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GOVERNMENT OF BIHAR



SCHEDULE OF RATE

EFFECTIVE FROM : 15-07-2019

Water Resources Department

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प्रस्तावना

बिहार लोक निर्माण संहिता की कंडिका: 103 के संशोधन के आलोक में बिहार सरकार, पथ निर्माण विभाग द्वारा निर्गत संकल्प-सह-पठित ज्ञापांक-01/बी0-12-2003-5762 (एस0) डब्लू0ई0, पटना दिनांक 05-06-2006 की कंडिका 2 (iii) में यह प्रावधान किया गया है कि अनुसूचित दर के निर्धारण के लिये दर विश्लेषण तथा सामग्रियों का दर निर्धारण पथ निर्माण विभाग के संयोजन में गठित राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा किया जायेगा।

जल संसाधन विभाग के पत्रांक-1/पी0 एम0 सी0/विविध/27/2007-91 पटना, दिनांक 09.02.2017 के द्वारा विभागीय अनुसूचित दर निर्धारण समिति का गठन किया गया है, जिसके वर्तमान सदस्य निम्नवत् है:

1. ई0 अंजनी कुमार सिंह
अभियंता प्रमुख, मुख्यालय-सह-अध्यक्ष, विभागीय अनुसूचित दर निर्धारण समिति।
2. ई0 राम पुकार रंजन
अभियंता प्रमुख (सिंचाई सृजन)-सह-सदस्य विभागीय अनुसूचित दर निर्धारण समिति।
3. ई0 राजेश कुमार
अभियंता प्रमुख (बाढ़ नियंत्रण एवं जल निस्सरण)-सह-सदस्य, विभागीय अनुसूचित दर निर्धारण समिति।
4. ई0 कमल नारायण लाल
मुख्य अभियंता (यांत्रिक)-सह-सदस्य-विभागीय अनुसूचित दर निर्धारण समिति।
5. ई0 सुजीत कुमार।
निदेशक, क्रय, भंडार एवं सामग्री प्रबंधन निदेशालय-सह-सदस्य सचिव, विभागीय अनुसूचित दर निर्धारण समिति।

राज्य स्तरीय अनुसूचित दर निर्धारण समिति, पथ निर्माण विभाग द्वारा अनुमोदित श्रमदर, मशीन दर, सामग्रियों का दर तथा कार्य मदों के दर विश्लेषण के आधार पर जल संसाधन विभाग के लिए दिनांक-15.07.2019 से प्रभावी अनुसूचित दर का एकादश संस्करण तैयार किया गया है जिसमें निम्नलिखित प्रावधान किये गये हैं:-

1. वर्तमान अनुसूचित दर पुस्तिका में प्रयुक्त सभी सामग्रियों, श्रम दर, प्लान्ट्स एवं मशीनरी का Usages Charge तथा Carriage दर एवं कार्य मदों का दर (विश्लेषण सहित) संयोजक, राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, पथ निर्माण विभाग, बिहार, पटना के पत्रांक-मु0नि0(पथ)22/2007-27(अनु0) पटना, दिनांक-17.07.2019 से अनुमोदित हैं।
2. अनुसूचित दर पुस्तिका-2019 में संलग्न राज्यस्तरीय अनुसूचित दर निर्धारण समिति द्वारा अनुमोदित सभी निर्णय यथामान्य है।
3. जल संसाधन विभाग के River valley/ Irrigation & Flood Control से संबंधित कार्य मदों के दर विश्लेषण में Prime Cost के लिये तकनीकी परीक्षण कोशांग के Chapter 8, 9 & 10 के Format को आधार माना गया है।

(1)

Andy's

4. रॉयल्टी (Royalty) का प्रावधान खनन विभाग की अधिसूचना सं० 244, 245 तथा 250, पटना दिनांक-27.01.2012 के अनुसार किया गया है। परन्तु खनन विभाग की रॉयल्टी संबंधी अद्यतन अधिसूचना पर कार्रवाई करने की जिम्मेदारी क्षेत्रीय पदाधिकारियों की होगी।
5. यदि परिस्थितिवश Finished Rate की निविदा के विरुद्ध संवेदक को विभाग द्वारा निर्माण सामग्री निर्गत किया जाता है तो वैसी परिस्थिति में वसूली (Recovery) सामग्री के दर पर तेरह प्रतिशत (13%) जोड़कर प्रावधानित किया जाय, ताकि विभागीय सामग्री पर सामग्री की सुरक्षा के विरुद्ध संवेदक को मात्र दो प्रतिशत (2%) का ही संवेदक लाभ (C.P.) प्राप्त हो सके। श्रम दर की निविदा में निर्माण में लगे संवेदक को विभागीय सामग्री पर कोई संवेदक लाभ (C.P.) देय नहीं होगा। यदि परिस्थितिवश निर्माण सामग्री की आपूर्ति ली जाती है तो निर्माण सामग्री की निविदा में सामग्री के दर पर मात्र दस प्रतिशत (10%) संवेदक लाभ (C.P.) का प्रावधान किया जाय।
6. दिनांक-19.06.2007 को सम्पन्न विभागीय अनुसूचित दर निर्धारण समिति की बैठक में यह निर्णय लिया गया था कि "चूँकि यांत्रिक साधन से मिट्टी ढुलाई कर कार्य कराने में ट्रक द्वारा ढुलाई कर कार्य कराना सर्वाधिक मंहगा पड़ता है", अतः जल-संसाधन विभाग के अन्तर्गत यांत्रिक साधन से मिट्टी कार्य ट्रक द्वारा नहीं किये जाए।
7. यदि जल संसाधन विभाग द्वारा पथ निर्माण, भवन निर्माण, लोक स्वास्थ्य अभियंत्रण या विद्युत से संबंधित कार्य कराया जाता है तो क्रमशः संबंधित विभाग यथा पथ निर्माण विभाग, भवन निर्माण विभाग, लोक स्वास्थ्य अभियंत्रण विभाग या विद्युत बोर्ड में लागू दर एवं दर विश्लेषण का जल संसाधन विभाग द्वारा हू-बहू पालन किया जायेगा।
8. अनुसूचित दर पुस्तिका-2019 के उपयोग करनेवालों के विशेष सुविधा के लिए यह पुस्तिका विभागीय वेबसाईट www.wrd.bih.nic.in पर भी उपलब्ध है।
9. अनुसूचित दर पुस्तिका-2019 के उपयोग करने वाले पदाधिकारियों से अनुरोध है कि कार्य मदों के दर विश्लेषण एवं विशिष्टियों का गहन अध्ययन किया जाय एवं इससे संबंधित सुझाव विभागीय अनुसूचित दर निर्धारण समिति को उपलब्ध कराना सुनिश्चित की जाय।
10. अनुसूचित दर पुस्तिका के पुनरीक्षण एवं वर्तमान संस्करण को तैयार करने में यथा संभव सावधानी बरती गई है। फिर भी ऐसी सम्भावना है कि अनुसूचित दर को तैयार करने में कुछ त्रुटि रह गई हो जो व्यवहार में लाने के क्रम में दृष्टिगोचर हो सकती है। ऐसी स्थिति में अनुरोध है कि उन त्रुटियों को विभागीय अनुसूचित दर निर्धारण समिति को जानकारी अविलम्ब दी जाय ताकि विचारोपरांत उन त्रुटियों का समुचित निराकरण किया जा सके।

वर्तमान अनुसूचित दर पुस्तिका को तैयार कर प्रकाशित करने में विभागीय अनुसूचित दर निर्धारण समिति के सभी सदस्यों के साथ-साथ क्रय, भंडार एवं सामग्री प्रबंधन निदेशालय के श्री संजय कुमार सिंह उप-निदेशक, श्री विजय कुमार, उप-निदेशक-2, श्री संतोश प्रसाद सिंह, सहायक अभियंता और कार्यालय के समस्त कर्मियों का विशेष योगदान रहा है। उन सभी पदाधिकारियों एवं कर्मचारियों के प्रति समिति आभार व्यक्त करती है।

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राज्यस्तरीय अनुसूचित दर निर्धारण समिति के अध्यक्ष एवं सभी सदस्यों को भी अनुसूचित दर पुस्तिका-2019 के पुनरीक्षण, सहयोग एवं सुझावों के लिए उनके प्रति आभार प्रकट किया जाता है।

यह अनुसूचित दर पुस्तिका दिनांक-15.07.2019 से प्रभावी है।

Amitkumar
15.07.19

(अंजनी कुमार सिंह)

अभियंता प्रमुख (मुख्यालय)-सह-अध्यक्ष
विभागीय अनुसूचित दर निर्धारण समिति
जल संसाधन विभाग, पटना

(iii)

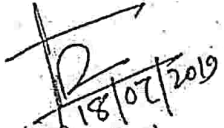
दिनांक-18.07.2019 को अभियंता प्रमुख (मुख्यालय) सह-अध्यक्ष विभागीय अनुसूचित दर निर्धारण समिति, जल संसाधन विभाग, बिहार, पटना के कार्यालय कक्ष में आहूत बैठक की कार्यवाही।

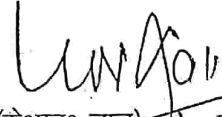
उपस्थिति:-

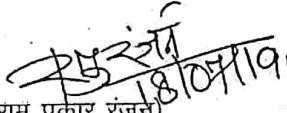
1. ई0 अंजनी कुमार सिंह
अभियंता प्रमुख, मुख्यालय-सह-अध्यक्ष, विभागीय अनुसूचित दर निर्धारण समिति।
2. ई0 राम पुकार रंजन
अभियंता प्रमुख (सिंचाई सृजन)-सह-सदस्य विभागीय अनुसूचित दर निर्धारण समिति।
3. ई0 कमल नारायण लाल
मुख्य अभियंता (यांत्रिक)-सह-सदस्य-विभागीय अनुसूचित दर निर्धारण समिति।
4. ई0 सुजीत कुमार
निदेशक, क्रय, भंडार एवं सामग्री प्रबंधन निदेशालय-सह-सदस्य सचिव, विभागीय अनुसूचित दर निर्धारण समिति।

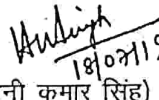
राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा जल संसाधन विभाग, बिहार, पटना के अनुसूचित दर पुस्तिका-2019 का अनुमोदन संयोजक, राज्य स्तरीय अनुसूचित दर निर्धारण समिति सह-अभियंता प्रमुख, पथ निर्माण विभाग, बिहार, पटना के पत्रांक मु0नि0(पथ)-22/2007 27 (अनु0) पटना दिनांक-17.07.2019 से प्राप्त हुआ है जिसे दिनांक 15.07.2019 से प्रभावी करने का निर्देश है।

समिति का निर्णय:- विभागीय अनुसूचित दर निर्धारण समिति के सभी सदस्यों द्वारा विमर्शोपरान्त जल संसाधन विभाग के अनुसूचित दर पुस्तिका-2019 को दिनांक-15.07.2019 से प्रभावी करते हुए प्रकाशन का निर्णय लिया गया। साथ ही अनुसूचित दर पुस्तिका को विभागीय वेबसाइट-www.wrd.bih.nic.in पर अपलोड करने का निर्णय लिया गया।


(सुजीत कुमार)
सदस्य सचिव विभागीय,
अनुसूचित दर निर्धारण समिति-सह-निदेशक,
क्रय भंडार एवं सामग्री प्रबंधन निदेशालय, जल संसाधन
विभाग, बिहार, पटना


(के0एन0 लाल)
सदस्य
विभागीय अनुसूचित दर
निर्धारण समिति-सह-मुख्य अभियंता (यांत्रिक)
जल संसाधन विभाग, बिहार, पटना


(राम पुकार रंजन)
सदस्य
विभागीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख
(सिंचाई सृजन) जल संसाधन विभाग, बिहार, पटना।


(अंजनी कुमार सिंह)
अध्यक्ष
विभागीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख, मुख्यालय,
जल, संसाधन विभाग, बिहार, पटना।

(IV)

SE(DPT)
Amika
17/07/19

पत्रांक :- मु.सि. (पथ)-22/2007-

27 (अ३०)

पटना, दिनांक :- 17/7/19

प्रेषक,

भवानी नन्दन,
संयोजक,
राज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख,
पथ निर्माण विभाग, बिहार, पटना।

सेवा में,

अभियंता प्रमुख (मुख्यालय)
-सह-अध्यक्ष, विभागीय अनुसूचित दर निर्धारण समिति,
जल संसाधन विभाग, बिहार, पटना।

विषय :-

जल संसाधन विभाग, बिहार, पटना से संबंधित अनुसूचित दर पुस्त 2019 पर
राज्यस्तरीय अनुसूचित दर निर्धारण समिति द्वारा दिनांक-04.07.2019 की बैठक में
लिये गये निर्णय का प्रेषण।

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि राज्यस्तरीय अनुसूचित दर निर्धारण समिति द्वारा
जल संसाधन विभाग, बिहार, पटना से संबंधित अनुमोदित अनुसूचित दर पुस्त 2019 की प्रति आवश्यक
कार्रवाई हेतु समर्पित की जा रही है।

अनु०- 1.

निर्णय (कार्यवाही) की प्रति।

2.

अनुमोदित अनुसूचित दर पुस्त
2019 की प्रति (कुल-304 पृष्ठ)।

विश्वासभाजन

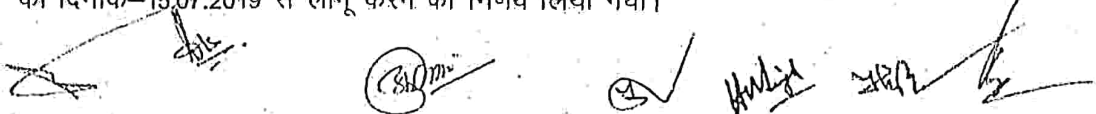
(भवानी नन्दन)
संयोजकराज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख,
पथ निर्माण विभाग, बिहार, पटना।

17/7/19

दिनांक-04.07.2019 को आहूत राज्य स्तरीय अनुसूचित दर निर्धारण समिति की बैठक की कार्यवाही में लिये गये निर्णय :-

1. बिटूमेन एवं इमल्शन के दर को अद्यतन करने के संबंध में-राष्ट्रीयकृत तेल कम्पनियों यथा IOCL, BPCL & HPCL से बिटूमेन एवं इमल्शन के बढ़े हुए/घटे हुए दर को न्यूनतम दर के आधार पर संलग्न सूची (Schedule-M4) के अनुसार अद्यतन करने का निर्णय लिया गया।
2. स्टील के दर को अद्यतन करने के संबंध में-विभिन्न स्टील निर्माता कंपनियों से प्राप्त निर्माण सामग्रियों यथा G.C.Sheet, wire rod in coil, Steel channel, Steel angles एवं TMT Bars आदि के बढ़े हुए/घटे हुए दर को न्यूनतम दर के आधार पर संलग्न सूची (Schedule M5, M6, M8, M9 एवं M10A) के अनुसार दर को अद्यतन करने का निर्णय लिया गया।
3. सिमेंट के दर को अद्यतन करने के संबंध में-विभिन्न सिमेंट निर्माता कंपनियों से प्राप्त विभिन्न प्रकार के सिमेंट यथा OPC-43Grade, Portland Pozzolana Cement (P.P.C), Portland Slag Cement (P.S.C.) एवं Portland composite cement (P.C.C) के बढ़े हुए/घटे हुए दर को न्यूनतम दर के आधार पर संलग्न सूची (Schedule "M1", "M3A," "M3B" एवं "M3C") के अनुसार दर को अद्यतन करने का निर्णय लिया गया।
4. ग्रामीण कार्य विभाग, बिहार, पटना से प्राप्त अनुसूचित दर पुस्त 2019 से संबंधित प्रस्ताव के संबंध में-ग्रामीण कार्य विभाग, बिहार, पटना के विभागीय अनुसूचित दर निर्धारण समिति द्वारा अनुशंसित अनुसूचित दर पुस्त 2019 के अनुमोदन हेतु प्रस्ताव प्राप्त हुआ है। इस पर समिति के सदस्यों द्वारा गहन विचार विमर्श किया गया। दर-विश्लेषण ग्रामीण कार्य विभाग मंत्रालय, भारत सरकार के Standard Data Book, 2004 के आधार पर तैयार किया गया है। इसके अतिरिक्त दर-विश्लेषण एवं Plant & Machinery में ग्रामीण विकास मंत्रालय, भारत सरकार के पत्र संख्या-P-17012/7/2005/P-III (Amendment No-1/2009-10) दिनांक-21.05.2009 एवं D.O. No-17023/13/2005/P-III दिनांक-12.11.2007 में विहित निर्देशों/सुझावों को अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार, पटना के पत्र संख्या-1679 दिनांक-13.06.2019 के आलोक में समाविष्ट किया गया है। उक्त के आलोक में समिति के सदस्यों द्वारा सम्यक् विचारोपरांत सर्वसम्मति से ग्रामीण कार्य विभाग के अनुसूचित दर पुस्त 2019 में प्रयुक्त होनेवाली निर्माण सामग्रियों, Plant Machinery एवं कार्य-मदों के दर (दर-विश्लेषण सहित) को अनुमोदित करने का निर्णय लिया गया।

समिति द्वारा सर्वसम्मति से ग्रामीण कार्य विभाग, बिहार, पटना के अनुसूचित दर पुस्त 2019 को दिनांक-15.07.2019 से लागू करने का निर्णय लिया गया।



(VI)

5. जल संसाधन विभाग, बिहार, पटना से प्राप्त अनुसूचित दर पुस्त 2019 से संबंधित प्रस्ताव के संबंध में—जल संसाधन विभाग, बिहार, पटना के विभागीय अनुसूचित दर निर्धारण समिति द्वारा अनुशासित अनुसूचित दर पुस्त 2019 को अनुमोदित करने से संबंधित प्रस्ताव प्राप्त हुआ है। इस पर समिति के सदस्यों द्वारा गहन विचार विमर्श किया गया। वर्तमान अनुसूचित दर पुस्त 2019 का दर-विश्लेषण दिनांक-07.12.2007 को आहूत राज्य स्तरीय अनुसूचित दर निर्धारण समिति की बैठक में जल संसाधन विभाग के अनुमोदित अनुसूचित दर प्रपत्र के आधार पर तैयार किया गया है। समिति के सदस्यों द्वारा सम्यक् विचारोपरांत सर्वसम्मति से अनुसूचित दर पुस्त 2019 में प्रयुक्त की जानेवाली निर्माण सामग्रियों Plant Machinery एवं कार्य मदों के दर (दर=विश्लेषण सहित) को अनुमोदित करने का निर्णय लिया गया।

समिति द्वारा सर्वसम्मति से जल संसाधन विभाग, बिहार, पटना के अनुसूचित दर पुस्त 2019 को दिनांक-15.07.2019 से लागू करने का निर्णय लिया गया।

6. डेडीकेटेड फ्रेट कोरीडोर कॉरपोरेशन ऑफ इंडिया लिमिटेड (DFCCIL, भारत सरकार का उपक्रम) वाराणसी से स्टील एवं सीमेंट के दर से संबंधित clarification के संबंध में—इस संबंध में DFCCIL द्वारा पथ निर्माण विभाग, बिहार के अनुसूचित दर पुस्त 2018 में दी गयी स्टील एवं सीमेंट के दर से संबंधित मांगी गयी clarifications के बिन्दुओं पर समिति के सदस्यों द्वारा गहन विचार-विमर्श किया गया। विमर्शोपरांत समिति के सदस्यों द्वारा सर्वसम्मति से यह निर्णय लिया गया, जो इस प्रकार है :-

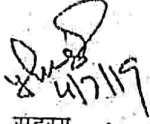
- (a) अनुसूचित दर पुस्त 2018 के Schedule M10A में अंकित स्टील (TMT Fe 500) का दर बिहार के सभी जिलों के लिए एक समान लागू है।
- (b) अनुसूचित दर पुस्त 2018 के Schedule M1 में अंकित सीमेंट (OPC grade 43) का दर किसी Particular Zone के अंतर्गत सभी जिलों (Districts) के लिए एक समान है।
- (c) Work site की आवश्यकतानुसार सक्षम प्राधिकार द्वारा सीमेंट एवं स्टील का लीड न्यूनतम दूरी के आधार पर स्वीकृत किया जा सकता है।

7. CWJC No.....2019 SRMB Srijan Pvt. Ltd. Vs the state of Bihar & others से संबंधित तथ्य विवरणी (Statement of Facts)—माननीय उच्च न्यायालय, पटना में दायर CWJC No.....2019 SRMB Srijan Pvt. Ltd. Vs the state of Bihar & others से संबंधित writ petition, Advocate General, Bihar, Patna के पत्र संख्या-14200/पटना, दिनांक-23.05.2019 के माध्यम से प्राप्त हुआ है।

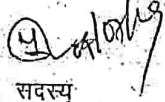
(VII)

उक्त writ petition के सभी बिन्दुओं पर समिति के सदस्यों द्वारा गहन विचार विमर्श किया गया। विमर्शोपरांत समिति के सदस्यों द्वारा सर्वसम्मति से Statement of Facts (तथ्य विवरणी) को अनुमोदित करने का निर्णय लिया गया।

बैठक सधन्यवाद समाप्त।


सदस्य

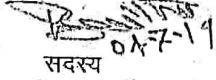
राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-अभियंता
प्रमुख, भवन निर्माण विभाग,
बिहार, पटना।


सदस्य

राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-अभियंता
प्रमुख, ग्रामीण कार्य विभाग, बिहार,
पटना।

सदस्य

राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-अभियंता
प्रमुख, लघु जल संसाधन विभाग,
बिहार, पटना।


सदस्य

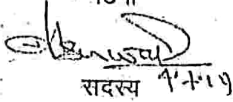
राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-मुख्य
अभियंता (असैनिक) बिहार स्टेट
पावर होल्डिंग कंपनी लि०, बिहार,
पटना।


सदस्य

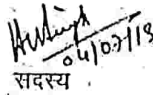
राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-मुख्य
अभियंता, (विद्युत) भवन निर्माण
विभाग, बिहार, पटना।

सदस्य

राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-अभियंता
प्रमुख, तकनीकी परीक्षण कोषांग,
निगरानी विभाग, बिहार, पटना।


सदस्य

राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-अभियंता
प्रमुख, लोक स्वास्थ्य अभियंत्रण
विभाग, बिहार, पटना।


सदस्य

राज्य स्तरीय अनुसूचित दर
निर्धारण समिति-सह-अभियंता
प्रमुख, मुख्यालय जल संसाधन
विभाग, बिहार, पटना।

संयोजक

राज्य स्तरीय अनुसूचित दर
निर्धारण समिति
-सह-अभियंता प्रमुख,
पथ निर्माण विभाग, बिहार, पटना।

(VIII)

जल संसाधन विभाग, बिहार, पटना के लिये अनुसूचित दर पुस्तिका (दर विश्लेषण सहित) 2019 का राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा अनुमोदन :-

अभियंता प्रमुख (मुख्यालय) सह अध्यक्ष विभागीय अनुसूचित दर निर्धारण समिति जल संसाधन विभाग, बिहार, पटना के पत्रांक-142 (अनु0) दिनांक-18.03.2019 एवं पत्रांक-341 (अनु0) दिनांक-21.06.2019 द्वारा वर्ष 2019 में प्रकाशित की जाने वाली अनुसूचित दर पुस्तिका के प्रारूप अनुमोदन हेतु प्राप्त हुआ है, जिसमें जल संसाधन विभाग के कार्यों में प्रयुक्त विभिन्न सामग्रियों एवं मदों का दर सम्मिलित है।

बिहार लोक निर्माण संहिता की कण्डिका-103 में संशोधन के आलोक में बिहार सरकार, पथ निर्माण विभाग द्वारा निर्गत संकल्प सह पठित ज्ञापांक 1/बी0-12/2003-5762 (एस) अनु0, पटना, दिनांक-05.06.2006 की कंडिका-2 (iii) में यह प्रावधान किया गया है कि अनुसूचित दर निर्धारण के लिए दर विश्लेषण तथा सामग्रियों का दर निर्धारण पथ निर्माण विभाग के संयोजन में गठित राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा किया जायेगा। जल संसाधन विभाग का वर्तमान अनुसूचित दर पुस्त 2019 का दर-विश्लेषण दिनांक-07.12.2007 को आहूत राज्य स्तरीय अनुसूचित दर निर्धारण समिति की बैठक में जल संसाधन विभाग के अनुमोदित अनुसूचित दर प्रपत्र के आधार पर तैयार किया गया है।

अनुसूचित दर तैयार करने में निम्नलिखित प्रक्रिया अपनायी गयी है :-

- (1) निर्माण कार्य के विभिन्न मदों में उपयोग की जाने वाली सामग्रियों की दर राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा निर्गत दर के अनुरूप है।
- (2) विभिन्न श्रेणी के मजदूरों का दैनिक मजदूरी की दर श्रम संसाधन विभाग, बिहार की श्रम संख्या-996 दिनांक-27.02.2019 के अनुरूप है। इसे दिनांक-21.05.2019 को आहूत राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा अनुमोदित किया गया है।
- (3) निर्माण में प्रयुक्त होने वाले Plant एवं Machineries की दर राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा निर्गत दर के अनुरूप है।
- (4) जल संसाधन विभाग, बिहार के अनुसूचित दर-विश्लेषण में प्रावधानित Contractor Profit एवं overhead मद में VAT/Sale tax सम्मिलित नहीं है।
- (5) Carriage of Material के Calculation में सर्व सम्मति से यह निर्णय लिया गया है कि वैसे स्थल जहाँ पर Railway के द्वारा निर्माण सामग्रियों की ढुलाई संभव हो वहाँ पर Road एवं Railway दोनों के द्वारा carriage of Materials का दर प्राप्त किया जाय तथा दोनों में से निम्नतम दर को ही प्रयोग में लाया जाय।
- (6) The maximum lead to be considered as per T.E.C. Norms is as follows-
 - (i) For local Sand 3 Km with 1 km kuchcha road.
 - (ii) For brick 8 km with 1 km kuchcha road.

- (iii) For Coarse Sand, Stone Metal, Stone chips, Moorum, Stone Boulder, Bitumen as per actual lead with Provision of kuchcha lead as per requirement of site condition.
- (7) Contractor's Profit एवं overhead मद में एकमुश्त 15% (10%+5%) का प्रावधान रखा गया है।
- (8) सीमेंट के दर में पटना के लिए लागू OPC-grade-43 के दर को व्यवहार में लाया गया है। निरूपण एवं संरचना की आवश्यकतानुसार संबंधित सक्षम पदाधिकारी अन्य प्रकार के सीमेंट का व्यवहार कर सकते हैं।
- (9) स्टील के दर में TMT Bar के लिए Fe 500 HYSD के दर को दर-विश्लेषण के लिए व्यवहार में लाया गया है।
- (10) Brick 100 "A" का दर के लिए Patna Urban के लिए लागू दर को व्यवहार में लाया गया है।
- (11) संबंधित सक्षम पदाधिकारी निर्माण कार्यक्षेत्र के जोन के अनुसार ही Bitumen/Cement/Brick/Coarse sand के निर्धारित दर का प्रयोग करेंगे और इसके अनुसार दर में अंतर राशि को प्राक्कलन में जोड़ेंगे या घटावेंगे।
- (12) चार स्टील कम्पनियों यथा TATA, SAIL, RINL एवं SHYAM STEEL INDUSTRIES LTD, KOLKATTA के स्टील का प्रयोग निर्माण कार्यों में किया जाना है।
- (13) दर विश्लेषण में Goods & Services tax (GST) शामिल नहीं है, परन्तु रॉयल्टी शामिल है।
- (14) दर-विश्लेषण में लेबर सेस (1%) की राशि सम्मिलित नहीं है। इसे सम्मिलित करने की जिम्मेवारी क्षेत्रीय पदाधिकारियों की होगी।
- (15) **GST से संबंधित निर्णय**—दिनांक-26.02.2019 को आहूत राज्य स्तरीय अनुसूचित दर निर्धारण समिति की बैठक में लिये गये निर्णय के आलोक में Goods & Service tax (GST) की प्रक्रिया समिति द्वारा सर्वसम्मति से विचारोपरांत निम्न प्रकार से अपनाने का निर्णय लिया गया है :-
- (i) दर-विश्लेषण में प्रयुक्त प्रत्येक सामग्री की दर में GST नहीं जोड़ा जाए।
- (ii) Carriage, overhead charge, Contractor profit, Royalty को जोड़कर प्रत्येक कार्य मद का दर निर्धारित किया जाए तथा इस निर्धारित दर के आधार पर परियोजना की प्राक्कलित राशि निर्धारित की जाए।
- (iii) Work-Contracts के लिए उपरोक्त कडिका-(ii) में निर्धारित प्राक्कलित राशि/कुल लागत (Labour Cess रहित) पर Contractor Service tax/work contract G.S.T. का प्रावधान वित्त मंत्रालय, भारत सरकार की अधिसूचना संख्या-20/2017-Central Tax (Rate), नई दिल्ली दिनांक-22-08-17 में निर्मित तालिका के

कॉलम-4 में निर्धारित G.S.T. (C.G.S.T.& S.G.S.T. मिलाकर जो वर्तमान में 12% है) तथा समय-समय पर भारत सरकार एवं राज्य सरकार द्वारा अधिसूचित कर की दर के अनुसार किया जाय।

परन्तु "For composite supply of work contract as defined in clause (119) of section 2 of the Central Goods & Services Tax Act 2017, involving predominantly earth work (That is, constituting more than 75% of the value of work contract) provided to the central Government, Union Territory, State Government, local Authority, a Government Authority or a Government Entity, the Goods & Services Tax (GST) for contract is 5% (CGST=2.5%, SGST=2.5%) only and as per revised GST Rates by the respective Government Authority time to time".

(iv) उपरोक्त कंडिका-(ii) में निर्धारित प्राक्कलित राशि (G.S.T रहित) पर 1% Labour Cess का प्राक्धान निर्धारित मापदण्डों के अनुसार किया जाय।

(v) Bill of Quantity (B.O.Q.) में work value, labour less value-एवं-G.S.T. value का अलग-अलग उल्लेख किया जाय।

तत्संबंधी उदाहरण तालिका (Model Calculation Sheet) निम्न प्रकार है :-

(a) Estimated Amount (प्राक्कलित राशि) including carriage, overhead charge, Contractor profit, Royalty but excluding GST & Labour Cess="A"

(b) Contractor Service Tax/Work Contract GST in percentage="Y" %

(c) Contract Service tax/contract GST Amount

$$= "B" = \frac{AY}{100}$$

(d) Labour Cess Amount@1% = "C" = A×0.01

(e) Bill of Quantity (B.O.Q.)

Work Value = A


GST Value = B

Labour Cess= C

जल संसाधन विभाग, बिहार के प्रस्ताव पर वर्ष 2019 के लिए विभिन्न निर्माण सामग्रियों, Plant Machinery एवं कार्य मर्दों का दर (दर-विश्लेषण सहित) संलग्न विवरणी के अनुसार समिति द्वारा सर्वसम्मति से सम्यक् विचारोपरांत अनुमोदित करने का निर्णय लिया गया।

16. नई अनुसूचित दर पुस्त का प्रकाशन :-

राज्यस्तरीय अनुसूचित दर निर्धारण समिति द्वारा जल संसाधन विभाग, बिहार, पटना के अनुसूचित दर पुस्त को दिनांक-15.07.2019 से लागू किये जाने को सर्वसम्मति से निर्णय लिया गया।


सदस्य 15/7/19

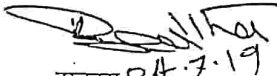
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, भवन निर्माण विभाग, बिहार, पटना।


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार, पटना।

सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लघु जल संसाधन विभाग, बिहार, पटना।


सदस्य 04-7-19

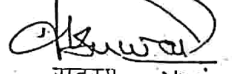
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (असैनिक) बिहार स्टेट पावर होल्डिंग कंपनी लि०, बिहार, पटना।


सदस्य

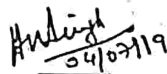
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (विद्युत), भवन निर्माण विभाग, बिहार, पटना।

सदस्य

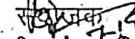
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, तकनीकी परीक्षण कोषांग, निगरानी विभाग, बिहार पटना।


सदस्य 15/7/19

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लोक स्वास्थ्य अभियंत्रण विभाग, बिहार, पटना।


सदस्य 04/07/19

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख मुख्यालय जल संसाधन विभाग, बिहार, पटना।


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, पथ निर्माण विभाग, बिहार, पटना।

बिहार सरकार

राज्य स्तरीय अनुसूचित दर निर्धारण समिति
पथ निर्माण विभाग, बिहार, पटना।

E-mail ID-sorred2012@gmail.com

पत्रांक :- मु0नि0(पथ)-04/2006 अंश-II

20 (3130)

पटना दिनांक :- 27/05/2019

प्रेषक,

Dir-DPT

लक्ष्मी नारायण दास,
संयोजकराज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख-सह-अपर आयुक्त-सह-विशेष सचिव,
पथ निर्माण विभाग, बिहार, पटना।

सेवा में,

1. अभियंता प्रमुख,
ग्रामीण कार्य विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 2. अभियंता प्रमुख (मुख्यालय)
जल संसाधन विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 3. अभियंता प्रमुख,
लोक स्वास्थ्य अभियंत्रण विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 4. अभियंता प्रमुख,
तकनीकी परीक्षण कोषांग, निगरानी विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 5. अभियंता प्रमुख,
भवन निर्माण विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 6. अभियंता प्रमुख,
लघु जल संसाधन विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 7. मुख्य अभियंता (असैनिक)
बिहार स्टेट पावर होल्डिंग कंपनी लिमिटेड सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
 8. मुख्य अभियंता (विद्युत)
भवन निर्माण विभाग सह सदस्य राज्य स्तरीय अनुसूचित दर निर्धारण समिति, बिहार, पटना।
- राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा दिनांक-21.05.2019 की आहूत बैठक में लिये गये निर्णयानुसार श्रमदर से संबंधित दर की सूची एवं कार्यवाही की प्रति के प्रेषण के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि दिनांक-21.05.2019 की आहूत बैठक में राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा अनुमोदित श्रमदर की सूची Schedule-I, Schedule-II एवं कार्यवाही की प्रति आवश्यक कार्रवाई हेतु संलग्न की जा रही है।
अनु0-यथोक्त।

अभियंता प्रमुख (मुख्यालय)
जल संसाधन विभाग, बिहार, पटना
धरो सं०.....

