेड/पार्टीशन/फ्लोरिंग/वाटर प्रूफिंग/सिलिंग/सेनेटरी वाटर सप्लाई से संबंधित रिनोवेशन एवं लघु स्पेशल निर्माण कार्य	149 लाख	2,98,000	---	CPWD/CGPWD//MES/BSNL/ RAIL WAY उचित श्रेणी में पंजीकृत ठेकेदार

देखें वेबसाइट- www.ggu.ac.in

कुलसचिव

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)
GURU GHASIDAS VISHWA VIDYALAYA, BILASPUR(C.G.)

निविदा आमंत्रण सूचना

NOTICE INVITING TENDER

1. Percentage rate tenders are invited on behalf of the Registrar, G.G.V.Bilaspur from the approved and eligible contractors of CPWD and those of approved list of BSNL, M.E.S., Railways and C.G.State P.W.D. for the work of : - कैम्पस डेव्लपमेंट के अंतर्गत भवन/सड़क/खेल मैदान / पार्किंग / शेड / पार्टीशन/ फ्लोरिंग /वाटर प्रूफिंग/सिलिंग/सेनेटरी वाटर सप्लाई से संबंधित रिनोवेशन एवं लघु स्पेशल निर्माण कार्य ।

ठेकेदारों का पंजीकरण निविदाओं की बिक्री की अंतिम तिथि को वैध होना चाहिए । यदि केवल निविदाओं की बिक्री की अंतिम तिथि बढ़ायी जाती है, तो ठेकेदार का पंजीकरण निविदाओं की बिक्री की मूल तिथि को वैध होना चाहिए। यदि आवेदन प्राप्त की अंतिम तिथि एवं निविदाओं की बिक्री की तिथि, दोनों बढ़ायी जाती है, तो ठेकेदार का पंजीकरण दोनों तिथियों में से कोई यानी निविदाओं की बिक्री की मूल तिथि या निविदाओं की बिक्री की बढ़ायी गई तिथि, को वैध होना चाहिए ।

The enlistment of contractors should be valid on the last date of sale of tender. In case only the last date of sale of tender is extended, the enlistment of contractor should be valid on the original date of sale of tenders. In case both the last date of receipt of application and sale of tenders are extended, the enlistment of contractor should be valid on either of the two dates i.e. original date of sale of tender or on the extended date of sale of tenders.

- 1.1 कार्य की अनुमानित लागत रु. 149 लाख है तथापि, यह अनुमानित लागत मोटे तौर पर एक मार्ग निर्देश मात्र है ।
The work is estimated to cost Rs. 149 lakhs this estimate, however, is given merely as a rough guide.

- 1.1.1 मिश्रित लागत वाली निविदा आमंत्रण सूचना को अनुमोदित करने वाला तथा मुख्य डिस्प्लेन का सक्षम प्राधिकारी, निविदाएं मंगवाने के लिए निविदा आमंत्रण सूचना का समेकन करेगा और वह उस मंडल को भी नामित करेगा जो निविदाएं आमंत्रित करने से संबंधित सभी मामलों को डील करेगा। मिश्रित निविदा के मिश्रित अनुमान की लागत को दर्शाने के साथ-साथ प्रत्येक घटक की अलग-अलग अनुमानित लागत का उल्लेख भी किया जाए । निविदादाता की पात्रता, विभिन्न घटकों की लागत को मिलाकर मिश्रित अनुमानित लागत के अनुरूप होगी ।

The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the tenders. He will also nominate Division which will deal with all matters relating to the invitation of tenders.

For composite tender, besides indicating the combined estimated cost put to tender, should clearly indicate the estimated cost of each component separately. The eligibility of tenderer will correspond to the combined estimated cost of different components put to tender.

- 1.2 Tender will be issued to eligible CPWD registered contractors. Non CPWD registered contractors and CPWD contractor registered in class II shall also be eligible provided they produce definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-

three similar works each of value not less than **40% of estimated cost** or two similar works each of value not less than **50% of estimated cost** or one similar work of value not less than **80% of estimated cost** in the period of last seven years ending **30.11.09** (Similar work' means 'Building works with RCC framed structure with or without electrical works). The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of receipt of applications for tender.

2. सफल निविदाकारों के साथ, निर्धारित निविदाकार उक्त प्रपत्र जो करार का हिस्सा होगा, निविदाकार उक्त प्रपत्र जो करार का हिस्सा होगा के विभिन्न निबंधन एवं शर्तों के अनुसार अपनी दरें बतायेगा।
Aggreement shall be drawn with the successful tenderer on standard form. Tenderer shall quote his rates as per various terms and conditions of the said form, which will be part of agreement.
3. दर की वैधता अनुबंध की तिथि से 12 माह के लिये होगी।
validity of rate is for 12 months from date of agriment.
4. कार्य हेतु कार्य स्थल उपलब्ध है।
The site for the work is available.

अथवा Or

कार्य हेतु कार्यस्थल नीचे लिखे अनुसार भागों में उपलब्ध करा दिया जाएगा :-

The site for the work shall be made available in parts as specified below:- #

5. प्रपत्र जारी करने हेतु आवेदन 27.01.2010 (शाम 5.30 बजे तक) प्राप्त किए जाएंगे तथा निविदा दस्तावेज 27.01.2010 (शाम 5.30 बजे तक) जारी किए जाएंगे। विश्वविद्यालय की वेब साइट से फार्म प्राप्त करने के लिये कोई अंतिम तिथि नहीं है।
Applications for issue of forms shall be received by 27.01.10 (5.30 PM) and tender documents shall be issued by 27.01.10 (5.30PM). There is no last date for downloading tender form from University website.

रेखांक, विनिर्देश, कार्य के विभिन्न वर्गों के लिए मात्राओं की अनुसूची के सहित निविदा कागजात एवं ठेके की शर्तों का सेट जिनका उस ठेकेदार द्वारा अनुपालन किया जाना है, जिसकी निविदा स्वीकृत हो जाए तथा अन्य आवश्यक कागजात '.. से '.. तक रविवार एवं सार्वजनिक छुट्टियों को छोड़कर, प्रतिदिन कार्यालयीन दिवस के बीच विश्वविद्यालय, बिलासपुर के कार्यालय में देखे जा सकते हैं। मानक प्रपत्र को छोड़कर, निविदा कागजात उक्त कार्यालय से ऊपर निर्दिष्ट समय के दौरान निविदा की लागत के तौर पर रु. 1,000/- की डी.डी. से भुगतान कर प्राप्त किए जा सकेंगे।

Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen in the office of the **University Engineer, Guru Ghasidas University, Bilaspur(C.G.)** between working hours from 13-01-10 to 27.01.10 everyday except on Sundays and Public Holidays. Tender documents, excluding standard form, will be issued from his office, during the hours specified above, on payment of Rs. **1,000/-** in cash as cost of Tender.

- 6- The tender and the earnest money shall be placed in separate sealed envelopes each marked "Tender" and "Earnest Money" respectively.
7. The contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (five percent) of the tendered amount within the period specified in schedule 'F'. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at call receipt of any scheduled Bank / Banker's cheque of any scheduled Bank / Demand Draft of any scheduled Bank / Pay order of any scheduled bank (in case guarantee amount is less than Rs.1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule "F" including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
8. कार्य का व्यौरा इस प्रकार है ।
The description of the work is as follows: कैम्पस डेवलपमेंट के अंतर्गत भवन/सड़क/खेल मैदान /पार्किंग / शेड / पार्टीशन/फ्लोरिंग/ वाटर प्रूफिंग/सिलिंग/सेनेटरी वाटर सप्लाई से संबंधित रिनोवेशन एवं लघु स्पेशल निर्माण कार्य।

निविदाकारों द्वारा जाँच के लिए कार्यों से संबंधित अन्य नक्शों तथा कागजातों की प्रतियां उपर्युक्त अधिकारी के कार्यालय में खुली रहेगी

Copies of other drawings and documents pertaining to the works will be open for inspection by the tenderers at the office of the above mentioned officer.

निविदाकारों को सलाह दी जाती है कि वे निविदा प्रस्तुत करने के पहले कार्यस्थल एवं उसके आस पास की जगह, जमीन की प्रकृति एवं अनमूदा (जहां तक व्यवहार्य हो), कार्य स्थल का रूप एवं प्रकृति, कार्य स्थल तक पहुंचने के साधन, स्थान जो उन्हें चाहिए उसका निरीक्षण व जाँच कर लें तथा जोखिम, आकस्मिकता एवं अन्य परिस्थितियों से, जो निविदा को प्रभावित कर सकती हैं, संबंधित आवश्यक जानकारी स्वयं प्राप्त कर, संतुष्ट हो लें। यह माना जायेगा कि निविदाकार को कार्यस्थल के बारे में पूरी जानकारी है, चाहे उसने इसका निरीक्षण किया हो या नहीं, तथा बाद में किसी भ्रूँति या अन्य बातों के लिए कोई अतिरिक्त प्रभार अनुमत नहीं होगा। कार्य निष्पादन हेतु सभी प्रकार की सामग्री, औजार एवं संयंत्र, जल, बिजली लाने के साधन, कामगारों के लिए सुविधाएं तथा अन्य अपेक्षित सेवाओं का प्रबन्ध करने तथा उनके रख रखाव का उत्तरदायित्व स्वयं निविदाकार का होगा, जब तक अन्यथा विशेष रूप से करार में इसका उल्लेख न किया गया हो। निविदाकार द्वारा निविदा प्रस्तुत करना यह सूचित करता है कि उसने इस सूचना एवं अन्य सभी करार-दस्तावेजों को पढ़ लिया है तथा उसे किए जाने वाले कार्य का अभिप्राय एवं विनिर्देशों, षर्तों व दरें जिन पर सरकार द्वारा उन्हें सामान, औजार एवं संयंत्र आदि दिए जाएंगे तथा स्थानीय स्थितियां और अन्य कारक जो कार्य में निष्पादन पर प्रभाव डालें, के बारे में पूरी जानकारी है ।

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed.

The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant. etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

9. विश्वविद्यालय न्यूनतम या किसी अन्य निविदा को स्वीकार करने के लिए अपने आप को आबद्ध करता है और प्राप्त हुए किसी भी निविदा या सभी निविदाओं को बिना कारण बताए अस्वीकार करने का अधिकार अपने पास सुरक्षित रखता है। ऐसी सभी निविदाओं को जिनमें विहित शर्तें पूरी नहीं की गई हों अथवा निविदाकार द्वारा सशर्त छूट दिए जाने सहित किसी शर्त को रखा गया हो, अस्वीकार कर दिया जाएगा।

The GGV does not bind itself to accept the lowest or any other tender, and reserves to itself the authority to reject any or all of the tenders received without the assignment of any reason. All tenders, in which any of the prescribed conditions are not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected”.