13/7/19
27/5/19

विश्वासभाजन

(लक्ष्मी नारायण दास)
संयोजक

राज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख-सह-अपर
आयुक्त-सह-विशेष सचिव,
पथ निर्माण विभाग, बिहार, पटना।

राज्यस्तरीय अनुसूचित दर निर्धारण समिति की दिनांक-21.05.2019 की बैठक में निर्माण कार्यों (सड़के, बाँध तथा सिंचाई कार्य) में नियोजित विभिन्न श्रेणी के मजदूरों का संशोधित न्यूनतम दैनिक मजदूरी के अनुमोदन हेतु प्रस्ताव :-

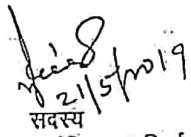
जनवरी 2018 से जून 2018 तक का औसत मूल्य श्रम संसाधन विभाग, बिहार सरकार के अधिसूचना सं०-6770 दिनांक-26.09.2018 के अनुसार सूचकांक 6581.46 है। जुलाई 2018 से दिसम्बर 2018 तक का औसत मूल्य सूचकांक श्रम संसाधन विभाग, बिहार सरकार के श्र० सं०-996 दिनांक-27.02.2019 के अनुसार 6878.20 है।

सूचकांक में वृद्धि = $6878.20 - 6581.46 = 296.74$

सूचकांक में प्रतिशत वृद्धि = $296.74 / 6581.46 \times 100 = 4.509\%$

औसत मूल्य सूचकांक (जनवरी 2018 से जून 2018 तक) पर आधारित न्यूनतम श्रम दर की सूची अनुसूची '1' एवं '2' के स्तम्भ '7' पर अंकित है। इसी स्तम्भ के अंकित दर में 4.509% वृद्धि कर न्यूनतम श्रम दर की गणना कर अंकित कर दी गई है।

श्रम संसाधन विभाग, बिहार सरकार की श्र० संख्या-996, दिनांक-27.02.2019 के आलोक में अनुसूचित दर पुनरीक्षण हेतु उपरोक्त वृद्धि को सम्मिलित करते हुए निर्माण कार्यों, सड़के, बाँध निर्माण तथा सिंचाई कार्यों में नियोजित दैनिक मजदूरों के न्यूनतम दैनिक मजदूरी में संशोधन के लिए संलग्न अनुसूची-1 तथा 2 के स्तम्भ '8' के अनुसार राज्यस्तरीय अनुसूचित दर निर्धारण समिति द्वारा सहमति प्रदान की जाती है। यह दर भवन निर्माण, ग्रामीण कार्य, लोक स्वास्थ्य अभियंत्रण विभाग एवं अन्य कार्य विभाग के अंतर्गत कराये जाने वाले समरूप कार्यों के उपयोग में भी लाया जायेगा। विशेष जानकारी हेतु श्रम संसाधन विभाग, बिहार सरकार की श्र० संख्या-996, दिनांक-27.02.2019 द्रष्टव्य।
अनु०-1 एवं 2


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, भवन निर्माण विभाग, बिहार, पटना।


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार, पटना


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लघु जल संसाधन विभाग, बिहार, पटना


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (असैनिक) बिहार स्टेट पावर होल्डिंग कंपनी लि०, बिहार, पटना।

सदस्य

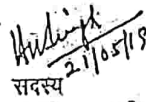
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता, (विद्युत) भवन निर्माण विभाग, बिहार, पटना


सदस्य

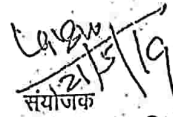
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, तकनीकी परीक्षण कोषांग, निगरानी विभाग, बिहार, पटना


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लोक स्वास्थ्य अभियंत्रण विभाग, बिहार, पटना


सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, मुख्यालय जल संसाधन विभाग, बिहार, पटना।


संयोजक

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख-सह-अपर आयुक्त-सह-विशेष सचिव, पथ निर्माण विभाग, बिहार, पटना।

SCHEDULE - I

Date: 21.05.2019

Approved Schedule of Rates for labour engaged in construction & maintenance of Roads

Sl. No.	Category of Employees	Minimum Rates of wages per day as per					
		Lab. Deptt. Notif. No. 2787/28.09.11	Lab. Deptt. Notif. No. 1194/28.03.17	Lab. Deptt. Notif. No. 4835/15.09.17	Lab. Deptt. Notif. No. 1453/20.03.18	Lab. Deptt. Notif. No. 6770/26.09.18	Lab. Deptt. L & R 996/27.02.19
1	2	3	4	5	6(L.03498xc15)	7(L.00816xc16)	8(L.04509xc17)
1	Unskilled labour	144.00	242.00	247.00	254.00	257.00	268.00
2	Sweeper	144.00	242.00	247.00	254.00	257.00	268.00
3	Misry	144.00	242.00	247.00	254.00	257.00	268.00
4	Cleaner	144.00	242.00	247.00	254.00	257.00	268.00
5	Helper	144.00	242.00	247.00	254.00	257.00	268.00
6	Khalasi/Chalman	144.00	242.00	247.00	320.00	323.00	338.00
7	Marker	184.00	309.00	309.00	309.00	351.00	367.00
8	Filter grade-I	199.00	336.00	336.00	348.00	351.00	367.00
	Filter grade-II	175.00	295.00	295.00	305.00	307.00	321.00
9	Turner	175.00	295.00	295.00	305.00	307.00	321.00
10	Mechanic grade-I	225.00	379.00	379.00	392.00	395.00	413.00
	Mechanic grade-II	209.00	352.00	352.00	364.00	367.00	384.00
11	Electrician grade-I	185.00	312.00	312.00	323.00	326.00	341.00
	Electrician grade-II	175.00	295.00	295.00	305.00	307.00	321.00
12	Lipeman/Wiceman	169.00	284.00	284.00	294.00	296.00	309.00
13	Chargeman	209.00	352.00	352.00	364.00	367.00	384.00
14	Foreman	247.00	415.00	415.00	430.00	434.00	454.00
15	Welder grade-I	220.00	370.00	370.00	383.00	386.00	403.00
	Welder grade-II	185.00	312.00	312.00	323.00	326.00	341.00
16	Glazier	164.00	276.00	276.00	286.00	288.00	301.00
17	Carpenter	175.00	295.00	295.00	305.00	307.00	321.00
18	Head Carpenter	196.00	330.00	330.00	342.00	345.00	361.00
19	Checker	177.00	298.00	298.00	308.00	311.00	325.00
20	Hammerman	153.00	258.00	258.00	267.00	269.00	281.00
21	Tin smith	199.00	336.00	336.00	348.00	351.00	367.00
22	Tin plate maker	209.00	352.00	352.00	364.00	367.00	384.00
23	Black Smith	175.00	295.00	295.00	305.00	307.00	321.00
24	Head black smith	196.00	330.00	330.00	342.00	345.00	361.00
25	Tile layer	155.00	261.00	261.00	270.00	272.00	284.00
26	Thatcher	155.00	261.00	261.00	270.00	272.00	284.00
27	Plumber	185.00	312.00	312.00	323.00	326.00	341.00
28	Grader	177.00	298.00	298.00	308.00	311.00	325.00
29	Road binder	164.00	276.00	276.00	286.00	288.00	301.00
30	Mason	175.00	295.00	295.00	305.00	307.00	321.00
31	Head Mason	196.00	330.00	330.00	342.00	345.00	361.00
32	Stone layer	175.00	295.00	295.00	305.00	307.00	321.00
33	Tarman	153.00	258.00	258.00	267.00	269.00	281.00
34	Fireman	155.00	261.00	261.00	270.00	272.00	284.00
35	Grinder	175.00	295.00	295.00	305.00	307.00	321.00
36	Gas cutter	184.00	309.00	309.00	320.00	323.00	338.00
37	Rigger	177.00	298.00	298.00	308.00	311.00	325.00
38	Sarang	209.00	352.00	352.00	364.00	367.00	384.00
39	Chipper-cum-rivetter	184.00	309.00	309.00	320.00	323.00	338.00
40	Tractor operator	209.00	352.00	352.00	364.00	367.00	384.00
41	Dozer operator grade-I	247.00	415.00	415.00	430.00	434.00	454.00
	Dozer operator grade-II	220.00	370.00	370.00	383.00	386.00	403.00
42	Dumper operator	210.00	353.00	353.00	365.00	368.00	385.00
43	Vibrator Operator	163.00	274.00	274.00	284.00	286.00	299.00
44	Pump driver grade-I	185.00	312.00	312.00	323.00	326.00	341.00
	Pump driver grade-II	175.00	295.00	295.00	305.00	307.00	321.00
45	Dragline operator grade-I	247.00	415.00	415.00	430.00	434.00	454.00
	Dragline operator grade-II	220.00	370.00	370.00	383.00	386.00	403.00
46	Concrete mixer operator grade-I	185.00	312.00	312.00	323.00	326.00	341.00
	Concrete mixer operator grade-II	175.00	295.00	295.00	305.00	307.00	321.00
47	Compressor operator grade-I	185.00	312.00	312.00	323.00	326.00	341.00
	Compressor operator grade-II	175.00	295.00	295.00	305.00	307.00	321.00

Handwritten signatures and initials

Approved Schedule of Rates for labour engaged in construction & maintenance of Roads

Sl. No.	Category of Employees	Minimum Rates of wages per day as per					
		Lab. Deptt. Notif. No. 2287/28.03.11	Lab. Deptt. Notif. No. 1194/28.03.17	Lab. Deptt. Notif. No. 4635/15.09.17	Lab. Deptt. Notif. No. 1453/28.03.18	Lab. Deptt. Notif. No. 6770/26.09.18	Lab. Deptt. L & R 996/27.02.19
1	2	3	4	5	6(1.03496xcl5)	7(1.00916xcl6)	8(1.04509xcl7)
48	Earth excavator						
	(a) For every 110 cu. ft for soft earth	144.00	243.00	243.00	252.00	254.00	265.00
	(b) For every 100 cu. ft for hard earth	144.00	243.00	243.00	252.00	254.00	265.00
	(c) For every 90 cu. ft for highly hard earth	144.00	243.00	243.00	252.00	254.00	265.00
49	Truck driver	209.00	352.00	352.00	352.00	367.00	384.00
50	Car/Jeep driver	184.00	309.00	309.00	320.00	323.00	338.00
51	Crane operator grade-I	247.00	415.00	415.00	430.00	434.00	454.00
	Crane operator grade-II	220.00	370.00	370.00	383.00	386.00	403.00
52	Winch operator	185.00	312.00	312.00	323.00	326.00	341.00
53	Road roller driver	252.00	424.00	424.00	439.00	443.00	463.00
54	Blaster	243.00	408.00	408.00	422.00	425.00	444.00
55	Painter grade-I	185.00	312.00	312.00	323.00	326.00	341.00
56	Polisher	155.00	261.00	261.00	270.00	272.00	284.00
57	Peon / Darvan / Chokidar	153.00	258.00	258.00	267.00	269.00	281.00
58	Clerk / Typist / Typist clerk	173.00	291.00	291.00	301.00	303.00	317.00
59	Time keeper	173.00	291.00	291.00	301.00	303.00	317.00
60	Store Assistant / Storeman	187.00	314.00	314.00	325.00	328.00	343.00
61	Store head	178.00	300.00	300.00	310.00	313.00	327.00
62	Material chaser	178.00	300.00	300.00	310.00	313.00	327.00
63	Male and Road male	155.00	261.00	261.00	270.00	272.00	284.00
64	Munshi	163.00	274.00	274.00	284.00	286.00	299.00
65	Work Supervisor	164.00	276.00	276.00	286.00	288.00	301.00
66	Amin	173.00	291.00	291.00	301.00	303.00	317.00
67	Surveyer	177.00	298.00	298.00	308.00	311.00	325.00
68	Supervisory diploma holder	237.00	399.00	399.00	413.00	416.00	435.00
69	Supervisory non-diploma holder	175.00	295.00	295.00	305.00	307.00	321.00
70	Any other category of semi-skilled workers not mentioned above	150.00	252.00	257.00	265.00	268.00	279.00
71	Any other category of skilled workers not mentioned above	183.00	307.00	313.00	322.00	325.00	340.00
72	Highly skilled labour	223.00	374.00	381.00	392.00	396.00	415.00

Note :- The above rates has been calculated as 4.509% increase vide Labour Dept. L & R No. 996 Dtd. 27.02.2019
Le (1.04509 * column 7).

21/5/2019
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख,
मवन निर्माण विभाग, बिहार, पटना।

21/5/19
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख,
प्रांतीय कार्य विभाग, बिहार, पटना।

21/5
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, नया नगर
संसाधन विभाग, बिहार, पटना।

21/5/19
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता (अंश), बिहार स्टेट पावर
होल्डिंग कंपनी लिमिटेड, बिहार, पटना।

सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (विद्युत),
मवन विभाग, बिहार, पटना।

21/5
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, तकनीकी
परीक्षण कोषांग, निगरानी विभाग, बिहार,
पटना।

21/5/19
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख,
लोक स्वास्थ्य अभियंत्रण विभाग,
बिहार, पटना।

21/5/19
सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख,
मुख्यालय, जल संसाधन विभाग,
बिहार, पटना।

21/5/19
संयोजक,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख सह-अपर
आयुक्त-सह-विशेष सचिव,
पथ निर्माण विभाग, बिहार, पटना।

Approved Schedule of Rates for labour engaged in Dam construction & Irrigation works

Sl. No.	Category of Employees	Minimum Rates of wages per day as per					
		Lab. Deptt. Notl. No. 2787/28.09.11	Lab. Deptt. Notl. No. 1194/28.03.17	Lab. Deptt. Notl. No. 4835/15.09.17	Lab. Deptt. Notl. No. 1453/28.03.18	Lab. Deptt. Notl. No. 6770/26.09.18	Lab. Deptt. L & R 996/27.02.19
1	2	3	4	5	6(1.03498xcl5)	7(1.00816xcl6)	8(1.04509xcl7)
1	Unskilled labour	144.00	242.00	247.00	254.00	257.00	268.00
2	Mate	158.00	266.00	266.00	275.00	277.00	289.00
3	Lead Mason	196.00	330.00	330.00	342.00	345.00	361.00
4	Mason	175.00	295.00	295.00	305.00	307.00	321.00
5	Printer Class-I	185.00	312.00	312.00	323.00	326.00	341.00
6	Printer Class-II	175.00	295.00	295.00	305.00	307.00	321.00
7	Head Carpenter	196.00	330.00	330.00	342.00	345.00	361.00
8	Carpenter	175.00	295.00	295.00	305.00	307.00	321.00
9	Head black smith	196.00	330.00	330.00	342.00	345.00	361.00
10	Black Smith	175.00	295.00	295.00	305.00	307.00	321.00
11	Glazier	155.00	261.00	261.00	270.00	272.00	284.00
12	Stone Dresser	185.00	312.00	312.00	323.00	326.00	341.00
13	Waler Carrier	144.00	243.00	243.00	252.00	254.00	265.00
14	Filler Class-I	199.00	336.00	336.00	348.00	351.00	367.00
15	Filler Class-II	175.00	295.00	295.00	305.00	307.00	321.00
16	Helper	153.00	258.00	258.00	267.00	269.00	281.00
17	Hammer man	153.00	258.00	258.00	267.00	269.00	281.00
18	Bellwman	144.00	243.00	243.00	252.00	254.00	265.00
19	Road Roller Driver	252.00	424.00	424.00	439.00	443.00	463.00
20	Concrete Mixer Operator, Class-I	185.00	312.00	312.00	323.00	326.00	341.00
21	Concrete Mixer Operator, Class-II	175.00	295.00	295.00	305.00	307.00	321.00
22	Stone Crusher Driver, Class-I	185.00	312.00	312.00	323.00	326.00	341.00
23	Stone Crusher Driver, Class-II	175.00	295.00	295.00	305.00	307.00	321.00
24	Truck Driver	209.00	352.00	352.00	364.00	367.00	384.00
25	Compressor Operator, Class-I	185.00	312.00	312.00	323.00	326.00	341.00
26	Compressor Operator, Class-II	175.00	295.00	295.00	305.00	307.00	321.00
27	Pump Driver, Class-I	185.00	312.00	312.00	323.00	326.00	341.00
28	Pump Driver, Class-II	175.00	295.00	295.00	305.00	307.00	321.00
29	Concrete Mixer Allendant	153.00	258.00	258.00	267.00	269.00	281.00
30	Cleaner or Oilman	148.00	250.00	250.00	259.00	261.00	273.00
31	TarBoiler Man	175.00	295.00	295.00	305.00	307.00	321.00
32	Plumber	185.00	312.00	312.00	323.00	326.00	341.00
33	Thatcher	155.00	261.00	261.00	270.00	272.00	284.00
34	Khalasi / Chainman	155.00	261.00	261.00	270.00	272.00	284.00
35	Sweeper	148.00	250.00	250.00	259.00	261.00	273.00
36	Walchamn	148.00	250.00	250.00	259.00	261.00	273.00
37	Stone Breaker	148.00	250.00	250.00	259.00	261.00	273.00
38	Work Sarker	164.00	276.00	276.00	286.00	288.00	301.00
39	Time Keeper	173.00	291.00	291.00	301.00	303.00	317.00
40	Welder, Grade-I	220.00	370.00	370.00	383.00	386.00	403.00
41	Welder, Grade-II	185.00	312.00	312.00	323.00	326.00	341.00
42	Wireman/Lineman	169.00	284.00	284.00	294.00	296.00	309.00
43	Mechanic, Grade-I	225.00	379.00	379.00	392.00	395.00	413.00
44	Mechanic, Grade-II	209.00	352.00	352.00	364.00	367.00	384.00
45	Sarang	209.00	352.00	352.00	364.00	367.00	384.00
46	Drill Operator	175.00	295.00	295.00	305.00	307.00	321.00
47	Tractor Operator	209.00	352.00	352.00	364.00	367.00	384.00
48	Gauge Reader-cum-sill Observer	153.00	258.00	258.00	267.00	269.00	281.00
49	Crane Operator, Grade-I	247.00	415.00	415.00	430.00	434.00	454.00
50	Crane Operator, Grade-II	220.00	370.00	370.00	383.00	386.00	403.00
51	Dragline / Scraper / Shovel Operator	247.00	415.00	415.00	430.00	434.00	454.00
52	Dragline/Scraper/Shovel Operator	220.00	370.00	370.00	383.00	386.00	403.00
53	Dumper Operator	210.00	353.00	353.00	365.00	368.00	385.00
54	Foreman	247.00	415.00	415.00	430.00	434.00	454.00

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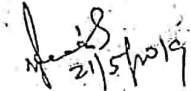
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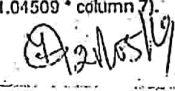
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21.5.19

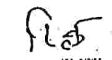
Approved Schedule of Rates for labour engaged in Dam construction & Irrigation works


Category of Employees	Minimum Rates of wages per day as per					
	Lab. Deptt. Notl. No. 2787/28.02.11	Lab. Deptt. Notl. No. 1194/28.03.17	Lab. Deptt. Notl. No. 4055/15.09.17	Lab. Deptt. Notl. No. 1453/28.03.18	Lab. Deptt. Notl. No. 6770/26.09.18	Lab. Deptt. L & R 996/27.02.19
	1	2	3	4	5	6
55 Junior Foreman	220.00	370.00	370.00	383.00	386.00	403.00
Chargeman	210.00	353.00	353.00	365.00	368.00	385.00
57 Electrician, Grade-I	185.00	312.00	312.00	323.00	326.00	341.00
Electrician, Grade-II	175.00	295.00	295.00	305.00	307.00	321.00
Electrician, Grade-III	153.00	258.00	258.00	267.00	269.00	281.00
60 Turner	175.00	295.00	295.00	305.00	307.00	321.00
Compounder	175.00	295.00	295.00	305.00	307.00	321.00
62 Supervisor / (Diploma holder)	237.00	399.00	399.00	413.00	416.00	435.00
Surveyor / Supervisor	175.00	295.00	295.00	305.00	307.00	321.00
Blow Printer	153.00	258.00	258.00	267.00	269.00	281.00
65 Tracer	153.00	258.00	258.00	267.00	269.00	281.00
Vibrator Operator	163.00	274.00	274.00	284.00	286.00	299.00
67 Clerk / Typist / Typist Clerk	173.00	291.00	291.00	301.00	303.00	317.00
Earth Excavator						
(a) For every 110 cubic feet of soft	144.00	243.00	243.00	252.00	254.00	265.00
(b) For every 100 cubic feet of hard	144.00	243.00	243.00	252.00	254.00	265.00
(c) For every 90 cubic feet of highly	144.00	243.00	243.00	252.00	254.00	265.00
69 Any other category of semi-skilled workers not mentioned above	150.00	252.00	257.00	265.00	268.00	279.00
70 Any other category of skilled workers not mentioned above	183.00	307.00	313.00	322.00	325.00	340.00
71 Highly skilled labour	223.00	374.00	381.00	392.00	396.00	415.00

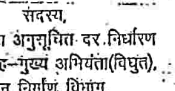
Note :- The above rates has been calculated as 4.509% Increase vide Labour Dept. L & R No. 996 Dtd. 27.02.2019
I.e (1.04509 * column 7).

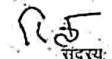

सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख,
भवन-निर्माण विभाग, बिहार, पटना।

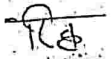

सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख,
ग्रामीण कार्य विभाग, बिहार, पटना।

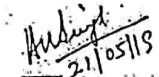

सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख, लघु जल
संसाधन विभाग, बिहार, पटना।

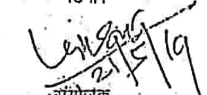

सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण समिति
-सह-मुख्य अभियंता (अरी), बिहार स्टेट
पावर होल्डिंग कंपनी लिमिटेड,
बिहार, पटना।


सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति-सह-मुख्य अभियंता(विद्युत),
भवन निर्माण विभाग,
बिहार, पटना।


सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति -सह-अभियंता प्रमुख, तमनीनी
परीक्षण कोष, निगरानी विभाग, बिहार,
पटना।


सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख,
लोक स्वास्थ्य अभियंत्रण विभाग,
बिहार, पटना।

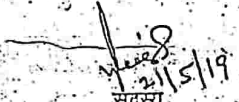

सदस्य,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख, मुख्यालय,
जल संसाधन विभाग,
बिहार, पटना।

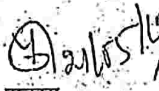

संयोजक,
राज्यस्तरीय अनुसूचित दर निर्धारण
समिति-सह-अभियंता प्रमुख सह-अपर
आयुक्त-सह-विशेष सचिव, पथ निर्माण
विभाग, बिहार, पटना।


दिनांक-21.05.2019 को आहूत राज्य स्तरीय अनुसूचित दर निर्धारण समिति की बैठक की कार्यवाही में लिये गये निर्णय :-


1. श्रम दर को अद्यतन करने के संबंध में-श्रम संसाधन विभाग, बिहार, पटना की श्रम संख्या-996 दिनांक-27.02.2019 के आलोक में पथ निर्माण कार्यों में प्रयुक्त 72 प्रकार के विभिन्न कर्मियों तथा बाँध निर्माण एवं सिंचाई कार्यों के लिए प्रयुक्त 71 प्रकार के कर्मियों के न्यूनतम दैनिक श्रम दर का अनुमोदन सदस्यों द्वारा सर्वसम्मति एवं पूर्ण विचारोपरान्त अनुसूची-1 एवं 2 के अनुसार करने का निर्णय लिया गया तथा समिति के सदस्यों द्वारा निर्णय लिया गया कि यह दर भवन निर्माण, ग्रामीण कार्य विभाग, लोक स्वास्थ्य अभियंत्रण विभाग एवं अन्य कार्य विभाग के उपयोग में भी लाया जा सकता है।

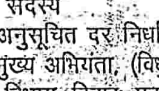
सधन्यवाद बैठक समाप्त।



सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, भवन निर्माण विभाग, बिहार, पटना।

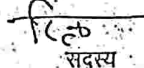

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार, पटना।

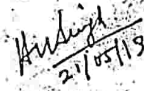

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लघु जल संसाधन विभाग, बिहार, पटना।

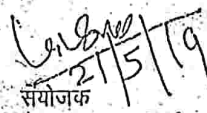

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (असैनिक) बिहार स्टेट पावर होल्डिंग कंपनी लि०, बिहार, पटना।


सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (विद्युत) भवन निर्माण विभाग, बिहार, पटना।


सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, तकनीकी परीक्षण कोषांग, निगरानी विभाग, बिहार, पटना।


सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लोक स्वास्थ्य अभियंत्रण विभाग, बिहार, पटना।


सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, मुख्यालय जल संसाधन विभाग, बिहार, पटना।


संयोजक
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख-सह-अपर आयुक्त-सह-विशेष सचिव, पथ निर्माण विभाग, बिहार, पटना।

CHAPTER-II

List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should conform to relevant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference	
1	2	3	4	5	6	7	8	
The rates are exclusive of all taxes, GST, Labour Cess, Contractor's profit and overhead charges.								
1		Cement (as per T.E.C Letter No.23 dated 28.02.06, capacity of one bag of cement = 0.034 Cum)						
	M-1	(i) Ordinary Portland Cement (O.P.C-43 Grade) (Unit-Per bag of 50 kg) approved by State Level schedule rate Committee for the year 2019-20 (for preparation of schedule of rate only) - Materials should conform to relevant BIS/IRC/MORT&H Specifications.						Per M ³
		Patna	Per bags	257.80	-	257.80	7582.00	
		Muzaffarpur	Per bags	253.70	-	253.70	7462.00	
		Darbhanga	Per bags	257.80	-	257.80	7582.00	
		Bhagalpur	Per bags	253.80	-	253.80	7465.00	
		Munger	Per bags	253.80	-	253.80	7465.00	
		Saharsa	Per bags	257.80	-	257.80	7582.00	
		Purnea	Per bags	257.80	-	257.80	7582.00	
		Gaya	Per bags	244.10	-	244.10	7179.00	
		Saran	Per bags	253.40	-	253.40	7453.00	
	M-2	(ii) Ordinary Portland Cement (O.P.C-33 Grade) (Unit-Per bag of 50 kg) approved by State Level Committee for the year 2019-20 (for preparation of schedule of rate only) - Materials should conform to relevant BIS/IRC/MORT&H Specifications.						
		Patna	Per bags	210.90	-	210.90	6203.00	
		Muzaffarpur	Per bags	213.90	-	213.90	6291.00	
		Darbhanga	Per bags	220.90	-	220.90	6497.00	
		Bhagalpur	Per bags	220.90	-	220.90	6497.00	
		Munger	Per bags	220.90	-	220.90	6497.00	
		Saharsa	Per bags	228.10	-	228.10	6709.00	
		Purnea	Per bags	228.10	-	228.10	6709.00	
		Gaya	Per bags	199.60	-	199.60	5871.00	
		Saran	Per bags	213.90	-	213.90	6291.00	
	M-3A	(iii) Portland Pozzolana Cement (P.P.C) (Unit-Per bag of 50 kg) approved by State Level Committee for the year 2019-20 (for preparation of schedule of rate only) - Materials should conform to relevant BIS/IRC/MORT&H Specifications.						
		Patna	Per bags	218.80	-	218.80	6435.00	
		Muzaffarpur	Per bags	211.20	-	211.20	6212.00	
		Darbhanga	Per bags	211.20	-	211.20	6212.00	
		Bhagalpur	Per bags	218.80	-	218.80	6435.00	
		Munger	Per bags	216.70	-	216.70	6374.00	
		Saharsa	Per bags	215.00	-	215.00	6324.00	
		Purnea	Per bags	222.30	-	222.30	6538.00	
		Gaya	Per bags	192.30	-	192.30	5656.00	
		Saran	Per bags	213.70	-	213.70	6285.00	

List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should conform to relevant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference			
1	2	3	4	5	6	7	8			
1	M-3B	(iv) Portland Slag Cement (P.S.C) (Unit-Per bag of 50 kg) approved by State Level Committee for the year 2019-20 (for preparation of schedule of rate only)-Materials should conform to relevant BIS/IRC/MORT&H Specifications.								
		Patna	Per bags	242.20	-	242.20	7124.00			
		Muzaffarpur	Per bags	240.90	-	240.90	7085.00			
		Darbhanga	Per bags	236.00	-	236.00	6941.00			
		Bhagalpur	Per bags	241.60	-	241.60	7106.00			
		Munger	Per bags	232.60	-	232.60	6841.00			
		Saharsa	Per bags	240.10	-	240.10	7062.00			
		Purnea	Per bags	236.00	-	236.00	6941.00			
		Gaya	Per bags	231.80	-	231.80	6818.00			
		Saran	Per bags	238.40	-	238.40	7012.00			
2	M-4	BITUMEN- List of Rates of Different Grades of Bitumen approved by state level Schedule rate committee for the year 2019-20 for the preparation of Schedule rates only. Materials should conform to relevant BIS/ IRC/ MORTH Specification								
		a	Bitumen Grade VG - 40 (30/40) Packed							
			(i) Ex.Haldia	Per M.T	input	-	#VALUE!			
			(ii) Ex.Barauni	Per M.T	input	-	#VALUE!			
			(iii) Ex.Giddha	Per M.T	input	-	#VALUE!			
			(iv) Ex.Fatuha	Per M.T	34177.50	-	34177.50			
			(v) Ex.Muzaffarpur	Per M.T	34427.50	-	34427.50			
			(vi) Ex.Gaya	Per M.T	33980.00	-	33980.00			
			b	Bitumen Grade VG 30 (60/70) Packed						
			(i) Ex.Barauni	Per M.T	32830.00	-	32830.00			
			(ii) Ex.Gaya	Per M.T	32710.00	-	32710.00			
			(iii) Ex.Fatuha	Per M.T	32907.50	-	32907.50			
			(iv) Ex.Muzaffarpur	Per M.T	33157.50	-	33157.50			
			(v) Ex. Jasidih	Per M.T	32407.50	-	32407.50			
			c	Bitumen Grade VG10 (80/100) Packed						
			(i) Ex.Barauni	Per M.T	32030.00	-	32030.00			
			(ii) Ex.Gaya	Per M.T	31910.00	-	31910.00			
			(iii) Ex.Fatuha	Per M.T	32107.50	-	32107.50			
			(iv) Ex. Jasidih	Per M.T	31607.50	-	31607.50			
			(iv) Ex.Muzaffarpur	Per M.T	32357.50	-	32357.50			
			d	Bitumen Grade VG- 40 (30/40) Bulk						
			(i) Ex.Haldia	Per M.T	input	-	#VALUE!			
			(ii) Ex.Barauni	Per M.T	28820.00	-	28820.00			
			e	Bitumen Grade VG - 30 (60/70) Bulk						
			(i) Ex.Haldia	Per M.T	input	-	#VALUE!			
			(ii) Ex.Barauni	Per M.T	28350.00	-	28350.00			
	f	Bitumen Grade VG - 10 (80/100) Bulk								

(Handwritten signatures and initials)

List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should confirm to relevant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
		(i) Ex.Haldia	Per M.T	input	-	#VALUE!	
		(ii) Ex.Barauni	Per M.T	27950.00	-	27950.00	
	g	Modified Graded Bitumen			-		
		(i)CRMB- 50 Packed Ex.Barauni	Per M.T	input	-	#VALUE!	
		(ii)CRMB -50 Packed Ex.Muzaffarpur	Per M.T	input	-	#VALUE!	
		(iii)CRMB- 50 Packed Ex.Gaya	Per M.T	input	-	#VALUE!	
		(iv)CRMB- 50 Packed Ex.Patna	Per M.T	input	-	#VALUE!	
		(v) CRMB -55 Packed Ex.Barauni	Per M.T	34920.00	-	34920.00	
		(vi)CRMB -55 Packed Ex.Gaya	Per M.T	36050.00	-	36050.00	
		(vii)CRMB- 55 Packed Ex Fatuha	Per M.T	34997.50	-	34997.50	
		(viii)CRMB- 55 Packed Ex Muzaffarpur	Per M.T	36497.50	-	36497.50	
		(ix)CRMB- 60 Packed Ex.Barauni	Per M.T	input	-	#VALUE!	
		(x)CRMB -60 Packed Ex-Patna	Per M.T	input	-	#VALUE!	
		(xi) CRMB- 60 Packed Ex Muzaffarpur	Per M.T	input	-	#VALUE!	
		(xii)CRMB -60 Packed Ex Gaya	Per M.T	input	-	#VALUE!	
	h	Bitumen Emulsion			-		
		(A) RS1 (packed) Drum			-		
		(i) Ex. Patna	Per M.T	37539.00	-	37539.00	
		(ii) Ex. Gaya	Per M.T	37739.00	-	37739.00	
		(iii) Ex. Muzaffarpur	Per M.T	37289.00	-	37289.00	
		(B) MS (packed) Drum			-		
		(i) Ex. Patna	Per M.T	39475.00	-	39475.00	
		(ii) Ex. Gaya	Per M.T	39625.00	-	39625.00	
		(iii) Ex. Muzaffarpur	Per M.T	39175.00	-	39175.00	
		(c) SS1 (Packed) Drum			-		
		(i) Ex.Patna	Per M.T	39613.00	-	39613.00	
		(ii) Ex.Gaya	Per M.T	39813.00	-	39813.00	
		(iii)Ex.Muzaffarpur	Per M.T	39363.00	-	39363.00	
3	0368	White Cement	Per Tonne	10424.10	-	10424.10	
4	M-5	G.C sheets thickness in mm			-		
		ii. 0.63	Per M.T	51355.93	-	51355.93	
		iii. 0.50	Per M.T	52881.36	-	52881.36	
		iv. 0.40	Per M.T	70405.08	-	70405.08	
		v. 0.35	Per M.T	73072.88	-	73072.88	
5	M-6	Wire Rod in COIL			-		
		(i) 5.5mm	Per M.T	46050.00	-	46050.00	
		(ii)6.0 mm	Per M.T	45970.00	-	45970.00	
		(iii) 6.5 mm	Per M.T	45830.00	-	45830.00	
		(iv) 7.0 mm	Per M.T	45700.00	-	45700.00	

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Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
		(v) 8.00 mm	Per M.T	45570.00	-	45570.00	
		(vi) 10.0 mm	Per M.T	46100.00	-	46100.00	
		(vii) 12.0/12.7 mm	Per M.T	46100.00	-	46100.00	
6	M-7	Joist size in mm					
		iv. 200x100	Per M.T	input	-	#VALUE!	
		vi. 250x125	Per M.T	input	-	#VALUE!	
		vii. 300x140	Per M.T	input	-	#VALUE!	
		ix. 400x140	Per M.T	input	-	#VALUE!	
		x. 450 x 150	Per M.T	input	-	#VALUE!	
		xii. 600x210	Per M.T	input	-	#VALUE!	
7	M-8	Steel Channel size in mm					
		i. 75x40	Per M.T	input	-	#VALUE!	
		ii. 100 x 50	Per M.T	45260.00	-	45260.00	
		iii. 125 x 65	Per M.T	45260.00	-	45260.00	
		iv. 150 x 75	Per M.T	45260.00	-	45260.00	
		v. 175x75	Per M.T	input	-	#VALUE!	
		vi. 200 x 75	Per M.T	45530.00	-	45530.00	
		vii. 250 x 82	Per M.T	input	-	#VALUE!	
		viii. 300 x 90	Per M.T	input	-	#VALUE!	
		ix. 400 x 100	Per M.T	input	-	#VALUE!	
8	M-9	Steel Angle size in mm					
		i) 50 x50 x6	Per M.T	input	-	#VALUE!	
		ii) 60 x 60 x6	Per M.T	input	-	#VALUE!	
		iii) 65x65x6	Per M.T	input	-	#VALUE!	
		iv) 75 x75 x6	Per M.T	43550.00	-	43550.00	
		v) 80 x80 x8 /10 /12	Per M.T	43550.00	-	43550.00	
		vi) 90x90x6/8	Per M.T	43550.00	-	43550.00	
		vii) 100x100 x 8 /10 /12	Per M.T	43550.00	-	43550.00	
		viii) 110x110 x 8 /10 /12	Per M.T	43550.00	-	43550.00	
		ix) 130 x130 x10 /12	Per M.T	43550.00	-	43550.00	
		x) 150x150 x12 /16/20	Per M.T	43550.00	-	43550.00	
		xi) 200 x200 x16 /18 /20	Per M.T	43550.00	-	43550.00	
9	M-10A	Steel T.M.T bars					
		T.M.T Fe -500- 8 mm	Per M.T	43644.00	-	43644.00	
		T.M.T Fe -500- 10 mm	Per M.T	42712.00	-	42712.00	
		T.M.T Fe -500-12 mm	Per M.T	42119.00	-	42119.00	

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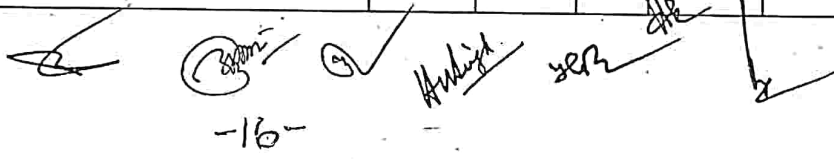
List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should confirm to relevant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
		T.M.T Fe -500- 16 mm	Per M.T	42119.00	-	42119.00	
		T.M.T Fe -500-20 mm	Per M.T	42119.00	-	42119.00	
		T.M.T Fe -500-25 mm	Per M.T	42119.00	-	42119.00	
		T.M.T Fe -500-28 mm	Per M.T	42712.00	-	42712.00	
		T.M.T Fe -500- 32 mm	Per M.T	42712.00	-	42712.00	
		T.M.T Fe -500- 36 mm	Per M.T	Input	-	#VALUE!	

Material at Serial No. 10 to 71- The rates are exclusive of all taxes, GST, Labour cess, Contractor's Profit and overhead charges but inclusive of royalty

S.No.	Ref. Code No.	NAME OF MATERIALS	Unit	Basic Rate	Royalty	Basic Rate including Royalty for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
10	M-11	100A Bricks (Rate of 13.03.2018 of SLSRC)					
	a	(i) For Urban Patna	Per %0 nos	6185.00	29.00	6214.00	
		(ii) For Darbhanga, Bhagalpur, Munger & Muzaffarpur	Per %0 nos	5214.00	29.00	5243.00	
		(iii) For Gaya & Saran	Per %0 nos	4931.00	29.00	4960.00	
		(iv) For Saharsa	Per %0 nos	5357.00	29.00	5386.00	
		(v) For Purnea	Per %0 nos	5642.00	29.00	5671.00	
		(vi) For Rural Patna	Per %0 nos	5144.00	29.00	5173.00	
	b	(i) 100B Bricks					
		(i) For Urban Patna	Per %0 nos	5738.00	29.00	5767.00	
		(ii) For Darbhanga, Bhagalpur, Munger & Muzaffarpur	Per %0 nos	4787.00	29.00	4816.00	
		(iii) For Gaya & Saran	Per %0 nos	4504.00	29.00	4533.00	
		(iv) For Saharsa	Per %0 nos	4931.00	29.00	4960.00	
		(v) For Purnea	Per %0 nos	5214.00	29.00	5243.00	
		(vi) For Rural Patna	Per %0 nos	4699.00	29.00	4728.00	
	c	(iii). Bricks Tiles (300mmx150mmx50mm)					
		(i) For Urban Patna and Rural Patna	Per %0 nos	6185.00	29.00	6214.00	
		(ii) For Saharsa, Bhagalpur, Darbhanga, & Muzaffarpur	Per %0 nos	6211.00	29.00	6240.00	
		(iii) For Purnea	Per %0 nos	6497.00	29.00	6526.00	
		(iv) For Other Places	Per %0 nos	5926.00	29.00	5955.00	
	d	Picket Jhama Brick					

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List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should confirm to relevalant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
		(i) For Urban Patna	Per %0 nos	5295.00	29.00	5324.00	
		(ii) For Darbhanga, Bhagalpur, Munger & Muzaffarpur	Per %0 nos	4362.00	29.00	4391.00	
		(iii) For Gaya & Saran	Per %0 nos	4073.00	29.00	4102.00	
		(iv) For Purnea	Per %0 nos	4787.00	29.00	4816.00	
		(v) For Saharsa	Per %0 nos	4504.00	29.00	4533.00	
		(vi) For Rural Patna	Per %0 nos	4263.00	29.00	4292.00	
	e	Brick Bats					
		(i) For Urban Patna	Per M ³	1084.40	11.60	1096.00	
		(ii) For Purnea, Saharsa, Bhagalpur, Munger & Darbhanga	Per M ³	1039.40	11.60	1051.00	
		(iii) For Rural Patna	Per M ³	1038.40	11.60	1050.00	
		(iv) For Other Places	Per M ³	994.40	11.60	1006.00	
	f	Jhama metal					
		(a) 63mm to 40mm size					
		(i) For Urban Patna	Per M ³	1290.40	11.60	1302.00	
		(ii) For Purnea, Saharsa, Bhagalpur, Munger & Darbhanga	Per M ³	1234.40	11.60	1246.00	
		(iii) For Rural Patna	Per M ³	1260.40	11.60	1272.00	
		(iv) For Other Places	Per M ³	1209.40	11.60	1221.00	
		(b) 40mm to 20mm size					
		(i) For Urban Patna	Per M ³	1437.40	11.60	1449.00	
		(ii) For Purnea, Saharsa, Bhagalpur, Munger & Darbhanga	Per M ³	1378.40	11.60	1390.00	
		(iii) For Rural Patna	Per M ³	1394.40	11.60	1406.00	
		(iv) For Other Places	Per M ³	1337.40	11.60	1349.00	
		(c) 20mm & down size					
		(i) For Urban Patna	Per M ³	1648.40	11.60	1660.00	
		(ii) For Purnea, Saharsa, Bhagalpur, Munger & Darbhanga	Per M ³	1579.40	11.60	1591.00	
		(iii) For Rural Patna	Per M ³	1590.40	11.60	1602.00	
		(iv) For Other Places	Per M ³	1522.40	11.60	1534.00	
11	g	Surkhi					
		(i) For Urban Patna	Per M ³	1706.40	11.60	1718.00	
		(ii) For Purnea, Saharsa, Bhagalpur, Munger & Darbhanga	Per M ³	1636.40	11.60	1648.00	
		(iii) For Rural Patna	Per M ³	1648.40	11.60	1660.00	
		(iv) For Other Places	Per M ³	1579.40	11.60	1591.00	
12	1157	stone boulder for masonry work (Rough dressed)	Per M ³	805.08	100.00	905.08	
13	1158	Stone for pitching 15cmX22.5cm	Cum	591.94	100.00	691.94	
14		Ashlar stone masonry	Per M ³	input	100.00	value	
15	M-001	Stone Boulder of size 150 mm and below at Crusher Plant	Per M ³	203.85	100.00	303.85	

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Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
16	M-002	Supply of quarried stone 150 - 200 mm size for Hand Broken at Site	Per M ³	203.85	100.00	303.85	
17	M-003	Boulder with minimum size of 300 mm for Pitching at Site	Per M ³	203.85	100.00	303.85	
18	M-004	Coarse sand at source quarry Koilwar/Sone-sand	Per M ³	100.80	50.00	150.80	
19	M-005	Coarse sand Equivalent to koilwar/Sone sand	Per M ³	100.80	50.00	150.80	
20	M-006	Fine sand at site	Per M ³	66.85	50.00	116.85	
21	M-007	Moorum at site	Per M ³	76.28	55.00	131.28	
22	M-008	Gravel/Quarry spall at site	Per M ³	203.85	100.00	303.85	
23		River bed material (30 % sand And 70 % Quarry spall)	Per M ³	input	input	input	
24		River bed material (50% sand And 50% Quarry spall)	Per Cum	135.35	75.00	210.35	
25	M-009	Granular Material or hard murrum for GSB works at site	Per M ³	81.53	50.00	131.53	
26	M-010	Granular Material or hard murrum for GSB works at Mixing Plant	Per Cum	81.53	50.00	131.53	
27	M-011	Fly ash conforming to IS: 3812 (Part II & I) at Plant	Per M ³	0.00	0.00	0	
28	M-012	Filter media/Filter Material as per Table 300-3 (MoRT&H Specification)	Per M ³	358.83	50.00	408.83	
29	M-013	Close graded Granular sub-base Material 53 mm to 9.5 mm	Per M ³	466.42	50.00	516.42	
30	M-014	Close graded Granular sub-base Material 37.5 mm to 9.5 mm	Per M ³	442.71	50.00	492.71	
31	M-015	Close graded Granular sub-base Material 26.5 mm to 9.5 mm	Per M ³	503.32	50.00	553.32	
32	M-016	Close graded Granular sub-base Material 9.5 mm to 4.75 mm	Per M ³	481.40	50.00	531.40	
33	M-017	Close graded Granular sub-base Material 9.5 mm to 2.36 mm	Per M ³	361.33	50.00	411.33	
34	M-018	Close graded Granular sub-base Material 4.75mm to 2.36 mm	Per M ³	152.91	50.00	202.91	
35	M-019	Close graded Granular sub-base Material 4.75mm to 75 micron mm	Per M ³	138.40	50.00	188.40	
36	M-020	Close graded Granular sub-base Material 2.36 mm & below	Per M ³	138.40	50.00	188.40	
37	M-021	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve.royalty @ 10% of rate	Per M ³	88.31	8.83	97.14	
38	M-022	Coarse graded Granular sub-base Material 2.36 mm & below	Per M ³	85.94	100.00	185.94	
39	M-023	Coarse graded Granular sub-base Material 4.75mm to 75 micron mm	Per M ³	85.94	100.00	185.94	
40	M-024	Coarse graded Granular sub-base Material 4.75 mm to 2.36mm	Per M ³	100.45	100.00	200.45	
41	M-025	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm	Per M ³	428.94	100.00	528.94	
42	M-026	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm	Per M ³	399.76	100.00	499.76	
43	M-027	Coarse graded Granular sub-base Material 26.5 mm to 9.5 mm	Per M ³	450.85	100.00	550.85	
44	M-028	Coarse graded Granular sub-base Material 37.5 mm to 9.5 mm	Per M ³	390.24	100.00	490.24	
45	M-029	Coarse graded Granular sub-base Material 53 mm to 26.5mm	Per M ³	358.22	100.00	458.22	
46	M-030	Aggregates below 5.6 mm at quarry	Per M ³	100.45	100.00	200.45	
47	M-031	Aggregates 22.4 mm to 2.36 mm at quarry	Per M ³	428.14	100.00	528.14	
48	M-032	Aggregates 22.4 mm to 5.6 mm at quarry	Per M ³	428.14	100.00	528.14	
49	M-033	Aggregates 45 mm to 2.8 mm at quarry	Per M ³	370.93	100.00	470.93	
50	M-034	Aggregates 45 mm to 22.4 mm at quarry	Per M ³	379.11	100.00	479.11	
51	M-035	Aggregates 53 mm to 2.8 mm at quarry	Per M ³	370.93	100.00	470.93	
52	M-036	Aggregates 53 mm to 22.4 mm (Grade III) at quarry	Per M ³	358.22	100.00	458.22	

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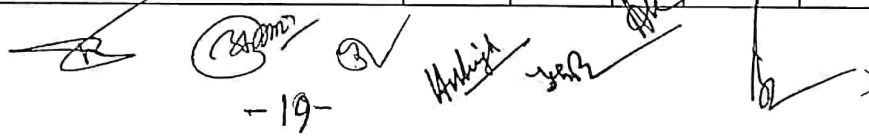
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Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
53	M-037	Aggregates 63 mm to 2.8 mm at quarry	Per M ³	327.80	100.00	427.80	
54	M-038	Aggregates 63 mm to 45 mm (Grade II) at quarry	Per M ³	327.69	100.00	427.69	
55	M-039	Aggregates 90 mm to 45 mm (Grade I) at quarry	Per M ³	296.24	100.00	396.24	
56	M-040	Aggregates 10 mm to 5 mm at quarry	Per M ³	428.94	100.00	528.94	
57	M-041	Aggregates 11.2 mm to 0.09 mm (Key aggregate type B)	Per M ³	245.52	100.00	345.52	
58	M-042	Aggregates 13.2 mm to 0.09 mm (Key aggregate type A)	Per M ³	370.04	100.00	470.04	
59	M-043	Aggregates 13.2 mm to 5.6 mm at quarry	Per M ³	514.17	100.00	614.17	
60	M-044	Aggregates 13.2 mm to 10 mm at quarry	Per M ³	542.67	100.00	642.67	
61	M-045	Aggregates 20 mm to 10 mm at quarry	Per M ³	542.67	100.00	642.67	
62	M-046	Aggregates 25 mm to 10 mm at quarry	Per M ³	512.59	100.00	612.59	
63	M-047	Aggregates 19 mm to 6 mm at quarry	Per M ³	428.14	100.00	528.14	
64	M-048	Aggregates 37.5 mm to 19 mm at quarry	Per M ³	379.11	100.00	479.11	
65	M-049	Aggregates 37.5 mm to 25 mm at quarry	Per M ³	379.11	100.00	479.11	
66	M-050	Aggregates 6 mm nominal size at quarry	Per M ³	308.74	100.00	408.74	
67	M-051	Aggregates 10 mm nominal size at quarry	Per M ³	514.17	100.00	614.17	
68	M-052	Aggregates 13.2/12.5 mm nominal size at quarry	Per M ³	542.67	100.00	642.67	
69	M-053	Aggregates 20 mm nominal size at quarry	Per M ³	450.85	100.00	550.85	
70	M-054	Aggregates 25 mm nominal size at quarry	Per M ³	425.31	100.00	525.31	
71	M-055	Aggregates 40 mm nominal size at quarry	Per M ³	341.08	100.00	441.08	

The rates are exclusive of all taxes, GST, Labour cess, Contractor's Profit and overhead charges.

S.No.	Ref. Code No.	NAME OF MATERIALS	Unit	Basic Rate	Royalty	Basic Rate including Royalty for SOR 2019-20
1	2	3	4	5	6	7
72	M-056	AC pipe 100 mm dia	metre	40.75	-	40.75
73	M-057	Acrylic polymer bonding coat	litre	input	-	#VALUE!
74	M-058	Alluminium Paint	litre	110.75	-	110.75
75	M-059	Aluminium alloy plate 2mm Thick	sqm	8615.21	-	8615.21
76	M-060	Aluminium alloy/galvanised steel	tonne	34460.81	-	34460.81
77	M-061	Aluminium sheeting fixed with encapsulated lens type reflective sheeting including 2% towards lettering, cost of angle iron, cost of drilling holes, nuts, bolts etc. and signs as applicable	sqm	8035.86	-	8035.86
78	M-062	Road Stud with Micro Prismatic lens reflectors(with shank)	each	165.38	-	165.38
79	M-063	Barbed wire	kg	61.21	-	61.21
80	M-064	Bearing (Cost of parts)	nos	input	-	#VALUE!
81	M-065	Bearing (Cast steel rocker bearing assembly of 250 tonne)	nos	77610.30	-	77610.30
82	M-066	Bearing (Elastomeric bearing assembly consisting of 7 internal layers of elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanisation,)	cubic cm.	0.59	-	0.59
83	M-067	Bearing (Forged steel roller bearing of 250 tonne)	nos	45625.63	-	45625.63

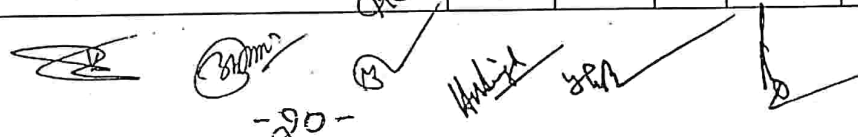
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List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should confirm to relelevant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
		Bearing (Pot type bearing assembly consisting of a metal piston supported by a disc, PTFE pads providing sliding surfaces against stainless steel mating together with cast steel assemblies/ fabricated structural steel assemblies duly painted with all components	MT	137.10.	-	0.00	
84	M-068	(a) Fixed POT-PTFE Bearing	MT	137.10	-	137.10	
		(b) Free POT-PTFE Bearing	MT	146.90	-	146.90	
		(c) Guide Slide (L) POT-PTFE Bearing	MT	156.70	-	156.70	
		(d) Guide Slide (T) POT-PTFE Bearing	MT	151.80	-	151.80	
85	M-069	Bearing (PTFE sliding plate bearing assembly of 80.T)	nos	input	-	#VALUE!	
86	M-070	Bearing (Supply of sliding plate bearing of 80 tonné)	nos	30724.33	-	30724.33	
87	M-071	Bentonite	kg	3.550	-	3.55	
88	M-072	Binding wire	kg	62.27	-	62.27	
89	M-073	Bitumen (Cationic Emulsion) Ex- Patna(RS1)Packed	tonne	37539.00	-	37539.00	
90	M-074	Bitumen (60-70 grade) Packed Ex- Barauni	tonne	32830.00	-	32830.00	
91	M-075	Bitumen (80-100 grade) Packed Ex- Barauni	tonne	32030.00	-	32030.00	
92	M-076	Bitumen (Cutback) Packed Ex- Barauni	tonne	32830.00	-	32830.00	
93	M-077	Bitumen (emulsion) Packed Ex- Patna (M.S)	tonne	39475.00	-	39475.00	
94	M-078	Bitumen (modified graded) Packed Ex - Barauni (CRMB - 55)	tonne	34920.00	-	34920.00	
95	M-079	Brick 100A for - Patna Urban	each	6.185	0.029	6.214	including royalty
96	M-080	C.I shoes for the pile	kg	43.17	-	43.17	
97	M-081	Cement - OPC 43 Grade at Patna	tonne	5156.00	-	5156.00	
98	M-082	Cold twisted bars (HYSD Bars) - Fe 500 Av. of M-10A	tonne	42532.00	-	42532.00	
99	M-083	Collar for joints 300 mm dia	nos	input	-	#VALUE!	
100	M-084	Compressible Fibre Board (20mm thick)	sqm	988.42	-	988.42	
101	M-085	Connectors / Staples	each	input	-	#VALUE!	
102	M-086	Copper Plate (12m long x 250mm wide)	kg	746.00	-	746.00	
103	M-087	Corrosion resistant Structural steel	tonne	42131.76	-	42131.76	
104	M-088	Corrugated sheet, 3 mm thick, "Thrie" beam section railing	kg	45.04	-	45.04	
105	M-089	Credit for excavated rock found suitable for use	cum	178.25	44.56	222.81	including royalty
106	M-090	Curing compound	litre	120.27	-	120.27	
107	M-091	Delineators from ISI certified firm as per the standard drawing given in IRC - 79	each	776.17	-	776.17	
108	M-092	Earth Cost or compensation for earth taken from private land	cum	1.78	22	23.78	including royalty
109	M-093	Elastomeric slab seal expansion joint assembly manufactured by using chloroprene, elastomer for elastomeric slab unit conforming to clause 915.1 of IRC: 83 (part II)	metre	25876.07	-	25876.07	
110	M-094	Electric Detonators @ 1 detonator for 1/2 gelatin stick of 125 gms each	100 nos	572.86	-	572.86	
111	M-095	Epoxy compound with accessories for preparing epoxy mortar	kg	550.68	-	550.68	
112	M-096	Epoxy mortar	kg	721.64	-	721.64	
113	M-097	Epoxy primer	kg	12.59	-	12.59	

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Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
114	M-098	Epoxy resin-hardner mix for prime coat	kg	668.67	-	668.67	
115	M-099	Flag of red color cloth 600 x 600 mm	each	50.74	-	50.74	
116	M-100	Flowering Plants	each	33.83	-	33.83	
117	M-101	Galvanised MS flat clamp	nos	14.70	-	14.70	
118	M-102	Galvanised steel wire crates of mesh size 100 mm x 100 mm woven with 4mm dia. GI wire in rolls of required size.	sqm	95.72	-	95.72	
119	M-103	Galvanised structural steel plate 200 mm wide, 6 mm thick, 24 m long	kg	42.10	-	42.10	
120	M-104	Gelatin 80%	kg	781.83	-	781.83	
121	M-105	Geo grids	sqm	input	-	0.00	
122	M-106	Geomembrane	sqm	input	-	0.00	
123	M-107	Geonets	sqm	101.66	-	101.66	
124	M-108	Geotextile	sqm	79.47	-	79.47	
125	M-109	Geotextile filter fabric	sqm	79.47	-	79.47	
126	M-110	GI bolt 10 mm Dia	nos	15.82	-	15.82	
127	M-111	Grouting pump with agitator	hour	140.04	-	140.04	
128	M-112	Grass (Doob)	kg	4.38	-	4.38	
129	M-113	Grass (Fine)	kg	4.38	-	4.38	
130	M-114	HDPE pipes 75mm dia	metre	191.60	-	191.60	
131	M-115	HDPE pipes 90mm dia	metre	191.60	-	191.60	
132	M-116	Hedge plants	each	33.83	-	33.83	
133	M-117	Helical pipes 600mm diameter	metre	input	-	#VALUE!	
134	M-118	Hot applied thermoplastic compound (Sp.gr. - 2.10)	litre	192.38	-	192.38	
135	M-119	HTS strand	tonne	69872.80	-	69872.80	
136	M-120	Joint Sealant Compound	kg	24.05	-	24.05	
137	M-121	Jute netting, open weave, 2.5 cm square opening for seeding and Mulching	sqm	33.66	-	33.66	
138	M-122	LDO for steam curing	litre	input	-	input	
139	M-123	M.S. Clamps	nos	35.97	-	35.97	
140	M-124	M.S. Clamps	kg	65.11	-	65.11	
141	M-125	M.S.shoes @ 35 Kg per pile of 15 m	kg	24.90	-	24.90	
142	M-126	Mild Steel bars (Av-M6)	tonne	45903.00	-	45903.00	
143	M-127	Modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140mm assembly comprising of edge beams, central beam, 2 modules chloroprene seal, anchorage elements, support and control system, all steel sections protected against corrosion and installed by the manufacturer or his authorised representative	metre	28516.45	-	28516.45	

Handwritten signatures and initials are present below the table, including a circled signature and several other scribbles.

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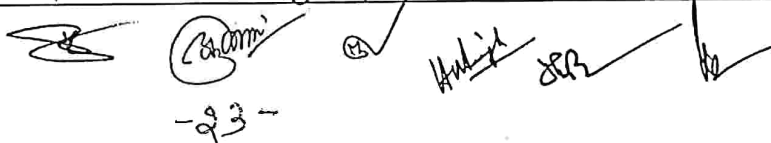
Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
144	M-128	Modular strip/box seal expansion joint catering to a horizontal movement beyond 140mm and upto 210mm box/box seal joint assembly containing 3 modules/cells and comprising of edge beams, two central beams, chloroprene seal, anchorage elements, support and control system, all steel sections protected against corrosion and installed by the manufacturer or his authorised representative	metre	input	-	#VALUE!	
145	M-129	Nipples 12mm	nos	input	-	#VALUE!	
146	M-130	Nuts and bolts	kg	61.19	-	61.19	
147	M-131	Paint	litre	219.05	-	219.05	
148	M-132	Pavement Marking Paint	litre	219.05	-	219.05	
149	M-133	Paving Fabric	sqm	input	-	#VALUE!	
150	M-134	Perforated geosynthetic pipe 150 mm dia	metre	25.91	-	25.91	
151	M-135	Perforated pipe of cement concrete, internal dia 100 mm	metre	106.55	-	106.55	
152	M-136	Pesticide	kg	75.60	-	75.60	
153	M-137	Pipes 200 mm dia, 2.5 m long for drainage	metre	168.15	-	168.15	
154	M-138	Plastic sheath, 1.25 mm thick for dowel bars	sqm	14.35	-	14.35	
155	M-139	Plastic tubes 50 cm dia, 1.2 m high	nos	input	-	#VALUE!	
156	M-140	Polymer braids	metre	input	-	#VALUE!	
157	M-141	Pre moulded Joint filler, 25 mm thick for expansion joint.	sqm	939.64	-	939.64	
158	M-142	Pre-coated stone chips of 13.2 mm nominal size	cum	490.02	100	590.02	including royalty
159	M-143	Preformed continuous chloroprene elastomer or closed cell foam sealing element with high tear strength, vulcanised in a single operation for the full length of a joint to ensure water tightness.	metre	input	-	#VALUE!	
160	M-144	Pre-moulded asphalt filler board	sqm	939.64	-	939.64	
161	M-145	Pre-packed cement based polymer concrete of strength 45 Mpa at 28 days	kg	input	-	#VALUE!	
162	M-146	Primer	kg	12.07	-	12.07	
163	M-147	Quick setting compound	kg	input	-	#VALUE!	
164	M-148	Random Rubble Stone	cum	188.85	100	288.85	including royalty
165	M-149	RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia	metre	2744.50	-	2744.50	
166	M-150	RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia	metre	3901.83	-	3901.83	
167	M-151	RCC Pipe NP 4 heavy duty non pressure pipe 300 mm dia	metre	502.61	-	502.61	
168	M-152	Reflectorising glass beads	kg	63.57	-	63.57	
169	M-153	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Copper Strips)	metre	input	-	#VALUE!	
170	M-154	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Galvanised carbon steel strips)	metre	input	-	#VALUE!	
171	M-155	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Glass reinforced polymer/fibre reinforced polymer/polymeric strips)	metre	input	-	#VALUE!	
172	M-156	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Stainless steel strips)	metre	input	-	#VALUE!	
173	M-157	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Aluminium strips)	metre	input	-	#VALUE!	

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Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
174	M-158	Rivets	each	8.04	-	8.04	
175	M-159	Sand bags (Cost of sand and Empty cement bag)	nos	5.76	1.7	7.46	including royalty
176	M-160	Sapling 2 m high 25 mm dia	each	22.56	-	22.56	
177	M-161	Scrap tyres of size 900 x 20	nos	75.17	-	75.17	
178	M-162	Seeds	kg	33.83	-	33.83	
179	M-163	Selected earth (excluding royalty @ Rs 22.0 per cum & compensation @ Rs 1.65 per cum)	cum	1.78	22	23.78	including royalty
180	M-164	Separation Membrane of impermeable plastic sheeting 125 micron thick	sqm	14.78	-	14.78	
181	M-165	Sheathing duct	metre	82.70	-	82.70	
182	M-166	Shrubs	each	16.91	-	16.91	
183	M-167	Sludge / Farm yard manure @ 0.18 cum per 100 sqm at site of work for turfing	cum	761.11	-	761.11	
184	M-168	Sodium vapour lamp	each	input	-	value	
185	M-169	Square Rubble Coursed Stone	cum	188.84	100	288.84	including royalty
186	M-170	Steel circular hollow pole of standard specification for street lighting to mount light at 5 m height above deck level	each	input	-	#VALUE!	
187	M-171	Steel circular hollow pole of standard specification for street lighting to mount light at 9 m height above road level	each	input	-	#VALUE!	
188	M-172	Steel drum 300 mm dia 1.2 m high/empty bitumen drum	nos	125.91	-	125.91	
189	M-173	Steel helmet and cushion block on top of pile head during driving.	kg	38.06	-	38.06	
190	M-174	Steel pipe 25 mm external dia as per IS:1239	metre	123.51	-	123.51	
191	M-175	Steel pipe 50 mm external dia as per IS:1239	metre	221.02	-	221.02	
192	M-176	Steel wire rope 20 mm	kg	42.15	-	42.15	
193	M-177	Steel wire rope 40 mm	kg	42.15	-	42.15	
194	M-178	Strip seal expansion joint	metre	8027.80	-	8027.80	
195	M-179	Structural Steel	tonne	44927.00	-	44927.00	
196	M-180	Super plastisizer admixture IS marked as per 9103-1999	kg	166.14	-	166.14	
197	M-181	Synthetic Geogrids as per clause 3102.8 and approved design and specifications.	sqm	input	-	#VALUE!	
198	M-182	Through and bond stone	each	10.48	-	10.48	
199	M-183	Tie rods 20mm diameter	nos	input	-	#VALUE!	
200	M-184	Tiles size 300 x 300 mm and 25 mm thick	each	39.73	-	39.73	
201	M-185	Timber	cum	42224.54	-	42224.54	
202	M-186	Traffic cones with 150 mm reflective sleeve	nos	input	-	value	
203	M-187	Tube anchorage set complete with bearing plate, permanent wedges etc	nos	45.10	-	45.10	
204	M-188	Unslaked lime	tonne	3555.38	-	3555.38	
205	M-189	Water	KL	253.69	-	253.69	
206	M-190	Water based cement paint	litre	111.48	-	111.48	
207	M-191	Welded steel wire fabric	kg	44.36	-	44.36	
208	M-192	Wire mesh 50mm x 50mm size of 3mm wire	kg	42.86	-	42.86	

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Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
209	M-193	Wooden ballies 2" Dia for bracing (Sal)	each	20.98	-	20.98	
210	M-194	Wooden ballies 8" Dia and 9 m long (9 m @ Rs 67.41/m) - Sal	each	507.48	-	507.48	
211	M-195	Wooden packing	cum	input	-	#VALUE!	
212	M-196	Wooden staff for fastening of flag 25 mm dia, 1.0 m long	each	26.23	-	26.23	
213	M-197	Bitumen (30/40 grade) Ex- Fatuha Packed	per MT	34177.50	-	34177.50	
214	M-198	Fly Ash Brick conforming to IS: 3812 (Part I & II) (Excluding the carriage cost* of Fly Ash from point of production to Kiln site) with OH scp (*Carriage cost of fly ash is same as of sand)(Cost of 1000nos. is Rs. 5156)	each	5.008	-	5.008	
215	M-199	Paver Block (Excluding GST)					
		i) M-35 Grade and 60 mm thickness					
		(a) White	Per M ²	463.54	-	463.54	
		(b) Red	Per M ²	471.80	-	471.80	
		(c) Yellow	Per M ²	486.61	-	486.61	
		ii) M-40 Grade and 80mm thickness					
		(a) White	Per M ²	531.94	-	531.94	
		(b) Red	Per M ²	545.86	-	545.86	
		(c) Yellow	Per M ²	563.46	-	563.46	
216	M-200	Ker-Stone Block-M30 Grade(size 375mmx300mmx150mm)	each	76.04	-	76.04	
217	M-201	Autoclaved Airted concrete (AAC) block	cum	2248.07	-	2248.07	
218	1199	Sal wood Scantling (@ Rs 558.43/10 cudm)	Per M ³	55843.00	-	55843.00	
219	1195	Local Wood in scantling (@ Rs 309.39 / 10 cudm)	Per M ³	30939.00	-	30939.00	
220	1196	First class kail wood in planks (@ Rs 288.52 / 10 cudm)	Per M ³	28852.00	-	28852.00	
221	1198	Second class kail wood in planks (@ Rs 241.99 / 10 cudm)	Per M ³	24199.00	-	24199.00	
222		Bamboo					
		i. 75 mm dia 6m long to 8m long	Each	141.50	-	141.50	
		ii. 100 mm dia 6m long to 8m long	Each	151.00	-	151.00	
		iii. 50 mm dia Hill Bamboo	Each	94.35	-	94.35	
223		Sz! Ballah Post					
		i. 100 mm dia	Per M	30.59	-	30.59	
		ii. 125 mm dia	Per M	53.99	-	53.99	
		iii. 150 mm dia	Per M	67.02	-	67.02	
224		Wire					
		i. G.I wire, 3.15mm dia (IS 4826-79)	Per Kg	69.30	-	69.30	
		ii. Black annealed wire 3.15mm dia. (IS 280-78)	Per kg.	62.924	-	62.924	
225	1029	Galvanised steel Barbed wire (@ Rs 4467.47/ Quintal)	Per M.T	44674.70	-	44674.70	
226		Welded mesh (8 to 10-SWG) 100 to 125 mm square size	Per M ²	input	-	input	
227	1213	water proofing compound 'Impermo' of Snowcem India Ltd.	Per Kg	32.58	-	32.58	
228	1219	Wire Nails	Per Kg	55.84	-	55.84	
229		Narial coir string	Per Kg	27.98	-	27.98	
230		Narial rope 20 mm to 25 mm dia	Per Kg	35.38	-	35.38	

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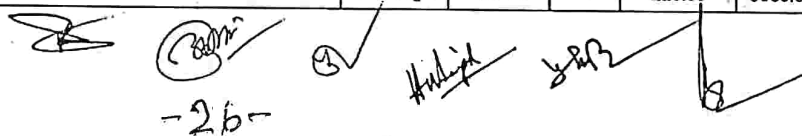
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1	2	3	4	5	6	7	8
231		Narial rope above 25 mm dia.	Per Kg	42.80	-	42.80	
232		Sutali	Per Kg	19.75	-	19.75	
233		Sabey string	Per Kg	14.81	-	14.81	
234	322	Bitumen felt Type 3, grade I, confirming to IS 1322	Sqm	65.15	-	65.15	
235	370	Coal (steam)	Per quintal	372.29	-	372.29	
236	1207	Limpmat washer G.I. (cadmium Coated)	per cent	32.58	-	32.58	
237	1208	Bitumen washer	per cent	27.92	-	27.92	
238	341	Flat pressed 3 layer particle board (medium density) Grade-I 12mm thick	Per M ²	307.14	-	307.14	
239	1701	R.C.C. Pipes NP ₂ Class 150 mm dia	Per M	195.45	-	195.45	
240	1703	R.C.C. Pipes NP ₂ Class 300 mm dia	Per M	279.22	-	279.22	
241	1706	R.C.C. Pipes NP ₂ Class 600 mm dia	Per M	856.27	-	856.27	
242	1710	R.C.C. Pipes NP ₂ Class 900 mm dia	Per M	1191.33	-	1191.33	
243	1713	R.C.C. Pipes NP ₂ Class 1200 mm dia	Per M	1560.82	-	1560.82	
244	1715	RCC Collars NP ₂ class 150mm dia.	Each	32.58	-	32.58	
245	1717	RCC Collars NP ₂ class 300mm dia.	Each	51.19	-	51.19	
246	1720	RCC Collars NP ₂ class 600mm dia.	Each	130.30	-	130.30	
247	1724	RCC Collars NP ₂ class 900mm dia.	Each	218.72	-	218.72	
248	1727	RCC Collars NP ₂ class 1200mm dia.	Each	325.75	-	325.75	
249		(i) Analysis of rate of brick khoa (63 mm to 40 mm size)			-		
		For 2.832 Cum Khoa Material- 100B Bricks. (Patna Urban) 800 Nos. @ Rs.5767 per thousand including royalty = 4613.60	(i)				
		(ii) Labour- Unskilled mazdoor 3 Nos. @ Rs.257 = 771.00					
		Total cost for 2.832 cum = 5384.60	cum	1901.34	-	1901.34	
250		(ii) Analysis of rate of brick khoa (40 mm to 20 mm size)			-		
		For 2.832 Cum Khoa Material- 100B Bricks (Patna Urban) 850 Nos. per thousand including royalty = 4901.95	(i)	@ Rs.5767			
		(ii) Labour- Unskilled mazdoor 4 Nos. @ Rs.257 = 1028.00					
		Total cost for 2.832 cum = 5929.15	cum	2093.90	-	2093.90	
251		(ii) Analysis of rate of brick khoa (20 mm and down)			-		
		For 2.832 Cum Khoa 100B Bricks (Patna Urban) 900 Nos. thousand including royalty = 5190.30	(i) Material-	@ Rs.5767 per			
		(ii) Labour- Unskilled mazdoor @ Rs.257 = 1285.00					
		Total cost for 2.832 cum = 6475.30	cum	2286.47	-	2286.47	
252		Pressure release valves (Vertical non return valve)	Each	input	-	#VALUE!	
253		Pocket valve (non return pocket valve)	Each	input	-	#VALUE!	
254		Safety valve	Each	input	-	#VALUE!	
255		Reflex valve	Each	input	-	#VALUE!	
256		Burnt clay pipe of internal dia 30 mm . External dia 31.75 mm		input	-	#VALUE!	