10. निविदाओं के मामले में किसी भी प्रकार के प्रत्यक्ष या अप्रत्यक्ष प्रेरण का पूर्णतया निषेध है तथा उन ठेकेदारों की निविदाएं, जो प्रेरण का सहारा लेंगे, अस्वीकार कर दी जाएंगी।

Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

11. विश्वविद्यालय पूरी निविदा या उसके किसी भाग को स्वीकार करने का अधिकार अपने पास सुरक्षित रखते हैं तथा निविदाकार, कथित दर पर निष्पादन के लिए बाध्य होगा।

The GGV on behalf of the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

12. ठेकेदार को विश्वविद्यालय में, (उद्यान / नर्सरी कैटेगरी के ठेकेदारों के लिये –डिवीजन) जो ठेके देने और उसके निष्पादन के लिए उत्तरदायी है। जिसमें उसका नजदीकी रिश्तेदार मंडल लेखाकार या अधीक्षण इंजीनियर एवं कनिष्ठ इंजीनियर (दोनों को मिलाकर) की श्रेणियों के बीच किसी भी हैसियत के अधिकारी के रूप में तैनात हो, कार्यों के लिए निविदा देने की आज्ञा नहीं होगी। यह उन व्यक्तियों के नामों को भी सूची देगा जो किसी भी हैसियत में उसके साथ कार्य कर रहे हों या जिन्हें उसके द्वारा बाद में भर्ती किया गया हो तथा जो केन्द्रीय लोक निर्माण विभाग या शहरी विकास मंत्रालय में कार्यरत किसी राजपत्रित अधिकारी के नजदीकी रिश्तेदार हो। यदि ठेकेदार इस शर्त को भंग करेगा तो उसका नाम इस विभाग की ठेकेदारों की अनुमोदित सूची से हटा दिया जाएगा।

The contractor shall not be permitted to tender for works in the CPWD Circle (Division – in case of contractor of Horticulture / Nursery category) responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

13. भारत सरकार के किसी इंजीनियरी विभाग में इंजीनियरी या प्रशासनिक कार्यों में लगे हुए राजपत्रित रैंक के किसी इंजीनियर को या किसी अन्य राजपत्रित अधिकारी को सरकारी नौकरी से सेवा मुक्त होने पर एक साल तक, भारत सरकार की पूर्व लिखित अनुमति बिना ठेकेदार की हैसियत से काम करने की अनुमति नहीं है। यदि किसी समय यह पाया गया कि ठेकेदार या उनका कोई कर्मचारी, ऐसा व्यक्ति है जिसने निविदा प्रस्तुत करने से पहले या ठेकेदार की सेवा में लगने के पहले भारत सरकार से अनुमति नहीं ली थी, तो यह ठेका रद्द किया जा सकता है।

No Engineer of gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. The contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

14. कार्यों के लिए निविदा, निविदाओं के जमा होने की अंतिम तारीख से 90 दिन तक स्वीकृति हेतु खुली रहेगी। यदि निविदाकार उक्त अवधि के पहले या स्वीकृति पत्र जारी होने के पहले, जो भी पहले हो, से पहले अपनी निविदा वापिस ले लेता है या निविदा की शर्तों और निबंधनों में कोई संशोधन करता है जो विभाग को स्वीकार्य नहीं है, तो सरकार किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना ऊपर किए गए उल्लेख के अनुसार उक्त धरोहर राशि का 50 का प्रतिशत जब्त करने के लिए स्वतंत्र होगी। इसके अतिरिक्त, निविदाकार को पुनः निविदा प्रक्रिया में भाग लेने की अनुमति नहीं दी जाएगी।

The tender for the works shall remain open for acceptance for a period of Ninety days from the date of opening of Tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance which ever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the tenderer shall not be allowed to participate in the retendering process of the work.

15. यह निविदा आमंत्रण सूचना, करार दस्तावेज का एक हिस्सा होगी। सफल निविदाकार/ठेकेदार, स्वीकरकर्ता प्राधिकारी द्वारा निविदा स्वीकार किए जाने के बाद कार्य प्रारंभ किए जाने की निर्धारित तिथि से 15 दिनों के भीतर निम्नलिखित को शामिल करते हुए संविदा पर हस्ताक्षर करेगा:-

This Notice inviting tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of :-

- क) निविदा आमंत्रण सूचना, अतिरिक्त शर्तों सहित सभी कागजात, विनिर्देश एवं नक्शे, यदि कोई हों, जो निविदा आमंत्रण के समय निविदा के रूप में जारी किए गए हों तथा इस बारे में किए गए किसी पत्राचार सहित इसकी स्वीकृति।
- a) The notice inviting tender, all the documents including Particular specifications & special conditions and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

ख) मानक प्रपत्र लागू होगा।

Standard format will be applicable.

मिश्रित संविदाओं के लिए
For Composite Tenders

- 16.1.1: The tender document will include following three components:
Part A :- NIT including schedule A to F for major component of the work, Standard General Conditions of Contract for CPWD 2008 or latest addition as applicable with all amendments / modifications.
- Part B:- General/specific conditions, specifications and schedule of quantities applicable to major component of the work.
- 16.1.2 : The tenderer must associate with himself, agencies of the appropriate class eligible to tender for the minor components individually.
- 16.1.3 : The eligible tenderers shall quote rates for all items of major component as well as for all items of minor components of work. It will be obligatory on the part of the tenderer to sign the tender document for all the components (The schedule of quantities, conditions and special conditions etc.) in appropriate column % above/ at per/below of DSR.
- 16.1.4 : After acceptance of the tender by competent authority, the Registrar GGV shall issue on behalf of Vishwavidyalaya.
- 16.1.5 : Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.
- 16.1.6 : Security Deposit will be worked out for estimated cost. The Earnest Money will become part of the security deposit of the major component of work.

गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ0ग0)
GURU GHASIDAS VISHWA VIDYALAYA, BILASPUR(C.G.)

कार्यों के लिए प्रतिशत दर निविदा
Percentage Rate Tender & Contract for Works

(A) कार्य के लिए निविदा :

Tender for the work of कैम्पस डेवलपमेंट के अंतर्गत भवन/सड़क/खेल मैदान /पार्किंग / शेड / पार्टीशन / फ्लोरिंग / वाटर प्रूफिंग/सिलिंग/सेनेटरी वाटर सप्लाई से संबंधित रिनोवेशन एवं लघु स्पेशल निर्माण कार्य।

- (i) क) दिनांक 30.01.10 को 3.00 बजे तक कुलसचिव, गुरु घासीदास विश्वविद्यालय, बिलासपुर में प्रस्तुत की जानी है।
To be submitted by 3.00 pm hours on 30-01-10 to Registrar GGV. Koni, Bilaspur (C.G.) (time) (date)
- (ii) ख) उन निविदाकारों के समक्ष खोली जाएगी जो दिनांक 30-01-10 को 4.00 बजे कुलसचिव कार्यालय, गुरु घासीदास विश्वविद्यालय, बिलासपुर के कार्यालय में उपस्थित रहेगे।
To be opened in presence of tenderers who may be present at -4.00 pm- hours on 30-01-10 in the office of the Registrar, Guru Ghasidas University, Bilaspur (C.G.)

सेवा में प्रेषित Issued to : _____
(टेकेदार) (Contractor)

कागजात जारी करने वाले अधिकारी के हस्ताक्षर :
Signature of officer issuing the documents

in Designation विश्वविद्यालय यंत्री, गुरु घासीदास विश्वविद्यालय, बिलासपुर **Executive Engineer Bilaspur**
Project Division, CPWD Bilaspur जारी करने की तारीख Date of Issue :

Registrar
GGV. Bilaspur (C.G.)

निविदा TENDER

मैंने/हमने कार्य के लिए निविदा आमंत्रण सूचना, अनुसूची क,ख,ग,घ, ङ, और च, लागू विनिर्देश, नक्शे एवं डिजाइन, सामान्य नियम एवं निर्देश, ठेके के उपबंध, विशिष्ट शर्तें, दर अनुसूची एवं अन्य कागजात तथा ठेके की शर्तों में दिए गए नियम तथा निविदा कागजात में उल्लिखित अन्य बातों को पढ़ व जांच लिया है।

I/We have read and examined the notice inviting tender, schedule, A,B,C,D,E & F, specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

मैं/हम, एतद्वारा भारत के राष्ट्रपति के लिए अनुसूची 'च' में विनिर्दिष्ट समय के भीतर विनिर्दिष्ट कार्य, यथा-मात्राओं की अनुसूची तथा सभी संबंधित विनिर्देशों, डिजाइनों, नक्शे के अनुरूप तथा सामान्य नियमावली के नियम-1 और ठेके की शर्तों के खंड-11 में उल्लिखित लिखित अनुदेशों एवं ऐसी सामग्रियों, जो प्रदान की जाती है और उसके संबंध में, ऐसी शर्तें जो लागू हों, के अनुरूप निष्पादन हेतु निविदा देता हूँ/देते हैं।

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

हम निविदा को, इसके जमा होने की निर्धारित तारीख से 90 दिनों के लिए खुला रखा जाने के लिए सहमत हैं।

We agree to keep the tender open for Ninety (90) days from the due date of its opening.

रु. 2,98,000=00/- की धनराशि, धरोहर राशि के रूप में नकद / ट्रेजरी चालान रसीद / अनुसूचित बैंक की मांग जमा रसीद / अनुसूचित बैंक की सावधी जमा रसीद / अनुसूचित बैंक का डिमांड ड्राफ्ट / अनुसूचित बैंक द्वारा जारी बैंक गारंटी के रूप में इसके साथ भेजी जा रही है। यदि मैं / हम निर्धारित निष्पादन गारंटी को निर्धारित समय अवधि में प्रस्तुत करने में असफल रहते हैं तो मैं / हम यह मंजूर करते हैं कि भारत के उक्त राष्ट्रपति या उनके कार्यालय के उत्तराधिकारी किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि जब्त करने के लिए पूर्णतया स्वतंत्र होंगे। इसके अलावा, यदि मैं/हम विनिर्दिष्ट कार्य प्रारंभ करने में असफल रहते हैं तो मैं/हम यह मंजूर करते हैं कि भारत के राष्ट्रपति या उनके कार्यालय के उत्तराधिकारी कानून में उपलब्ध किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि, तथा निष्पादन गारंटी जब्त करने के लिए पूर्णतया स्वतंत्र होंगे अन्यथा उक्त धरोहर राशि निविदा कागजात के अनुसार उसमें निहित शर्तों व निबंधनों के अनुसार कार्यों के निष्पादन एवं आदिष्ट विचलनों को अनुसूची 'च' में वर्णित प्रतिषत से अनधिक व निविदा प्रपत्र के खण्डों 12.2 व 12.3 में निहित प्रावधानों के अनुसार निषिद्ध की जाने वाली दरों पर उस सीमा से अधिक के विचलनों के करने के लिए उनके द्वारा प्रतिभूति-निपेक्ष के रूप में रोक ली जाएगी। इसके अतिरिक्त मैं/हम सहमत हैं कि बयाना राशि या बयाना राशि तथा उपर्युक्त निष्पादन गारंटी जब्त हो जाने के मामले में मुझे/हमें कार्य की पुनः निविदा प्रक्रिया में भाग लेने से रोक दिया जाएगा।

A sum of **Rs. 2,98,000=00/-** is hereby forwarded in cash/receipt treasury challan / deposit at call receipt of scheduled bank / fixed deposit receipt of scheduled bank / demand draft of a scheduled bank/bank guarantee issued by a scheduled bank as earnest money. If I/We fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that president of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions

contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I/we agree that in case of forfeiture of earnest money or both earnest money and performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

मैं/हम एतत् द्वारा घोषणा करते हैं कि मैं/हम निविदा कागजातों, नक्शे और कार्य से संबंधित अन्य अभिलेखों को गुप्त/गोपनीय कागजात के रूप में रखेंगे और उनसे प्राप्त/ली गई जानकारी किसी अन्य को, जिन्हें मैं/हम सूचित करने के लिए प्राधिकृत हो, से भिन्न किसी को, नहीं बताएंगे या जानकारी को किसी ऐसे रूप में प्रयोग नहीं करेंगे जो राज्य की सुरक्षा के लिए प्रतिकूल हो।

I/We hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived therefrom to any person other than a person to whom I/We am/are authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

I/we have done myself/ourself fully satisfied to read & examine the notice inviting, general conditions and various clauses of contract, all annexures, special conditions & specifications, applicable specifications, drawings, designs, applicable schedule of rates, descriptions, of the items of work, all the rules in respect of contract and all other contents in the tender documents and here by agreed for execution of the said specified work for the University Authority within the above time period in accordance with that at the rate (in figures)..... (in words)..... Percent below/at par/above of Delhi Schedule of Rates.

तारीख Dated.....
Contractor
पता Postal Address
साक्षी Witness :
पता Address:
उपजीविका Occupation :
applicable

टेकेदार के हस्ताक्षर Signature of
डाक का

To be filled in by the contractor/witness as

स्वीकृति ACCEPTANCE

मैं गुरु घासीदास विश्वविद्यालय, बिलासपुर की ओर से तथा उनके लिए रु.'..... (रूपए
.....') की राशि के लिए उपर्युक्त निविदा (अधोलिखित पत्रों के अनुसार परिवर्तित) स्वीकार करता हूँ।
The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Registrar, GGV. Bilaspur for a sum of Rs.