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1	2	3	4	5	6	7	8
		(a). 100 mm long	Each	input	-	#VALUE!	
		(b) 222mm long	Each	input	-	#VALUE!	
257		Jute	Per Kg	20.44	-	20.44	
258		M.S Bends	Each	input	-	#VALUE!	
259		Rubber seal	metre	input	-	#VALUE!	
260		Sheet Pile	Per M.T	input	-	#VALUE!	
261		Tree branches of dia 150 mm to 200 mm and 3 M to 4.5 M long with jhankhi covering the space of 100 cft in volume.	nos	input	-	#VALUE!	
262	0761	Fuel (wood) (Rs 465.36 per Quintal)	Kg	4.6536	-	4.6536	
263	0326	Blasting Material/blasting fuse(Fuse Wire)	each	13.96	-	13.96	
264		Cardium compound	kg	input	-	#VALUE!	
265		M.S. Bolt 20mm dia., 25 Cm long	Each	32.88	-	32.88	
266	8509	Special primer (C.W)	Litre	130.30	-	130.30	
267	8510	Metal Primer (U.G)	Litre	83.77	-	83.77	
268	0818	Oil/Fuel Linseed oil(double boiled)	Litre	186.14	-	186.14	
269		Electric Charge	K.W.H	input	-	#VALUE!	
270		Slotted pins and wedges 10 mm dia and 60 mm long	nos	input	-	#VALUE!	
271		Tube and nuts 26 no. 25 mm dia and above	nos	input	-	#VALUE!	
272		M.S Electrodes	nos	input	-	#VALUE!	
273	771	Kerosene Oil	litre	41.88	-	41.88	
274		Gun metal in gate	Kg	input	-	#VALUE!	
275		Old empty cement bag (synthetic) (Annexure-I)	Per % nos	292.00	-	292.00	
276		Nylon Crate of size 1mx1mx1m (As per Annex-II)	Each	39.85	-	39.85	
277		Geo bag (non woven) size 1mx0.70m (As per Annex-III)	nos	93.40	-	93.40	
278		Mega Geo Bag of size 2mx1.5m (As per Annex-IV)	nos	620.96	-	620.96	
279		P.P. Rope Gabion of size 1.80mx1.80mx0.5m (As per Annex-V)	nos.	1780.00	-	1780.00	
280		P.P.Rope Gabion of size 1.80mx1.20mx0.5m (As per Annex-VI)	Nos.	1385.00	-	1385.00	
281	7754	Gravel 5mm to 10mm	Cum	744.58	100	844.58	including of royalty
282		Shalitek Board (For use as per expansion Joint)					
283		(i) 25mm thick	Per Sqm	input	-	input	
284		(ii) 12mm thick	Per Sqm	input	-	input	
285		(iii) 18mm thick	Per Sqm	input	-	input	
286		Shalitek Primer	Per litre	input	-	input	
287	312	Bitumen grade PMB-40	M.T	35879.39	-	35879.39	
288	M-3 C	Portland Composite Cement (Unit-Per bag of 50 kg) approved by State Level Committee for the year 2019-20 (for preparation of schedule of rate only)-Materials should conform to relevant BIS/IRC/MORT&H Specifications.					
		Patna	Per bags	226.60	-	226.60	6665.00
		Muzaffarpur	Per bags	226.60	-	226.60	6665.00
		Darbhanga	Per bags	226.60	-	226.60	6665.00
		Bhagalpur	Per bags	226.60	-	226.60	6665.00
		Munger	Per bags	226.60	-	226.60	6665.00
		Saharsa	Per bags	226.60	-	226.60	6665.00

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List of Basic rates of construction material approved by state level schedule rate committee for the year 2019-20 for the preparation of schedule of rates only. Material should confirm to relevant BIS/ IRC/ MORTH/ AS Specification. The rates are exclusive of GST, CP & overhead charge.

Sr.No.	Ref. Code No.	NAME OF MATERIALS	UNIT	Basic Rate	Royalty	Basic Rate for SOR 2019-20	Reference
1	2	3	4	5	6	7	8
		Purnea	Per bags	226.60	-	226.60	6665.00
		Gaya	Per bags	226.60	-	226.60	6665.00
		Saran	Per bags	226.60	-	226.60	6665.00
289		Mechanically Woven Double Twisted Hexagonal shaped wire Mesh Gabion Boxes/Crates of required Sizes, mesh Type 10cm x12 cm, heavily Zinc Coated Mesh wire Dia 8 to 10 (SWG), Mechanically edged/selvedged with partitions at every one mt. interval as per IS 16014: 2012.					
		a) size (3m x1.5m x 0.60m)	Each	2070.00	-	2070.00	-
		b) size (3m x1.5m x 0.75m)	Each	2264.00	-	2264.00	-

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CHAPTER - III

Schedule -P&M/ MORTH-1A

Approved Usages Rates of Plants and Machinery. The Usages charges for the machines include ownership charges, cost of repair & maintenance including replacement of tyre and running and operating charges which includes crew, fuel & lubricants. These rates are for the preparation of Schedule of Rates only

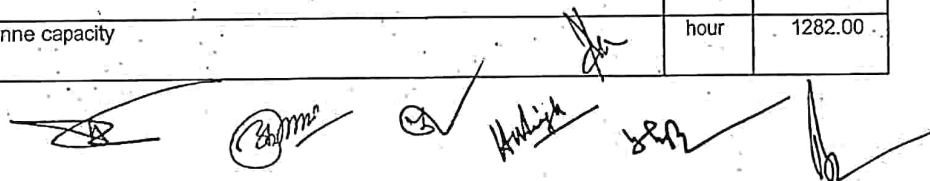
Sl. No.	Description of Machine	Activity	Output of Machine	Output	Unit	Rate(Rs)
P&M-001	Air Compressor	General Purpose	capacity in cfm	170/250	hour	481.00
P&M-002	Batching and Mixing Plant (a) 30 cum capacity	Concrete Mixing	cum/hour	20	hour	2851.00
P&M-003	Batching and Mixing Plant (b) 15 - 20 cum capacity	Concrete Mixing	cum/hour	13	hour	1853.00
P&M-004	Bitumen Pressure Distributor	Applying bitumen tack coat	sqm/hour	1750	hour	1613.00
P&M-005	Bitumen Boiler oil fired	Bitumen Spraying	capacity in litre	1500	hour	298.00
P&M-006	Concrete Paver Finisher with 40 HP Motor	Paving of concrete surface	cum / hour	20	hour	1470.00
P&M-007	Concrete Pump of 45 & 30 cum capacity	Pumping of concrete	cum / hour	33 / 22	hour	385.00
P&M-008	Concrete Bucket	For Pouring concrete	capacity in cum	1	hour	24.20
P&M-009	Concrete Mixer (a) 0.4/0.28 cum	Concrete Mixing	cum/hour	2.5	hour	82.30
P&M-010	Concrete Mixer (b) 1 cum	Concrete Mixing	cum/hour	7.5	hour	247.00
P&M-011	Crane (a) 80 tonnes	Lifting Purpose			hour	1925.00
P&M-012	Cranes b) 35 tonnes	Lifting Purpose			hour	1282.00
P&M-013	Cranes c) 3 tonnes	Lifting Purpose			hour	537.00
P&M-014	Dozer D - 80 - A 12	Spreading /Cutting / Clearing	cum/hour	300/ 150/250	hour	5598.00
P&M-015	Dozer D - 50 - A 15	Spreading /Cutting / Clearing	cum/hour	200/ 120/150	hour	3319.00
P&M-016	Emulsion Pressure Distributor	Applying emulsion tack coat	sqm/hour	1750	hour	1203.00
P&M-017	Front End loader 1 cum bucket	Soil loading / Aggregate loading	cum/hour	60 /25	hour	1373.00
P&M-018	Generator (a) 125 KVA	Genration of electric Energy	KVA	100	hour	2637.00
P&M-019	Generator (b) 63 KVA	Genration of electric Energy	KVA	50	hour	1062.00
P&M-020	GSB Plant 50 cum	Producing GSB	cum/hour	40	hour	1564.00
P&M-021	Hotmix Plant - 120 TPH Capacity	DBM/BM/SDC/ Premix	cum/hour	40	hour	51428.00
P&M-022	Hotmix Plant - 100 TPH Capacity	DBM/BM/SDC/ Premix	cum/hour	30	hour	39088.00

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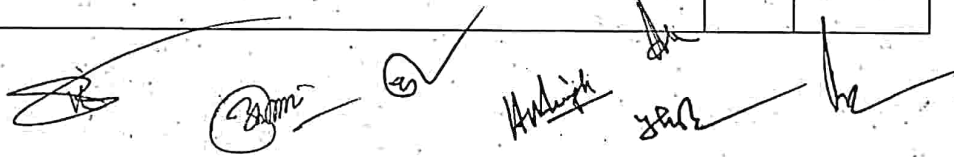
P&M-023	Hotmix Plant - (60- 90) TPH Capacity	DBM/BM/SDC/ Premix	cum/hour	25	hour	32919.00
P&M-024	Hotmix Plant - (40-60) TPH capacity	DBM/BM/SDC/ Premix	cum/hour	17	hour	23018.00
P&M-025	Hydraulic Chip Spreader	Surface Dressing	sqm/hour	1500	hour	3964.00
P&M-026	Hydraulic Excavator of 1 cum bucket	Soil Ordinary/Soil Marshy / Soil Unsuitable	cum/hour	60 /60 /60	hour	1958.00
P&M-027	Integrated Stone Crusher 100THP	Crushing of Spalls	TPH	100	hour	13036.00
P&M-028	Integrated Stone Crusher 200 THP	Crushing of Spalls	TPH	200	hour	27425.00
P&M-029	Kerb Casting Machine	Kerb Making	Rm/hour	80	hour	467.00
P&M-030	Mastic Cooker	Mastic Wearing coat	capacity in tonne	1	hour	92.70
P&M-031	Mechanical Broomer	Surface Cleaning	sqm/hour	1250	hour	555.00
P&M-032	Motor Grader 3.35 mtr blade	Clearing /Spreading /GSB /WBM	cum/hour	200/200/50/50	hour	2697.00
P&M-033	Mobile slurry seal equipment	Mixing and laying slurry seal	sqm/hour	2700	hour	1516.00
P&M-034	Sensor Paver Finisher Hydrostatic With Sensor Control 100 TPH	Paving of DBM/ BM/SDC/ Premix	cum/hour	40	hour	3505.00
P&M-035	Paver Finisher Mechanical 100 TPH	Paving of WMM /Paving of DLC	cum/hour	40/30	hour	1390.00
P&M-036	Piling Rig with Bantonite Pump	0.75 m dia to 1.2 m dia Boring attachment	Rm/hour	2 to 3	hour	8220.00
P&M-037	Pneumatic Road Roller	Rolling of Asphalt Surface	cum/hour	25	hour	1872.00
P&M-038	Pneumatic Sinking Plant	Pneumatic Sinking of wells	cum/hour	1.5 to 2.00	hour	6273.00
P&M-039	Pot Hole Repair Machine	Repair of potholes	cum/hour	4	hour	1363.00
P&M-040	Prestressing Jack with Pump & access	Stressing of steel wires/stands			hour	194.00
P&M-041	Ripper	Scarifying	cum/hour	60	hour	43.20
P&M-042	Rotavator	Scarifying	cum/hour	25	hour	26.30
P&M-043	Road marking machine	Road marking	Sqm/hour	100	hour	141.00
P&M-044	Smooth Wheel Roller 8 tonne	Soil Compaction /BM Compaction	cum/hour	70/25	hour	781.00
P&M-045	Tandem Road Roller	Rolling of Asphalt Surface	cum/hour	30	hour	1722.00
P&M-046	Tipper - 5 cum	Transportation of soil, GSB, WMM, Hotmix etc.	Capacity in cum	5.5	km	36.90
P&M-047	Tipper - 5 cum	Transportation of soil, GSB, WMM, Hotmix etc.	Capacity in cum	5.5	tonne.km	8.86
P&M-048	Tipper - 5 cum	Transportation of soil, GSB, WMM, Hotmix etc.	Capacity in cum	5.5	hour	1018.00

P&M-049	Transit Mixer 4.0/4.5 cum	Transportation of Concrete Mix to site	cum/hour	4.5	hour	1398.00
P&M-050	Transit Mixer 4/4.5 cum	Transportation of Concrete Mix to site	cum/hour	4.5	tonne.km	6.94
P&M-051	Transit Mixer 3.0 cum	Transportation of Concrete Mix to site	cum/hour	3	hour	1282.00
P&M-052	Transit Mixer 3.0 cum	Transportation of Concrete Mix to site	cum/hour	3	tonne.km	9.24
P&M-053	Tractor	Pulling	capacity in HP	50	hour	546.00
P&M-054	Tractor with Rotevator	Rate of Tractor + Rotevator			hour	570.00
P&M-055	Tractor with Ripper	Rate of Tractor 6 + Ripper			hour	588.00
P&M-056	Truck 5.5 cum per 10 tonnes	Material Transport	capacity/cum	4.5	km	32.70
P&M-057	Truck 5.5 cum per 10 tonnes	Material Transport	capacity/cum	4.5	hour	929.00
P&M-058	Truck 5.5 cum per 10 tonnes	Material Transport	capacity/cum	4.5	tonne.km	3.47
P&M-059	Vibratory Roller 8 tonne	Earth or soil / GSB / WBM	cum/hour	100/60/60	hour	2029.00
P&M-060	Water Tanker	Water Transport	capacity in KL	6	hour	183.00
P&M-061	Water Tanker	Water Transport	capacity in KL	6	km	37.90
P&M-062	Wet Mix Plant 60 TPH	Wet Mix	cum/hour	25	hour	1812.00

Sl. No.	Description of Machine	Unit	Rate (Rs)
P&M-063	Air compressor with pneumatic chisel attachment for cutting hard clay.	hour	934.00
P&M-064	Batch type cold mixing plant 100-120 TPH capacity producing an average output of 75 tonne per hour	hour	3730.00
P&M-065	Belt conveyor system	hour	input
P&M-066	Boat to carry atleast 20 persons	hour	234.00
P&M-067	Cement concrete batch mix plant @ 175 cum per hour (effective output)	hour	7833.00
P&M-068	Cement concrete batch mix plant @ 75 cum per hour	hour	3356.00
P&M-069	Cold milling machine @ 20 cum per hour	hour	1398.00
P&M-070	Crane 5 tonne capacity	hour	1282.00
P&M-071	Crane 10 tonne capacity	hour	1282.00
P&M-072	Crane 15 tonne capacity	hour	1282.00



P&M-073	Crane 20 tonne capacity	hour	1282.00
P&M-074	Crane 40 T capacity	hour	1925.00
P&M-075	Crane with grab 0.75 cum capacity	hour	1925.00
P&M-076	Compressor with guniting equipment along with accessories	hour	234.00
P&M-077	Drum mix plant for cold mixes of appropriate capacity but not less than 75 tonnes/hour.	hour	1812.00
P&M-078	Epoxy Injection gun	hour	174.00
P&M-079	Generator 33 KVA	hour	559.00
P&M-080	Generator 100 KVA,	hour	1923.00
P&M-081	Generator 250 KVA	hour	3691.00
P&M-082	Induction, deinduction and erection of plant and equipment including all components and accessories for pneumatic method of well sinking.	hour	input
P&M-083	Joint Cutting Machine with 2-3 blades (for rigid pavement)	hour	350.00
P&M-084	Jack for Lifting 40 tonne lifting capacity.	day	1282.00
P&M-085	Piling rig including double acting pile driving hammer (Hydraulic rig)	hrs	8220.00
P&M-086	Plate compactor.	hour	467.00
P&M-087	Snow blower equipment 140 HP @ 600 cum per hour	hour	input
P&M-088	Texturing machine (for rigid pavement)	hour	118.00
P&M-089	Truck Trailor 30 tonne capacity	hour	3730.00
P&M-090	Truck Trailor 30 tonne capacity	t.km	3.47
P&M-091	Tunnel Boring machine	hour	input
P&M-092	Vibrating Pile driving hammer complete with power unit and accessories.	hour	input
P&M-093	Wet Mix Plant 100 TPH	hour	2791.00
P&M-094	WMM Plant 75 TPH	hour	2791.00



Schedule -P&M/ MORTH-1B

Approved Usages Rates of Plants and Machinery: The Usages charges for the machines include ownership charges, cost of repair & maintenance including replacement of tyre and running and operating charges which includes crew, fuel & lubricants. These rates are for the preparation of Schedule of Rates only

Sl. No.	Description of Machine	Activity	Output of Machine	Output	Unit	Rate(Rs)
1	WMM Paver Finisher	Paving of WMM/Paving of DLC	Cum/hour		hour	1598.00
2	Tipping Truck 14 Cum	Transportation of Soil,GSB,WMM,Hot Mix etc.	Capacity in cum		hour	2323.00
3	6.5 KVA Generator	Generation of electric energy	KVA		hour	258.00
4	Vibratory Earth Compactor		Cum/hour		hour	1849.00
5	Tractor(25 HP)	carriage	25 HP Capacity	2.25 cum	hour	525.00
6	5 KVA silent Type Generator	Generation of electric energy	KVA		hour	225.00
7	Mini HOT MIX PLANT -(6-10) TPH		Cum/hour	2.7	hour	3601.00

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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.N o.	Description	Quantity	Unit	Rate	Amount	Ref.
3.1	Drill Jumbo					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	10	Year			
	Rated life of machine	12000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1200	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines	0			#VALUE!	A
B	Repairs and Maintenance charge 60 % of Depreciation of machine /hr	60	%		#VALUE!	B
C	Running charges (P.O.L)					
	a.Fuel				0.00	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		0.00	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator Gr I	2	30	321.00	19260.00	
	ii.Helper	4	30	281.00	33720.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Chowkidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				59418.75	
	Direct labour charge per hr (Total labour charge/Working hr in year)				594.19	D
	Hourly use rate				#VALUE!	Per hr
3.2	Jack hammer (52 lb.)					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	10	Year			
	Rated life of machine	10000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	60	%		#VALUE!	B
C	Running charges (P.O.L)					
	a.Fuel compressed air	100/100cfm			#VALUE!	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	d.Pneumatic rubber hose pipe 38 mm with fitting per 100 working hrs	15	mtr	46.80	7.02	
	Total charge				#VALUE!	C
D	Labour charge					

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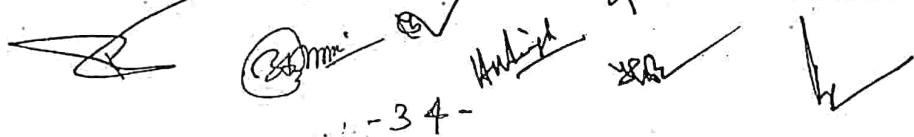
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CALCULATION OF HIRE CHARGES OF MACHINE										
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.				
	Direct labour charge	Nos	Days	Rate	Amount					
	i.Operator Gr I	1	30	321.00	9630.00					
	ii.Helper	1/2	30	281.00	4215.00					
	iii.Mechanic	1/8	30	384.00	1440.00					
	iv.Chaukidar	1/8	30	273.00	1023.75					
	v. Supervisor	1/5	30	321.00	1926.00					
	Total Direct labour charge				16308.75	Per hr				
	Direct labour charge per hr= Total labour charge/Working hr in year				195.71	D				
	Hourly use rate				#VALUE!					
3.2a	a. Jack Hammer drill rod									
	Cost of m drill rod at site		per mtr		IINPUT	Per mtr				
	Economic life	130	mtr							
	Use rate of drill rod				#VALUE!					
3.2b	b. Jack Hammer drill bit									
	Cost of bit				IINPUT					
	Economic life	130	mtr							
	Use rate of drill bit				#VALUE!	Per mtr				
3.3	Scalling hammer									
A	Depreciation charge									
	Capital cost of machine				IINPUT					
	Life of machine	10	Year							
	Rated life of machine	10000	hrs							
	Working Hours per year (Rated life in hrs/yr)	1000	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A				
B	Repaire and Maintenance charge % of Depreciation of machine /hr	60	%		#VALUE!	B				
C	Running charges (P.O.L)									
	a.Fuel compressed air	100	/100cfm		0.00					
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		0.00					
	c.Sundries and miseellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!					
	Total charge				#VALUE!	C				
D	Labour charge									
	Direct labour charge	Nos	Days	Rate	Amount					
	i.Operator Gr I	1	30	321.00	9630.00					
	ii.Helper	1/2	30	281.00	4215.00					
	iii.Chaukidar	1/10	30	273.00	819.00					
	iv. Supervisor	1/8	30	321.00	1203.75					
	Total Direct labour charge				14664.00					
	Direct labour charge per hr				175.97	D				
	Hourly use rate				#VALUE!	Per hr				
3.4	Diamond core drilling machine and diesel pump.									
A	Depreciation charge									
	Capital cost of machine				input					
	Life of machine	8	Year							
	Rated life of machine	8000	hrs							

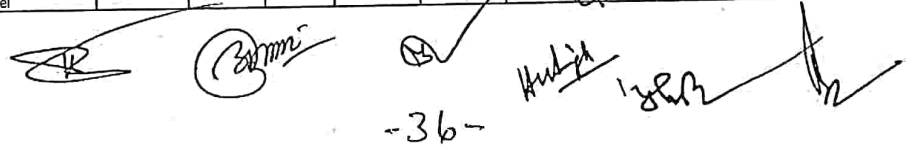
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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = $0.9 \times \text{Cost of Machine} / \text{Rated life of Machines}$				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B
C	Running charges (P.O.L)					
	a.Fuel:-Diesel (2/3x0.5x0.6xH.Px4.54/8.26)	14.29	lit	69.22	989.19	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		247.30	
	c.Sundries and miseellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
1	For Drilling Machine					
	i.Operator Gr I	2	30	321.00	19260.00	
	ii.Helper	3	30	281.00	25290.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Chaukidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				50988.75	
	Direct labour charge per hr				611.87	D
	Hourly use rate				#VALUE!	Per hr
3.5	Wagon Drill					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	8	Year			
	Rated life of machine	8000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = $0.9 \times \text{Cost of Machine} / \text{Rated life of Machines}$				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B
C	Running charges (P.O.L)					
	a.Fuel Compressed air	400	/100cfm	0.00	0.00	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		0.00	
	c.Sundries and miseellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator Gr I	1	30	321.00	9630.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/8	30	384.00	1440.00	
	v.Chaukidar	1/4	30	273.00	2047.50	

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CALCULATION OF HIRE CHARGES OF MACHINE

Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.				
	iv. Supervisor	1/4	30	321.00	2407.50					
	Total Direct labour charge				25466.25					
	Direct labour charge per hr				305.60	D				
	Hourly use rate				#VALUE!					
3.7	Holst winch 30T									
A	Depreciation charge									
	Capital cost of machine				INPUT					
	Life of machine	12	Year							
	Rated life of machine	15000	hrs							
	Working Hours per year (Rated life in hrs/yr)	1250	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A				
B	Repairs and Maintenance charge % of Depreciation of machine /hr	120	%		#VALUE!	B				
C	Running charges (P.O.L.)									
	a. Fuel Diesel		lit	69.22	0.00					
	b. Lubricant and grease waste etc 25% of above Fuel	25	%		0.00					
	c. Sundries and miscellaneous supplies at site @ 10% of R/M(B)	10	%		#VALUE!					
	Total charge				#VALUE!	C				
D	Labour charge									
(a)	Direct labour charge	Nos	Days	Rate	Amount					
	i. Operator Gr I	1	30	341.00	10230.00					
	ii. Helper	0	30	281.00	0.00					
	iii. Formen	0	30	403.00	0.00					
	iv. Mechanic	0	30	384.00	0.00					
	v. Choukdar	0	30	273.00	0.00					
	iv. Supervisor	0	30	321.00	0.00					
	Total Direct labour charge				10230.00					
	Direct labour charge per hr				98.21	D				
	Hourly use rate				#VALUE!					
3.8	Shot crete Machine									
A	Depreciation charge									
	Capital cost of machine				INPUT					
	Life of machine	10	Year							
	Rated life of machine	15000	hrs							
	Working Hours per year (Rated life in hrs/yr)	1500	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A				
B	Repairs and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B				
C	Running charges (P.O.L.)									
	a. Fuel Compressed air	600	per100cfm	Input	#VALUE!					
	b. Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!					



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CALCULATION OF HIRE CHARGES OF MACHINE									
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.			
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Operator Gr I	1	30	input	#VALUE!				
	ii.Helper	1	30	281.00	8430.00				
	iii.Formen	1/8	30	403.00	1511.25				
	iv.Mechanic	1/2	30	384.00	5760.00				
	v.Choukidar	1/4	30	273.00	2047.50				
	Total Direct labour charge				#VALUE!				
	Direct labour charge per hr.				#VALUE!	D			
	Hourly use rate				#VALUE!				
3.9	Convey muckers (1.5 cubic yard 42" wide conveyer 165 H.P)								
A	Depreciation charge								
	Capital cost of machine				IINPUT				
	Life of machine	10	Year						
	Rated life of machine	15000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1500	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A			
B	Repaire and Maintenance charge % of Depreciation of machine /hr	100	%		#VALUE!	B			
C	Running charges (P.O.L)								
	a.Electrical energy charge (H.Px0.746)	123.09	KWH	#VALUE!	#VALUE!				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!				
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Operator Gr I	1	30	input	#VALUE!				
	ii.Helper	1	30	281.00	8430.00				
	iii.Formen	1/8	30	403.00	1511.25				
	iv.Mechanic	1/6	30	384.00	1920.00				
	v.Choukidar	1/4	30	273.00	2047.50				
	Total Direct labour charge				#VALUE!				
	Direct labour charge per hr				#VALUE!	D			
	Hourly use rate				#VALUE!	Per hr			
3.10	Shovel (Diesel) 2 cum 262 H.P.								
A	Depreciation charge								
	Capital cost of machine				IINPUT				
	Life of machine	12	Year						
	Rated life of machine	15000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1250	hrs						

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CALCULATION OF HIRE CHARGES OF MACHINE										
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.				
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A				
B	Repaire and Maintenance charge % of Depreciation of machine /hr	150.00	%		#VALUE!	B				
C	Running charges (P.O.L)									
	a.Fuel Diesel (2/3x0.5xh.Px0.6x4.546/8.26)	28.55	lit	69.22	1976.04					
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		494.01					
	c.Sundries and miseellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!					
	Total charge				#VALUE!	C				
D	Labour charge									
(a)	Direct labour charge	Nos	Days	Rate	Amount					
	i.Operator Gr I	1	30	403.00	12090.00					
	ii.Helper	1	30	281.00	8430.00					
	iii.Formen	1/4	30	403.00	3022.50					
	iv.Mechanic	1/2	30	384.00	5760.00					
	v.Chokidar	1/4	30	273.00	2047.50					
	iv. Supervisor	1	30	321.00	9630.00					
	Total Direct labour charge				40980.00					
	Direct labour charge per hr				393.41	D				
	Hourly use rate				#VALUE!	Per hr				
	Shovel (Electric) 5 cum 350 H.P									
A	Depreciation charge									
	Capital cost of machine				INPUT					
	Life of machine	20	Year							
	Rated life of machine	40000	hrs							
	Working Hours per year (Rated life in hrs/yr)	2000	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A				
B	Repaire and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B				
C	Running charges (P.O.L)									

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CALCULATION OF HIRE CHARGES OF MACHINE										
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.				
	H.P motor =350 Electric energy required=350x0.746=261 KWH. Electric energy for 40 kv .A.C. control @ 0.80 Power factor=40x0.80=32 KWH Total Electric energy required=261+32=293 KWH Assuming diversity factor @ 60 % energy required=0.6x293=175.86 KWH									
	a.Electrical energy charge	175.86	KWH	#VALUE!	#VALUE!					
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!					
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		0.00					
	Total charge				#VALUE!	C				
D	Labour charge									
(a)	Direct labour charge	Nos	Days	Rate	Amount					
	i.Operator Gr I	1	30	403.00	12090.00					
	ii.Helper	1	30	281.00	8430.00					
	iii.Formen	1/4	30	403.00	3022.50					
	iv.Mechanic	1/2	30	384.00	5760.00					
	v.Chokidar	1/4	30	273.00	2047.50					
	vi. Electrician	1/2	30	321.00	4815.00					
	vii. Cableman	2	30	309.00	18540.00					
	viii.Supervisor	1	30	321.00	9630.00					
	Total Direct labour charge				64335.00					
	Direct labour charge per hr				386.01	D				
	Hourly use rate				#VALUE!	Per hr				
3.11	D.8 Tractor Dozer (Push Plate) 270 H.P									
A	Depreciation charge									
	Capital cost of machine				INPUT					
	Life of machine	10	Year							
	Rated life of machine	12000	hrs							
	Working Hours per year (Rated life in hrs/yr)	1200	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A				
B	Repairs and Maintenance charge % of Depreciation of machine /hr	100	%		#VALUE!	B				
C	Running charges (P.O.L)									
	Rated H.P=270 Consumption of diesel oil= 0.5xB.H.P x0.6/8.26 Gallons / hr =0.04 BHP gallons / hr Actual consumption adopted= 65 % or 2/3 of above =0.026 BHPx4.546 litres/hr=									
	a.Fuel Diesel	29.42	lit	69.22	2036.38					
	b.Lubricant and grease waste									
	Hydraulic oil	0.25	lit	Input	#VALUE!					

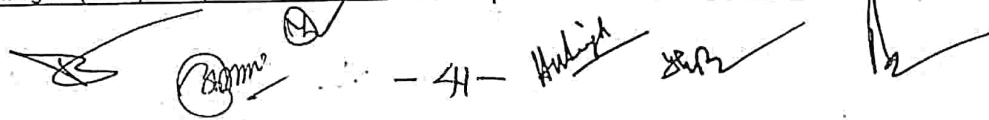
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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
	Petrol	1	lit	Input	#VALUE!	
	Lubricant oil	0.75	lit	Input	#VALUE!	
	Filter oil	0.6	lit	Input	#VALUE!	
	Gear oil	0.25	lit	254.00	63.50	
	Grease	0.5	kg	Input	#VALUE!	
	Cardium compound	200	gm	Input	#VALUE!	
	c.Sundries and miscellenceous supplies at site @ 15 % of R/M(B)	15	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator	1	30	403.00	12090.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/4	30	403.00	3022.50	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Chokidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				28470.00	
	Direct labour charge per hr				284.70	D
	Hourly use rate				#VALUE!	Per hr
	D.9 Tractor Dozer 385 H.P					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	10	Year			
	Rated life of machine	12000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1200	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	100	%		#VALUE!	B
C	Running charges (P.O.L)					
	Rated H.P=385 Consumption of diesel oil= 0.5xB.H.P x0.6/8.26 Gallons / hr =0.04 BHP gallons / hr Actual consumption adoped=.65 % or 2/3 of above =0.026 BHPx4.546 litres/hr					
	a.Fuel Diesel	41.95	lit	input	#VALUE!	
	b.Lubricant and grease waste					
	Hydraulic oil	0.25	lit	Input	#VALUE!	
	Petrol	1	lit	Input	#VALUE!	
	Lubricant oil	0.75	lit	Input	#VALUE!	
	Filter oil	0.6	lit	Input	#VALUE!	
	Gear oil	0.25	lit	254.00	63.50	
	Grease	0.5	kg	Input	#VALUE!	
	Cardium compound	200	gm	Input	#VALUE!	
	c.Sundries and miscellenceous supplies at site @ 15 % of R/M(B)	15	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	

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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
	i.Operator Gr I	1	26	403.00	10478.00	
	ii.Helper	1	26	281.00	7306.00	
	iii.Formen	1/4	26	403.00	2619.50	
	iv.Mechanic	1/4	26	384.00	2496.00	
	v.Chokidar	1/4	26	273.00	1774.50	
	Total Direct labour charge				24674.00	
	Direct labour charge per hr				246.74	D
	Hourly use rate				#VALUE!	Per hr
3.12	Dumper or Tipper(7T) 4.5 cum					
A	Depreciation charge				IINPUT	
	Capital cost of machine					
	Life of machine	8	Year			
	Rated life of machine	10000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1250	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	140	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a.Diesel (2/3X0.5XHPx0.6x4.546/8.26)	11.99	lit	69.22	829.63	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		207.41	
	c.Sundries and miseellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	385.00	11550.00	
	ii.Cleaner	1	30	268.00	8040.00	
	iv.Mechanic	1/8	30	384.00	1440.00	
	v.Chokidar	1/6	30	273.00	1365.00	
	Total Direct labour charge				22395.00	
	Direct labour charge per hr				214.99	
	Hourly use rate				#VALUE!	Per hr
	Dumper or Tipper(15 T)			Rear Dumper 35 T		
A	Depréciation charge				IINPUT	
	Capital cost of machine					
	Life of machine	8	Year			
	Rated life of machine	10000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1250	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	140	%		#VALUE!	B
C	Running charges (P.O.L)					

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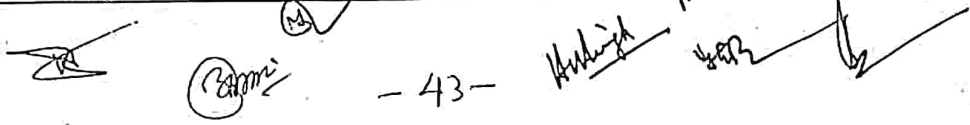


CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
	H.P motor =200					
	a.Diesel (2/3X0.5XHPx0.6x4.546/8.26)	21.79	lit	69.22	1508.43	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		377.11	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator	1	30	385.00	11550.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/6	30	384.00	1920.00	
	v.Choukidar	1/6	30	273.00	1365.00	
	Total Direct labour charge				24776.25	
	Direct labour charge per hr				237.85	D
	Hourly use rate				#VALUE!	Per hr
	Dumper or Tipper(35 T)					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	10	Year			
	Rated life of machine	12000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1200	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	140	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =560					
	a.Diesel (2/3X0.5XHPx0.6x4.546/8.26)	61.02	lit	69.22	4223.59	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		1055.90	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)				#VALUE!	
	Total charge				#VALUE!	C
D.	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator	1	30	385.00	11550.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/4	30	403.00	3022.50	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Choukidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				27930.00	
	Direct labour charge per hr				279.30	D
	Hourly use rate				#VALUE!	Per hr
3.13	Batching and mixing plant (35cu.yd/hr)					
A	Depreciation charge					
	Capital cost of machine				IINPUT	

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CALCULATION OF HIRE CHARGES OF MACHINE										
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.				
	Life of machine	18	Year							
	Rated life of machine	30000	hrs							
	Working Hours per year (Rated life in hrs/yr)	1666.67	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A				
B	Repairs and Maintenance charge % of Depreciation of machine /hr	100	%		#VALUE!	B				
C	Running charges (P.O.L)									
	a.Electrical energy charge	59.68	KWH	#VALUE!	#VALUE!					
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!					
	c.Sundries and miscellaneous supplies at site @ 10% of R/M(B)	10	%		#VALUE!					
	Total charge				#VALUE!	C				
D	Labour charge									
(a)	Direct labour charge	Nos	Days	Rate	Amount					
	i.Operator Gr I	2	30	321.00	19260.00					
	ii.Welder	6	30	341.00	61380.00					
	iii.Formen	1/2	30	403.00	-6045.00					
	iv.Mechanic	1/2	30	384.00	5760.00					
	v.Choukidar	1	30	273.00	8190.00					
	Total Direct labour charge				88545.00					
	Direct labour charge per hr				637.52	D				
	Hourly use rate				#VALUE!	Per hr				
3.14	Ventilation blower (20000cfm)									
A	Depreciation charge									
	Capital cost of machine				IINPUT					
	Life of machine	12	Year							
	Rated life of machine	58000	hrs							
	Working Hours per year (Rated life in hrs/yr)	4833.33	hrs							
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A				
B	Repairs and Maintenance charge % of Depreciation of blower /hr	80	%		#VALUE!	B				
C	Running charges (P.O.L)									
	H.P motor =20									
	a.Electrical energy charge	14.92	KWH	#VALUE!	#VALUE!					
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!					
	c.Sundries and miscellaneous supplies at site @ 10% of R/M(B)	10	%		#VALUE!					
	Total charge				#VALUE!	C				
D	Labour charge									
(a)	Direct labour charge	Nos	Days	Rate	Amount					
	i.Operator	1/4	30	Input	#VALUE!					
	ii.Helper	1/4	30	281.00	2107.50					
	iii.Mechanic	1/2	30	384.00	5760.00					
	Total Direct labour charge				#VALUE!					



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CALCULATION OF HIRE CHARGES OF MACHINE										
Sr.N o.	Description	Quantity	Unit	Rate	Amount	Ref.				
	Direct labour charge per hr				#VALUE!	D				
	Hourly use rate				#VALUE!	Per hr				

CALCULATION OF HIRE CHARGES OF MACHINE

Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.	Upto 15 H.P			Above 15 H.P		
							Nos	Days	Rate	Nos	Days	Rate
3.15	Pump				5 H.P	10H.P	15H.P	20H.P	25H.P	30 H.P		
(i)	DIESEL PUMP				IINPUT	IINPUT	IINPUT	IINPUT	IINPUT	IINPUT		
	Capital cost	8	Years									
	Life in year	10000	hrs									
	Rated life	1250	Days									
	Annual operational hours	300.00										
	Depreciation of machine /hr =											
A	0.9x Cost of Machine/Rated life of Machines	80	%		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
B	Major & Minor repair @ 100 % of depreciation				#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
C	Operation charge											
	Operator ---x26 per month	Nos	Days	Rate	Amount							
	Annual operational hours	1.00	30	321.00	9630							
	Fuel	1250.00	hr		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
D	i.H.S.D --- lit / hr			69.22	0.61	1.21	1.82	2.42	3.03	3.63		
	ii. Lubricant; cotton waste etc 10 % of (i)	10	%		4.19	8.38	12.57	16.76	20.95	25.14		
	Hourly use rate (A+B+C+D)				46.09	92.18	138.27	184.37	230.46	276.55		
					#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
(ii)	ELECTRIC PUMP				5 H.P	10H.P	15H.P	20H.P	30H.P	40H.P	50H.P	
	Capital cost				IINPUT	IINPUT	IINPUT	IINPUT	IINPUT	IINPUT	IINPUT	
	Life in year	12	Years									
	Rated life	20000	hrs									
	Depreciation /hr				#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
a.	Major & Minor repair @ --- % of depreciation				#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
b.	Labour charge	70	%		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
c												
	Operator	Nos	Days	Rate	Amount							
	Mechanic	1	30	321.00	9630							
	Electrician	1/4	30	384.00	2880							
	Helper	1/8	30	321.00	1203.75							
					13713.75							
	Rated life in hrs/yr	1666.67			98.74	98.74	98.74	162.32	162.32	162.32	162.32	162.32
d	Running charges (P.O.L)			Unit =	3.73	7.46	11.19	14.92	22.38	29.84	37.30	37.30
				Rate =	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

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CALCULATION OF HIRE CHARGES OF MACHINE

Sr.N o.	Description	Quantity	Unit	Rate	Amount	Ref.					
	a. Electrical energy charge			Amount =	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	b. Lubricant and grease waste etc 25% of	25	%		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	c. Sundries and miscellaneous supplies at site @ 10 % of RM(B)	10	%		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	Total charge				#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	Hire charge of Electric Pump Per /hour (a+b+c+d)			Per hour	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
(iii)	5 H.P vacuum pumping set					
A	Capital cost of machine				IINPUT	
	Life of machine	12	Year			
	Rated life of machine	20000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1666.67	hrs			
	a. Depreciation of machine /hr				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of blower /hr	50	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =20					
	a. Electrical energy charge	3.73	KWH	#VALUE!	#VALUE!	
	b. Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!	
	c. Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i. Operator	1	26	321.00	8346	
	Direct labour charge per hr				60.09	D
	Hourly use rate				#VALUE!	Per hr
3.16	Roller					
	Sheep foot roller					
A	Capital cost of machine				IINPUT	
	Life of machine	8	Year			
	Rated life of machine	10000	hrs			
	Working Hours per year	1250	hrs			
	a. Depreciation of machine /hr				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	70	%		#VALUE!	B
	Hourly use rate of Sheep foot roller				#VALUE!	Per hr
3.17	Locomotives					
1	Diesel Locomotives					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	10	Year			
	Rated life of machine	16000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1600	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	120	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a. Diesel	10.79	lit	69.22	746.68	
	b. Lubricant and grease waste etc 25% of above Fuel	25	%		186.67	
	c. Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i. Driver	1	30	321.00	9630.00	
	ii. Helper	1	30	281.00	8430.00	
	iii. Foremen	1/8	30	403.00	1511.25	
	iv. Mechanic	1/4	30	384.00	2880.00	
	v. Choukidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				24498.75	
	Direct labour charge per hr				183.74	
	Hourly use rate				#VALUE!	Per hr
2	Battery Locomotive					
A	Depreciation charge					
	Capital cost of machine				IINPUT	
	Life of machine	22	Year			
	Rated life of machine	40000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1818.18	hrs			

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CALCULATION OF HIRE CHARGES OF MACHINE									
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A			
B	Repalre and Maintenance charge % of Depreciation of machine /hr	120	%		#VALUE!	B			
	Sundries and misellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	321.00	9630.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.For men	1/8	30	403.00	1511.25				
	iv.Mechanic	1/4	30	384.00	2880.00				
	v.Choukidar	1/4	30	273.00	2047.50				
	Total Direct labour charge				24498.75				
	Direct labour charge per hr				161.69				
	Hourly use rate				#VALUE!	Per hr			
3.18	Grouting machine								
A	Depreciation charge								
	Capital cost of machine				IINPUT				
	Life of machine	10	Year						
	Rated life of machine	10000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1000	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A			
B	Repaire and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B			
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Fuel Compressed air	200.00	/100cfm	input	#VALUE!				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!				
	c.Sundries and misellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	384.00	11520.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.For men	1/8	30	403.00	1511.25				
	iv.Mechanic	1/6	30	384.00	1920.00				
	v.Choukidar	1/6	30	273.00	1365.00				
	Total Direct labour charge				24746.25				
	Direct labour charge per hr				296.96				
	Hourly use rate				#VALUE!	Per hr			
3.19	Air Compressor.								
	A. Diesel compressors'								
	1.Diesel Air compressorcfm				210cfm		300cfm		500cfm
A	Depreciation charge								
	Capital cost of machine				IINPUT		IINPUT		IINPUT
	Life of machine	8	Year						
	Rated life of machine	10000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1250	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A	#VALUE!		#VALUE!
B	Repaire and Maintenance charge % of Depreciation of machine /hr	100	%		#VALUE!	B	#VALUE!		#VALUE!
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Diesel	6.77	lit	69.22	468.58	10.38	718.49	16.13	1116.24
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		117.15		179.62		279.06
	c.Sundries and misellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!		#VALUE!		#VALUE!
	Total charge				#VALUE!	C	#VALUE!		#VALUE!
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount		Amount		Amount

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CALCULATION OF HIRE CHARGES OF MACHINE									
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.			
	i.Driver	1	30	321.00	9630.00		9630.00		9630.00
	ii.Helper	1	30	281.00	8430.00		8430.00		8430.00
	iii.For men	1/8	30	403.00	1511.25		1511.25		1511.25
	iv.Mechanic	1/4	30	384.00	2880.00		2880.00		2880.00
	v.Choukidar	1/4	30	273.00	2047.50		2047.50		2047.50
	Total Direct labour charge				24498.75		24498.75		24498.75
	Direct labour charge per hr				235.19	D	235.19		235.19
	Hourly use rate				#VALUE!	Per hr	#VALUE!	Per hr	#VALUE!
	B.Electric compressors								
	1.Electric Air compressor 500 cfm								
A	Depreciation charge								
	Capital cost of machine				IINPUT				
	Life of machine	12	Year						
	Rated life of machine	20000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1666.67	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A			
B	Repaire and Maintenance charge % of Depreciation of machine /hr	30	%		#VALUE!	B			
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Electrical energy charge	90.00	KWH	#VALUE!	#VALUE!				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!				
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	321.00	9630.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.For men	1/8	30	403.00	1511.25				
	iv.Mechanic	1/4	30	384.00	2880.00				
	v.Electrician	1/2	30	#REF!	#REF!				
	vi.Choukidar	1/4	30	273.00	2047.50				
	Total Direct labour charge				#REF!				
	Direct labour charge per hr				#REF!				
	Hourly use rate				#VALUE!	Per hr			
	2.Electric Air compressor 1500 cfm								
A	Depreciation charge								
	Capital cost of machine				IINPUT				
	Life of machine	8	Year						
	Rated life of machine	8000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1000	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A			
B	Repaire and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B			
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Electrical energy charge	240.00	KWH	#VALUE!	#VALUE!				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!				
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	321.00	9630.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.For men	1/8	30	403.00	1511.25				
	iv.Mechanic	1/3	30	384.00	3840.00				
	v.Electrician	1/2	30	#REF!	#REF!				
	vi.Choukidar	1/4	30	273.00	2047.50				
	Total Direct labour charge				#REF!				
	Direct labour charge per hr				#REF!				
	Hourly use rate				#VALUE!	Per hr			

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CALCULATION OF HIRE CHARGES OF MACHINE

Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.			
3.20	Crane								
	Crawler Mounted 10 T								
A	Depreciation charge								
	Capital cost of machine						IINPUT		
	Life of machine	10	Year						
	Rated life of machine	12000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1200	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines					#VALUE!	A		
B	Repairs and Maintenance charge % of Depreciation of machine /hr	120	%			#VALUE!	B		
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Diesel	3.50	lit	69.22	242.27				
	ii.Petrol	8.00	lit	Input	#VALUE!				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%			#VALUE!			
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%			#VALUE!			
	Total charge					#VALUE!	C		
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	403.00	12090.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.Formen	1/4	30	403.00	3022.50				
	iv.Mechanic	1/4	30	384.00	2880.00				
	v.Choukidar	1/4	30	273.00	2047.50				
	vi.Supervisor	1/4	31	321.00	2487.75				
	Total Direct labour charge				28470.00				
	Direct labour charge per hr				284.70				
	Hourly use rate					#VALUE!	Per hr		
3.21	Muck / car (12 cubic yard)								
A	Depreciation charge								
	Capital cost of machine						IINPUT		
	Life of machine	20	Year						
	Rated life of machine	30000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1500	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines					#VALUE!	A		
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%			#VALUE!	B		
C	Running charges (P.O.L)								
	Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%			#VALUE!			
	Total charge					#VALUE!	C		
	Hourly use rate					#VALUE!	Per hr		
3.22	Vibrator								
A	Depreciation charge								
	Capital cost of machine						input		
	Life of machine	5	Year						
	Rated life of machine	8000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1600	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines					#VALUE!	A		
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%			#VALUE!	B		
C	Running charges (P.O.L)								
	H.P motor =5								
	a.Diesel	1.50	lit	69.22	103.83				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		25.95				
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%			#VALUE!			
	Total charge					#VALUE!	C		
D	Labour charge								

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CALCULATION OF HIRE CHARGES OF MACHINE

Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.			
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	299.00	6970.00				
	Total Direct labour charge				6970.00				
	Direct labour charge per hr				67.28				
	Hourly use rate				#VALUE!	Per hr			
3.23	Scrapper								
A	Depreciation charge								
	Capital cost of machine				INPUT				
	Life of machine	8	Year						
	Rated life of machine	9000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1125	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A			
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B			
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Diesel	17.98	lit	69.22	1244.45				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		311.11				
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	403.00	12090.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.Formen	1/4	30	403.00	3022.50				
	iv.Mechanic	1/4	30	384.00	2880.00				
	v.Choukidar	1/4	30	273.00	2047.50				
	Total Direct labour charge				28470.00				
	Direct labour charge per hr				303.68				
		Hourly use rate				#VALUE!	Per hr		
	3.24	GRADER 110 hp							
A	Depreciation charge								
	Capital cost of machine				INPUT				
	Life of machine	10	Year						
	Rated life of machine	12000	hrs						
	Working Hours per year (Rated life in hrs/yr)	1200	hrs						
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A			
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B			
C	Running charges (P.O.L)								
	H.P motor =110								
	a.Diesel	12.53	lit	69.22	867.35				
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		216.84				
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!				
	Total charge				#VALUE!	C			
D	Labour charge								
(a)	Direct labour charge	Nos	Days	Rate	Amount				
	i.Driver	1	30	325.00	9750.00				
	ii.Helper	1	30	281.00	8430.00				
	iii.Formen	1/8	30	403.00	1511.25				
	iv.Mechanic	0	30	384.00	0.00				
	v.Choukidar	1/2	30	273.00	4095.00				
	Total Direct labour charge				23766.25				
	Direct labour charge per hr				237.86				
		Hourly use rate				#VALUE!	Per hr		
	3.28	Tractors							
A	Depreciation charge								
	Capital cost of machine				input				
	Life of machine	5	Year						
	Rated life of machine	12000	hrs						
	Working Hours per year (Rated life in hrs/yr)	2400	hrs						

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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B
C	Running charges (P.O.L.)					
	H.P motor =110					
	a.Diesel	2.75	lit	69.22	190.36	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		47.59	
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	384.00	11520.00	
	ii.Helper	1	30	281.00	8430.00	
	Total Direct labour charge				19950.00	
	Direct labour charge per hr				99.75	D
	Hourly use rate				#VALUE!	Per hr
	Hire charge of Tractor per day				#VALUE!	Per day
3.32	Drill extractors (Compressed air)					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	8	Year			
	Rated life of machine	8000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B
C	Running charges (P.O.L.)					
	a.Fuel Compressed air	400	/100cfm	input	#VALUE!	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!	
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator Gr I	1	30	321.00	9630.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/8	30	384.00	1440.00	
	v.Choukidar	1/4	30	273.00	2047.50	
	iv. Supervisor	1/4	30	321.00	2407.50	
	Total Direct labour charge				25466.25	
	Direct labour charge per hr				305.60	D
	Hourly use rate				#VALUE!	
3.33	Grinder					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	8	Year			
	Rated life of machine	8000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Tated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B
C	Running charges (P.O.L.)					
	a.Fuel Compressed air	400	/100cfm	input	#VALUE!	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!	
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C

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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator Gr I	1	30	321.00	9630.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/8	30	384.00	1440.00	
	v.Choukidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				23058.75	
	Direct labour charge per hr				276.71	D
	Hourly use rate				#VALUE!	
3.34	Sheet Pile Driving plant					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	10	Year			
	Rated life of machine	15000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1500	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	50	%		#VALUE!	B
C	Running charges (P.O.L)					
	a.Fuel Compressed air	400	/100cfm	input	#VALUE!	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!	
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Operator Gr I	1	30	input	#VALUE!	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Choukidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				#VALUE!	
	Direct labour charge per hr				#VALUE!	D
	Hourly use rate				#VALUE!	
3.35	Loader					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	10	Year			
	Rated life of machine	15000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1500	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repaire and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a.Diesel	12.79	lit	69.22	885.55	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		221.39	
	c.Sundries and miscellenceous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	input	#VALUE!	
	ii.Helper	1	30	281.00	8430.00	
	iii.Fomen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Chokidar	1/2	30	273.00	4095.00	
	Total Direct labour charge				#VALUE!	
	Direct labour charge per hr				#VALUE!	
	Hourly use rate				#VALUE!	Per hr
	Overhead loader 1cu. yd					
A	Depreciation charge					
	Capital cost of machine				INPUT	

CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.
	Life of machine	16	Year			
	Rated life of machine	20000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1250	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	70	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a.Diesel	119.36	lit	69.22	8262.10	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		2065.52	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	input	#VALUE!	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Choukidar	1/6	30	273.00	1365.00	
	Total Direct labour charge				#VALUE!	
	Direct labour charge per hr				#VALUE!	
	Hourly use rate				#VALUE!	Per hr
3.36	Pneumatic concrete placer (1 CUBIC YARD)					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	10	Year			
	Rated life of machine	10000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	120	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a.Fuel Compressed air	200.00	/100cfm	input	#VALUE!	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		#VALUE!	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	input	#VALUE!	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/8	30	403.00	1511.25	
	iv.Mechanic	1/6	30	384.00	1920.00	
	v.Chokidar	1/6	30	273.00	1365.00	
	Total Direct labour charge				#VALUE!	
	Direct labour charge per hr				#VALUE!	
	Hourly use rate				#VALUE!	Per hr
3.37	Draglines 2 cum 262 H.P					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	12	Year			
	Rated life of machine	15000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1250	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					

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CALCULATION OF HIRE CHARGES OF MACHINE						
Sr.N o.	Description	Quantity	Unit	Rate	Amount	Ref.
	a.Diesel	28.55	lit	69.22	1976.04	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		494.01	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	403.00	12090.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/4	30	403.00	3022.50	
	iv.Mechanic	1/2	30	384.00	5760.00	
	v.Chokidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				31350.00	
	Direct labour charge per hr				300.96	
	Hourly use rate				#VALUE!	Per hr
3.38	Hydraulic excavators (Diesel) 1.25cu.yd					
A	Depreciation charge					
	Capital cost of machine				input	
	Life of machine	10	Year			
	Rated life of machine	12000	hrs			
	Working Hours per year. (Rated life in hrs/yr)	1200	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a.Diesel	11.28	lit	69.22	780.61	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		195.15	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	403.00	12090.00	
	ii.Helper	1	30	281.00	8430.00	
	iii.Formen	1/4	30	403.00	3022.50	
	iv.Mechanic	1/4	30	384.00	2880.00	
	v.Choukidar	1/4	30	273.00	2047.50	
	Total Direct labour charge				28470.00	
	Direct labour charge per hr				284.70	
	Hourly use rate				#VALUE!	Per hr
3.40	Agitating car 4cu.yd					
A	Depreciation charge					
	Capital cost of machine				INPUT	
	Life of machine	10	Year			
	Rated life of machine	10000	hrs			
	Working Hours per year (Rated life in hrs/yr)	1000	hrs			
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A
B	Repairs and Maintenance charge % of Depreciation of machine /hr	120	%		#VALUE!	B
C	Running charges (P.O.L)					
	H.P motor =110					
	a.Diesel	5.33	lit	69.22	368.84	
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		92.21	
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	
	Total charge				#VALUE!	C
D	Labour charge					
(a)	Direct labour charge	Nos	Days	Rate	Amount	
	i.Driver	1	30	input	#VALUE!	
	ii.Helper	1	30	281.00	4215.00	
	iii.Formen	1/4	30	403.00	1511.25	

CALCULATION OF HIRE CHARGES OF MACHINE

Sr.No.	Description	Quantity	Unit	Rate	Amount	Ref.		
	iv.Mechanic	1/4	30	384.00	2880.00			
	v.Chokidar	1/6	30	273.00	1365.00			
	Total Direct labour charge				#VALUE!			
	Direct labour charge per hr				#VALUE!			
	Hourly use rate				#VALUE!	Per hr		
3.42	Crushing & Processing Plant							
	Integrated Stone Crusher TPH			100 TPH				200TPH
A	Depreciation charge							
	Capital cost of machine				INPUT			INPUT
	Life of machine	12	Year					
	Rated life of machine	8000	hrs					
	Working Hours per year (Rated life in hrs/yr)	666.67	hrs					
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A		#VALUE!
B	Repairs and Maintenance charge % of Depreciation of machine /hr	80	%		#VALUE!	B		#VALUE!
C	Running charges (P.O.L)							
	H.P motor =110							
	a.Diesel	400.00	lit	69.22		800.00		0
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		0.00			0.00
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!			#VALUE!
	Total charge				#VALUE!	C		#VALUE!
D	Labour charge							
(a)	Direct labour charge	Nos	Days	Rate	Amount			
	i.Driver	2	30	321.00	19260.00	2		19260
	ii.Helper	0	30	281.00	0.00	0		0
	iii.Formen	1	30	403.00	12090.00	1		12090
	iv.Mechanic	1/4	30	384.00	2880.00	1/4		2880
	v.Chokidar	1	30	273.00	8190.00	1		8190
	vi.Beldar	15	30	268.00	120600.00	20		160800
	Total Direct labour charge				42420.00			203220
	Direct labour charge per hr				763.58			3657.96
	Hourly use rate				#VALUE!	Per hr		#VALUE!
3.43	Boat							
	40 quintal capacity boat							100 quintal capacity boat
A	Depreciation charge							
	Capital cost of machine				input			input
	Life of machine	B	Year					
	Rated life of machine	35000	hrs					
	Working Hours per year (Rated life in hrs/yr)	4375	hrs					
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A		#VALUE!
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B		#VALUE!
C	Running charges							
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!	C		#VALUE!
D	Labour charge							
(a)	Direct labour charge	Nos	Days	Rate	Amount			#VALUE!
	Driver	2	30	input	#VALUE!			#VALUE!
	Total Direct labour charge				#VALUE!			#VALUE!
	Direct labour charge per hr				#VALUE!	D		#VALUE!
	Hourly use rate				#VALUE!	Per hr		#VALUE!
					#VALUE!	Per day		#VALUE!
	100 quintal capacity boat (Pump Fitted)							
A	Depreciation charge							
	Capital cost of machine				input			
	Life of machine	B	Year					
	Rated life of machine	35000	hrs					
	Working Hours per year (Rated life in hrs/yr)	4375	hrs					
	Depreciation of machine /hr = 0.9x Cost of Machine/Rated life of Machines				#VALUE!	A		#VALUE!
B	Repairs and Maintenance charge % of Depreciation of machine /hr	150	%		#VALUE!	B		#VALUE!
C	Running charges (P.O.L)							
	H.P motor =110							
	a.Diesel	0.54	lit	69.22	37.71			
	b.Lubricant and grease waste etc 25% of above Fuel	25	%		9.43			
	c.Sundries and miscellaneous supplies at site @ 10 % of R/M(B)	10	%		#VALUE!			#VALUE!
	Total charge				#VALUE!	C		#VALUE!
D	Labour charge							
(a)	Direct labour charge	Nos	Days	Rate	Amount			#VALUE!
	i.Driver	1	30	input	#VALUE!			#VALUE!

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 CALCULATION OF HIRE CHARGES OF MACHINE

Sr.N o.	Description	Quantity	Unit	Rate	Amount	Ref.			
	Direct labour charge per hr				#VALUE!				
	Hourly use rate				#VALUE!	Per hr			
					#VALUE!	Per day			

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CHAPTER --III

Machine Related Material						
Sl.No	Material	Cost	Unit	Life of Material	Approved Rate	
						Unit
1	Jumbo drill steel	IINPUT	per mtr		IINPUT	per mtr
2a.	Jack Hammer drill rod	IINPUT	per mtr	130	IINPUT	per mtr
2b.	Jack Hammer drill bit	IINPUT	per mtr	130	IINPUT	per mtr
3	For Diamond core drilling machine	IINPUT				
3a	Diamond bit for N x size (53 mm to 75 mm)(Internal dia To External dia) 'D'	IINPUT	per mtr	10	IINPUT	per mtr
3b	Diamond bit for (Bxsize (41mm to 59 mm)(Internal dia To External dia) 'T'	IINPUT	per mtr	10	IINPUT	per mtr
3c	Tungston Carbide bit	IINPUT	per mtr	20	IINPUT	per mtr
3d	(NxSize) Reaming shell 'S'	IINPUT	per mtr	50	IINPUT	per mtr
3e	(BxSize) Reaming shell 'TK'	IINPUT	per mtr	50	IINPUT	per mtr
3f	Reaming shell 'N'	IINPUT	per mtr	100	IINPUT	per mtr
3g	Core box (wooden 3m long x 0.85 m wide x 0.15 m deep) with longitudinal compartment to accomodate 5 rows of 3 m long cores. i.e total 15 m	IINPUT	Each		IINPUT	Each
4	Wagon Drill(Steel) equipment required with Wagon drill	IINPUT				
4a	Shank adopter	IINPUT	per mtr	460	IINPUT	per mtr
4b	Coupling sleeves	IINPUT	per mtr	460	IINPUT	per mtr
4c	Extension rod 1 x 3.00metre	IINPUT	per mtr	460	IINPUT	per mtr
4d	Extension rod 1 x 2.50 metre	IINPUT	per mtr	460	IINPUT	per mtr
4e	Extension rod 1 x 2.00 metre	IINPUT	per mtr	460	IINPUT	per mtr
4f	Extension rod 1 x 1.50 metre	IINPUT	per mtr	460	IINPUT	per mtr
4g	Extension rod 1 x 1.00 metre	IINPUT	per mtr	460	IINPUT	per mtr
4h	Cost of 4 point drill bit	IINPUT	per mtr	130	IINPUT	per mtr

CHAPTER - III

Usage Rate of Plant And Machinery

TABULATION OF OPERATING & MAINTENANCE CREW ADOPTED IN THE HOURLY USE RATE OF EQUIPMENT

S.N	Names of Equipment	Operation & Maintenance crew required for the operational of the MC															
		Fore-man	Operator	Mechanite	Helper	Watchman	Electrician	Supervisor	Driver	Cableman	Beldar	Cleaner	Chargeman	Filter	Gra-ser	Khalasi	Tar man
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3.1	Drill Jumbo	1/8	2	1/4	4	1/4											
3.2	Jack hammer (52 lb)		1	1/8	1/2	1/8		1/5									
3.3	Scalling hammer		1		1/2	1/10		1/8									
3.4	Diamond core drilling machine and diesel pump.	1/8	2	1/4	3	1/4											
3.5	Wagon Drill	1/8	1	1/8	1	1/4		1/4									
3.6	Paving Breakers (65 lb or 38.6 Kg)		1	1/8	1/2	1/8											
3.7	Hoist winch (30 T)		1	1/2	1	1/4											
3.8	Shot crete Machine	1/8	1	1/2	1	1/4											
3.9	Convey muckers (1.5 cubic yard 42" wide conveyor)	1/8	1	1/8	1	1/4											
3.10	Shovel (Diesel) 2 cum 262 H.P	1/4	1	1/2	1	1/4		1									
	Shovel (Electric) 5 cum 350 H.P	1/4	1	1/2	1	1/4	1/2	1		2							
3.11	D.8 Tractor Dozer (Push Plate) H.P 270	1/4		1/4	1	1/4			1								
	D.9 Tractor Dozer H.P 385	1/4		1/4	1	1/4			1								
3.12	Dumper (Tipper) (7 T) 4.5 cum		1	1/8		1/8											
	Dumper (15 T)	1/8	1	1/6	1	1/6											
	Rear Dumper (35 T) 17 cum	1/4	1	1/4	1	1/4											
3.13	Batching and mixing plant (25-35 cum)	1/2	2	1/2		1					6						
3.14	Ventilation blower (20000cfm)		1/4	1/4	1/2												
3.15	Pump																
	Disel																
	5 H.P		6														
	10 H.P																
	15 H.P																
	20 H.P																
	25 H.P																
	30 H.P																
	Electric Pump																
	5 H.P																
	10 H.P																
	15 H.P		1	1/4													
	20 H.P																
	30 H.P																
	40 H.P																

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CHAPTER ---II

TABULATION OF COST & LIFE OF MACHINES, FUEL CONSUMPTION ADOPTED IN THE HOURLY USE RATE OF EQUIPMENT & ADOPTED USE RATE

Sl No	Description of machine	Activity	Cost of machine	Life of Machine		Repair on In %	Engine Horse Power	Fuel consumption per		Output of machine		Hourly use rate (By)		Adopted Use Rate of	
				Year	Hour			Qty	Unit	Output	Unit	Rates	Unit	Rate	Ref
3.1	Drill Jumbo	Number of holes drilled simultaneously	IINPUT	5	12000	60	8	100	cfm	2.3 M	35mmhole /hr	#VALUE!	Per hr	#VALUE!	
3.2	Jack hammer (52 lb)	Drilling	IINPUT	10	10000	60	8	100	cfm			#VALUE!	Per hr	#REF!	
3.3	Scaling hammer	Drilling	IINPUT	10	10000	60	8	100	cfm			#VALUE!	Per hr	#VALUE!	
3.4	Diamond core drilling machine and diesel pump.	Core samples	IINPUT	8	8000	80	32.25	3.55	lit/hr	0.5	lit/hour	#VALUE!	Per hr	#VALUE!	
3.5	Weapon Drill	Drilling	IINPUT	8	8000	80		400.00	cfm	0.2	lit/hour	#VALUE!	Per hr	#VALUE!	
3.6	Pneumatic Breakers (65 lb or 38.6 Kg)		IINPUT	10	10000	60		100.00	cfm			#VALUE!	Per hr	#REF!	
3.7	Hoist winch 30T		IINPUT	12	15000	120		0	lit/hr			#VALUE!	Per hr	#REF!	
3.8	Shotcrete Machine/ Concrete Pump of 45 & 30 cum capacity	Pumping of Concrete	IINPUT	10	15000	80		600	cfm	33/22	cum/hour	#VALUE!	Per hr	985.00	P & M 007
3.9	Convey muckers (1.5 cubic yard 42" wide conveyor) or 1.15 cum	Transporting	IINPUT	10	15000	100	165	123.09	KWH	76.5	cum/hour	#VALUE!	Per hr	#VALUE!	P & M 065
3.10	Shovel (Diesel) 2 cum 262 H.P	Excavation	IINPUT	12	15000	150	262	28.55	lit/hr	100	cum/hour	#VALUE!	Per hr	#VALUE!	
	Shovel (Electric) 5 cum 350 H.P		IINPUT	20	40000	150	350	175.98	KWH	28.08	cum/hour	#VALUE!	Per hr	#VALUE!	
3.11	D.8 Tractor Dozer (Push) - Plate J.H.P. 270	Spreading	IINPUT	10	12000	100	270	29.42	lit/hr	300	cum/hour	#VALUE!	Per hr	#VALUE!	
b	D.9 Tractor Dozer H.P. 365	Spreading, cutting, clearing	IINPUT	10	12000	100	365	41.95	lit/hr			#VALUE!	Per hr	#VALUE!	
c	BD 50 Bulldozer with suitable diesel engine	Spreading, cutting, clearing	IINPUT	10	12000	100	50	5.45	lit/hr	200 100 150	cum/hour	#VALUE!	Per hr	3319.00	P&M-015
d	BD 80 Bulldozer with suitable diesel engine	Spreading, cutting, clearing	IINPUT	10	12000	100	80	6.72	lit/hr	300 150 250	cum/hour	#VALUE!	Per hr	5568.00	P&M-014
3.12	Dumper or Tipper (7 T) 4.5 cum	Transportation of soil, GSB, WMM, Hotmix etc	IINPUT	8	10000	140	110	11.99	lit/hr			#VALUE!	Per hr	#VALUE!	
b	Dumper or Tipper (10 T) 5.5 cum		IINPUT	8	10000	140		0.00	lit/hr			#VALUE!	Per hr	1018.00	P&M-048
c	Dumper (15 T)		IINPUT	8	10000	140	200	21.79	lit/hr	25.22	cum/hour	#VALUE!	Per hr	#VALUE!	
d	Rear Dumper (35 T) 17 cum		IINPUT	10	12000	140	560	61.02	lit/hr			#VALUE!	Per hr	#VALUE!	
3.13	Batching and mixing plant (35 cu.yd/hr) or 27 cum	Concrete Mixing	IINPUT	18	30000	75	80	59.68	kwh	27	cum/hour	#VALUE!	Per hr	2851.00	P&M-002
b	Batching and mixing plant (15-20 cum)		IINPUT							13	cum/hour	#VALUE!	Per hr	1853.00	P&M-003
3.14	Ventilation blower (20000cfm)		IINPUT	12	58000	80	20	14.92	kwh			#VALUE!	Per hr	#VALUE!	
3.15	Pump	Pumping, water supply, sewage, dredging etc													
(i)	Diesel 5 H.P		IINPUT	8	10000	100	5	0.61	lit/hr			#VALUE!	Per hr	#VALUE!	
a	10 H.P		IINPUT	8	10000	100	10	1.21	lit/hr			#VALUE!	Per hr	#VALUE!	
b	15 H.P		IINPUT	8	10000	100	15	1.82	lit/hr			#VALUE!	Per hr	#VALUE!	
c	20 H.P		IINPUT	8	10000	100	20	2.42	lit/hr			#VALUE!	Per hr	#VALUE!	
d	25 H.P		IINPUT	8	10000	100	25	3.03	lit/hr			#VALUE!	Per hr	#VALUE!	
e	30 H.P		IINPUT	8	10000	100	30	3.63	lit/hr			#VALUE!	Per hr	#VALUE!	
(ii)	Electric Pump 5 H.P		IINPUT	12	20000	70	5	3.73	kwh			#VALUE!	Per hr	#VALUE!	
g	10 H.P		IINPUT	12	20000	70	10	4.96	kwh			#VALUE!	Per hr	#VALUE!	

CHAPTER - IV

CARRIAGE OF MATERIALS (By TRACTOR)

Sl.No	Description	Unit	Quantity	Rate(Rs)	Cost(Rs)	Ref.
4.1	Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum					
	Placing tractor at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip.					
	Unit = cum					
	Taking output = 2.25 cum					
	Time required for					
	i) Positioning of tipper at loading point		1Min			
	ii) Loading by front end loader 1cum bucket capacity @ 25 cum per hour		5 Min			
	iii) Maneuvering, reversing, dumping and turning for return.		0 Min			
	iv) Waiting time, unforeseen contingencies etc		0 Min			
	Total		6 Min			
	a) Labour					
	Mate	no.	0.03	289.00	8.67	
	Mazdoor for loading and unloading	no.	0.72	268.00	192.96	
	b) Machinery					
	Tractor 3.6 tonnes capacity	hour	0.100	525.00	52.50	P&M-1B 5
	Front end-loader 1cum bucket capacity @ 25 cum/hour.	hour	0.083	1373.00	113.96	P&M017
					368.09	
	Overhead charges & C.P @ 15%				55.21	
	Cost for 2.25 cum				423.30	
	Rate per cum				188.13	
				say	188.10	
	Note:-Unloading will be done manually.					
4.2	Loading and Unloading of stone Boulders by Manual means					
	Unit = cum					
	Taking output = 2.25 cum					
	a) Labour					
	Mate	no.	0.05	289.00	14.45	
	Mazdoor for loading and unloading	no.	0.31	268.00	83.08	
	b) Machinery					
	Tractor 3.60 tonne capacity	hour	0.31	525	162.75	
					260.28	
	Overhead charges & C.P @ 15%				39.04	
	Cost for 2.25 cum				299.32	
	Rate per cum				133.03	
				say	133.00	Xa
	Note:-Unloading will be done manually.					
4.3	Loading and Unloading of Cement or Steel by manual means and stacking					
	Unit = tonne					
	Taking output = 3.6 tonnes					
	a) Labour					

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	Mate	no.	0.03	289.00	8.67	
	Mazdoor for loadina and unloading	no.	0.72	268.00	192.96	
	b) Machinery					
	Tractor 3.6 tonne capacity	hour	0.72	525.00	378.00	
					579.63	
	Overhead charges & C.P @ 15%				86.94	
	Cost for 3.6 tonnes				666.57	
	Rate per tonnes				185.16	
				say	185.20	Xb
4.4	Cost of Haulage Excluding Loading and Unloading					
	Haulage of materials by tractor excluding cost of loading, unloading and stacking.					
	Unit = t.km or cum.km					
	Taking output (3.60 tonnes load and lead 10 km) =36 t. km					
4.4a	Surfaced Road					
	Speed with load : 15 km / hour					
	Speed while Returning empty :25 km /					
	a) Machinery					
	Tractor 3.60 tonne capacity					
	Time taken for onward haulage with load	hour	0.667	525.00	350.18	
	Time taken for empty return trip.	hour	0.40	525.00	210.00	
					560.18	
	Overhead charges & C.P @ 15%				84.027	
	cost for 36 t km				644.21	
	Rate per t.km				17.89	
				say	17.90	Hsb
4.4b	Unsurfaced Graveled Road					
	Speed with load: 12 km / hour					
	Speed for empty return trip : 20 km / hour					
	a) Machinery					
	Tractor 3.6 tonnes capacity					
	Time taken for onward haulage with load	hour	0.833	525.00	437.33	
	Time taken for empty return trip	hour	0.50	525.00	262.50	
					699.83	
	b) Overhead charges & C.P @ 15%				104.97	
	Cost for 36 t.km				804.80	
	Rate per t.Km				22.36	
				say	22.40	Hub
4.4c	Katcha Track and Track in River Bed/Nallah Bed and choe Bed					
	Speed with load :10 km / hour					
	Soeed while returning empty : 15 km / hour					
	a) Machinery					
	Tractor 3.6 tonnes capacity					
	Time taken for onward haulage	hour	1.00	525.00	525.00	
	Time taken for empty return trip	hour	0.667	525.00	350.18	
					875.18	
	c) Overhead charges & C.P @ 15%				131.28	
	Cost for 36 t.km				1006.46	
	Rate per t.Km				27.96	
				say	28.00	Hkb

CARRIAGE OF MATERIALS (By TIPPER)

No.	Description	Unit	Quantity	Rate	Cost	
4.1	Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum					
	Placing tipper at loading point, loading with front end loader, dumping, turning for return-trip, excluding time for haulage and return trip.					
	Unit = cum					
	Taking output = 5.5 cum					
	Time required for					
	i) Positioning of tipper at loading point		1Min			
	ii) Loading by front end loader 1cum bucket capacity @ 25 cum per hour		13 Min			
	iii) Maneuvering, reversing, dumping and turning for return		2 Min			
	iv) Waiting time, unforeseen contingencies etc		4 Min			
	Total		20 Min			
	a) Machinery					
	Tipper 5.5 tonnes capacity	hour	0.33	1018.00	335.94	P&M048
	Front end-loader 1cum bucket capacity @ 25 cum/hour	hour	0.33	1373.00	453.09	P&M017
					789.03	
	b) Overhead charges & C.P @ 15%					
	Cost for 5.5 cum				118.35	
	Rate per cum.				907.38	
					164.98	
				say	165.00	
	Note:-Unloading will be by tipping.					
4.2	Loading and Unloading of Stone Boulders by Manual means					
	Unit = cum					
	Taking output = 5.5 cum					
	a) Labour					
	Mate	no.	0.11	289.00	31.79	
	Mazdoor for loading and unloading	no.	0.75	268.00	201.00	
	b) Machinery					
	Tipper 5.5 tonne capacity	hour	0.75	1018.00	763.5	
					996.29	
	c) Overhead charges & C.P @ 15%					
	Cost for 5.5 cum				149.44	
	Rate per cum = (a+b+c+d)/5.5				1145.73	
					208.32	
				say	208.30	Xa
	Note:-Unloading will be by tipping.					
4.3	Loading and Unloading of Cement or Steel by manual means and stacking.					
	Unit = tonne					
	Taking output = 10 tonnes					
	a) Labour					
	Mate	no.	0.08	289.00	23.12	
	Mazdoor for loading and unloading	no.	2.00	268.00	536.00	
	b) Machinery					
	Truck 10 tonne capacity	hour	2.00	929.00	1858.00	P&M057
					2417.12	
	c) Overhead charges & C.P @ 15%					
	Cost for 10 tonnes				362.57	
	Rate per tonnes				2779.69	
					277.97	
				say	278.00	Xb
4.4	Cost of Haulage Excluding Loading and Unloading					
	Haulage of materials by tipper excluding cost of loading, unloading and stacking.					