(Rupees _____)

नीचे दिए गए पत्र इस ठेका करार का हिस्सा होंगे।

The letters referred to below shall form part of this contract Agreement:-

a)

b)

c)

कुलसचिव
Registrar

हस्ताक्षरSignature

.....

तारीख Dated

**अनुसूचियां SCHEDULES
FOR MAJOR (CIVIL) COMPONENT**

अनुसूची 'क' SCHEDULE 'A'
मात्राओं की अनुसूची (संलग्न)

Schedule of quantities (Enclosed)

अनुसूची 'ख' SCHEDULE 'B'
टेकेदार की निर्गत की जाने वाली सामग्रियों की अनुसूची
Schedule of materials to be issued to the contractor.

क्रम. सं. S.No.	मद विवरण निर्गत स्थान Description of item Place of Issue	मात्रा Quantity	जिस दर पर सामग्रियां टेकेदार को प्रभारित होगी वह दर अंकों एवं षब्दों में Rates in figures & words at which the material will be charged to the contractor	
1	2	3	4	5

----- NIL -----

अनुसूची 'ग' SCHEDULE 'C'

ढेकेदार को भाडे पर दिए जाने वाले औजार एवं संयंत्र
Tools and plants to be hired to the contractor

क्रम सं. Sl. No. of Issue	विवरण निर्गत स्थान Description	भाडा प्रभार प्रतिदिन Hire charges per day	Place
1 4	2	3	

NIL

अनुसूची 'घ' SCHEDULE 'D'

कार्य के लिए विशेष अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची

Extra schedule for specific requirements/documents for the work, if any. -----Nil---

--

अनुसूची (ड) SCHEDULE 'E'

मूल्य वृद्धि के लिए सीमेंट, इस्पात, अन्य सामग्री आदि के घटकों की अनुसूची

Schedule of component of other materials, Labour POL etc. for price escalation –

Note- No Escalation shall be given by GGV., Neither any claim for the escalation will be entertain.

Clause 10 CC --- This clause is not applicable.

Component of civil (Except materials covered under clause 10 CA) /Electrical construction materials expressed as percent of total value of work 30%	Xm
Component of labour expressed as percent of total value of work. 25%	'Y'
Component of P.O.L. expressed as percent of total value of work. Nil%	'Z'

अनुसूची 'च' SCHEDULE 'F'

टेके की सामान्य शर्तों का संदर्भ

Reference to General Conditions of contract.

कार्य का नाम Name of work :

कैम्पस डेवलपमेंट के अंतर्गत भवन/सड़क/खेल मैदान /पार्किंग / शेड / पार्टीशन / फ्लोरिंग / वाटर प्रूफिंग/सिलिंग/सेनेटरी वाटर सप्लाय से संबंधित रिनोवेशन एवं लघु स्पेशल निर्माण कार्य।

कार्य की अनुमानित लागत Estimated cost of work : **Rs. 149 lakhs**

(i) धरोहर राशि Earnest money:

: **Rs. 2,98,000=00**

(ii)निष्पादन गारंटी Performance guarantee
5 प्रतिषत

:5% of tendered value.निविदित मूल्य का

(iii) प्रतिभूति निक्षेप: Security Deposit:

5% of tendered value. निविदित मूल्य का
5 प्रतिषत

सामान्य नियम एवं दिशानिर्देश:

General Rules & Directions:

निविदा आमंत्रण करने वाला प्राधिकारी

Officer inviting tender -

EE/BPD/CPWD/Bilaspur

कार्य की मर्दों की मात्रा के लिए अधिकतम प्रतिषत जिससे अधिक निष्पादित मर्दों के लिए दरों का निर्धारण खण्ड 12.2 और 12.3 के अनुसार होगा

निम्नानुसार

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

see below

- Definitions:**
- 2(v) भारसाधक इंजीनियर
Engineer-in-Charge For Civil:
EE/BPD/CPWD/Bilaspur or his successor. For Electrical : EE(E)/BCED/CPWD/Bhopal
or his successor
- 2(viii) स्वीकारकर्ता प्राधिकारी
Accepting Authority **Registrar, GGV, Bilaspur.**
- 2(x) अतिरिक्त और लाभों को पूरा करने के
लिए श्रम एवं सामग्रियों की लागत पर प्रतिषतता
Percentage on cost of materials and
labour to cover all overheads and profits. **15%**
- 2(xi) दरों की मानक अनुसूची
Standard schedule of Rates For Civil: Delhi Schedule of Rates
2007(Civil) with correction
slips issued upto date of receipt of tender.
For Electrical : Delhi Schedule of rate
2007 for Internal
Electrical works and schedule of rate
2007 for
External Electrical works.
- 2(xii) विभाग
Department **GGV, Bilaspur.**
- 9(ii) विश्वविद्यालय मानक के टेका फार्म
University Standard contract Form
placed Standard Form
on **P-21-30** of **this**
documents).

खण्ड Clause 1

- (i) स्वीकृति पत्र जारी होने की तारीख से निष्पादन
गारंटी के प्रस्तुतीकरण के लिए अनुमत समय
Time allowed for submission of
performance guarantee from the
date of issue of letter of acceptance : 20 days दिन
- (ii) (उपर्युक्त प) में दी गई अवधि के पश्चात् अधिकतम
अनुमेय एक्सटेंशन
Maximum allowable extension beyond
the period as provided in (i) above 10 days दिन

खण्ड Clause 2

- खण्ड 2 के तहत प्रतिकार निष्चित करने वाला प्राधिकारी
Authority for fixing **Superintending Engineer,**
Bhopal compensation under clause 2 **Central Circle, CPWD,**
Bhopal.

खण्ड Clause 2A

क्या खण्ड 2 क लागू होगा

Whether clause 2A shall be applicable

Yes**खण्ड Clause 5**

कार्य आरंभ की तारीख की गणना के लिए स्वीकृति पत्र के जारी होने की तारीख से दिनों की संख्या

No. of days from the date of issue of letter of acceptance for reckoning date of start

22 days.

लक्ष्य नीचे दी गई सारणी के अनुसार

Milestone(s) : - as per Table given below

लक्ष्य (मील-पत्थर) सारणी

Table of milestone(s)

S No	Description of Milestone लक्ष्य का विवरण	Time allowed in days (From date of start) अनुमत्य समय, दिनों में (कार्य आरंभ की तारीख से)	Amount to be withheld in case of non-achievement of milestone लक्ष्य प्राप्त न होने की स्थिति में रोके जाने वाली राशि
1	Setting up batching plant and approval of design mix / approval of RMC plant	45 days	In the event of not achieving the necessary progress as assessed from the running payments, 1% of the tendered value of work will be withheld for failure of each milestone. Subject to maximum of 5% of tendered valued of the work.
2	Structure upto level-2	150 days	
3	Complete RCC structure excluding mumty, O.H. tank etc.	255 days	
4.	Completion of building including brick work, flooring, plastering, services installation (excluding fittings and fixtures & painting).	360 days	
5.	Completion of work and handing over	12 months	

कार्य निष्पादित करने के लिए अनुमत्य समय

Time allowed for execution of work

12 (Twelve) Months

Authority to decide

(i) Extension of Time

University Engineer, Guru Ghasidas University, Bilaspur (C.G.)

(ii) Rescheduling of mile stones

Superintending Engineer, Bhopal

Central Circle

CPWD, Bhopal

खण्ड Clause 6, 6A

खंड लागू-(6 या 6 क) Clause applicable

6 A**खण्ड Clause 7**

<p>अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य</p> <p>Gross work to be done together with net payment/adjustment of advances for</p> <p>Component)</p> <p>component)</p>	<p>material collected, if any since the last</p> <p>such payment for being eligible to interim payment</p>	<p>Rs. 45 Lakhs (For Civil</p> <p>Rs. 2 Lakhs (For Electrical</p>
---	--	---

खण्ड 10 d Clause10A

कार्यस्थल प्रयोगशाला में ठेकेदार द्वारा उपलब्ध कराये जाने परीक्षण उपकरण की सूची
 List of testing equipment to be provided by the contractor at site lab. **See P 41 Para 11.0 (Part – B)**

खण्ड Clause10B(ii)

क्या खण्ड 10 ख ;पपद्ध लागू होगा
 Whether clause 10B (ii) shall be applicable **Yes / हाँ**

खण्ड Clause10C

Component of labour expressed as
 Percent of value of work **25% (Twenty five per cent)**

खण्ड Clause10CA

Material covered under this clause	Nearest materials (Other than cement, reinforcement bars and structural steel) for which All India Whole Sale Price Index is to be followed.	Base Price of all materials covered under clause 10 CA *
1 Cement 2 Steel reinforcement 3 Structural steel	NA NA NA	1. Rs. 5000.00 per MT 2. Rs.31304.00 per MT 3.Rs. 31009.00 per MT

खण्ड Clause10CC

: Not Applicable

खण्ड 10 गग उन संविदाओं पर लागू होगा जिसमें कार्य समापन की अवधि, अगले कालम में दर्शाई गई अवधि से अधिक अनुबंधित है।
 Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column **18 months**

खण्ड Clause 11

कार्य निष्पादन के लिए अनुपालन
Volume-I & II
 Specifications to be followed for execution of work

For Civil : CPWD specification 2009,
with correction slips upto date of receipt of tender.
For Electrical : CPWD specification for electrical works Part-I
(Internal) 2005 and Part-II (external) 1994 – amended upto date of receipt of tender.

खण्ड Clause 12

12.2 & 12.3

विचलन सीमा जिसके परे खण्ड 12.2 तथा 12.3 भवन निर्माण कार्य के लिए लागू होंगे
Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work **30%**

12.5

वह विचलन सीमा जिसके परे खण्ड 12.2 तथा 12.3 नींव कार्य के लिए लागू होंगे
Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work **100%**

खण्ड Clause 16

घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी
Competent Authority for deciding
committee.

Registrar/Building

Reduced rates.

खण्ड Clause 18

कार्यस्थल पर ठेकेदार द्वारा लगाये जाने वाली अनिवार्य मशीनरी औजार एवं सयंत्रों की सूची :-

List of mandatory machines, tools and
(Part – B)

See P 40 Para 9.0

plants to be deployed by the contractor at site.

खण्ड Clause 36(i)**“Requirement of Technical Representative(s) and Recovery Rate**

SNo	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical / Technical representative)	Minimum experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i)	
						Figures	Words
1	Graduate Engineer	CIVIL	Principal Technical Representative	10-years	ONE	Rs.20000/- PM.	Rupees Twenty Thousand Per Month each
2	Graduate Engineer	CIVIL	Technical Representative	5-years	ONE	Rs.15000/- PM.	Rupees fifteen Thousand Per Month each
3	Graduate Engineer Or Diploma Engineer	CIVIL	Technical Representative	Nil Or 5-years	TWO Or TWO	Rs.10000/- PM.	Rupees Ten Thousand Per Month each
4	Graduate Engineer Or Diploma Engineer	ELECTRICAL	Technical Representative	Nil Or 5-years	ONE Or ONE	Rs.10000/- PM.	Rupees Ten Thousand Per Month each

सरकारी सेवा से सेवानिवृत्त वे सहायक अभियंता जो डिप्लोमाधारक हों, ग्रेजुएट अभियंता के बराबर माने जाएंगे ।

“Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.”

खण्ड Clause 42

I) क) सीमेन्ट और बिटुमन की अनुमानमूल अनुसूची 2007 के आधार पर मात्रा निर्धारित करने के लिए अनुसूची/विवरण	केलोनिवि द्वारा मुद्रित दिल्ली दर
I) (a) Schedule/statement for determining Schedule of Rates 2007 theoretical quantity of cement & bitumen	on the basis of Delhi printed by C.P.W.D.
II) अनुमानमूलक मात्राओं में अनुमत विचलन Variations permissible on theoretical quantities.	
क) सीमेन्ट जिन कार्यों के लिए निविदा में अनुमानित मूल्य रु. 5 लाख से अधिक न हो	3 प्रतिशत जमा/घटा
a) Cement for works with estimated cost put to tender not more than Rs. 5 lakhs	3% plus/minus.
जिन कार्यों के लिए निविदामें अनुमानित मूल्य रु. 5 लाख से अधिक हो	2 प्रतिशत जमा/घटा
for works with estimated cost put to tender more than Rs. 5 lakhs	2 % plus/minus.
ख) बिटुमन सभी कार्यों के लिए पक्ष में षून्य	2.5 प्रतिशत केवल जमा और घटा के
b) Bitumen for all works side.	2.5% plus only & Nil on minus
ग) इस्पात प्रत्येक व्यास, कोट और श्रेणी के लिए पूनर्वलन और संरचनात्मक इस्पात काट	2 प्रतिशत जमा/घटा
c) Steel Reinforcement and structural steel sections for each diameter, section and category.	2% plus/minus
घ) सभी अन्य सामग्रियां	षून्य
d) All other materials	Nil.

अनुमत्य विचलन से अधिक की मात्राओं के लिए वसूली दरें

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

क्रम सं. Sl No.	मद विवरण Description of item Contractor	अंको और षब्दों में वह दर जिस पर ठेकेदार से वसूली की जाएगी Rates in figures and words at which recovery shall be made from the	
		अनुमत्य विचलन से अधिक आधिक्य Excess beyond	अनुमत्य विचलन से अधिक उपयोग Less use
	घटाया beyond permissible variation		
1.	1hesUV Cement per MT	NIL	Rs.6000.00
2.	Reinforcement steel per MT	NIL	Rs. 50000.00

----- Two items only -----

PARTICULAR SPECIFICATION

&

SPECIAL CONDITIONS (CIVIL)

1. GENERAL

- 1.1 The contractor shall work according to the programme of work as approved by the Engineer-in-charge/Registrar/Building committee for which purpose, the contractor shall submit a tentative programme of the work within 15 days from the stipulated date of start of the work.
- 1.2 The contractor shall take instructions from the Engineer-in-charge for stacking of materials at site. No excavated earth or building materials shall be stacked on areas where the buildings, roads, services or compound walls are to be constructed.
- 1.3 If as per municipal / GG.V. rules the huts for labour are not to be erected at the site of work by the contractors, the contractors shall provide such accommodation at such locations as are acceptable to local bodies, for which nothing shall be payable.

- 1.4 Unless otherwise provided in the Schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing shall be payable to him on this account. However, payment for centering, shuttering, if required to be done for floor heights greater than 3.5m, shall be admissible at rates arrived at, in accordance with clause 12 of the agreement, if not already specified otherwise.
- 1.5 The working drawings appearing at para 8.1(iii) of conditions of contract in the form prescribed form shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor before proceeding further.
- 1.6 Samples for particular items of work shall be prepared, for prior approval of the Engineer-in-charge before taking up the same on mass scale and nothing shall be payable on this account.
- 1.7 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restriction / instructions and nothing extra shall be payable on this account.
- 1.8 The contractor shall make his own arrangements for obtaining electric connections, if required, and make necessary payments directly to the University.
- 1.9 Other agencies may also be executing simultaneously on some other related works such as- electrical cable laying, street lighting and horticulture works for the same project. The contractor shall extend necessary co-operation to them without any claim on this account.
- 1.10 Cast iron pipes and fittings without ear shall be used. However, pipes and fittings with ears may be accepted without any extra payment. In such cases, clamps are not required and no extra payment shall be made for fixing the pipes in a different manner.
- 1.11 Any cement slurry added over base surface for bond or for continuation of concreting, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.
- 1.12 Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required shall have to be done by the contractor at his own cost.
- 1.13 No claim for idle establishment & labour, machinery & equipments, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.

2.0 WATER PROOFING TREATMENT

The water proofing items shall be got done through the firms approved by University or other wise as directed by University.

2.1 **GUARANTEE FOR WATER PROOFING TREATMENT**

The contractor shall give Ten years performance guarantee in the prescribed proforma for the water proofing treatment. In addition 10% (Ten percent) of the cost of these items shall be retained as security, to watch the performance of the work executed. However, half of this amount (withheld) shall be released after five years, after the completion of the work, if no defect comes to notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days and, if not attended to, the same shall be got done through other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the treatment once every year and make good any defect observed. However, the 10 % security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

3.0 **ACP CLADDING AND STRUCTURAL GLAZING.**

3.1 **scope of work :**

The scope of work includes structural analysis and design, preparation of shop drawings, setting out, lubrication, supply, installation, aligning, fixing and protection of the curtain glazing and aluminium composite panel cladding etc. It also includes performance testing and guarantee for the works as described above, for the system, materials and performance requirements, for a period of **not less than** 10 years from the date of completion of the work.

The **rates of work under this section** includes cost of all inputs of labour, materials including wastages, T&P, equipments, cranes or cradles, scaffolding, other enabling temporary structures and services and all other incidental charges, if any, not specifically mentioned here, but as required for complete design, engineering, fabrication, assembling, delivery, anchorage, installation, protection of curtain glazing, aluminium composite panel cladding etc. and making the curtain glazing, aluminium composite panel cladding etc. water tight, all complete, and all in accordance with the true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown in the drawings and/or described in the specifications provided that the same can be reasonably inferred therefrom.

The curtain glazing, aluminium composite panel cladding shall have framing which shall be structurally and mechanically designed to achieve the architectural elevations as well as performance parameters specified herein. Anchorage shall include all supporting bracket & anchor fasteners, as required to rigidly secure the structural framing to the RCC/Masonry/structural steel members of the building.

STANDARDS :

3.2 Materials and workmanship shall, in general, comply with the latest editions of the following standards as a minimum.

ANSI	Z97.1	Safety Glazing materials used in Buildings
ASTM	C1036	Specification for float glass
ASTM	C1172	Specification for Laminated Architectural Glass
ASTM	C864	Specification for compression Seal Gaskets
ASTM	C1115	Specification for Silicone Rubber Gaskets
ASTM	C920	Specification for Sealants
ASTM	C509	Specification for sealing material
CPSC16	CFR 1201	Specification for Safety Glass
BSCP 118		Structural use of Aluminium
AS 1664		--Do--

3.3 International Standards

In general, the Contractor shall follow the latest Indian/International Standards issued by BIS. Other specification relevant to this item of work like ASTM, SAA, AAMA, BSS, ISO & SSIR can also be adopted if particular standards are not available in BIS codes. The contractor shall also state reasons for adopting particular standards/codes. Nothing in this clause shall relieve the contractor of his obligations to provide high standard of quality and workmanship as required.

3.4 The contractor shall also submit guarantee in the enclosed format for replacement of glass during the guarantee period of not less than 10 years from the date of completion of work. **All the Guarantees shall be submitted before final payment is released after the date of the completion of work and shall not in any way limit any other rights, which the Engineer-in-Charge may have under the Contract.**

3.5 If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of issue of notice to the contractor, (at least temporarily if it requires specialized materials and equipment for such rectification works which may entail some more time), to the satisfaction of the Engineer-in-Charge, till the permanent rectification of the defects/replacement of defective materials is carried out by the contractor, in maximum four months period.

If not attended to, the same shall be got done by the Engineer-in-Charge through other agency at the risk and cost of the contractor and the cost, which shall be final and binding on the contractor, shall be recovered from the amount withheld towards the guarantee as mentioned above or any other amount due to the contractor.

3.6 Scope of Shop Drawings

- a) Shop drawing shall incorporate scaled and dimensioned plans, elevations, sections and complete size details for all the works.
- b) The shop drawings shall indicate the required dimensional profiles and modules, function, design and performance standards and in general cover all dimensions and details required to fabricate and install the curtain wall at site.
- c) The contractor shall verify and co-ordinate the shop drawings with all applicable and inter-related trades, drawings and specifications.
- d) All dimensions/modules, etc. shall be field checked and the drawings shall be modified, if required, based on actual measurements at site.

- e) Details shall show and specify all metal sections, types of finishes, areas to be sealed and sealant materials, gaskets, applicable construction materials including fasteners and welds, all anchorage assemblies and components, fabrication and erection tolerances for the work.
- f) All details shall be subject to the approval of the Engineer-in-Charge, after incorporating all the modifications as suggested by the Engineer-in-Charge or otherwise.

4.0 **Stainless Steel Railing/Handrails**

4.1 Supply and installation of satin finish stainless steel railing (Ozone or equivalent) having 50 mm dia OZBF-SS-ACC-HR-50-SS-P (PIPE) 1.6 mm thick tube handrail modular and component based system having unified stem keys as connector, centre rod 12 mm @ 300 c/c including end caps for railing & centre rod, SS balustrade OZBF –WS-11 members to be fixed on top of stair steps or floor edge at a minimum distance of 1000 mm to be complete with all necessary bends and joints and erected with chemical grouts of approved make or equivalent as per drawing and instruction of Engineer-in-Charge (Height 1000 mm as per sketch)

4.2 **GENERAL**

The contractor shall apply all materials, labour, tools, ladders, scaffolding and other equipments necessary for the completion and protection of all stainless steel work.

4.3 **MATERIAL**

All stainless steel pipes and plates shall conform to AISI 304 in 18/8 composition 18 will be chromium and 8 will be Nickel and carbon content will be 0.03 maximum and the relevant clauses associated with this grade of steel to be followed.

4.4 **SURFACE FINISH**

Surface finish of all the stainless steel materials will be in 240 grit satin finish / matt finish.

4.5 **ACCESSORIES**

Fixing will be done by stainless steel expansion bolts of approved size and make as per Engineer-in-charge and welding to be done by using organ welding rods and the surface being duly finished and cleaned by K2 passivation, which is nitric acid plus florlic acid solution treatment by which the chances of corrosion will be eliminated and any burn out makes on the metal will also be eliminated.

4.6 **COATING MASS**

All stainless steel material will have to be coated by a solution of Inox to avoid finger in prints and avoidance of settlement of environment / atmospheric dust.

4.7 **MEASUREMENT**

All the stainless steel finished parts shall be weighed correct to a gram and paid on weight basis.

4.8 RATE

The rate shall include the cost of all the materials, machinery and labour involved in all the operations described above including cartage, lifts and all taxes like Sales Tax / VAT, Excise duty, Octroi etc. as applicable.

Any incidental additional requirements for execution of this item to the satisfaction of Engineer-in-charge shall also be treated as included in the item and shown in attached drawing and nothing extra will be paid for such extra work.

5.0 PAINT BROUGHT BY THE CONTRACTOR

5.1 The contractors shall bring sufficient quantity of paint of brand & shade approved by Engineer-in-charge prior to the commencement of work & keep it in his stores at site of work under double lock & key.

5.2 The paint shall be issued to the contractor from time to time according to requirements for the work in the same manner as followed for issue of cement

5.3 Empty containers shall not be removed without the written permission of the Engineer-in-charge.

6.0 CONDITION FOR CEMENT :-

6.1 The Contractor shall procure 43 grade Ordinary Portland cement (conforming to IS : 8112) or Portland slag cement (conforming to IS : 455) or Portland Pozzolana Cement (PPC) (Fly ash based) – conforming to IS : 1489 (Part-I) as required in the work, from reputed manufactures of cement, having a production capacity of one million tonnes or more, such as ACC, L&T, JP REWA, Vikram, Shri Cement, Birla Jute, Prism, Ambuja, Lafarge and Cement corporation of India etc. i.e. agencies approved by Ministry of Industry, Government of India, and holding license to use ISI certification mark for their product. **The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacture(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufactures, given by the tenderer, fully or partially.** Supply of cement shall be taken in 50 Kg bags bearing manufacture's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-charge and got issue in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the Contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so.

If Portland Pozzolana cement or Portland slag cement is used, suitable modification in deshuttering time etc. shall be done if need be as per specifications and standards and as directed by Engineer – in – charge and nothing extra shall be payable on this account.

No extra payment / deduction shall be made from the payment to the contractor for using any of the above type of cement.