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Unit = t.km					
Taking output (for 10 tonnes or 5.5 cum load and lead 10)					
4.4a	Surfaced Road				
Speed with load: 25 km / hour.					
Speed while Returning empty :35 km /					
a) Machinery					
Tipper 10 tonne capacity					
	Time taken for onward haulage with load	hour	0.40	1018.00	407.2
	Time taken for empty return trip.	hour	0.29	1018.00	295.22
					702.42
b) Overhead charges & C.P @ 15%					
cost for 100 t.km or 55cum.km					
Rate per t.km					
				say	8.08
					8.10
	Rate per cum.km				14.69
				say	14.70
4.4b	Unsurfaced Graveled Road				
Speed with load: 20 km / hour					
Speed for empty return trip :30 km / hour					
a) Machinery					
Tipper 10 tonnes or 5.5 cum capacity					
	Time taken for onward haulage with load	hour	0.50	1018.00	509.00
	Time taken for empty return trip	hour	0.33	1018.00	335.94
					844.94
b) Overhead charges & C.P @ 15%					
Cost for 100 t.km or 55cum.km					
Rate per t.Km					
				say	9.72
					9.70
	Rate per cum.km				17.67
				say	17.70
4.4c	Katcha Track and Track in River Bed/Nallah Bed and choe Bed				
Speed with load :10 km / hour					
Speed while returning empty: 15 km / hour					
a) Machinery					
Tipper 10 tonnes capacity					
	Time taken for onward haulage	hour	1.00	1018.00	1018.00
	Time taken for empty return trip	hour	0.67	1018.00	682.06
					1700.06
b) Overhead charges & C.P @ 15%					
Cost for 100 t.km					
Rate per t.Km					
				say	19.55
					19.60
	Rate per cum.km				35.55
				say	35.60

Hsb *Hsb* *Hsb* *Hsb*

CARRIAGE OF MATERIAL BY TIPPER OF 5.5 CUM CAPACITY INCLUDING OVER-HEAD CHARGES & C.P

Sr.No	Name of Materials	Unit	Gross Tipper Capacity per trip	(For void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Haulage Per cum				Cost of Haulage per Tipper				Lead in KM			Per Unit Rate =(col17/Net Payable Capacity)	
						H _{sa}	H _{ua}	H _{ka}	5.5H _{sa}	For Surface Road	For Unsurfaced graveled Road	For Hatcha track & Track in river bed/ Nallah bed & Choe Bed	L _s	L _u	L _k	For Surface Road		For Unsurfaced graveled Road
1	2	M ³	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Lime, Mooroom, Rubbish	M ³	6	1	6	5.5X _a Stacking per Trip Of Tipper (Tipper capacity 5.5 cum Xa)	H _{sa} For Surface Road	H _{ua} For Unsurfaced graveled Road	H _{ka} For Hatcha track & Track in river bed/ Nallah bed & Choe Bed	5.5H _{sa} For Surface Road	5.5H _{ua} For Unsurfaced graveled Road	5.5H _{ka} For Hatcha track & Track in river bed/ Nallah bed & Choe Bed	L _s For Surface Road	L _u For Unsurfaced graveled Road	L _k For Hatcha track & Track in river bed/ Nallah bed & Choe Bed	[(5.5H _{sa} .L _s +5.5H _{ua} .L _u +5.5H _{ka} .L _k)+5.5X		
2	Earth	M ³	6	0.8	4.8	1145.65	14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!
3	Manur or Sludge	M ³	6	0.92	5.52	1145.65	14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!
4	Excavated Rock (120lbs)	M ³	6	0.67	4.02	1145.65	14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!
5	Stone metal (above 50 mm)	M ³	5.4	0.85	4.59		14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!
6	Boulder	M ³	6	0.8	4.8	1145.65	14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!
7	Stone chips / Sand / Stone Agg	M ³	5.4	0.924	4.99	1145.65	14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!
8	Soling stone	M ³	5	0.85	4.25	1145.65	14.70	17.70	35.60	80.85	97.35	195.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!	#VALUE!

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CARRIAGE OF MATERIAL BY TIPPER OF 10 Tonnes CAPACITY INCLUDING OVERHEAD CHARGES & C.P.

Sr.No	Name of Materials	Unit	Gross Tipper Capacity per trip	(For void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of loading, Unloading & Stacking per Trip Of Tipper (Tipper capacity 8t x Xb)	Cost Of Haulage Per cum			Cost of Haulage per			Lead in KM			Cost of carriage = [(8Hsb.Ls+8Hub.Lu+8Hkb.Lk)+8Xb]	Per Unit Rate = (colt 7/Net Payable capac
							H _{sb}	H _{ub}	H _{kb}	For Surface Road	For Unsurfaced gravelled Road	For Katcha track & Track in river bed/ Nallah bed & Choe Bed	L _s	L _u	L _k		
1	Cement, Steel, Stone CC pipe	M.T	8	1	8	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
2	Brick (93/4x43/4x23/4)	Per %0	2000	1	2000	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
3	G.I. Crate (3x1.5x0.75)	Per %	80	1	80	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
4	Bitumen, Tar, Steam, Coal	MT	8	1	8	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
5	R.C.C hume, A.C. pipe	mtr	290	1	290	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	100 mm dia	mtr	200	1	200	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	125 mm dia	mtr	180	1	180	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	150 mm dia	mtr	100	1	100	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	200 mm dia	mtr	75	1	75	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	250 mm dia	mtr	60	1	60	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	300 mm dia	mtr	47.5	1	47.5	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	350 mm dia	mtr	32.5	1	32.5	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	400 mm & 450 dia	mtr	15	1	15	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	500 mm & 600 mm dia	mtr	12.5	1	12.5	2224.00	8.10	9.70	19.60	64.8	77.6	156.80	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	700 mm & 800 mm dia	mtr	10	1	10	2224.00	8.10	9.70	19.60	64.8	77.6	156.8	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	900mm & 1000 mm dia	mtr	7.5	1	7.5	2224.00	8.10	9.70	19.60	64.8	77.6	156.8	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	1100 & 1200 m dia	mtr	7.5	1	7.5	2224.00	8.10	9.70	19.60	64.8	77.6	156.8	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
6	Bamboo	Per %	280	1	280	2224.00	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	75 mm to 100 mm dia	Per %	300	1	300	2224.00	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	50 mm to 75 mm dia	Per %	30000	1	30000	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
7	E.C bag 30000 nos	Per %0	9.6	1	9.6	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
8	Timber	Cum	9.6	1	9.6	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
9	Sal ballah av.6m length																

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CARRIAGE OF MATERIAL BY TIPPER OF 10 Tonnes CAPACITY INCLUDING OVERHEAD CHARGES & C.P.

Sr.No	Name of Materials	Unit	Gross Tipper Capacity per trip	(For void) Multiplying Factor	Net Tipper capacity (Payable Qty) Per Trip	8X ₅ Cost of loading, Unloading & Stacking per Trip Of Tipper (Tipper capacity 8t x Xb)	Cost of Haulage Per cum			Cost of Haulage per			Lead in KM			Cost of carriage = (8H _{sb} .L _s +8H _{ub} .L _u +8H _{kb} .L _k)+8X _b] Per Unit Rate = (col17/Net Payable capac	
							H _{sb}	H _{ub}	H _{kb}	8H _{sb}	8H _{ub}	8H _{kb}	L _s	L _u	L _k		17
1	100 mm dia	Nos	125	1	125	2224	8	9	10	11	12	13	14	15	16	17	18
	125 mm dia	Nos	80	1	80	2224											
	150 mm dia	Nos	60	1	60	2224											
	175 mm dia	Nos	45	1	45	2224											
	200 mm dia	Nos	25	1	25	2224											
	225 mm dia	Nos	20	1	20	2224											
10	S.W.Pipe 60 cm length	Mtr	480	1	480	2224											
	150 mm dia	Mtr	240	1	240	2224											
	200 mm dia	Mtr	135	1	135	2224											
	230 mm dia	Mtr	105.6	1	105	2224											
	250 mm dia	Mtr	84	1	84	2224											
	300 mm dia	Mtr	67.2	1	67.2	2224											
	350 mm dia	Mtr	48	1	48	2224											
	400 mm dia	Mtr	33.6	1	33.6	2224											
	450 mm dia	Mtr	26.4	1	26.4	2224											
	500 mm dia	Mtr	24	1	24	2224											
	600 mm dia	Mtr	19.2	1	19.2	2224											
11	Tiles (Manglore / Mosaic)	Per %	3200	1	3200	2224											
12	Brick Tiles(300x150x50mm)	Per %	1760	1	1760	2224											
13	Steel and C.I pipe																
	100 mm dia	Mtr	292.8	1	292.8	2224											
	125 mm dia	Mtr	219.6	1	219.6	2224											

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CARRIAGE OF MATERIAL BY TIPPER OF 10 Tonnes CAPACITY INCLUDING OVERHEAD CHARGES & C.P.

Sr.No	Name of Materials	Unit	Gross Tipper Capacity per trip	(For void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of loading, Unloading & Stacking per Trip Of Tipper (Tipper capacity 8t x Xb)	Cost Of Haulage Per cum			Cost of Haulage per			Lead in KM			Cost of carriage = [(8Hsb.Ls+8Hub.Lu+8Hkb.Lk)+8Xb]	Per Unit Rate =(col17/Net Payable capax
							H _{sb}	H _{ub}	H _{kb}	8H _{sb}	8H _{ub}	8H _{kb}	L _s	L _u	L _k		
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	150 mm dia	Mtr	183	1	183	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	200 mm dia	Mtr	109.8	1	109.8	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	250 mm dia	Mtr	80.52	1	80.52	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	300 mm dia	Mtr	62.22	1	62.22	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	350 mm dia	Mtr	43.92	1	43.92	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	400 mm dia	Mtr	32.94	1	32.94	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	500 mm dia	Mtr	25.62	1	25.62	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	600 mm dia	Mtr	18.3	1	18.3	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	700 mm & 800 mm dia	Mtr	15	1	15	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	900mm & 1000 mm dia	Mtr	10	1	10	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!
	1100mm & 1200mm dia	Mtr	7.5	1	7.5	2224	-	-	-	-	-	-	INPUT	INPUT	INPUT	#VALUE!	#VALUE!

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CHAPTER - V

CANAL EMBANKMENT AND STRUCTURE

5.1 EARTH WORK

Sr.No	Items	Rate	Unit
5.1.1	Preparation of seat of embankment or canals by 75 mm ploughing and removing the grass roots etc as per specifications and direction of E/I.	4.1	Per M ²
5.1.2	Preparation of borrow areas of embankment or canals by removing the grass and the jungle, bushes from the top including weeding out shrubs including roots and leveling all complete as per specifications and direction of E/I.	2.50	Per M ²
5.1.3	Jungle clearance and weeding out shrubs including small tree up to 0.50 M girth and removal as per specifications and direction of E/I.	7.5	Per M ²
5.1.4	Cutting of trees along with branches and their removal away from the work site and stacking the same as per specifications and direction of E/I. (Measurement of girth at a height of one meter above the ground level)		
	(a) Girth above 0.50 meter but up to 0.75 meter	246.40	Each
	(b) Girth above 0.75 meter but upto 1.50 meter	492.80	Each
	(c) Girth above 1.5 meter but upto 2.50 meter	893.30	Each
	(d) Girth above 2.50 meter but up to 4.00 meter	1447.80	Each
	(e) Girth above 4.00 meter	2094.70	Each
5.1.5	Uprooting of stumps and their removal away from the work site as per		
	(a) Girth above 0.50 meter but up to 0.75 meter	154.10	Each
	(b) Girth above 0.75 meter but up to 1.50 meter	154.10	Each
	(c) Girth above 1.5 meter but upto 2.50 meter	205.50	Each
	(d) Girth above 2.50 meter but up to 4.00 meter	308.20	Each
	(e) Girth above 4.00 meter	385.20	Each
5.1.6	Earth work in excavation of canals and dhars caring minimum full supply discharge above 28 cumecs (1000 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layers with an initial lead of 30 M and lift of 1.5 M all complete as per specifications and direction of E/I.	130.80	Per M ³
5.1.7	Earth work in excavation of canals and dhars caring minimum full supply discharge between 28 cumecs (1000 cusecs) and 8.5 cumecs (300 cusecs) in ordinary soil (vide classification of soil item A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layers and rough dressing with an initial lead of 30 M and lift of 1.5 M all complete as per specifications and direction of E/I.	104.40	Per M ³
5.1.8	Earth work in excavation of canals and dhars caring minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layers and rough dressing with an initial lead of 30 M and lift of 1.5 M all complete as per specifications and direction of E/I.	98.90	Per M ³
5.1.9	Earth work in filling for the maintenance of canals having minimum full supply discharge up to 28 cumecs (1000 cusecs) and flood embankment in ordinary soil (vide classification of soil item A) including clod breaking having earth in 225 mm layers and rough dressing of soil with all leads and lift all complete as per specifications and direction of E/I.	98.90	Per M ³
5.1.10	Extra for earth work in hard soil (vide classification of soil item. B) all complete as per specifications and direction of E/I.	21.80	Per M ³

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5.1.11	Extra for earth work in marshy, slushy and daldal soil (vide classification of soil item F) all complete as per specifications and direction of E/I.	32.60	Per M ³
5.1.12.1	Earth work in excavation in soft rock or ordinary rock (vide classification of soil item C) with initial lead of 10 M and lift of 1.5 M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	509.50	Per M ³
5.1.12.2	Earth work in excavation in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) with initial lead of 10M and lift of 1.5 M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete as per specifications and direction of E/I.	371.60	Per M ³
5.1.13.1	Earth work in excavation in soft rock or ordinary rock (vide classification of soil item C) with initial lead of 30M and lift of 1.5 M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	524.90	Per M ³
5.1.13.2	Earth work in excavation in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) with initial lead of 30M and lift of 1.5 M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete as per specifications and direction of E/I.	387.00	Per M ³
5.1.14	Earth work in excavation in hard rock (vide classification of soil item D) where blasting is needed with initial lead of 10 mtr and lift of 1.5 mtr including dressing, making the sides in profile and dressing the bed in proper grade etc all complete as per specifications and direction of E/I.	885.00	Per M ³
5.1.15	Earth work in excavation in hard rock (vide classification of soil item D) where blasting is needed with initial lead of 30 M and lift of 1.5 M including dressing, making the sides in proper profile and dressing the bed in proper grade as well as fine dressing of side and slopes etc. all complete as per specifications and direction of E/I.	900.40	Per M ³
5.1.16	Earth work in excavation of water course in ordinary soil with all lead and lift including clod breaking, rough dressing all complete as per specifications and direction of E/I.	98.90	Per M ³
5.1.17	Earth work in maintenance of canals having discharge less than 28 cumecs (1000 cusecs) in ordinary soil (vide classification of soil item A) including clod breaking and rough dressing of soil with all leads and lift all complete including royalty as per specifications and direction of E/I.	98.90	Per M ³
5.1.18	Earth work in bed clearance or desilting of canals caring full supply discharge of 28 cumecs (1000 cusecs) or more in dead courses of river etc, in ordinary soil and removing the excavated earth in proper profile in spoils etc. with an initial lead of 30 mtr and lift of 1.5M all complete as per specifications and direction of E/I.	100.90	Per M ³
5.1.19	Earth work in bed clearance or desilting of canals having full supply discharge between of 28 cumecs (1000 cusecs) and 8.5cumecs (300 Cusecs) including rough dressing with all lead and lift all complete including royalty as per specifications and direction of E/I.	98.90	Per M ³
5.1.20	Earth work in bed clearance or desilting of canals having full supply discharge between 8.5 cumecs (300 cusecs) and 0.14cumecs (5 Cusecs) and renovation of pynes etc. in ordinary soil and disposal of excavated earth etc. including rough dressing with all lead and lift all complete including royalty as per specifications and direction of E/I.	98.90	Per M ³



5.1.21	Earth work in leap cutting in side slopes and bed of canal in ordinary soil with initial lead of 30 M and lift of 1.5 M including the cost of formation of sub grade of canal lining profiling, leveling ,controlling of slopes and fine dressing ,disposal of excavated earth and nominal dewatering if any all complete as per approved design , specifications and direction of E/I.	124.00	Per M ³
5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	10.90	Per M ³
5.1.23	Earth work in excavation of filling of E.R.P.set channels, tube well channels (lined or unlined) in ordinary soil with all lead and lift including clod breaking dressing of sides of banks etc. all complete as per specifications and direction of E/I.	98.90	Per M ³
5.1.24	Earth work in filling in flood embankment ,canal banks (canals discharge above 28 cumecs)as well as special repairs of embankment and canal banks in ordinary soil in proper profile (vide classification of soil item A) obtained from borrow area or any other source free from logs, roots or any other ingredients etc. with initial lead of 30 M and initial lift of 1.5 M including breaking the clods to maximum 60 mm.cube ,placing the earth in layers not exceeding 225 mm, thick all complete as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)	114.70	Per M ³
5.1.25	Earth work in filling in canal banks (canals discharge up to 28 cumecs)as well as special repairs of canal banks in ordinary soil in proper profile (vide classification of soil item A) obtained from borrow area or any other source free from logs, roots or any other ingredients etc. with initial lead of 30 M and initial lift of 1.5 M including breaking the clods to maximum 60 mm.cube ,placing the earth in layers not exceeding 225mm, thick all complete including royalty as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)	104.40	Per M ³
5.1.26	Deleted		
5.1.27	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance up to 50 mtr and average lift of 1.5 M including leveling , ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	123.40	Per M ³
5.1.28	Earth work in excavation of foundation trenches in soft rock or ordinary rock (vide classification of soil item C)with initial lead of 300M and lift of 1.5 M including dressing , making the sides in profile and dressing the bed in proper grade etc. all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	524.90	Per M ³
5.1.29	Earth work in excavation of foundation trenches in proper section in hard rock (vide classification of soil item D) (non- blasting zone) with chisel and hammer with. disposal of excavated rock to a distance up to 30 M lifts of 1.5 M in proper stack including leveling, dressing of foundation trenches all complete as per specifications and direction of E/I.	400.30	Per M ³
5.1.30	Earth work in excavation of foundation trenches in hard rock (vide classification of soil item D) in proper section by blasting disposal of excavated rock in proper stack sat places beyond working site with initial lead of 30 mtr and lift of 1.5M including leveling, dressing of foundation trenches all complete as per specifications and direction of E/I.	900.40	Per M ³
5.1.31	Earth work in filling in foundation trenches and back filling of structures in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30 mtr and lift of 1.5 mtr. complete job as per specifications and direction of E/I.	94.30	Per M ³

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5.1.32	Earth work in filling in foundation trenches and back filling of structures in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with semi-pervious or suitable earth obtained after cutting of borrow pits within a lead of 30 M and lift of 1.5 M complete job as per specifications and direction of E/I.	105.20	Per M ³
5.1.33.1	Extra for earth work for ordinary or hard soil (vide classification of soil item-A and B) in each additional lead up to 25 M beyond the initial lead of 30 M as per specifications and direction of E/I.	10.90	Per M ³
5.1.33.2	Extra for earth work for ordinary or hard soil (vide classification of soil item-C and D) in each additional lead up to 25 M beyond the initial lead of 30 M as per specifications and direction of E/I.	16.30	Per M ³
5.1.34.1	Extra for earth work for ordinary or hard soil(vide classification of soil item-A and B) of each subsequent lift up to 1 M over the initial lift of 1.5 M as per specification and direction of E/I.	10.90	Per M ³
5.1.34.2	Extra for earth work for ordinary soft or hard rock(vide classification of soil item-C and D) of each subsequent lift up to 1 M over the initial lift of 1.5 M as per specification and direction of E/I.	16.30	Per M ³
5.1.35	Deleted		
5.1.36	Trimming and fine dressing the side slopes of canal (of preparation of soil of lining for precast P.C.C. slab) to proper section and profile and disposal of spoil at a suitable place complete job as per specifications and direction of E/I.	21.80	Per % M ³
5.1.37	Providing coarse clean local sand in filling in foundation trenches including ramming, watering ,royalty all complete job as per specifications and direction of E/I.	243.20	Per M ³
5.1.38	Watering and consolidation of earth laid in 150 mm to 225 mm layers by manual labour with C.I hammer to achieve minimum 85 % of dry density including supply of water and necessary tools and plants with all leads and lifts all complete as per specifications and direction of E/I.	65.50	Per M ³
5.1.39	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C by sheep foot roller driven by tractor to achieve minimum 95 % of dry density including sprinkling the required quantity of water, making arrangement for supply and carriage of water with all leads and lifts, finishing the surfaces as per plan and drawing including hire charge of compaction, machine and other tools and plants etc. for lined canal all complete as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)	#VALUE!	Per M ³
5.1.40	Close timbering in trenches including strutting, shoring and packing cavities(whenever required)depth not exceeding 1.5 M, complete as per specifications and direction of E/I (measurement to be taken of the face area timbered).	100.60	Per M ²
5.1.41	Close timbering in trenches including strutting, shoring and packing cavities(whenever required)depth not exceeding 1.5 M, but up to 3.0 M complete as per specifications and direction of E/I. (measurement to be taken of the face area timbered).	105.10	Per M ²
5.1.42.1	Fine dressing of the canals banks or embankment and turfing with 75 mm thick grass sod obtained within a lead of 150 mtr including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.	2164.30	Per % M ²
5.1.42.2	Extra for each lead of 150 mtr over initial lead of 150 mtr including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.	462.30	Per % M ²
5.1.43	Jungle clearance in borrow area, building premises; flanks, slope of existing road and canal etc,embankment by removing the jungle , bushes from top including weeding out shrubs including roots and leveling complete job as per specifications and direction of E/I.	2.50	Per M ²

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5.1.44	Earth work by tractor (Rajashani) with bucket (Doli) with spreader (Tractor leveller or Tractor Dozer) in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers and construction & removal of dhalas properly with lead of meter (Lead will be considered as perpendicular distance from C.G. of Pit to C.G. of banks or embankment) and with all lifts all complete as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)(Lead should be taken C.G to C.G. perpendicular to the bank Maximum Lead Upto - 150 mtr. Note:- Track Path may not be taken as lead)		
5.1.44.1	For C.G to C.G Lead 15 M	92.80	Per M ³
5.1.44.2	For C.G To C.G Lead 30 M	103.10	Per M ³
5.44.3.	For C.G to C.G Lead 55 M	116.70	Per M ³
5.44.4	For C.G to C.G Lead 80 M	126.50	Per M ³
5.44.5	For C.G to C.G Lead 100 M	133.20	Per M ³
	NOTE :- Add Royalty of Earth Rs 22.00 Where needed without overhead charge & C.P		
5.1.45	Deleted		
5.1.46	Earth work by Mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers properly with lead of meter (lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of haulage path from pit to bank or embankment. Pit will be beyond 150 meter from centre of bank i.e. perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 meter) and with all lifts all complete job as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)		
5.1.46.1	Beyond 150M but upto 1/2 K.M	141.70	Per M ³
5.1.46.2	Beyond 1/2 K.M but upto 1 K.M	172.10	Per M ³
5.1.46.3	Beyond 1.00 K.M but upto 1.50 K.M	207.90	Per M ³
5.1.46.4	Beyond 1.50 K.M but upto 2.00K.M	243.60	Per M ³
5.1.46.5	Beyond 2.0 K.M but upto 2.50 K.M	279.40	Per M ³
5.1.46.6	Beyond 2.50 K.M but upto 3.00 K.M	315.10	Per M ³
	NOTE :- Add Royalty of Earth Rs 22.00 Where needed without overhead charge & C.P		
5.1.47	Earth work by excavator and spreader or tractor- leveller in lower level canal or flood embankment or dhar (Like, Minor, Sub -minor, Jamindari bundh, Pynes etc where tipper is not needed) all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers properly with lead below 15 meter and with. all lifts all complete job as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth) NOTE :- Add Royalty of Earth Rs 22.00 Where needed without overhead charge & C.P	62.10	Per M ³

CHAPTER - V
CANAL EMBANKMENT AND STRUCTURE

5.1 EARTH WORK

S.No.	Description	Quantity	Unit	Rate	Amount	Ref
5.1.1	Preparation of seat of embankment or canals by 75 mm ploughing and removing the grass roots etc. and as per specifications and direction of E/L.					
	Unit :- Per Sqm.					
	Taking Out put:- 92.94 Sqm					
	Unskilled mazdoor for leveling and ploughing	0.50	nos	268.00	134.00	
	Unskilled mazdoor for removing grass roots and leveling	0.75	nos	268.00	201.00	
	Add Overhead charge & C.P @ 15%				335.00	
					50.25	
					385.25	
					4.15	
	Rate per Sqm			say, Rs	410.40	Per M ²
5.1.2	Preparation of borrow areas of embankment or canals by removing the grass and the jungle, bushes from the top including weeding out shrubs including roots & leveling all complete as per specifications and direction of E/L.					
	Unit :- Per Sqm.					
	Taking Out put:- 92.94 Sqm					
	Unskilled mazdoor for leveling and ploughing	0.75	nos	268.00	201.00	
	Add Overhead charge & C.P @ 15%				30.15	
					231.15	
					2.49	
	Rate per Sqm			say, Rs.	233.64	Per M ²
5.1.3	Jungle clearance and weeding out shrubs including small tree tip to 0.50M girth and removal as per specifications and direction of E/L.					
	Unit :- Per Sqm					
	Taking Out put:- 92.94 Sqm					
	Unskilled mazdoor for cutting shrubs and trees	1.50	nos	268.00	402.00	
	Unskilled mazdoor for collecting and removing shrubs, weeds and	0.75	nos	268.00	201.00	
	Add Overhead charge & C.P @ 15%				603.00	
					90.45	
					693.45	
					7.46	
	Rate per sqm			say, Rs	750.91	Per M ²
5.1.4	Cutting of trees along with branches and their removal away from the work site and stacking the same as per specifications and direction of E/L. (Measurement of girth at a height of one metre above the ground level)					
	Unit :- Each					
	(a) Girth above 0.50 metre but up to 0.75 metre					
	Carpenter Gr II	0.25	nos	321.00	80.25	
	Unskilled mazdoor	0.50	nos	268.00	134.00	
	Add Overhead charge & C.P @ 15%				214.25	
					32.14	
	Rate for each			say, Rs	246.39	Each
	(b) Girth above 0.75 metre but up to 1.50 metre					
	Carpenter Gr II	0.50	nos	321.00	160.50	
	Unskilled mazdoor	1	nos	268.00	268.00	
	Add Overhead charge & C.P @ 15%				428.50	
					64.28	
	Rate for each			say, Rs	492.78	
	(c) Girth above 1.5 metre but up to 2.50 metre					
	Carpenter Gr II	0.75	nos	321.00	240.75	
	Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P @ 15%				776.75	
					116.51	
	Rate for each			say, Rs	893.26	Each
	(d) Girth above 2.50 metre but up to 4.00 metre					
	Carpenter Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	3.50	nos	268.00	938.00	
	Add Overhead charge & C.P @ 15%				1259.00	
					188.85	
	Rate for each			say, Rs	1447.85	each
	(e) Girth above 4.00 metre					
	Carpenter Gr II	1.50	nos	321.00	481.50	
	Unskilled mazdoor	5	nos	268.00	1340.00	
	Add Overhead charge & C.P @ 15%				1821.50	
					273.23	
	Rate for each			say, Rs	2094.73	Each

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5.1.5	Up rooting of stumps and their removal away from the work site and as per specifications and direction of E/I.						
	Unit :- Each						
	(a) Girth above 0.60 metre but up to 0.75 metre						
	Unskilled mazdoor	0.50	nos	268.00	134.00		
					134.00		
	Add Overhead charge & C.P@15%				20.10		
					154.10		
				say Rs	154.10	each	
	(b) Girth above 0.75 metre but up to 1.50 metre						
	Unskilled mazdoor	0.50	nos	268.00	134.00		
					134.00		
	Add Overhead charge & C.P@15%				20.10		
					154.10		
				say Rs	154.10	Each	
	(c) Girth above 1.5 metre but upto 2.50 metre						
	Unskilled mazdoor	0.67	nos	268.00	178.67		
					178.67		
	Add Overhead charge & C.P@15%				26.80		
					205.47		
				say Rs	205.50	Each	
	(d) Girth above 2.50 metre but up to 4.00 metre						
	Unskilled mazdoor	1	nos	268.00	268.00		
					268.00		
	Add Overhead charge & C.P @15%				40.20		
					308.20		
				say Rs	308.20	each	
	(e) Girth above 4.00 metre						
	Unskilled mazdoor	1.25	nos	268.00	335.00		
					335.00		
	Add Overhead charge & C.P*15%				50.25		
					385.25		
				say Rs	385.20	Each	
	Rate for each						
5.1.6	Earth work in excavation of canals and dhars carrying minimum full supply discharge above 28 cumecs (1000 cusecs) in ordinary soil (vide classification of soil item A) and making the banks with excavated earth in proper profile, clod breaking and laying earth in 225 mm layers with an initial lead of 30 M and lift of 1.5 M all complete and as per specifications and direction of E/I.						
	Unit :- Per Cum						
	Taking Out put =28.32 Cum						
	Unskilled mazdoor for cutting	5	nos	268.00	1340.00		
	Unskilled mazdoor for carrying	6	nos	268.00	1608.00		
	Unskilled mazdoor for clod breaking	0.75	nos	268.00	201.00		
	Male	0.25	nos	289.00	72.25		
					3221.25		
	Add Overhead charge & C.P @15%				483.19		
					3704.44		
						130.81	
						130.81	
	Rate per cum			say Rs	130.80	Per M ³	
	NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P						
5.1.7	Earth work in excavation of canals and dhars carrying minimum full supply discharge between 28 cumecs (1000 cusecs) and 8.5 cumecs (300 cusecs) in ordinary soil (vide classification of soil item A) and making the banks with excavated earth in proper profile, clod breaking and laying earth in 225 mm layers and rough dressing with an initial lead of 15M and lift of 1.5 M all complete and as per specifications and direction of E/I.						
	AS per labour deptt .Norms (Vide T.E.C no 63 dt 7.10.94)						
	Unit :- Per Cum						
	Taking Out put =28.32 Cum						
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12		
	Unskilled mazdoor for clod breaking	0.5	nos	268.00	134.00		
					2570.12		
	Add Overhead charge & C.P @15%				385.52		
					2955.64		
						104.37	
						104.37	
	Rate per cum			say Rs	104.40	Per M ³	
	NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P						
5.1.8	Earth work in excavation of canals and dhars carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layers and rough dressing with an initial lead of 10 M and lift of 1.5 M all complete, and as per specifications and direction of E/I.						
	As per labour deptt .Norms (Vide T.E.C no 63 dt 7.10.94)						
	Unit :- Per Cum						
	Taking Out put = 28.32 Cum						
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12		
	Add Overhead charge & C.P@15%				365.42		
					2801.54		
						98.92	
						98.92	

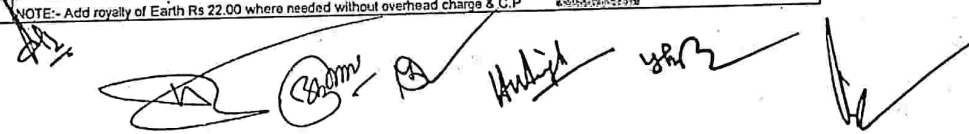
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Rate per cum			say, Rs	98.90	Per M ³
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.9	Earth work in filling for the maintenance of canals having minimum full supply discharge up to 28 cumecs (1000 cusecs) and flood embankment in ordinary soil (vide classification of soil item A) including clod breaking having earth in 225 mm layers and rough dressing of soil with all leads and lift all complete as per specifications and direction of E/I.				
As per labour dept. Norms (Vide T.E.C no 63 dt 7.10.94)					
Unit :- Per Cum					
Taking Out put =28.32 Cum					
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12
	Add Overhead charge & C.P @15%				365.42
					2801.54
					98.92
					98.92
	Rate per cum			say, Rs	98.90
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.10	Extra for earth work in hard soil (vide classification of soil item B) all complete as per specifications and direction of E/I.				
Unit :- Per Cum					
Taking Out put =28.32 Cum					
	Unskilled mazdoor for cutting	2	nos	268.00	536.00
	Add Overhead charge & C.P @15%				80.40
					616.40
					21.77
	Rate per cum			say, Rs	21.80
5.1.11	Extra for earth work in marshy, slushy and dalidal soil (vide classification of soil item F) all complete as per specifications and direction of E/I.				
Unit :- Per Cum					
Taking Out put=28.32 Cum					
	Unskilled mazdoor for cutting	1.5	nos	268.00	402.00
	Unskilled mazdoor for carrying	1.5	nos	268.00	402.00
	Add Overhead charge & C.P @15%				120.60
					924.60
					32.65
	Rate Per Cum			say, Rs	32.60
5.1.12.1	Earth work in excavation in soft rock or ordinary rock (vide classification of soil item C) with initial lead of 10 M and lift of 1.5 M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
Unit :- per Cum					
Taking Out put =10 cum					
Materials					
	Special Gelatin	2.00	Kg	781.83	1563.66
	Defonator	10	nos	5.73	57.29
	Fuse coil	1	nos	13.96	13.96
					1634.91
Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00
Labour					
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work	8.50	nos	268.00	1742.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.33	nos	444.00	146.52
					2780.40
					4430.31
	Add Overhead charge & C.P @15%				664.55
					5094.85
					509.49
	Rate per Cum			say, Rs	509.50
5.1.12.2	Earth work in excavation in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) with initial lead of 10 M and lift of 1.5M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete and as per specifications and direction of E/I.				
Unit :- Per Cum					
Taking Out put =10 Cum					
Labour					
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work	8.50	nos	268.00	2278.00
	Mason Gr I	0.50	nos	361.00	180.50
					3231.25
	Add Overhead charge & C.P @15%				484.69
					3715.94
					371.59