6.2 The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer - in - charge.

- 6.3 For each grade / type, cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) constructed by the contractor at his own cost as per sketch shown in General conditions of contract for Vishwavidyalaya with weather proof roofs and walls. The size of the cement godown is indicated in the sketch for guidance only. The actual size of godown shall be as per site requirements and as per the direction of the Engineer in charge and nothing extra shall be paid for the same. The decision of the Engineer-in-charge regarding the capacity required/needed will be final. However, the capacity of each godown shall not be less than 30 tonnes. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with CPWD Engineer-in-charge or his authorized person and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Proforma and signed daily by the contractor or his authorized agent in token of its correctness.
- 6.4 The cement shall be got tested by Engineer –in –charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor / Department in the manner indicated below :-.
- (a) By the contractor, if the results show that the cement does not conform to relevant BIS codes.
- (b) By the Department, if the results show that the cement conforms to relevant BIS codes.
- 6.4.1 All other charges of sampling, packing and transportation of sample shall also be borne by the contractors.
- 6.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained separately for each type of cement, as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein. However, for consumption lesser beyond permissible theoretical variation recovery shall be made in accordance with conditions of contract at Schedule A to F (CPWD-8), without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be.
- 6.6 For non-schedule items, the decision of the Superintending Engineer regarding theoretical quantity of cement, which should have been actually used, shall be final and binding on the contractor.
- 6.7 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.

7.0 CONDITIONS FOR REINFORCEMENT STEEL :-

- 7.1 The contractor shall procure TMT bars of Fe415 grade as per BIS 1786 – 2008 from primary producers such as SAIL or TISCO or RINL as approved by Ministry of Steel. In

case of non-availability of steel from primary producers, Superintending Engineer, Bhopal Central Circle may permit use of TMT reinforcement bars procured from secondary producers.

- a. The secondary producers must have valid BIS licence to produce HSD bars conforming to IS 1786 : 2008. In addition to BIS licence, the secondary producer must have valid licence from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT Bars.
- b. The TMT bars procured from primary producers shall conform to manufacture's specifications.
- c. The TMT bars procured from secondary producers shall conform to the specifications as laid by Tempcore, Thermex, Evcon Turbo & Turbo Quench as the case may be.
- d. TMT bars procured either from primary producers or secondary producers, the specifications shall meet the provisions of IS 1786 : 1985 pertaining to Fe 415 grade of steel as specified in the tender.

Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para (c) & (d) above, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the Engineer-in-Charge to do so.

In case contractor is permitted to use TMT reinforcement bars procured from secondary producers then:

- (i) The base price of TMT reinforcement bars as stipulated under schedule 'F' shall be reduced by Rs. 6000/- MT.
- (ii) The rate of providing & laying TMT reinforcement bars as quoted by the contractor in the tender shall also be reduced by Rs. 7.35 per kg.

7.2 The steel reinforcement shall be brought at site in bulk supply of 25 tonnes or more as decided by the Engineer in charge.

7.3 The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

7.4 For checking nominal mass tensile strength bend test re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Dia of bar	For consignment below 100tonnes	For consignment above 100tonnes
Under 10 mm	One sample for each 25 tonnes or part thereof	One sample for each 40tonnes or part thereof
10 mm to 16mm	One sample for each 35 tonnes or part thereof	One sample for each 45tonnes or part thereof
Over 16mm	One sample for each 45 tonnes or part thereof	One sample for each 50tonnes or part thereof

7.5 The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor / Department in the manner indicated below :-

- (a) By the contractor, if the results show that the steel does not conform to relevant BIS codes.
 - (b) By the Department, if the results show that the steel conforms to relevant BIS codes.
- 7.6 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.
- 7.7 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein.
- 7.8 Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.
- 7.9
- (i) Reinforcement including authorized spacer bars and lappings shall be measured in length of different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.
 - (ii) The standard sectional weights referred to shall be as in Table 5.4 in para 5.3.4 in CPWD specifications 2009 will be considered for conversion of length of various sizes of TMT bars in to standard weight.
 - (iii) Record of actual sectional weights shall also be kept dia wise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer in charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.
 - (a) If the derived weight as in sub-para (iii) above is less than the standard weight as in sub-para
 - (ii) above, then the Derived Actual Weight shall be taken for payment.
 - (b) If the derived actual weight is found more than the standard weight, than standard weight as worked out in sub para (ii) above shall be taken for payment nothing shall be paid extra for the difference in Derived/ Actual Weight and standard weight.
- 7.10 TMT bars of Fe 500 grade as per BIS : 1786: - 2008 from primary producer may also be permitted by Engineer – in – charge for which neither deduction shall be made nor extra shall be paid to the contractor. However, every care should be taken to avoid mixing different types of grades of bars in the same structural members as main reinforcement to satisfy relevant clause of IS: 456. In case of buildings, wherever the situation necessitates, the change over shall be made only from any one level onwards. In case of foundations, all foundation elements (footings and grade beams) shall have the same kind of steel. In the case of columns, all structural elements up to the level of change, where the change over is taking place should have the same kind of steel as those in columns.

- 7.11 The reinforcing steel brought to site of work shall be stored as per CPWD specification 2009.

8.0 REINFORCED CEMENT CONCRETE WORK

- 8.1 To ensure proper cover, only factory made round type cover blocks will be used to avoid displacement of bars in any direction.
- 8.2 For the execution of centering and shuttering, the contractor shall use propriety "Reebole" chemical mould release agent of "FOSROC" or equivalent as shuttering oil as recommended by the manufacture and nothing extra shall be paid on this account.

8.3 DESIGN MIX CONCRETE

- 8.3.1 The RCC work shall be done with Design Mix Concrete unless otherwise specified. In the nomenclature of items wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. For the nominal mix in RCC, CPWD Specifications shall be followed. The Design Mix Concrete will be designed based on the principles given in IS: 456-2000. The contractor shall design mixes for each grade of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. In case of use of admixture and or white cement, the mix shall be designed with these ingredients as well. The specification mentioned here-in-below shall be followed for Design Mix Concrete.
- 8.3.2 The concrete mix design will be carried out by the contractor through one of the following laboratories / Test houses and ready mix concrete shall conform to accepted design mix.
1. NIT, Raipur.
 2. G.E.C., Bilaspur.
 3. MANIT Bhopal
 4. G.E.C. Ujjain
 5. MITS Gwalior.
 6. National Council for Cement & Building materials, Ballabgarh.
- 8.3.3 In the event of all the above laboratories being unable to carry out the requisite design / testing the contractor shall have to get the same done from any other laboratory with prior approval of the Engineer-in-charge.
- 8.3.4 The contractor shall submit the mix design report from any of above approved laboratories for approval of Engineer-in-charge within 45 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the mix design is approved.
- In case of white Portland cement and the likely use of admixtures where CC/RCC is done with concrete pumps in concrete with ordinary Portland/white Portland cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and /or admixtures also, for which nothing extra shall be payable.

In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Engineer-in-Charge.

The Mix shall be designed to produce the grade of concrete having required workability and characteristic strength not less than as specified.

The mix design for a specified grade of concrete shall be done for a target mean compressive strength $T_{ck} = F_{ck} + 1.65 s$

Where,

F_{ck} = Characteristic compressive strength at 28 days.

S= Standard deviation

The standard deviation for each grade of concrete shall be calculated separately.

The degree of quality control for this work is “Good” for which the standard deviation (s) obtained for different grades of concrete shall be as follows:-

Grade of Concrete	For “Good” quality of control
M 20	4.0
M 25	4.0
M 30	5.0
M 35	5.0

Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days. All cost of mix designing and testing connected therewith including charges payable to laboratory shall be borne by the Contractor.

- 8.3.5 The samples of cement, aggregate (fine & coarse) to be sent to the laboratories shall be sealed in the presence of the Engineer in charge and shall have his signature and cost of packaging, sealing, transportation, loading, unloading, cost of samples and the testing charges for Mix design in all cases shall be borne by the contractor.
- 8.3.6 Notwithstanding the approval granted by engineer-in-charge in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, transportation and placement etc.
- 8.3.7 The Engineer-in-charge reserves the right to exercise control over the : ingredients, water and admixtures, purchased, stored and to be used in the concrete including conducting of tests for checking quality of Materials fit or unfit for use in production of mix.
- 8.3.8 The Contractor shall submit the test data of the material used for concrete mix-design in the laboratories, so the material being used at site be compared with those data / size etc.
- 8.3.9 In case of change of parameters of ingredients (sand, cement, coarse aggregate) fresh concrete mix-design to be done as mentioned in para 8.3.2 above and got approved from the Engineer-in-charge before execution.
- 8.3.10 The contractor shall make arrangement to install a mini laboratory at site for accelerated testing of design mix concrete as per IS : 9013. The department reserves right to take

samples of design mix concrete from the mass production of the concrete for testing and compare with the laboratory's results.

- 8.3.11 Nothing shall be paid extra for installation and cost of batching plant and other arrangement for making necessary test of design mix concrete.
- 8.3.12 The rate for item of design mix cement concrete shall be inclusive of all the ingredients including admixtures if required, labour, machinery T & P etc. (except shuttering which will be measured & paid for separately) required for a design mix concrete of required strength and workability. The rate quoted by the agency shall be net & nothing extra shall be payable on account of change in quantities of concrete ingredients like cement and aggregates and admixtures etc. as per the approved mix design. **Cost adjustment at the rate of Rs. 600/- per quintal shall be made for less use of cement in design mix than specified in the item.**
- 8.3.13 Concrete shall be handled from the place of mixing to the place of final deposit / placement by methods, which prevent segregation, or loss of any ingredients and contamination.
- 8.3.14 Where concrete is conveyed by chutes, the chute shall be made of metal or fitted with metal lining. The approval of the Engineer-in-charge shall be obtained for the use of chutes in excess of 3 metres length and in such cases the concrete shall be remixed if so required by the Engineer-in-charge or closed bottom buckets shall be used. If concrete is placed by pumping, the conduit shall be primed properly. Once pumping is started, it shall not be interrupted as far as possible. Concrete shall not be dropped into place from a height more than 1.5m.
- 8.3.15 Concreting of any portion of the work shall be done in presence of the representative of the Engineer-in-charge and shall be done only after approval of the Engineer-in-charge.
- 8.3.16 Concreting shall be carried out continuously between construction joints shown on the drawings or as agreed by the Engineer-in-charge. The contractor shall closely follow the sequence of concreting where it is specified in the drawings. If concreting is interrupted before reaching the predetermined joint an approved construction joint shall be provided. Construction joints shall be minimized as far as possible. These shall be set at right angles to the general direction of the member. The surface film of the first placed concrete should preferably be removed while the concrete is still green to expose the aggregate and leave a sound irregular surface. However care shall be taken not to disturb the concrete already laid.
- 8.3.17 **Admixtures :** Wherever required, admixtures of approved quality shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The chloride content in the admixture shall satisfy the requirements of BS: 5075. The total amount of chlorides in the admixture mixed concrete shall also satisfy the requirements of IS 456-2000.
- 8.3.18 Use of ready mixed concrete (RMC) may also be permitted, with prior approval of Engineer –in – charge, without any extra payment. Separate account of design mix

concrete and RMC shall however be kept. The ready mixed concrete shall conform to the requirement of durability, workability and strength laid down for design mix concrete.

9.0 EQUIPMENTS AND PLANTS (Refer Clause 18 of Schedule ‘F’)

9.1 The contractor should be capable of deploying necessary tools & plants as when required in appropriate as below required numbers to ensure smooth & timely execution of work, at his own cost & risk as per the requirement of work at different stages. The decision of Engineer-in-Charge shall be final regarding use of particular T&P(s) at a particular time(s) & the contractor has to adhere the same strictly:

I.	Steel centering and shuttering.	7000 Sqm.
II	Excavator Cum Loader.	1 No.
III	Builders Hoist / Tower crane	1 No.
IV	Concrete mixer with hopper. (Diesel + Elect.)	1 Nos.
V	Needle Vibrator. (Diesel / Petrol + Elect.)	5 Nos.
VI	Bar Bending Machine.	1 No.
VII	Bar Cutting Machine.	1 No.
VIII	Truck / Tipper	1 Nos.
IX	Floor grinding machine	10 Nos.
X	Welding machine	2 No.
XI	Chase cutter.	2 Nos.
XII	Water Pump	1 Nos.
XIII	DG set (Diesel)	1 No.
XIV	Pile rig for 300 mm dia pile	1 No.