Rate Per Cum	Say	Rs	371.60	Per M ³
5.1.13.1 Earth work in excavation in soft rock or ordinary rock (vide classification of soil item C)with initial lead of 300 M and lift of 1.5 M including dressing , making the sides in profile and dressing the bed in proper grade etc. all complete and as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
Unit :- Per Cum Taking Out put= 10 Cum				
Materials				
Special Gelatin	2.00	Kg	781.83	1563.66
Detonator	10	nos	5.73	57.29
Fuse coil	1	nos	13.95	13.95
				1634.91
Labour				
Hammer man	2.75	nos	281.00	772.75
Unskilled mazdoor for all work	7.00	nos	268.00	1876.00
Mason Gr I	0.33	nos	361.00	119.13
Blaster	0.33	nos	444.00	146.52
				2914.40
Tools and Plants				
Cost of hire charge of compressor, drilling equipment and other accessories				15.00
				4564.31
Add Overhead charge & C.P @15%				684.65
				5248.95
				524.90
Rate per Cum	Say	Rs	524.90	Per M ³
5.1.13.2 Earth work in excavation in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C)with initial lead of 30M and lift of 1.5M Including dressing , making the sides in profile and dressing the bed in proper grade etc. all complete and as per specifications and direction of E/I.				
Unit :- Per Cum Taking Out put =10 Cum				
Labour				
Hammer man	2.75	nos	281.00	772.75
Unskilled mazdoor for all work	9.00	nos	268.00	2412.00
Mason Gr I	0.50	nos	361.00	180.50
				3355.25
Add Overhead charge & C.P@15%				504.79
				3870.04
				387.00
Rate per Cum	Say	Rs	387.00	Per M ³
5.1.14 Earth work in excavation in hard rock (vide classification of soil item D) where blasting is needed with initial lead of 10 M and lift of 1.5M including dressing , making the sides in profile and dressing the bed in proper grade etc. all complete and as per specifications and direction of E/I.				
Unit :- Per Cum Taking Out put =10Cum				
Materials				
Special Gelatin	2.00	Kg	781.83	1563.66
Detonator	10	nos	5.73	57.29
Fuse coil	1	nos	13.95	13.95
				1634.91
Labour				
Hammer man	10.50	nos	281.00	2950.50
Unskilled mazdoor for all work	10.00	nos	268.00	2680.00
Mason Gr I	0.33	nos	361.00	119.13
Blaster	0.67	nos	444.00	296.00
				6045.63
Tools and Plants				
Cost of hire charge of compressor, drilling equipment and other accessories				15.00
				7695.54
Total				1154.33
Add Overhead charge & C.P@15%				8849.87
				884.09
Rate per Cum	Say	Rs	885.00	Per M ³
5.1.15 Earth work in excavation in hard rock (vide classification of soil item D) where blasting is needed with initial lead of 30 M and lift of 1.5M including dressing , making the sides in proper profile and dressing the bed in proper grade as well as fine dressing of side and slopes etc. all complete and as per specifications and direction of E/I.				
Unit :- Per Cum Taking Out put=10' Cum				
Exp. Blug material				

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	Special Gelatin	2.00	Kg	781.83	1563.66	
	Defonator	10	nos	5.73	57.29	
	Fusa coil	1	nos	13.96	13.96	
					1634.91	
	Labour					
	Hammer man	10.50	nos	281.00	2950.50	
	Unskilled mazdoor for all work	10.50	nos	268.00	2814.00	
	Mason Gr I	0.33	nos	361.00	119.13	
	Blaster	0.67	nos	444.00	296.00	
					6179.63	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					7829.54	
	Total				1174.43	
	Add Overhead charge & C.P @15%				9003.97	
						900.40
	Rate per Cum	Say	Rs	900.40	Per M ³	
5.1.16	Earth work in excavation of water course in ordinary soil with all lead and lift including clod breaking, rough dressing all complete and as per specifications and direction of E/L.					
	As per labour dept. Norms (Vide T.E.C no 63 dt 7.10.94)					
	Unit :- Per Cum					
	Taking Out put =28.32 Cum					
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12	
	Add Overhead charge & C.P @15%				365.42	
					2801.54	
						98.92
						98.92
	Rate per Cum	Say	Rs	98.92	Per M ³	
	NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.17	Earth work in maintenance of canals having discharge less than 28 cumecs (1000 cusecs) in ordinary soil (vide classification of soil item A) including clod breaking and rough dressing of soil with all leads and lift all complete and as per specifications and direction of E/L.					
	As per labour dept. Norms (Vide T.E.C no 63 dt 7.10.94)					
	Unit :- Per Cum					
	Taking Out put = 28.32 Cum					
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12	
	Add Overhead charge & C.P @15%				365.42	
					2801.54	
						98.92
						98.92
	Rate per Cum	Say	Rs	98.92	Per M ³	
	NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.18	Earth work in bed clearance or desilting of canals carrying full supply discharge of 28 cumecs (1000 cusecs) or more in dead courses of river etc, in ordinary soil and removing the excavated earth in proper profile in spoils etc with an initial lead of 30 M and lift of 1.5 M all complete as per specifications and direction of E/L.					
	Unit :- Per Cum					
	Taking Out put =28.32 Cum					
	Unskilled mazdoor for cutting	5	nos	268.00	1340.00	
	Unskilled mazdoor for carrying	4	nos	268.00	1072.00	
	Mate	0.25	nos	289.00	72.25	
	Total				2484.25	
	Add Overhead charge & C.P @15%				372.64	
					2856.89	
						100.88
						100.88
	Rate per Cum	Say	Rs	100.90	Per M ³	
	NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.19	Earth work in bed clearance or desilting of canals having full supply discharge between of 28 cumecs (1000 cusecs) and 8.5cumecs (300 Cusecs) including rough dressing with all lead and lift all complete and as per specifications and direction of E/L.					
	As per labour dept. Norms (Vide T.E.C no 63 dt 7.10.94)					
	Unit :- Per Cum					
	Taking Out put=28.32 Cum					
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12	
	Add Overhead charge & C.P @15%				365.42	
					2801.54	
						98.92
						98.92
	Rate per Cum	Say	Rs	98.90	Per M ³	
	NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					



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5.1.20	Earth work in bed clearance or desilting of canals having full supply discharge between 8.5 cumecs (300-cusecs) and 0.14cumecs (5 Cusecs) and renovation of pynes etc. in ordinary soil and disposal of excavated earth etc.including rough dressing .with all lead and lift all complete and as per specifications and direction of E/I.				
As per labour deptt .Norms (Vide T.E.C no 63 dt 7.10.94)					
Unit :-Per Cum					
Taking Out put=28.32 Cum					
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12
	Add Overhead charge & C.P@15%				365.42
					2801.54
					98.92
					98.92
	Rate per Cum	Say	Rs	98.92	Per M ³
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.21	Earth work in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30 M and lift of 1.5 M including the cost of formation of sub grade of canal lining, profiling, leveling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete and as per approved design, specifications and direction of E/I.				
Unit :-Per Cum					
Taking Out put=28.32 Cum					
	Unskilled mazdoor for cutting	4	nos	268.00	1072.00
	Unskilled mazdoor for carrying	4	nos	268.00	1072.00
	Unskilled mazdoor for controlling slope and fine dressing	2	nos	268.00	536.00
	Skilled mazdoor	0.25	nos	340.00	85.00
	Mate	1	nos	289.00	289.00
					3054.00
					458.10
	Add Overhead charge & C.P@15%				3512.10
					124.01
	Rate per Cum	Say	Rs	124.01	Per M ³
5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.				
Unit :-Per Cum					
Taking Out put =28.32 Cum					
	Unskilled mazdoor	1	nos	268.00	268.00
	Add Overhead charge & C.P@15%				40.20
					308.20
					10.88
	Rate per Cum	Say	Rs	10.90	Per M ³
5.1.23	Earth work in excavation of filling of E.R.P,set channels, tube well channels (lined or unlined) in ordinary soil with all lead and lift including clod breaking, dressing of sides of banks etc. all complete and as per specifications and direction of E/I.				
As per labour deptt .Norms (Vide T.E.C no 63 dt 7.10.94)					
Unit :-Per Cum					
Taking Out put=28.32 Cum					
	Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12
	Add Overhead charge & C.P@15%				365.42
					2801.54
					98.92
					98.92
	Rate per Cum	Say	Rs	98.90	Per M ³
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P					
5.1.24	Earth work in filling in flood embankment, canal banks (canals discharge above 28 cumecs)as well as special repairs of embankment and canal banks in ordinary soil in proper profile (vide classification of soil item A) obtained from borrow area or any other source free from logs, roots or any other ingredients etc. with initial lead of 30 M and initial lift of 1.5M including breaking the clods to maximum 60 mm.cube ,placing the earth in layers not exceeding 225 mm, thick all complete and as per specifications and direction of E/I.(mode of measurement-sectional measurement of compacted earth)				
Unit :-Per Cum					

Taking Out put =28.32 Cum					
Unskilled mazdoor for cutting	9	nos	268.00	2412.00	
Skilled mazdoor	1	nos	340.00	340.00	
Mate	0.25	nos	289.00	72.25	
				2824.25	
Add Overhead charge & C.P@15%				423.64	
				3247.89	
					114.69
					114.69
Rate per Cum	Say	Rs	114.70	Per M ³	
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P.					
5.1.25	Earth work in filling in canal banks (canals discharge up to 28 cumecs) as well as special repairs of canal banks in ordinary soil in proper profile (vide classification of soil item A) obtained from borrow area or any other source, free from logs, roots or any other ingredients etc. with initial lead of 30M and initial lift of 1.5 M including breaking the clods to maximum 60 mm.cube, placing the earth in layers not exceeding 225mm, thick all complete and as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)				
As per labour deptt .Norms (Vide T.E.C no 63 dt 7.10.94)					
Unit :- Per Cum					
Taking Out put =28.32 Cum					
Labour					
Unskilled mazdoor for cutting, carrying	9.09	nos	268.00	2436.12	
Add extra wag of 1/2 no unskilled labour per 28.32 M ³	0.5	nos	268.00	134.00	
				2570.12	
Add Overhead charge & C.P@15%				385.52	
				2955.64	
					104.37
					104.37
Rate per Cum	Say	Rs	104.40	Per M ³	
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P.					
5.1.26	Deleted				
5.1.27	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance up to 50 M and average lift of 1.5 M including leveling, ramming the foundation trenches, removing the roots of shrubs etc. all complete and as per specifications and direction of E/I.				
Unit :- Per Cum					
Taking Out put =28.32 Cum					
Labour					
Unskilled mazdoor for cutting and carrying etc.	11	nos	268.00	2948.00	
Head mason	0.25	nos	361.00	90.25	
				3038.25	107.28
Add Overhead charge & C.P@15%				455.74	
				3493.99	
					123.38
Rate per Cum	Say	Rs	123.40	Per M ³	
5.1.28	Earth work in excavation of foundation trenches in soft rock or ordinary rock (vide classification of soil item C)with initial lead of 300 M and lift of 1.5 M including dressing, making the sides in profile and dressing the bed in proper grade etc. all complete including and as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
Unit :-Per Cum					
Taking Out put=10.00 Cum					
Blasting material					
Special Gelatin	2.00	Kg	781.83	1563.66	
Detonator	10	nos	5.73	57.29	
Fuse coil	1	nos	13.96	13.96	
				1634.91	(A)
Labour					
Hammer man	2.75	nos	281.00	772.75	
Unskilled mazdoor for all work	7.00	nos	268.00	1876.00	
Mason Gr I	0.33	nos	361.00	119.13	
Master	0.33	nos	444.00	146.52	

				2914.40	(B)
	Tools and Plants			15.00	(C)
	Cost of hire charge of compressor, drilling equipment			4564.31	(A+B+C)
	Total			684.65	
	Add Overhead charge & C.P.@15%			5248.95	
					524.90
	Rate per Cum	Say	Rs	524.90	Per M ³
5.1.29	Earth work in excavation of foundation trenches in proper section in hard rock (vide classification of soil item D) (non-blasting zone) with chisel and hammer with disposal of excavated rock to a distance up to 30 M and lifts of 1.5 M in proper stack including leveling, dressing of foundation trenches all complete and as per specifications and direction of E/I.				
	Unit :-Per Cum Taking Out put =10 Cum				
	Labour				
	Hammer man	2.25	nos	281.00	632.25
	Skilled mazdoor for all work	2.25	nos	340.00	765.00
	Unskilled mazdoor	5.5	nos	268.00	1474.00
	Blacksmith	1	nos	321.00	321.00
	Mate	1	nos	289.00	289.00
					3481.25
	Add Overhead charge & C.P.@15%				522.19
					4003.44
	Rate per Cum	Say	Rs	400.30	Per M ³
5.1.30	Earth work in excavation of foundation trenches in hard rock (vide classification of soil item D) in proper section by blasting disposal of excavated rock in proper stack at places beyond working site with initial lead of 30 M and lift of 1.5M, including leveling, dressing of foundation trenches all complete and as per specifications and direction of E/I.				
	Unit :-Per Cum Taking Out put =10 Cum				
	Blasting material				
	Special Gelatin	2.00	Kg	781.83	1563.66
	Detonator	10	nos	5.73	57.29
	Fuse coil	1	nos	13.96	13.96
					1634.91
	Labour				
	Hammer man	10.50	nos	281.00	2950.50
	Unskilled mazdoor for all work	10.50	nos	268.00	2814.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.67	nos	444.00	296.00
					6179.63
	Tools and Plants				15.00
	Cost of hire charge of compressor, drilling equipment				7829.54
	Add Overhead charge & C.P.@15%				1174.43
					9003.97
	Rate per Cum	Say	Rs	900.40	Per M ³
5.1.31	Earth work in filling in foundation trenches and back filling of structures in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30 M and lift of 1.5 M, all complete job and as per specifications and direction of E/I.				
	Unit :-Per Cum Taking Out put =28.32 Cum				
	Labour				
	Unskilled mazdoor for cutting	4.5	nos	268.00	1206.00
	Unskilled mazdoor for carrying	4	nos	268.00	1072.00
	Head mason	0.125	nos	361.00	45.13
					2323.13
	Add Overhead charge & C.P.@15%				348.47
					2671.59
	Rate per Cum	Say	Rs	94.30	Per M ³

5.1.32	Earth work in filling in foundation trenches and back filling of structures in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with semi-pervious or suitable earth obtained after cutting of borrow pits within a lead of 30M and lift of 1.5 M complete job and as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put=28.32 Cum					
	Labour					
	Unskilled mazdoor for cutting	5.5	nos	268.00	1474.00	
	Unskilled mazdoor for carrying	4	nos	268.00	1072.00	
	Head mason	0.125	nos	361.00	45.13	
					2591.13	
	Add Overhead charge & C.P@15%				388.67	
					2979.79	
						105.22
	Rate per cum	Say	Rs	105.22	Per M ³	
5.1.33.1	Extra for earth work for ordinary or hard soil (vide classification of soil item-A and B) in each additional lead up to 25 M beyond the initial lead of 30 M as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put=28.32 Cum					
	Unskilled mazdoor	1	nos	268.00	268.00	
	Add Overhead charge & C.P@15%				40.20	
					308.20	
						10.88
	Rate per Cum	Say	Rs	10.90	Per M ³	
5.1.33.2	Extra for earth work for ordinary or hard soil (vide classification of soil item-C and D) in each additional lead up to 25 M beyond the initial lead of 30 M and as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put=28.32 Cum					
	Unskilled mazdoor	1.5	nos	268.00	402.00	
	Add Overhead charge & C.P@15%				60.30	
					462.30	
						16.32
	Rate per Cum	Say	Rs	16.30	Per M ³	
5.1.34.1	Extra for earth work for ordinary or hard soil (vide classification of soil item-A and B) for each subsequent lift up to 1 M over the initial lift of 1.5 M as per specification and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put = 28.32 Cum					
	Unskilled mazdoor for cutting	1	nos	268.00	268.00	
	Add Overhead charge & C.P@15%				40.20	
					308.20	
						10.88
	Rate per Cum	Say	Rs	10.90	Per M ³	
5.1.34.2	Extra for earth work for ordinary soft or hard rock (vide classification of soil item-C and D) for each subsequent lift up to 1 M over the initial lift of 1.5 M as per specification and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put=28.32 Cum					
	Unskilled mazdoor for cutting	1.5	nos	268.00	402.00	
	Add Overhead charge & C.P@15%				60.30	
					462.30	
						16.32
	Rate per Cum	Say	Rs	16.30	Per M ³	
NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P						
5.1.35	Deleted					
5.1.36	Trimming and fine dressing the side slope of canal (for preparation of soil for lining of precast P.C.C. slab) to proper section and profile and disposal of soil at a suitable place complete job as per specifications and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put=100Sqm					
	Labour					
	Mason Gr II	0.25	nos	321.00	80.25	
	Unskilled mazdoor for cutting slope	3	nos	268.00	804.00	
	Unskilled mazdoor for carrying the spoils	2	nos	268.00	536.00	
	Unskilled mazdoor for making the seat of lining to proper profile	1.5	nos	268.00	402.00	
	Mate	0.25	nos	289.00	72.25	
					1894.50	
	Add Overhead charge & C.P@15%				284.18	
					2178.68	
						21.79
	Rate per sqm	Say	Rs	21.80	Per M ²	

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5.1.37	Providing coarse clean local sand in filling in foundation trenches including ramming, watering, royalty, all complete job as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Labour					
	Unskilled mazdoor for cutting	1	nos	268.00	268.00	
	Local Sand	2.832	Cum	116.85	330.92	
					598.92	
	Add Overhead charge & C.P@15%				89.84	
					688.76	
						243.21
	Rate per sqm	Say	Rs	243.20	Per M ³	
5.1.38	Watering and consolidation of earth laid in 150 mm to 225 mm layers by manual labour with C.I hammer to achieve minimum 85 % of dry density including cost and carriage of water and necessary tools and plants with all leads and lifts all complete as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put =28.32 Cum					
	Cost of water				15.00	
	Labour					
	Unskilled mazdoor	3	nos	268.00	804.00	
	Bhisti for carriage of water and sprinkling	3	nos	265.00	795.00	
					1614.00	
	Add Overhead charge & C.P@15%				242.10	
					1856.10	
						65.54
	Rate per cum	Say	Rs	66.60	Per M ³	
5.1.39	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C by sheep foot roller driven by tractor to achieve minimum 95 % of dry density including sprinkling the required quantity of water making arrangement for supply and carriage of water with all leads and lifts, finishing the surfaces plan and drawing including hire charge of compaction, machine and other tools and plants etc. for lined canal all complete as per specifications and direction of E/I. (mode of measurement- sectional measurement of compacted earth)					
	Unit :- Per Cum					
	Taking Out put =28.32 Cum					
	Cost of water				15.00	
	Bhisti for carriage of water and sprinkling	3	nos	265.00	795.00	
	Hire charge of seep foot roller assuming 1450 cum to be rolled in 8 hr vide item no 3.16	0.16	hr	#VALUE!	#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
	Rate per cum	Say	Rs	#VALUE!	Per M ³	#VALUE!
5.1.40	Close timbering in trenches including strutting, shoring and packing cavities (wherever required) depth not exceeding 1.5 M, complete as per specifications and direction of E/I. (measurement to be taken of the face area timbered).					
	Unit :-Per Sqm					
	Taking Out put =90 Sqm					
	Assuming 30M long 1.5 M deep					
	Area= 2 x 30 x 1.5 = 90 sqm.					
	Poling Boards					
	Local wood planks 90 x 0.038= 3.42 cum	3.42	cum	24199.00	82760.58	
	100 mm x100 mm					
	Local wood planks 4 x30x 0.1 x0.1 = 1.2 cum	1.2	Cum	24199.00	29038.80	
	Bailli struts					
	Sai baliyah 120 mm dia 1.5 m long =2 x17x1.5=51 M	51	M	53.99	2753.49	
					114552.87	
	Carriage					
	Cost of carriage of material including loading, unloading and stacking @ 1 % of total of cost materials				1145.53	
	Total				115698.40	
	Deduct credit for materials 75 % of the cost of material				85914.65	
					29783.75	a
	This can be used four times, therefore cost per use= a/4				7445.94	.A
	Labour					
	Carpenter Gr II	0.50	nos	321.00	160.50	
	Unskilled mazdoor	1	nos	268.00	268.00	
					428.50	B
	Total A+B				7874.44	
	Add Overhead charge & C.P@15%				1181.17	
					9055.60	
	Rate per sqm	Say	Rs	100.60	Per Sqm	100.62

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5.1.41	Close timbering in trenches including stalling, shoring and packing cavities (wherever required) depth not exceeding 1.5 M, but up to 3.0 M complete as per specifications and direction of E/I. (measurement to be taken of the face area timbered).					
	Unit :-Per Sqm					
	Taking Out put=90 Sqm					
	Assuming 30 mtr long 1.5 mtr deep					
	Area= 2 x 30 x 1.5 = 90 sqm.					
	Poling Beards					
	Local wood planks 90 x 0.38= 3.42 cum	3.42	cum	24199.00	82760.58	
	100 mm x100 mm					
	Local wood planks 4 x30x 0.1 x0.1 = 1.2 cum	1.2	Cum	24199.00	29038.80	
	Balli struts					
	Sal baltah 120 mm dia 1.5 m long 2 x17x1.5=51 mtr	51	mtr	53.99	2753.49	
					114552.87	
	Carriage					
	Cost of carriage of material including loading, unloading and stacking @ 1 % of total of cost materials				1145.53	
	Total				115698.40	
	Deduct credit for materials 75 % of the cost of material				85914.65	
					29783.75	a
	This can be used four times, therefore cost per use a/4				7445.94	A
	Labour					
	Carpenter Gr II	0.75	nos	321.00	240.75	
	Unskilled mazdoor	2	nos	268.00	536.00	
					776.75	B
	Total A+B				8222.69	
	Add Overhead charge & C.P@15%				1233.40	
					9456.09	
						105.07
	Rate per sqm	Say	Rs	105.10	Per Sqm	
5.1.42.1	Fine dressing of the canal banks or embankment and turfing with 75 mm thick grass sods obtained within a lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =100 Sqm					
	Cost of watering till the growth				15	
	Labour					
	Unskilled mazdoor for cutting	1.5	nos	268.00	402.00	
	Unskilled mazdoor for carrying	1.5	nose	268.00	402.00	
	Unskilled mazdoor for dressing, placing turf and ramming	1	nos	268.00	268.00	
	Bhisti for cartage of water and sprinkling	3	nos	265.00	795.00	
					1867.00	
					1882.00	
	Add Overhead charge & C.P@15%				282.30	
					2164.30	
						2164.30
	Rate per 100 sqm	Say	Rs	2164.30	Per % M ²	
5.1.42.2	Extra for each lead of 150 M over initial lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put=100 Sqm					
	Unskilled mazdoor for carrying	1.50	nos	268.00	402.00	
					402.00	
	Add Overhead charge & C.P@15%				60.30	
					462.30	
						462.30
	Rate per 100 sqm	Say	Rs	462.30	Per % M ²	
5.1.43	Jungle clearance in borrow area, building premises; flanks, slope of existing road and canal etc, embankment by removing the jungle, bushes from top including weeding out shrubs including roots and leveling complete job as per specifications and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =92.94 Sqm					
	Unskilled mazdoor for carrying	0.75	nos	268.00	201.00	
					201.00	
	Add Overhead charge & C.P@15%				30.15	
					231.15	
						2.49
	Rate per sqm	Say	Rs	2.60	Per M ²	

5.1.44. Earth work by tractor (Rajasthan) with bucket (Doil) with spreader (Tractor leveler or Tractor Dozer) in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers and construction & removal of dhalas properly with lead of meter (lead will be considered as perpendicular distance from C.G. of Pit to C.G. of banks or embankment) and with all lifts all complete as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth) (Lead should be taken C.G to C.G.perpendicular to the bank Maximum Lead Up to -150 mtr. Note:- Track Path may not be taken as lead)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
For C.G to C.G Lead in K.M (L)	Speed (km/hr) (V)	Time for loading, Unloading etc (hr) (t) = 1 min.	Spacing of Dhalas (km) (S)	Capacity Per Trip Cum (e)	Haulage Path (Distance travelled in one cycle) = 2(L+S)	Time of run per trip = 2(L+S)/V	Time per cycle (hr) = 2(L+S)/V + t	No of trips, N = 8V/(2L+2S+Vt)	Output per day with 80% efficiency = 0.80xNxe	Use Rate of Tractor Per Day (Tr)	Cost per Cubic Metre = Tr/Ne	Proportional Cost of Dhalas (10% only)	Cost of Dhalas Per cubic metre	Add for cutting (Use rate of tractor / Capacity of cutting 324 cum per day) = Tr/324	Add for spreading cost = (Use rate of D-80 Dozer Per hr / Capacity of D-80 Dozer per hr 300 cum)	Add for finishing and dressing = one mazdoor/100M ³	Total cost (12+14+15+16+17)	Add Overhead charge & C.P 15% (col 18)	Rate Per cum (col 18+19)
5.1.44.1 0.015	5.000	0.0167	0.03	0.60	0.09	0.018	0.035	230.55	110.66	4560.00	41.21	0.10	4.12	14.07	18.66	2.68	80.74	12.11	92.80
5.1.44.2 0.03	5.670	0.0167	0.04	0.60	0.14	0.025	0.041	193.28	92.77	4560.00	49.15	0.10	4.92	14.07	18.66	2.89	89.69	13.45	103.10
5.1.44.3 0.055	6.330	0.0167	0.05	0.60	0.21	0.033	0.050	160.40	76.99	4560.00	59.23	0.10	5.92	14.07	18.66	3.61	101.49	15.22	116.70
5.1.44.4 0.08	7.000	0.0167	0.06	0.60	0.28	0.040	0.057	141.09	67.72	4560.00	67.33	0.10	6.73	14.07	18.66	3.21	110.01	16.50	126.50
5.1.44.5 0.1	7.670	0.0167	0.07	0.60	0.34	0.044	0.061	131.09	62.92	4560.00	72.47	0.10	7.25	14.07	18.66	3.41	115.86	17.38	133.20

NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P

(Handwritten signatures and initials)

5.1.45	Deleted																				
5.1.46	Earth work by Mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or char all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and char in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers properly with lead of metre (lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of haulage path from pit to bank or embankment. Pit will be beyond 150 meter from centre of bank i.e. perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 meter) and with all lifts all complete job as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)																				
		Lead in K.M (L)																			
		Cost of cutting & Loading by Excavator one M3 capacity= Use rate of Excavator / Capacity of Excavator (60M ³)																			
		Average Speed on Kucha track Km / hr = (V)																			
		Average haulage path (Distance) in one cycle (D) in Km																			
		Haulage Time in minute (Time taken in one cycle of run) = 60D/V																			
		Loading Time one minute Per M ³ For 5.5 M ³																			
		Unloading & Turning Time in minute																			
		Total Time Per trip in minute Col (5+6+7) = (T)																			
		No. of Trip per hour taken as 50 minute N =50/T																			
		Output per hour with 80 % efficiency Q = 0.8 X N X 5.5																			
		Use Rate per hour of Tipper 5.5 M ³ capacity = (Tr)																			
		Carriage Cost per M ³ = Tr/ Q																			
		Add for spreading cost =(Use rate of D-80 Dozer Per hr / Capacity of D-80 Dozer per hr 300 cum) =3000/300																			
		Add 5 % for haul road maintenance, 5 % for processing and 2 % for extra labour for finishing = 12 % of column (2+12+13)																			
		Total Cost per M3 col (2+12+13+14)																			
		Add Overhead charge & C.P 15% (col 15)																			
		Rate Per Cum (15+16)																			
5.1.46.1	Beyond 150m but upto 1/2 KM	32.63	10.00	0.65	3.90	5.50	3.30	12.70	3.937	17.323	1018.00	58.77	18.66	13.21	123.26	18.49	141.70				
5.1.46.2	Beyond 1/2 KM but upto 1.00 KM	32.63	10.00	1.50	9.00	5.50	3.30	17.80	2.809	12.360	1018.00	82.37	18.66	16.04	149.69	22.45	172.10				
5.1.46.3	Beyond 1.00 KM but upto 1.50 KM	32.63	10.00	2.50	15.00	5.50	3.30	23.80	2.101	9.244	1018.00	110.13	18.66	19.37	180.79	27.12	207.90				
5.1.46.4	Beyond 1.50 KM but upto 2.00 KM	32.63	10.00	3.50	21.00	5.50	3.30	29.80	1.678	7.383	1018.00	137.89	18.66	22.70	211.88	31.78	243.60				
5.1.46.5	Beyond 2.00 KM but upto 2.50 KM	32.63	10.00	4.50	27.00	5.50	3.30	35.80	1.397	6.145	1018.00	165.66	18.66	26.03	242.98	36.45	279.40				
5.1.46.6	Beyond 2.50 KM but upto 3.00 KM	32.63	10.00	5.50	33.00	5.50	3.30	41.80	1.196	5.263	1018.00	193.42	18.66	29.37	274.08	41.11	315.10				

NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P

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5.1.47	Earth work by excavator and spreader or tractor- leveler in lower level canal or flood embankment or dhar (Like Minor, Sub -minor, Jamindari bundh, Pynes etc where tipper is not needed) all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing Including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers properly with lead below 15 metre and with all lifts all complete jobas per specifications and direction of E/I. (mode of measurement- sectional measurement of compacted earth)				
	Unit-Per Cum				
	(A) Cost of cutting, loading, unloading & placing by excavator 1 M ³				
	Use rate of Excavator(Rupees per hour)			1958.00	
	Output of Excavator =60 Cum per hour				
	Cost				32.63
	(B) Cost of spreading by D-80 Dozer				
	Use rate of D-80 Dozer(Rupees per hour)			5598.00	
	Output of D-80 Dozer =300 Cum per Hour				
	Cost				18.66
	(C) For dressing & finishing one labour for 100 M ³				
	Unskilled labour	0.01	no	268.00	2.68
	Total				53.97
	Add Overhead charge & C.P@15%				8.10
					62.07
	Rate per cum	Say	Rs	62.07	Per M ³

NOTE:- Add royalty of Earth Rs 22.00 where needed without overhead charge & C.P

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5.2 CANAL LINING

Sr.No	Item	Rate	Unit
5.2.1	Providing compacted 75 mm thick sand filter of required F.M as per design on slopes and in bed of canal with local sand including cost of water, ramming, leveling and dressing, etc: all complete as per specification and direction of E/I	100.00	Per M ³
5.2.2	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, rains including hand packing, etc . all complete as per specification and direction of E/I	1054.60	Per M ³
5.2.3	Providing intake wells with P.C.C M 150 with nominal mix of (1:2:4) using stone chips 20 mm and down and sand of F.M. not less than 2 including cost of form work, making space for under drainage pipes, fixing bolts, curing and placing in position, all complete including as per specification and direction of E/I	1276.60	Each
5.2.4	Providing single brick tile 300 mm x 150 mm x 50 mm lining in canal bed laid on 10 mm thick cement mortar in (1:5) base coarse and 5 mm vertical joints all round filled with the mortar of the same mix and top finished with 20 mm thick cement plaster in (1:3) washed, screened sand having F.M not less than 2. including royalty etc, all complete as per specification and direction of E/I	583.30	Per M ²
5.2.5	Providing double brick tile 300 mm x 150 mm x 50 mm lining on canal side slopes with top layer of tile and laid on 5 mm thick green cement mortar (1:3) over hardened surface of 15 mm thick cement plaster (1:3) on top of bottom layer of brick tiles, laid on 10 mm thick cement mortar in (1:5) as base coarse over sand filter 5 mm vertical joints all round of top layer of brick tiles filled with cement mortar (1:3) and that of bottom layers with C.M. (1:5) with washed and screened sand F.M. not less than 2, including cost of scaffolding staging, curing royalty etc. all complete as per specification and direction of E/I	1088.10	Per M ²
5.2.6	Supplying and laying jhama khoa(metal) filter of 20 to 25 mm size in under drainage of canal lining including royalty etc. all complete as per specification and direction of E/I	1829.60	Per M ³
5.2.7	Supplying and laying stone metal graded filter of size 90 mm to 45 mm size in slope and bed of canal below lining including royalty , all complete as per specification and direction of E/I (where depth of cutting is more than 6M)	1029.10	Per M ³
5.2.8	Supplying and laying sand filter free from clay and other organic materials (F.M 2.5 to 3.0) in slope and bed of the canal, below lining including the cost of watering, compaction, including royalty etc. all complete as per specification and direction of E/I (where depth of cutting is more than 6 M)	964.50	Per M ²
5.2.9	Providing junction lining over one layer of brick tiles, laid on 10 mm thick cement mortar (1:5) joints filled with mortar of the same mix by laying cement concrete M150 with nominal mix of (1:2:4) with well graded stone metal 20 mm and down washed and screened sand having F.M not less than 2 including curing royalty etc. all complete as per specification and direction of E/I	896.80	Per M ²
5.2.10	Providing 10 mm thick vertical joints at suitable intervals, filled with bituminous materials of approved quality. including royalty etc. all complete as per specification and direction of E/I	102.60	Per M
5.2.10.1	For canal side slope per 30.50 M	66.90	Per M
5.2.10.2	For canal bed for 30.50M		
5.2.11	Supplying and laying 150 mm dia R.C.C NP2 perforated pipe in under drainage of canal lining as per specification and direction of E/I	247.20	Per M