9.2 To achieve the progress of work as per programme the contractor must bring at site the shuttering materials required for cement concrete and RCC work etc. within 7 days from the date of start of work. Work shop facilities for fabrication/addition and alterations, and other allied works shall be arranged by the contractor at his own cost.

9.3 In addition to these, machinery / equipment as required shall be arranged by the contractor in case the requirement at any stage exceeds as per the programme finalized at his own cost and nothing extra whatsoever on this account shall be paid.

9.4 All the equipment, T&P and machinery shall be kept in good condition.

10.0 SAFETY MEASURES AT CONSTRUCTION SITE

In order to ensure safe construction, following shall be adhered for strict compliance at the site:-

- (i) The work site shall be properly barricaded.
- (ii) Adequate signages indicating ‘Work in Progress – Inconvenience caused is Regretted’ or Diversion Signs shall be put on the sites conspicuously visible to the public even during night hours. These are extremely essential where works are carried out at public places in use by the public.
- (iii) The construction malba at site shall be regularly removed on daily basis.

- (iv) All field officials and the workers must be provided with safety helmets, safety shoes and safety belts.
- (v) Proper MS pipe scaffoldings with work – platforms and easy-access ladders shall be provided at site to avoid accidents.
- (vi) Necessary First-Aid kit shall be available at the site.

The above provisions shall be followed in addition to the provisions of General Condition of Contract, CPWD safety code and CPWD specifications for which nothing extra shall be paid except otherwise provided.

11.0 LIST OF EQUIPMENT FOR SITE LABORATORY(Ref. Clause 10A of Schedule ‘F’)

A. Laboratory testing instruments.

- (1) Balances
 - i. 7 Kg. to 10 Kg. capacity, semi-self indicating type – accuracy 10 gm.-1 No.
 - ii. 500 gm. Capacity, semi-self indicating type – accuracy 1 gm.- 1 No.
 - iii. Pan balance – 5 Kg. capacity – accuracy 10 gms.-1 No.
- (2) Sieves : as per IS 460 – 1962.
 - i. I.S. sieves – 450 mm internal dia, of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan. – 1 Set
 - ii. I.S. sieves - 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan. – 1 Set
- (3) Equipment for slump test – slump cone, steel plate, tamping rod, steel scale, scoop.- 2 Nos.
- (4) Graduated measuring cylinders 200 ml capacity – 2 Nos.

B. Field testing instruments.

- (1) Steel tapes – 3 m. – 2 Nos
- (2) Vernier Calipers. - 1 Nos.
- (3) Micrometer screw 25 mm gauge. – 1 Nos.
- (4) A good quality plumb bob. – 2 Nos.
- (5) Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical.- 2 Nos.
- (6) Wire gauge (circular type) disc. – 1 Nos.
- (7) Foot rule – 2 Nos.
- (8) Long nylon thread – 2 Nos.
- (9) Magnifying glass – 1 Nos.
- (10) Screw driver 30 cms long – 1 Nos.
- (11) Ball pin hammer, 100 gms. – 1 Nos.
- (12) Plastic bags for taking samples – 1 Nos.

12.0 SPECIFICATIONS FOR CEMENT BASED FLY ASH BRICKS

12.1 Quality of Raw Materials

12.1.1 **ASH** : Fly ash shall meet the requirement of Grade 2 of IS : 3812. Fly ash should preferably be collected from 1st / 2nd field of ESP.

12.1.2 **Sand / Stone dust** : Deleterious materials such as clay and silt in sand / stone dust shall not be more than 5%.

12.1.3 **Cement** : Portland cement conforming to IS : 269, IS : 8112 or IS : 12269 (latest revision) shall be used.

12.1.4 **Storage** : All raw materials shall be stored in covered sheds and suitably protected from the rains.

12.1.5 **Proportioning of raw materials** : The following mix proportion shall be adopted for manufacturing fly ash, sand and cement bricks

Fly ash	50-60%
Sand / Stone dust	32-40%
Cement	8-10%

12.1.6 ACCEPTANCE CRITERIA :

12.1.6.1 **Compressive Strength** : Minimum average compressive strength of brick shall not be less than 7.5 N/sq.mm when tested as per IS -3495 (Part-I) : 1976. The compressive strength of any individual brick shall not fall below the minimum average compressive strength by more than 20%. In case any test result of compressive strength exceeds 10.0 N/sq.mm, the same shall be limited to 10.0 N/sq.mm for the purpose of averaging.

12.1.6.2 **Water absorption** : The bricks when tested in accordance with the procedure laid down in Is : 3495 (Part-2) : 1976 after immersion in cold water for 24 hours, shall have water absorption not more than 20%.

12.1.6.3 **Drying Shrinkage** : The average drying shrinkage of the bricks, when tested by the method described in IS : 4139 : 1989 being the average of the three units, shall not exceed 0.15 percent.

12.1.6.4 **Efflorescence Test** : The bricks when tested in accordance with the procedure laid down in IS : 3495 (Para-3) : 1976 shall have the rating of efflorescence not more than 'Moderate'.

Sampling and Criteria for conformity: Sampling and criteria for conformity of the bricks shall be as given in IS : 5454 : 1976.

13. The University will not pay cost escalation in any case.
14. The tenderer shall be required to submit the tender in two envelop system. Envelop A should contain the earnest money through bank draft of any scheduled bank payable to the Registrar GGV, Bilaspur (C.G.) Envelop B should contain the rate quoted by the contractor/firm of contractors in the prescribed tender form.
15. Envelop 'A' & 'B' will be sealed and then again put in the third envelop which also should be in sealed envelop. It should be clearly mentioned on the top of the envelop that it contains the tender invited by GGV wide tender number **06/Engg./2010 dated 08/01/2010.**
16. The GGV reserves the right to award the work order to the 2nd lowest tenderer incase of the first lowest tenderer fails to execute monthly work progress report by canceling the work order given the 1st lowest tenderer.
17. The GGV reserves the right to place the order complete or part of work.
18. The GGV reserves the right to alter. Add or delete any term(s) & condition(s) in the interest of the University without any prenotice and no suit shall lie on the University for the same.
19. Validity of accepted Quoted rates will be for 12 months from the date of agreement. University will give separate order for separate works time to time for some specified time and specified works in the interest of the University.
20. The venue of arbitration shall be the court at Bilaspur (C.G.)
21. Any other information related to the tender may be obtained from office of the University Engineer, GGV, Bilaspur during working hours.

LIST OF APPROVED MATERIALS & SPECIALIZED AGENCIES (CIVIL)

Note :

1. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material or engaging any of the specialized agencies.
2. Wherever applicable, the Engineer-in-charge may approve any material equivalent to that specified in the tender subject to proof being offered by the Contractor for equivalence to his satisfaction.
3. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature, in the particular specifications and in the list of approved materials attached in the tender, shall be used in the work.
4. In case of non availability of the brand specified in the contract or ISI marked materials, the Contractor shall be allowed to use alternate equivalent brand of the material subject to submission of documentary evidence of non-availability of the specified brand. Necessary cost adjustments on account of above change shall be made for the material, if required.

MATERIALS:

BRAND/MAKE

1.	White Cement	JK, Birla or equivalent.
2.	Super plasticizer	MC Baucheme, Sika, Fosroc
3.	Water Proofing Compound (Liquid)	Pidiproof Ltd., Cico, Impermo
4.	Stainless Steel	Jindal Stainless Steel, Salem Steel
5.	Galvanized/Stainless Steel Anchor Fasteners	Shakti, Arrow, Hilti, Fischer
6.	PVC Tiles	Arm Strong, LG or equivalent.
7.	Ceramic Tiles	Kajaria, Somany, Nitco, Orient, Bell Ceramic, Johnson
8.	Vitrified /Porcelain Tile	Marbonite, Euro, Somany, diamond of Naveen Granamite of Bell ceramic, Granito, Kajaria, Marbitto.
9.	Terrazzo tiles	Mehtab, Nitasha, Nitco, Raj-yesh, Bharat
10.	Chequered tiles	Mehtab, Nitasha, Nitco, Raj-yesh, Bharat
11.	Acid/Alkali Resistant Tile	Somany, Nitco, Kajariya, Bell Granamite Group, Johnson
12.	Polymer Modified Cementitious grout	Bal Endura, Pidilite or equivalent.
13.	Glass Mosaic Tile	Bissazza, Saon or equivalent.
14.	Hardner	Hard crete of Snowcem India, MC Deritop F.H.
15.	Flush Doors	Kutty flush door, Anchor, Kanara, Kitlam, National, Swastic

16.	FRP Shutters	Fibre Glass Engineers, Raipur, Aashoo Model
17.	PVC Shutter	Rajshri, Sintex or equivalent.
18.	Ply Wood	Archid, Kitply, Green ply, Century
19.	Pre-laminated Particle Board	Novapan, Kitlam or equivalent.
20.	Melamine Polish	Melamine of Asian Paint, Wudfin of pidilite Industries Timbertone of ICI Dullex.
21.	Laminate	Marino, Greenlam, Decolam, Century, Formica
22.	Aluminium Composite Panel	Alpolic, Aluco Bond, Reynobond, Euro bond, Al-strong
23.	Stainless Steel Screws	Kundan, Arrow or equivalent.
24.	Aluminium Extrusions	Hindalco, Indalco, Jindal
25.	Hydraulic Floor spring	Hardwyn, Godrej or equivalent.
26.	Hydraulic Door Closer	Hardwyn, Godrej or equivalent.
27.	Annealed Float Glass	Saint Gobain, Modi Guard, Hindustan Pilkington
28.	Synthetic Enamel Paints	ICI(Dulux),Asian (Apcolite),Berger (Luxol),Nerolac (NST)
29.	Structural Silicon Sealant	Dow Corning, Wacker, GE, Du-pont
30.	Epoxy Primer & Paints	Berger, Pidilite or equivalent.
31.	GI Pipe	Tata, Zenith, Jindal
32.	GI fitting	Unik, ICS or equivalent.
33.	Centrifugally Cast Iron Pipe & Fittings	Neco, RIF, SKF
34.	Polyester Powder Coating	Nerolac, Berger, J&N
35.	Gun Metal Gate Valve	Zoloto, Leader, SAINT
36.	PVC Rain Water Pipe & Fitting	Finolax, Classic of Kisan or equivalent.
37.	Primer	Asian, ICI, Berger, Nerolac
38.	Oil Bound Distemper	Asian(Tractor), ICI (Maxi lite),Berger(Bison),Nerolac (NAD)
39.	Acrylic Emulsion Paint	Asian (Royale), ICI (Velvet), Berger (Luxol Silk), Nerolac (Allscapes)
40.	Structural steel section	TATA, SAIL, RINL
41.	Curtain Carrier	Vista levlor or equivalent.
42.	Drapery Rod	Vista Levlor or equivalent.
43.	Vitreous China Wash Basin Rectangular without Pedestal	Hindware / Perryware or equivalent.
44.	Virtuosos China Wash Basin Oval	Hindware / Perryware or equivalent.
45.	Vitreous China Pedestal for Wash Basin	Pedstal of Perryware / Hindware
46.	Vitreous China Floor Mounted European W.C. without cistern	Perryware / Hindware or equivalent.
47.	Vitreous China Floor moulded	Perryware / Hindware or equivalent.

	European with Cistern Compote	
48.	Vitreous China Wall hung W.C. without Cistern.	Perryware / Hindware or equivalent.
49.	Vitreous China Wall Hung W.C. with vitreous Cistern (component)	Perryware / Hindware or equivalent.
50.	Orissa Pan	Perryware / Hindware or equivalent.
51.	Vitreous China Low Level Cistern for European W.C.	Hindware / Perryware or equivalent.
52.	Low Level PVC Cistern Single flush	Sleek model Cistern of PVC of Hindware or Slimline deluxe model of Perryware JINDAL.
53.	Dual Flush	Sleek Dual flush PVC cistern of Hindware or Slimline dual of Perryware.
54.	Vitreous China Half stall Urinal	Model No. 6002 Urinal flat back large of Hindware or magnum of Perryware.
55.	Flush Valve	Aquel, Marc or equivalent.
56.	Solid Plastic Seat Cover for EWC	EWC standard seat cover white of Perryware/Hindware
57.	Jet Assembly for EWC	Perryware, Kamal (Mahendra)
58.	Float Glass	Modi Float, Saint Gobain, Asahi, Sejal
59.	CP Brass Bibcock, Pillarcock, Stopcock, Angle Valve, Concealed Stop Cock.	Marc (oriental series) Jaquar (continental series), Parko, Nova
60.	Plastic Connection Pipe	Perryware/Kamal Delux or equivalent.
61.	CP Waste Coupling	Kamal/Jaquar/Mark/Nova/Parko
62.	CP Bottle Trap	Perryware / Hindware or equivalent.
63.	Waste Pipe	Kamal with brass checknut/Viking
64.	Stainless steel Sink with or without Draining board.	Nirali, Hindware, Frankee, Cobra
65.	Towel Ring/Towel Rod/Towel Rack	Kamal, Marc or equivalent.
66.	Fibre Glass Shelf	Kamal, Bath King or equivalent.
67.	Vitreous China laboratory Sink	Hindware / Perryware or equivalent.
68.	Aluminum Sections	Jindal, Hindalco, Indalco
69.	Textured Exterior wall	Berger, Unitile, Spectrum, Oikos
70	Non asbestos high impact polypropelene reinforced Cement sheet	Everest or equivalent

Schedule of Quantities of Civil Work

1	EARTH WORK		
1.1	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.		
1.1.1	All kinds of soil	153.00	Cubic Metre
1.2	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.		
1.2.1	All kinds of soil.	275.00	Cubic Metre
1.3	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :		
1.3.1	All kinds of soil		
1.3.1.1	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia.	166.00	Metre
1.4	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	160.00	Cubic Metre
1.5	Supplying and filling in plinth with local sand under floors including, watering, ramming consolidating and dressing complete.	177.00	Cubic Metre
2	CONCRETE WORK		
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :		
2.1.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	2.00	Cubic Metre

2.1.2	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	116	Cubic Metre
2.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centring, shuttering and finishing :		
2.2.1	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	3.20	Cubic Metre
2.3	Centring and shuttering including strutting, propping etc. and removal of form work for :		
2.3.1	Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses plinth and string courses fillets etc.	33.00	Square Metre
2.4	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	110.00	Square Metre
2.5	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering in sunken portion of slab at all floor levels : 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	22.00	Cubic Metre
3	REINFORCED CEMENT CONCRETE		
3.1	Centring and shuttering including strutting, propping etc. and removal of form for :		
3.1.1	Foundations, footings, bases of columns, etc. for mass concrete.	419.00	Square Metre
3.1.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	239.00	Square Metre
3.1.3	Suspended floors, roofs, landings, balconies and access platform.	1409.00	Square Metre
3.1.4	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	1568.00	Square Metre
3.1.5	Columns, Pillars, Piers, Abutments, Posts and Struts.	1124.00	Square Metre
3.1.6	Stairs, (excluding landings) except spiral-staircases.	125.00	Square Metre
3.1.7	Vertical and horizontal fins individually or forming box louvers band, fascias and eaves boards.	145.00	Square Metre

3.1.8	Edges of slabs and breaks in floors and walls.		
3.1.8.1	Under 20 cm wide	273.00	Metre
3.1.9	Weather shade, Chajjas, corbels etc., including edges.	136.00	Square Metre
3.2	Extra for additional height in centring, shuttering where ever required with adequate bracing, propping etc. including cost of de-shuttering and decentring at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured)		
3.2.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured).	72.00	Square Metre
3.3	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6mm nominal size) reinforced with 1.6 mm dia mild steel wire including centring and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete excluding plastering of the jambs, sills and soffits.		
3.3.1	50 mm thick	13.80	Square Metre
3.4	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level		
3.4.1	Thermo-Mechanically Treated bars.	21595.00	Kilogram
3.5	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level		
3.5.1	Thermo-Mechanically Treated bars.	Nil	Kilogram
3.6	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	329.00	Metre
3.7	Reinforced cement concrete work in walls (any thickness) including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement: 1:1.5:3 (1 cement: 1.5 coarse sand:3 graded stone aggregate 20 mm nominal size)	205.00	Cubic Metre
3.8	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but	384.00	Cubic Metre

excluding the cost of centring, shuttering, finishing and reinforcement. including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. M-25 grade reinforced cement concrete by using 410kg. of cement per cum of concrete.

All work above plinth level and upto floor V level

4 BRICK WORK

4.1	Brick work with cement based F.P.S. fly ash bricks of class designation 75 in foundation and plinth in:		
4.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	55.00	Cubic Metre
4.2	Brick work with cement based F.P.S. fly ash bricks of class designation 75 in superstructure above plinth level upto floor V level		
4.2.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	468.00	Cubic Metre
4.3	Half brick masonry with cement based F.P.S. fly ash bricks of class designation 75 in superstructure above plinth level upto floor V level.		
4.3.1	Cement mortar 1:4 (1 cement :4 coarse sand)	470.00	Square Metre
4.4	Brick edging 7cm wide 11.4cm deep to plinth protection with cement based F.P.S. fly ash bricks of class designation 75 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	107.00	Metre

5 MARBLE WORK

5.1	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanity counters , window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to give high gloss finish etc. complete at all levels.		
5.1.1	Udaipur green marble.		
5.1.1.1	Area of slab upto 0.50 sqm.	61.00	Square Metre
5.1.1.2	Area of slab over 0.50 sqm.	30.00	Square Metre
5.1.2	Granite of colour and shade as approved by Engineer – in – Charge.		
5.1.2.1	Area of slab over 0.50 sqm.	37.00	Square Metre

6 WOOD AND P. V. C. WORK

6.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position :		
-----	--	--	--

6.1.1	Bija wood	3	Cubic Metre
6.2	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked stainless steel butt hinges with necessary screws excluding, panelling which will be paid for separately.		
6.2.1	Kiln seasoned and chemically treated Bija wood.		
6.2.1.1	35 mm thick shutters	167.00	Square Metre
6.3	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick :		
6.3.1	Particle Board 12 mm thick		
6.3.1.1	Plain particle board flat pressed, 3 layer or graded wood particle board medium density Grade I IS:3087.	77.00	Square Metre
6.4	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	17.00	Square Metre
6.5	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately).		
6.5.1	18 mm thick	27.00	Square Metre
6.6	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both side of shutters.		
6.6.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	62.00	Square Metre

6.7	Providing and fixing 35mm thick wire gauze shutters using stainless steel wire gauze of average width of aperture 1.40 mm with wire of dia. 0.35 mm for doors, windows and clerestory windows including ISI marked stainless steel butt hinges with necessary screws :		
6.7.1	Kiln seasoned and chemically treated Bija wood.	22.00	Square Metre
6.8	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		
6.8.1	20 mm dia (heavy type)	218.00	Metre
6.9	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.		
6.9.1	Fixed to steel windows by welding.	3376.00	Kilogram
6.10	Providing and fixing oxidised M.S. Safety chain with necessary fixtures for doors. (Weighing not less than 450 gms.)	23.00	Each
6.11	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	81.00	Each
6.12	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :		
6.12.1	300x16 mm	30.00	Each
6.12.2	250x16 mm	153.00	Each
6.13	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
6.13.1	250x10 mm	177.00	Each
6.13.2	150x10 mm	162.00	Each
6.14	Providing and fixing aluminium pull bolt lock anodised ISI marked 9anodic coating not less than grade AC 10 asper IS : 1868) transparent or dyed to required colour and shade with necessary screws vgolts, nut and washers etc. complete.	27.00	Each
6.15	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
6.15.1	125 mm	368.00	Each

6.16	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.		
6.16.1	Twin rubber stopper	109.00	Each
6.17	Providing and fixing to existing door frames.		
6.17.1	30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter).	371	Square Metre
6.18	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.		
6.18.1	25mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws.	703	Square Metre
6.19	Extra for providing and fixing flush doors with decorative veneering		
6.19.1	On one side in item No. 6.18	320	Square Metre

6.20		Providing and fixing drapery rods of 25 mm dia of C.I. covered with PVC sheet of approved brand manufacturer (Vista / Marbel) including necessary rings, knobs and brackets, cleats and necessary screws for curtain rod are all complete as per direction of Engineer - in - Charge.	1705	Metre
7	10	STEEL WORK		
7.1		Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
7.1.1		Using flats 30x6mm for diagonal braces and central cross piece.	119	Square Metre
7.2		Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 and M.S. top cover of required thickness for rolling shutters.		
7.2.1		80x0.90 mm M.S. laths with 0.90 mm thick top cover.	16.00	Square Metre
7.3		Providing and fixing ball bearing for rolling shutters.	4.00	Each
7.4		Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded with 15x3 mm lugs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or with dash fastener or rawl plugs and screws or with fixing clips or with bolts and nuts as require including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.	1393.00	Kilogram
7.5		Providing and fixing pressed steel door frames conforming to IS: 4351 manufactured from commercial mild steel sheet of 1.60 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.60mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:		
7.5.1		Profile B	245.00	Metre
7.5.2		Profile C	196.00	Metre

7.6	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	25.00	Each
7.7	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	40.00	Each
7.8	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.		
7.8.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	52242.00	Kilogram
7.9	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.		
7.9.1	M.S. tube.	505.00	Kilogram
7.10	Providing and fixing 4 mm thick float glass panes with glazing clips, special metal sash putty of approved make in steel doors, windows, ventilators and composite units (Actual area of opening of steel door, windows, ventilators or composite unit shall be measured for payment).	153.00	Square Metre
7.11	Providing and fixing glazed / wire gauzed steel door, windows & ventilators made up of Cold Rolled. Formed continuous Seam Welded Tubular profiles made from commercial M.S. sheet conforming to IS : 513, size of welded tubular Z profiles & T- profiles shall be 50 mm X 23 mm X 16 gauge, joints mitred & flash butt welded, with 19 mm X 3 mm lugs 10 cm long embedded in cement concrete blocks 15 X 10 X 10 cm of cement concrete 1 : 3 : 6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs & screws or with rawl plugs & screws as required including necessary arrangement for fixing glass panes / wire gauze as required. Providing and fixing MS oxidized casement fastener(125 mm length weighing not less than 120 gm) M.S. oxidized Peg stay (200 mm length weighing not less than 120 gm) or 250 X 16 mm oxidised M.S. sliding door bolt (2 Nos.)& Box type Hinges 65 mm long made of 2.5 mm thick-sheet, G.I. pin of 6 mm dia and applying a priming coat of approved steel		

	primer. Workshop / factory approved by Chief Engineer (CZ). The above item is for all sizes / design and types of doors and windows i.e. composite window / ventilator, fixed window, openable side hung / top hung etc.. For measurement, the profiles of above mentioned size shall be measured in running Metre, along the centre line of the profile provided in doors, windows and ventilators correct to one mm and total weight calculated on the basis of standard weight or actual weight per Metre, which ever is less. No deduction or extra payment shall be made for making holes and making arrangements for fixing fittings etc. including packing wherever necessary. The rate of item includes payment for accessories mentioned in the item. Providing and fixing glass panes / wire gauze shall be paid for separately.	5866.00	Kilogram
7.12	Providing and fixing galvanised mild steel wire mesh of 0.63 mm dia and 1.40 mm aperture with steel beading and necessary screws in M.S. windows all operation complete as per direction of Engineer-in-charge. (Opening of wire gauze shall be measured for payment)	222.00	Square Metre
8	FLOORING		
8.1	52 mm thick cement concrete flooring with concrete hardener topping under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume .hardening compound is mixed @ 2 litre per 50kg of cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	34.00	Square Metre
8.2	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.		
8.2.1	18 mm thick.	11.00	Square Metre
8.3	Precast terrazo tiles 22 mm thick with graded marble chips of size upto 12mm laid in floors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete with precast tiles on 20mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
8.3.1	Light shade using white cement. 665.75	120.00	Square Metre
8.3.2	Ordinary cement without any pigment. 548.90	53.00	Square Metre
8.4	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :		
8.4.1	25 mm thick.694.40	2740.00	Square Metre

8.5	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	43.00	Square Metre
8.6	Extra for pre finished nosing in treads of steps of Kota stone/ treads / window sill	289.00	Metre
8.7	Extra for Kota stone in treads of steps and risers using single length upto 1.05 metre .	60.00	Square Metre
8.8	Providing and fixing 30 mm thick machine cut, prepolished on both side single piece Rajim stone in shelves including cutting cheses of appropriate size of depth not less than 5cm in wall & making good the wall wiith cement mortar 1:4 (1 Cement : 4 Coarse sand)as per direction of Engineer - in - charge. (Only the stone piece exposed outside the finished wall shall be measured for payment).	56.00	Square Metre
8.9	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacture) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	447.00	Square Metre
8.10	Providing and laying Ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete.	84.00	Square Metre
8.11	Providing and fixing 25 mm thick machine cut, prepolished on one side single piece Kota stone width not exceeding 300 mm in window sills laid over 20 mm thick base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :	19.00	Square Metre

9 ROOFING

9.1	Providing corrugated G.S. sheet roofing including vertical/curved surface fixed with palymer coalid j or L hooke, bolts & nuts 8 m.m dia with bilume & G.I. limpel warhers or with G.I. limpet warhers gfilled with white lead and ile a coat of approned steel primer ad two coals of approned paint or overtapping of sheets complete (up to any pitch in horifontea/vertical or arved surfaces) excluding the
-----	--

	cost of purlins, rafters, & trusses and i/c cutting to of and & hape whirener required.		
	(9.1.2) 0.80 mm thick with sine coating not less than 275 gm/m ² – 2950.00 m ²		
	(9.4) – Providing ridges or hips of width 60 cm over all width plain c.c. sheet ficed with paymer coaled J or R hooks bolts & nulls 8 mm dia G.I. limpet and bitumen warhars conprlete .		
	_ 9.4.1 – 0.80 mm thick with sine coating not less than 275 gm/nt – 450.00 m ²		
	Providing and fixing on wall face Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. (i) Single socketed pipes		
9.1.1	110 mm diameter	200.00	Metre
9.2	Providing and fixing on wall face Unplasticised - PVC moulded fittings/ accessories for Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
9.2.1	Single tee with door		
9.2.1.1	110x110x110 mm	6.00	Each
9.2.2	Bend 87.5°		
9.2.2.1	110 mm bend	43.00	Each
9.2.3	Shoe (Plain)		
9.2.3.1	110 mm Shoe	13.00	Each
9.3	Providing and fixing Unplasticised -PVC pipe clips of approved design to Unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.		
9.3.1	110 mm	95.00	Each
9.4	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	35.00	Each
10	FINISHING		
10.1	12 mm cement plaster of mix :		
10.1.1	1:6 (1 cement : 6 fine sand)	108.00	Square Metre
10.2	15 mm cement plaster on the rough side of single or half brick wall of mix :		
10.2.1	1:6 (1 cement : 6 fine sand)	2396.00	Square Metre

10.3	6 mm cement plaster of mix :		
10.3.1	1:3 (1 cement : 3 fine sand)	1463.00	Square Metre
10.4	Neat cement punning	327.00	Square Metre
10.5	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	4220.00	Square Metre
10.6	White washing with lime to give an even shade:		
10.6.1	New work (three or more coats)	826.00	Square Metre
10.7	Distemping with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
10.7.1	Two or more coats on new work.	2350.00	Square Metre
10.8	Finishing walls with Acrylic Smooth exterior paint of required shade :		
10.8.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	778.00	Square Metre
10.9	Applying priming coat :		
10.9.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	275.00	Square Metre
10.9.2	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	263.00	Square Metre
10.10	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:		
10.10.1	Two or more coats on new work	1305.00	Square Metre
10.11	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
10.11.1	Two or more coats on new work	1015.00	Square Metre
11	ROAD WORK		
11.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	177.00	Square Metre

11.2	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge.	177.00	Square Metre
------	---	--------	--------------

11.3	Supplying and filling moorum under approach paths roads in layers not exceeding 20 cm in depth consolidating each deposited layer by road roller of 8 to 10 tonne capacity including watering, dressing to camber and graded etc. complete.	53.00	Cubic Metre
------	---	-------	-------------

12 SANITARY INSTALLATIONS

12.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
------	--	--	--

12.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	13.00	Each
--------	---	-------	------

12.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
------	---	--	--

12.2.1	W.C. pan with ISI marked white solid plastic seat and lid	8.00	Each
--------	---	------	------

12.3	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :		
------	--	--	--

12.3.1	White Vitreous China Wash basin size 550X400 mm with a pair of 15 mm C.P. brass pillar taps.	16.00	Each
--------	--	-------	------

12.3.2	White Vitreous China flat back Wash basin size 550x400 mm with a single 15 mm C.P. brass pillar tap.	5.00	Each
--------	--	------	------

12.4	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	16.00	Each
------	--	-------	------

12.5	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :		
12.5.1	Kitchen sink with drain board		
12.5.1.1	510x1040 mm bowl depth 250mm.	2.00	Each
12.5.1.2	510x1040 mm bowl depth 200mm.	4.00	Each
12.5.2	Kitchen sink without drain board		
12.5.2.1	610x510 mm bowl depth 200 mm.	8.00	Each
12.6	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
12.6.1	Flexible pipe		
12.6.1.1	32 mm dia	23.00	Each
12.6.1.2	40 mm dia	14.00	Each
12.7	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :		
12.7.1	Rectangular shape 453x357mm	20.00	Each
12.8	Providing and fixing toilet paper holder :		
12.8.1	C.P. brass	8.00	Each
12.9	Providing and fixing soil, waste and vent pipes :		
12.9.1	100 mm dia.		
12.9.1.1	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	147.00	Metre
12.9.2	75 mm diameter :		
12.9.2.1	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	188.00	Metre
12.10	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :		
12.10.1	For 100 mm dia. Pipe	54.00	Each
12.10.2	For 75 mm dia. Pipe	59.00	Each
12.11	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
12.11.1	100 mm		
12.11.1.1	Sand cast iron S&S as per IS - 3989	20.00	Each
12.11.2	75 mm dia		
12.11.2.1	Sand cast iron S&S as per IS- 3989	12.00	Each

12.12	Providing and fixing plain bend of required degree.		
12.12.1	100 mm		
12.12.1.1	Sand cast iron S&S as per IS : 3989	10.00	Each
12.12.2	75 mm		
12.12.2.1	Sand cast iron S&S as per IS - 3989	22.00	Each
12.13	Providing and fixing heel rest sanitary bend		
12.13.1	100 mm dia		
12.13.1.1	Sand cast iron S&S as per IS - 3989	12.00	Each
12.13.2	75 mm		
12.13.2.1	Sand cast iron S&S as per IS - 3989	30.00	Each
12.14	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
12.14.1	100x100x100 mm		
12.14.1.1	Sand cast iron S&S as per IS - 3989	24.00	Each
12.14.2	75x75x75 mm		
12.14.2.1	Sand cast iron S&S as per IS - 3989	26.00	Each
12.15	Providing and fixing terminal guard:		
12.15.1	100 mm		
12.15.1.1	Sand cast iron S&S as per IS - 3989	11.00	Each
12.15.2	75 mm		
12.15.2.1	Sand cast iron S&S as per IS - 3989	23.00	Each
12.16	Providing and fixing collar:		
12.16.1	100 mm		
12.16.1.1	Sand cast iron S&S as per IS - 3989	47.00	Each
12.16.2	75 mm		
12.16.2.1	Sand cast iron S&S as per IS- 3989	46.00	Each
12.17	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) iron pipes and fittings of diameter:		
12.17.1	100 mm	125.00	Each
12.17.2	75 mm	77.00	Each
12.18	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :		
12.18.1	100 mm	11.00	Each

12.18.2	75 mm	23.00	Each
12.19	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :		
12.19.1	100 mm inlet and 75 mm outlet		
12.19.1.1	Sand cast iron S&S as per IS - 3989	35.00	Each
12.20	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		
12.20.1	100 mm diameter pipe	98.00	Metre
12.20.2	75 mm diameter pipe	118.00	Metre
12.21	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour. weighing not less than 105 gms.	14.00	Each
12.22	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.		
12.22.1	600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	21.00	Each
12.23	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour. Weighing not less than 300 gms.	21.00	Each
13	WATER SUPPLY		
13.1	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc.		
	Internal work - Exposed on wall		
13.1.1	15 mm dia. nominal bore	167.00	Metre
13.1.2	20 mm dia. nominal bore	201.00	Metre
13.1.3	25 mm dia. nominal bore	210.00	Metre
13.2	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall.		
13.2.1	15 mm dia nominal bore	143.00	Metre
13.2.2	20 mm dia nominal bore	64.00	Metre

13.3	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.		
	External work :		
13.3.1	25 mm dia. nominal bore	94.00	Metre
13.4	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
13.4.1	25 mm nominal bore	38.00	Each
13.5	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
13.5.1	20 mm nominal bore	20.00	Each
13.6	Providing and fixing uplasticised PVC connection pipe with brass unions :		
13.6.1	45 cm length		
13.6.1.1	15 mm nominal bore	43.00	Each
13.7	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
13.7.1	100 mm diameter	22.00	Each
13.8	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :		
13.8.1	15 mm diameter pipe.	167.00	Metre
13.8.2	20 mm diameter pipe.	201.00	Metre
13.8.3	25 mm diameter pipe.	210.00	Metre
13.9	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		
13.9.1	25 mm diameter pipe	94.00	Metre
13.10	Providing and filling sand of grading zone V or coarser grade all-round the G.I. pipes in external work.		
13.10.1	25 mm diameter pipe	94.00	Metre
13.11	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)		
13.11.1	25 mm nominal bore	35.00	Each
13.12	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	8815.00	Per Litre
13.13	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931		
13.13.1	15 mm nominal bore.	27.00	Each

13.14	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		
13.14.1	15 mm nominal bore	37.00	Each
13.15	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
13.15.1	15 mm nominal bore.	52.00	Each
13.16	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931		
13.16.1	15 mm nominal bore	26.00	Each
13.17	Providing and fixing PTMT grating of approved quality and colour.		
13.17.1	Circular type.		
13.17.1.1	100 mm nominal dia.	50.00	Each
13.18	Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.	12.00	Each
14	D R A I N A G E		
14.1	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
14.1.1	100 mm diameter	45.00	Metre
14.1.2	150 mm diameter	37.00	Metre
14.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		
14.2.1	100 mm diameter S.W. pipe	45.00	Metre
14.2.2	150 mm diameter S.W. pipe	37.00	Metre
14.3	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :		
14.3.1	100x100 mm size P type		

14.3.1.1	With cement based F.P.S. fly ash Bricks of class designation 75	18.00	Each
14.4	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :		
14.4.1	150 mm dia. R.C.C. pipe	144.00	Metre
14.4.2	250 mm dia. R.C.C. pipe	60.00	Metre
14.5	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :		
14.5.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :		
14.5.1.1	With cement based F.P.S. Fly ash bricks of class designation 75	20.00	Each
14.6	Extra for depth for manholes		
14.6.1	Size 90x80 cm		
14.6.1.1	With cement based F.P.S. fly ash bricks of class designation 75	4.00	Metre
15	PILE WORK		
15.1	Boring, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in reinforcement with M35 to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured up to the bottom of pile cap) :		
15.1.1	300 mm dia piles.	975.00	Metre
15.2	Extra over item No. 15.1 for providing additional bulb in under reamed piles, under specified dia meter (Only the quantity of extra bulbs are to be paid).		
15.2.1	300mm dia piles.	278.00	Each

15.3	Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.		
15.3.1	Single pile upto 50 tonne capacity		
15.3.1.1	Routine test	4.00	Per Test
15.3.2	Group of two or more piles upto 50 tonne capacity		
15.3.2.1	Routine test	1.00	Per Test
16	WATER PROOFING		
16.1	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sum. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	85.00	Square Metre
16.2	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs		

c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.

d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.

e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :

16.2.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	535.00	Square Metre
--------	---	--------	--------------

Note- Items other than above schedule for civil work/Electrical work will be taken from for civil: Delhi schedule of rates 2007 for Electrical: Delhi schedule of rate-2007.