5.2.12	Supplying and laying 150 mm dia open jointed 1220 mm long P.C.C (1:1:2) pipes in under drainage of canal lining including the cost of curing as per specification and direction of E/I	#VALUE!	Per M
5.2.13	Supplying and laying 150 mm dia open jointed 610 mm long earthen ware pipe in under drainage of canal lining including the cost of curing as per specification and direction of E/I	#VALUE!	Per M
5.2.14	Providing 150 mm dia vertical non return valve complete with holding down bolts, nuts, base plate etc.all complete as per specification and direction of E/I	#VALUE!	Each
5.2.15	Providing 50 mm dia non return pocket valve complete with holding down bolts, nuts, base plate etc.all complete as per specification and direction of E/I	#VALUE!	Each
5.2.16	Providing safety valve in lined section of canal with M.S rod embedded in cement concrete (1:3:6) all complete as per specification and direction of E/I	#VALUE!	Each
5.2.17	Providing safety ladder in lined section of canal with M.S rod embedded in cement concrete (1:3:6) in accordance with I.S.S 3812-1966 including royalty etc. all complete as per specification and direction of E/I	#VALUE!	Each
5.2.18	Laying of 600 mm x 525 mm x 55 mm, 600 mm x 450 mm x 55 mm, 600 mm x 425 mm x 55 mm size precast P.C.C. slab in side slopes and berm of canal with groove of the slab and lug slab set in C.M. (1:3) and flush pointing (1:2) including royalty but excluding the cost of precast slabs including royalty etc. all complete as per specification and direction of E/I	351.90	Per M ²
5.2.19	Providing 100 mm thick P.C.C lining in M-100 with nominal mix of (1:3:6) with well graded stone chips (20 mm & down and coarse sand of approved quality and of requisite F.M. in side and bottom curved portion of the canal in panels with construction joints including cost of form work and its removal, curing including royalty etc. complete job as per specification and direction of E/I.	6289.30	Per M ³
5.2.20	Providing 30 mm internal dia burnt clay pipe for providing holes in concrete section of slab, cross and longitudinal sleepers including sand packing in holes in lining work of canals. all complete job as per specification and direction of E/I	#VALUE!	Each
5.2.21	Providing 100/75mm thick P.C.C lining in M-150 with nominal mix of (1:2:4) with well graded stone chips (20mm & down) and coarse sand of approved quality and requirement 5M in side and bottom common portion of the canal in panels with construction joints including cost of form work and its removal,curing,all complete job as per specification & direction of E/I.	6788.70	Per M ³
5.2.22	Providing and laying P.C.C M-150 with nominal mix of (1:2:4) with well graded stone chips (20mm & down) and coarse sand of approved quality and requisite F.M in lug slab,cross and longitudinal sleeper for lining canal including cost of form work and its removal,curing, all complete job as per specification & direction of E/I.	6788.70	Per M ³
5.2.23	Providing and laying LDPE film of 250 micron or kg/sqm in the bed of canal and side slope as per specification and direction of E/I	562.60	Per M ²

5.2 CANAL LINING

Sl.No.	Description	Quantity	Unit	Rate	Amount	Ref.
5.2.1	Providing compacted 75 mm thick sand filter of required F.M as per design on slopes and in bed of canal with local sand including cost of water, ramming, leveling and dressing etc. all complete as per specification and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	(Assuming 9.3 sqm area with 75 mm thickness sand layer)					
	Material					
	Cost of local sand as per design & specification	0.70	cum	116.85	81.80	
	Labour					
	Skilled labour	0.167	nos	340.00	56.78	
	Unskilled mazdoor	1.5	nos	268.00	402.00	
	Unskilled mazdoor for watering and ramming	1	nos	268.00	268.00	
	Total				808.58	
	Add Overhead charge & C.P @15%				121.29	
					929.86	
						99.99
	Rate per sqm		Rs	100.00	Per M ²	
5.2.2	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, rains including hand packing etc. all complete as per specification and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put =2.832 Cum					
	Material					
	Stone chips (M-040+M-045)/2	2.832	cum	585.81	1659.00	
	Labour					
	Unskilled mazdoor for screening and grading filter	2	nos	268.00	536.00	
	Unskilled mazdoor for laying and hand packing	1.5	nos	268.00	402.00	
	Total				2597.00	
	Add Overhead charge & C.P@15%				389.55	
					2986.55	
						1054.57
	Rate per cum		Rs	1054.60	Per M ³	
5.2.3	Providing intake wells with P.C.C M 150 with nominal mix of (1:2:4) using stone chips 20 mm and down and sand of F.M. not less than 2.00 including cost of form work, making space for under drainage pipes, fixing bolts, curing and placing in position all complete as per specification and direction of E/I					
	Unit :-Each					
	Volume of one intake well					
	$\frac{1}{4} \times (0.650)^2 \times 0.075 = 0.025$					
	$\frac{1}{4} \times (0.65)^2 \times (0.5)^2 \times 0.42 = 0.052$					
	Total = 0.077 cum					
	P.C.C (1:2:4) vide item 5.3.4 (without C.P. etc)	0.077	cum	3821.39	294.25	
	Detail of side shuttering = $22/7 \times 0.65 \times 0.495 + 22/7 \times 0.50 \times 0.42 = 1.67$ sqm Shuttering vide item 5.3.18 (without C.P etc)	1.67	sqm	409.76	684.29	
	Bolts 20 mm dia 25 cm long	4	nos	32.88	131.52	
					1110.06	
	Add Overhead charge & C.P@15%				166.51	
					1276.57	
						1276.57
	Rate		Say Rs	1276.60	Each	
5.2.4	Providing single brick tile 300 mm x 150 mm x 50 mm lining in canal bed laid on 10 mm thick cement mortar in (1:5) base coarse and 5 mm vertical joints all round filled with the mortar of the same mix and top finished with 20 mm thick cement plaster in (1:3) washed screened sand having F.M not less than 2, including royalty etc. all complete as per specification and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	Material					
	i. Brick tiles 1 st class Including 5 % wastage	198	nos	6.214	1230.37	
	ii. Volume of (1:5) mortar					
	(a). Base course 10 mm thick $10/1000 \times 9.3 = 0.0930$					
	(b) Vertical longitudinal joints 5 mm thick $21 \times 5/1000 \times 50/1000 \times 3.05 = 0.016$					
	(c). Vertical transverse joints 5 mm thick $11 \times 5/1000 \times 50/1000 \times 3.05 = 0.008$					
	Total = 0.117					
	Add 20% extra for undulation of sub grade and wastage of mortar etc. = 0.023					
	Total 0.140 cum					
	Cement	0.028	cum	7582.00	212.30	

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	Sand	0.140	cum	150.80	21.11	
	Labour					
	Mason Gr I	1.5	nos	361.00	541.50	
	Unskilled mazdoor	3	nos	268.00	804.00	
iii.	Volume of (1:3) mortar					
	20/1000x3.05x3.05=0.185					
	Add 5% wastage=0.009					
	Total= 0.195 say 0.2 cum					
	Cement	0.07	cum	7582.00	530.74	
	Sand	0.21	cum	150.80	31.67	
	Labour					
	Mason Gr I	1.5	nos	361.00	541.50	
	Unskilled mazdoor	3	nos	268.00	804.00	
	Total				4717.19	
	Add Overhead charge & C.P @15%				707.58	
					5424.77	
						583.31
	Rate per sqm	Say Rs		683.30	Per M ²	
5.2.5	Providing double brick tile 300 mm x 150 mm x 50 mm lining on canal side slopes. with top layer of tile and laid on 5 mm thick green cement mortar (1:3) over hardened surface of 15 mm thick cement plaster (1 : 3) on top of the bottom layer of brick tiles, laid on 10 mm thick cement mortar in (1: 3) as base course over sand filter 5 mm vertical joints all round of top layer of brick tiles filled with cement mortar (1:3) and that of the bottom layers with C.M. (1:5) with washed and screened sand F.M. not less than 2 including royalty etc. all complete as per specification and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put= 9.3 Sqm					
	(Assuming 9.3 sqm =3.05mx3.05m)-					
	A. Bottom layer of tile lining					
i.	Brick tiles	198	nos	6.214	1230.37	
ii.	Volume of (1:5) mortar with 20 % extra for foundation of sub grade and wastage of cement mortar vide item no 5.2.4=0.14 cum					
	Cement	0.028	cum	7582.00	212.30	
	Sand	0.140	cum	150.80	21.11	
	Mason Gr I	0.5	nos	361.00	180.50	
	Unskilled mazdoor	3	nos	268.00	804.00	
					246.13	
iii.	Add 25 % For working in slope					
	B. Top layer of lining volume of (1:3) mortar with 10 % wastage 1 st class brick tiles					
	a. 15 mm thick cement plaster = 15/1000x9.3=0.14					
	5 mm thick C.P= 5/1000x9.3=0.047 Total=0.211					
	Total =0.211,					
	Add 10 % wastage =0.021					
	Total = 0.232 cum					
	Brick tiles	198	nos	6.214	1230.37	
	Cement	0.077	cum	7582.00	583.81	
	Sand	0.232	cum	150.80	34.99	
	Mason Gr I	1.5	nos	361.00	541.50	
	Unskilled mazdoor	3	nos	268.00	804.00	
	Add 25 % on labour for working in slope				336.38	
	C. Labour for laying tiles including mortar jointing					
	Mason Gr I	2	nos	361.00	722.00	
	Unskilled mazdoor	4	nos	268.00	1072.00	
	Add 25 % on labour for working in slope				448.50	
	D. Cost of scaffolding				331.30	
	Add 10 % of cost of cement, sand and bricks tiles				8799.25	
	Total				1319.89	
	Add Overhead charge & C.P@15%				10119.13	
						1088.09
	Rate per sqm	Say Rs		1088.10	Per M ²	
5.2.6	Supplying and laying jhama metal filter of 20 to 25 mm size in under drainage of canal lining including royalty etc.all complete as per specification and direction of E/I					
	Unit :-Per Cum					
	Taking Out put= 2.832 Cum					
	Material					
	Jhama metal	2.832	cum	1449.00	4103.57	
	Unskilled mazdoor	1.5	nos	268.00	402.00	
					4505.57	
	Add Overhead charge & C.P@15%				675.84	
					5181.40	
						1829.59
	Rate per cum	Rs		1829.60	Per M ³	

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5.2.7	Supplying and laying stone metal graded filter of size 90 mm to 45 mm size in slope and bed of canal below lining including royalty etc. all complete as per specification and direction of E/I (where depth of cutting is more than 6 M)					
Unit :-Per Cum						
Taking Out put =2.832 Cum						
Material						
Stone metal	2.832	cum	396.24	1122.15	M-039	
Labour						
Male	0.25	nos	289.00	72.25		
Unskilled mazdoor for carrying metal	3.5	nos	268.00	938.00		
Unskilled mazdoor for spreading	1.5	nos	268.00	402.00		
Total				2534.40		
Add Overhead charge & C.P@15%				380.16		
				2914.56		
						1029.15
Rate per cum			Rs	1029.15	Per M ³	
5.2.8	Supplying and laying sand filter free from clay and other organic materials (F.M 2.5 to 3.0) in slope and bed of the canal, below lining including the cost of watering, compaction, including royalty etc. all complete as per specification and direction of E/I (where depth of cutting is more than 6M)					
Unit :-Per Cum						
Taking Out put =2.832 Cum						
Material						
Sand	2.832	cum	150.80	427.07		
Labour						
Male	0.25	nos	289.00	72.25		
Unskilled mazdoor for carrying and placing	3.5	nos	268.00	938.00		
Unskilled mazdoor for spreading	1.5	nos	268.00	402.00		
Unskilled mazdoor for loading and ramming	2	nos	268.00	536.00		
Total				2375.32		
Add Overhead charge & C.P@15%				356.30		
				2731.61		
						964.55
Rate per cum			Rs	964.55	Per M ³	
5.2.9	Providing junction lining over one layer of brick tiles, laid on 10 mm thick cement mortar (1:5) joints filled with mortar of the same mix by laying cement concrete M150 with nominal mix of (1:2:4) with well graded stone metal 20 mm and down washed and screened sand having F.M not less than 2.00 including curing royalty etc, all complete as per specification and direction of E/I					
Unit :-Per Sqm						
Taking Out put =9.30 Sqm						
A. Bottom layer of tile lining						
Brick tiles	198	nos	6.214	1230.37		
B. Volume of (1:5) mortar with 20 % extra for foundation of sub grade and wastage of cement mortar vide item no 5.2.4=0.14 cum						
i.Cement	0.028	cum	7582.00	212.30		
ii.Sand	0.140	cum	150.80	21.11		
iii. Labour for laying tiles including mortar jointing						
Mason Gr I	1.5	nos	361.00	541.50		
Unskilled mazdoor	3	nos	268.00	804.00		
iv. Labour charge for 10 mm thick base course						
Mason Gr I	1.5	nos	361.00	541.50		
Unskilled mazdoor	3	nos	268.00	804.00		
C. Quantity of (1:2:4) concrete in 9.3 sqm of junction lining= (20 mm +70 mm)x.0.30/(2x1000)=0.42 cum						
Material						
Stone chips (M-040+M-045)/2	0.38	cum	585.81	222.51		
Cement	0.095	cum	7582.00	720.29		
Sand	0.190	cum	150.80	28.65		
Labour						
Mason Gr I	0.25	nos	361.00	90.25		
Mason Gr II	1.75	nos	321.00	561.75		
Unskilled mazdoor	5.5	nos	268.00	1474.00		
Total				7252.33		
Add Overhead charge & C.P@15%				1087.85		
				8340.18		
						896.79
Rate per sqm			Say Rs	896.80	Per M ²	
5.2.10	Providing 10 mm thick vertical joints at suitable intervals, filled with bituminous materials of approved quality including royalty etc. all complete as per specification and direction of E/I					
Unit :- Per Metre						
Taking Out put =30.50M						

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5.2.10.1	For canal side slope per 30.50M					
	Volume of bitumen 30.5 x0.010x0.130=0.04 cum@1440 kg per cum=0.04x1440=57.6 kg					
	Bitumen (Grade VG 30 (60/70) Packed)	57.6	kg	32.91	1895.47	
	Semi Skilled labour	2	nos	279.00	558.00	
	Unskilled mazdoor	1	nos	268.00	268.00	
					2721.47	
	Add Overhead charge & C.P@15%				408.22	
					3129.69	
						102.61
	Rate per Metre		Rs	102.60	Per M	
5.2.10.2	For canal bed per 30.50M					
	Volume of bitumen= 30.5 x10x80/(1000x1000)=0.0244 cum@1440 kg per cum=0.0244x1440=35.13 kg					
	Bitumen (Grade VG 30 (60/70) Packed)	35.13	kg	32.91	1158.04	
	Semi Skilled labour	1.5	nos	279.00	418.50	
	Unskilled mazdoor	0.75	nos	268.00	201.00	
					1775.54	
	Add Overhead charge & C.P@15%				266.33	
					2041.87	
						66.95
	Rate per Metre		Rs	66.90	Per M	
5.2.11	Supplying and laying 150 mm dia R.C.C NP ₂ perforated pipe in under drainage of canal lining as per specification and direction, of E/I					
	Unit :-Per Metre Taking Out put=1 M					
	Cost of pipe	1	M	195.45	195.45	
	Cost of laying @ 10% of above				19.55	
					215.00	
	Add Overhead charge & C.P@15%				32.25	
					247.24	
	Rate per Metre	Say Rs		247.20	Per M	247.24
5.2.12	Supplying and laying 150 mm dia open jointed 1220 mm long P.C.C (1:1:2) pipes in under drainage of canal lining including the cost of curing, royalty etc. all complete as per specification and direction of E/I					
	Unit :-Per Metre Taking Out put=1.22 M					
	Taking pipe length as 1.22 m					
	Cost of 150 mm dia P.C.C pipe	1.22	M	INPUT	#VALUE!	
	Cost of laying @ 10% of above				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P @15%				#VALUE!	
					#VALUE!	
	Rate per Metre	Say Rs		#VALUE!	Per M	#VALUE!
5.2.13	Supplying and laying 150 mm dia open jointed 610 mm long earthen ware pipe in under drainage of canal lining including the cost of curing, royalty etc. all complete as per specification and direction of E/I					
	Unit :-Per Metre Taking Out put =0.61M					
	Taking pipe length as 0.61 m					
	Cost of 150 mm dia P.C.C pipe	0.61	M	INPUT	#VALUE!	
	Cost of laying @ 10% of above				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
	Rate per Metre	Say Rs		#VALUE!	Per M	#VALUE!
5.2.14	Providing 150 mm dia vertical non return valve complete with holding down bolts, nuts, base plate etc.all complete as per specification and direction of E/I					
	Unit :-Each					
	Cost of pressure release valves	1	nos	input	#VALUE!	
	Cost of laying @ 10% of above				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
	Rate	Say Rs		#VALUE!	Each	#VALUE!
5.2.15	Providing 50 mm dia non return pocket valve complete with holding down bolts, nuts, base plate etc.all complete as per specification and direction of E/I					
	Unit :-Each					
	Cost of pocket valves	1	nos	input	#VALUE!	
	Cost of laying @ 10% of above				#VALUE!	

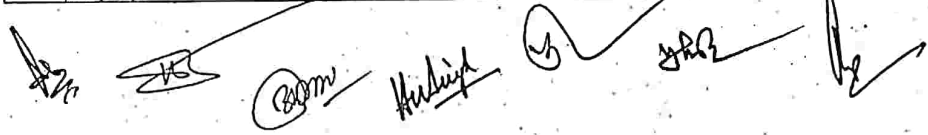
				#VALUE!	
	Add Overhead charge & C.P.@15%			#VALUE!	
				#VALUE!	
				#VALUE!	
	Rate	Say Rs	#VALUE!	Each	
5.2.16	Providing safety valve in lined section of canal with M.S rod embedded in cement concrete (1:3:6) all complete as per specification and direction of E/I (Vide I.S.I 3872-1966)				
	Unit :-Each				
	Volume of concrete	0.74	cum		
	M.S. rods 10 mm dia	25	kg		
	25 mm dia 10.5 m @ 3.87 kg / m=40.63 kg	40.63	kg		
	Cost of concrete (1:3:6) mix vide item no 5.3.3 (Modify the rates for the quality of aggregate)	0.74	cum	3176.77	2350.81
	Providing M.S bars Vide Item no 5.3.22				
	10 mm dia	25	kg	INPUT	#VALUE!
	25 mm dia	40.63	kg	INPUT	#VALUE!
	Cost of safety valve	1	nos	INPUT	#VALUE!
					#VALUE!
	Add Overhead charge & C.P (Safety valve only)@15%				#VALUE!
					#VALUE!
					#VALUE!
	Rate	Say Rs	#VALUE!	Each	
5.2.17	Providing safety ladder in lined section of canal with M.S rod embedded in cement concrete (1:3:6) in accordance with I.S.S 3812-1966 Including royalty all complete as per specification and direction of E/I. (Vide I.S.I 3872-1966)				
	Unit :-Each				
	Volume of concrete	0.74	cum		
	M.S. rods 10 mm dia	25	kg		
	25 mm dia 10.5 m @ 3.87 kg / m=40.63 kg	40.63	kg		
	Cost of concrete (1:3:6) mix vide item no 5.3.3 (Modify the rates for the quality of aggregate)	0.74	cum	3176.77	2350.81
	Providing M.S bars Vide Item no 5.3.22				
	10 mm dia	25	kg	input	#VALUE!
	25 mm dia	40.63	kg	input	#VALUE!
	Cost of safety ladder	1	nos	input	#VALUE!
					#VALUE!
	Add Overhead charge & C.P (Safety ladder only)@15%				#VALUE!
					#VALUE!
					#VALUE!
	Rate	Say Rs	#VALUE!	Each	
5.2.18	Laying of 600 mm x 525 mm x 55 mm; 600 mm x 450 mm x 55 mm; 600 mm x 425 mm x 55 mm size precast P.C.C. slab in side slopes and berm of canal with groove of the slab and lug slab set in C.M. (1:3) and flush pointing (1:2) but excluding the cost of precast slabs including royalty all complete as per specification and direction of E/I				
	Unit :-Per Sqm				
	Taking Out put =9.30 Sqm				
	Laying of precast slab				
	Mason Gr II	0.5	nos	321.00	160.50
	Unskilled mazdoor	1	nos	268.00	268.00
	Joining pre cast slab				
	Cement	0.006	cum	7582.00	45.49
	Sand	0.018	cum	150.80	2.71
	Labour				
	Mason Gr II	3	nos	321.00	963.00
	Unskilled mazdoor	3	nos	268.00	804.00
	Bhisli	1.5	nos	265.00	397.50
	Flush pointing of joints				
	Cement	0.003	cum	7582.00	22.75
	Sand	0.010	cum	150.80	1.51
	Labour				
	Mason Gr II	0.25	nos	321.00	80.25
	Unskilled mazdoor	0.25	nos	268.00	67.00
	Bhisli	0.125	nos	265.00	33.13
					2845.84
	Add Overhead charge & C.P.@15%				426.88
					3272.71
					351.90
	Rate per sqm	Say Rs	#VALUE!	Per M ²	

(Handwritten signatures and initials)

5.2.19	Providing 100 mm thick P.C.C lining in M-100 with nominal mix of (1:3:6) with well graded stone chips (20 mm & down) and coarse sand of approved quality and of requisite F.M. in side and bottom curved portion of the canal in panels with construction joints including cost of form work and its removal, curing, royalty all complete job as per specification and direction of E/I				
	Unit :- Per Cum				
	Taking Out put =2.832 Cum				
A.	Materials				
	Stone chips	2.66	M ³	642.67	1709.50
	Sand	1.33	M ³	150.80	200.56
	Cement	0.443	M ³	7582.00	3358.83
B.	HIRE CHARGES OF MACHINE				
	(i) Concrete mixer (10 H.P.) To be calculated taking 2 cum of concrete per hr) for 1.42 hr	1.42	hr	82.30	116.87
	(ii) Vibrator	1.42	hr	43.75	62.13
C.	Shuttering				
	I. Form work for curved portion for 2.832 cum of concrete assuming 14 sqm Vide item no 5.3.18(without C.P.etc.)	14	sqm	409.76	5736.58
D.	Labour				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	2	nos	321.00	642.00
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				15487.96
	Add Overhead charge & C.P@15%				2323.19
					17811.16
					6289.25
	Rate per cum	Say Rs		6289.30	Per M ³
5.2.20	Providing 30 mm internal dia burnt clay pipe for providing holes in concrete section of slab, cross and longitudinal sleepers including sand packing in holes in lining work of canals all complete job as per specification and direction of E/I				
	Unit :-Each				
	Assuming 100 mm long holes=139 Nos. and 225 mm long holes=222 Nos.				
	Materials				
	I. Cost of burnt clay pipe of internal dia 31.75 mm , 1-1/4' External dia 38.00 mm 1-1/2'				
	(a). 100 mm long	139	nos	input	#VALUE!
	(b) 225 mm long	222	nos	input	#VALUE!
	II. Sand	0.07	cum	150.80	10.56
	Labour				
	Head mason	1	nos	361.00	361.00
	Mason Gr II	0.5	nos	321.00	160.50
	Unskilled mazdoor	1	nos	268.00	268.00
	Unskilled mazdoor for sand packing	1	nos	268.00	268.00
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate	Say Rs		#VALUE!	Each
5.2.21	Providing 100/75mm thick P.C.C lining in M-150 with nominal mix of (1:2:4) with well graded stone chips (20mm & down) and coarse sand of approved quality and requirement 5M IrI side and bottom common portion of the canal in panels with construction joints including cost of form work and its removal,curing, all complete job as per specification & direction of E/I.				
	Unit- Per Cum				
	Taking output 2.832 cum				
A	Material				
	Stone chips (20mm & down)	2.548	M ³	642.67	1637.52
	Sand	1.274	M ³	150.80	192.12
	cement	0.637	M ³	7582.00	4829.73
B	Hire charge of Machine				
	Concrete Mixer(taking 2cum per hr)	1.42	hr	82.30	116.87
	Vibrator	1.42	hr	43.75	62.13
C.	Shuttering				
	Form work for curved portion for 2.832 cum of concrete assuming 14sqm vide item no -5.3.19	14	sqm	409.76	5736.58
D.	Labour				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr-II	1.5	nos	321.00	481.50
	Unskilled Mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				16717.95

(Handwritten signatures and initials)

	Add Overhead charge & C.P@15%				2507.69
					19225.64
	Rate per Cum	Say Rs			5785.70
5.2.22	Providing and laying P.C.C M-150 with nominal mix of (1:2:4) with well graded stone chips (20mm & down) and coarse sand of approved quality and requisite F.M in lug slab, cross and longitudinal sleeper for lining canal including cost of form work and its removal, curing, royalty etc. all complete jobs per specification & direction of E/I.				
	Unit- per cum				
	Out put = 2.832 cum				
	Material				
	Stone chips(20mm & down)	2.548	M ³	642.67	1637.52
	sand	1.274	M ³	150.80	192.12
	Cement	0.637	M ³	7582.00	4829.73
	Hire charge of Machine				
	Concrete Mixer(taking 2cum per hr)	1.42	hr	82.30	116.87
	Vibrator	1.42	hr	43.75	62.13
	Shuttering				
	Form work for curved portion for 2.832 cum of concrete assuming 14sqm vlda item no -5.3.19	14	sqm	409.76	5736.58
	Labour				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr-II	1.5	nos	321.00	481.50
	Unskilled Mazdoor	12	nos	268.00	3216.00
	Bhisi	1	nos	265.00	265.00
	Total				16717.95
	Add Overhead charge & C.P@15%				2507.69
					19225.64
	Rate per cum	Say Rs			5785.70
5.2.23	Providing and laying LDPE film of 250 micron or kg/sqm in the bed of canal and side slope as per specification and direction of E/I				
	Unit- per Sqm				
	Taking output =10 Sqm				
	Materials				
	250 micron LDPE film @ 230 gm/sqm(including 5%v for overlap and wastage)	2.415	kg	141.42	341.53
	Adhesive and cello Tape		LS		20.00
	Labour				
	Male	0.02	nos	289.00	5.78
	Unskilled labour	0.30	nos	268.00	80.40
	skilled labour	0.1	nos	415.00	41.50
					489.21
	Add Overhead charge & C.P@15%				73.38
					562.59
	Rate pe sqm		say Rs		562.60

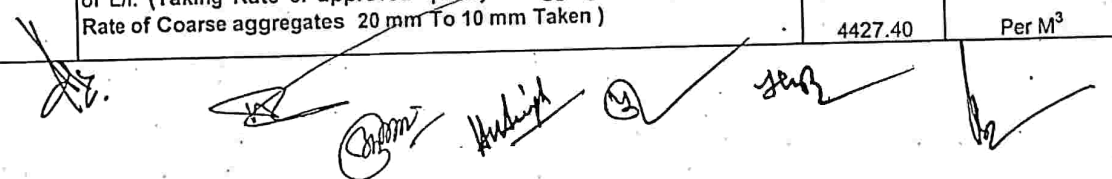


100

5.3. CONCRETE WORK

Sr.No.	Item	Rate	Unit
5.3.1	Providing and laying P.C.C. M-100 with nominal mix of (1:3:6) with approved quality of graded stone chips (20 mm and down) and coarse granular sand of requisite F.M in lug slab, cross and longitudinal sleepers for lining of canals including cost of form work and its removal, curing including royalty etc. all complete job as per specifications and direction of E/I.	6924.30	Per M ³
5.3.2	Providing and laying P.C.C.M-75 with nominal mix of (1:4:8) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)	3326.70	Per M ³
5.3.3	Providing and laying P.C.C. M-100 with nominal mix of (1:3:6) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing. royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr IV Taken)	3653.30	Per M ³
5.3.4	Providing and laying P.C.C. or R.C.C M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, . excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm To 10 mm Taken)	4394.60	Per M ³
5.3.5	Providing and laying P.C.C.or R.C.C M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm To 10 mm Taken)	4900.70	Per M ³
5.3.6	Providing and laying P.C.C. or R.C.C M-250 with nominal mix of (1:1.:2) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	6084.80	Per M ³

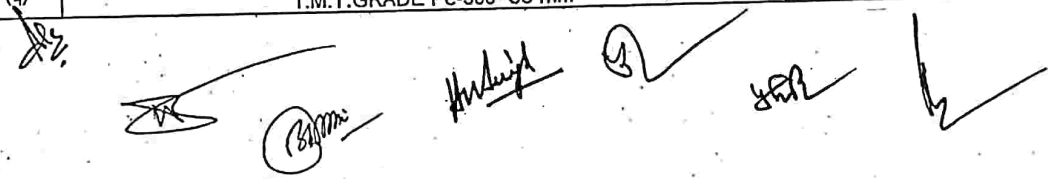
5.3.7	Providing and laying P.C.C. M-75 with nominal mix of (1:4:8) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)	3326.70	Per M ³
5.3.8	Providing and laying P.C.C. M-100 with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr IV Taken)	3653.30	Per M ³
5.3.9	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm To 10 mm Taken)	4394.60	Per M ³
5.3.10	Providing and laying P.C.C. or R.C.C M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm To 10 mm Taken)	4900.70	Per M ³
5.3.11	Providing and laying P.C.C. or R.C.C M-250 with nominal mix of (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	6044.80	Per M ³
5.3.12	Providing and laying P.C.C. or R.C.C M-150 with nominal mix of (1:2:4) in deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	4427.40	Per M ³



5.3.13	Providing and laying P.C.C. or R.C.C M-200 with nominal mix of (1:1.5:3) in deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	4933.30	Per M ³
5.3.14	Providing and laying P.C.C. or R.C.C M-150 with nominal mix of (1:2:4) in wearing coat over deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 10 mm To 5 mm Taken)	4342.10	Per M ³
5.3.15	Providing and laying P.C.C. or R.C.C M-150 with nominal mix of (1:1.5:3) in wearing coat over deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 10 mm To 5 mm Taken)	4853.10	Per M ³
5.3.16	Providing and laying dry pitching with precast cement concrete block of size 600 mm x 600 mm x 300 mm in M-75 with nominal mix of (1:4:8) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)	5345.80	Per M ³
5.3.17	Providing and laying dry pitching with precast cement concrete blocks of size 600 mm x 600 mm x 300 mm in M-100 with nominal mix of (1:3:6) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)	5694.10	Per M ³
5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specifications and direction of E/I.	471.20	Per M ²
5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	471.20	Per M ²
5.3.20	Providing centering including strutting, propping etc. and removing after use in deck slab as per specifications and direction of E/I.	637.40	Per M ²
5.3.21	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
	(a).Dia of bar 6 mm	64602.30	Per M.T
	(B).Dia of bar above 6 mm to 12 mm	64602.30	Per M.T
	(B).Dia of bar above 14 mm to 50 mm	64602.30	Per M.T

(Handwritten signatures and initials)

5.3.22	Providing M.S reinforcement (Tor steel) as per approved design, drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
(a)	T.M.T.GRADE Fe-415- 8 mm	#VALUE!	Per M.T
(b)	T.M.T.GRADE Fe-415- 10 mm	#VALUE!	Per M.T
(c)	T.M.T.GRADE Fe-415- 12 mm	#VALUE!	Per M.T
(d)	T.M.T.GRADE Fe-415- 16 mm	#VALUE!	Per M.T
(e)	T.M.T.GRADE Fe-415- 20 mm	#VALUE!	Per M.T
(f)	T.M.T.GRADE Fe-415- 25 mm	#VALUE!	Per M.T
(g)	T.M.T.GRADE Fe-415- 28 mm	#VALUE!	Per M.T
(h)	T.M.T.GRADE Fe-415- 32 mm	#VALUE!	Per M.T
(i)	T.M.T.GRADE Fe-500- 8 mm	61874.60	Per M.T
(j)	T.M.T.GRADE Fe-500- 10 mm	60749.20	Per M.T
(k)	T.M.T.GRADE Fe-500- 12 mm	60033.10	Per M.T
(l)	T.M.T.GRADE Fe-500- 16 mm	60033.10	Per M.T
(m)	T.M.T.GRADE Fe-500- 20 mm	60033.10	Per M.T
(n)	T.M.T.GRADE Fe-500- 25 mm	60033.10	Per M.T
(o)	T.M.T.GRADE Fe-500- 28 mm	60749.20	Per M.T
(p)	T.M.T.GRADE Fe-500- 32 mm	60749.20	Per M.T
(q)	T.M.T.GRADE Fe-500- 36 mm	#VALUE!	Per M.T



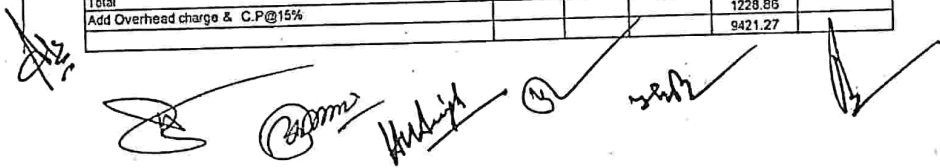
5.3 CONCRETE WORK					
Sr.No.	Description	Quantity	Unit	Rate	Amount
5.3.1	Providing and laying P.C.C. M-100 with nominal mix of (1:3:6) with approved quality of graded stone chips (20 mm and down) and coarse granular sand of requisite F.M in lag slab, cross and longitudinal sleepers for lining of canals including cost of form work and its removal, curing, royalty etc. all complete and job as per specifications and direction of E/I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
A.	MATERIALS				
	Stone chips (20 mm & down)	2.66	M ³	642.67	1709.50
	Sand	1.330	M ³	150.80	200.66
	Cement	0.443	M ³	7582.00	3358.83
	Total				5268.89
B.	HIRE CHARGES OF MACHINE				
	(i) Concrete mixer	1.42	hr	82.30	116.87
	(ii) Vibrator vide 3.22	1.42	hr	43.75	62.13
					178.99
C.	Shuttering				
	I. Form work for curved portion for 2.832 cum of concrete assuming 18.8sqm Vide item no 5.3.18	18.8	sqm	409.76	7621.46
D.	Labour				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	1	nos	321.00	321.00
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				3982.50
					17051.84
	Add Overhead charge & C.P@15%				2557.78
					19609.62
					6924.30
	Rate per Cum	Say Rs		6924.30	Per M ³
5.3.2	Providing and laying P.C.C. M-75 with nominal mix of (1:4:8) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M, washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
A.	MATERIALS				
	Coarse aggregates Gr III (Rate of approved quality of aggregate as per Design)	2.718	M ³	458.22	1245.44
	Sand	1.368	M ³	150.80	206.29
	Cement	0.34	M ³	7582.00	2577.88
	Total				4029.62
B.	LABOUR				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	1	nos	321.00	321.00
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				3982.50
C.	HIRE CHARGES OF MACHINE				
	(i) Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98	82.30			117.71
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98	43.75			62.58
					8192.41
	Total				1228.65
	Add Overhead charge & C.P@15%				9421.27
					3326.72
	Rate per Cum	Say Rs		3326.72	Per M ³
5.3.3	Providing and laying P.C.C. M-100 with nominal mix of (1:3:6) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
A.	MATERIALS				

Handwritten signatures and initials are present below the table, including names like 'Raj', 'Sachin', and 'Amit'.

Coarse aggregates Gr IV approved quality of aggregate as per Design		(Rate of	2.66	M ³	479.11	1274.43
Sand		1.33	M ³	150.80	200.56	
Cement		0.443	M ³	7582.00	3358.83	
Total						4833.82
B. LABOUR						
Head mason		0.5	nos	361.00	180.50	
Mason Gr II		1	nos	321.00	321.00	
Unskilled mazdoor		12	nos	268.00	3216.00	
Bhisti		1	nos	265.00	265.00	
Total						3982.50
C. HIRE CHARGES OF MACHINE						
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98		82.30				117.71
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98		43.75				62.58
Total						896.61
Add Overhead charge & C.P@15%						1349.49
						10346.10
						3653.29
Rate per Cum		Say Rs		3663.30		Per M ³
5.3.4	Providing and laying P.C.C. M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.					
	Unit :- Per Cum					
	Taking Out put= 2.832 Cum					
A. MATERIALS						
Coarse aggregates (20 mm To 10 mm) (Taking Rate of approved quality of aggregate as per Design)		2.548	M ³	642.67	1637.52	
Sand		1.274	M ³	150.80	192.12	
Cement		0.637	M ³	7582.00	4829.73	
Total						6659.38
B. LABOUR						
Head mason		0.5	nos	361.00	180.50	
Mason Gr II		1	nos	321.00	321.00	
Unskilled mazdoor		12	nos	268.00	3216.00	
Bhisti		1	nos	265.00	265.00	
Total						3982.50
C. HIRE CHARGES OF MACHINE						
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98		82.30				117.71
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98		43.75				62.58
Total						180.29
						10822.17
Add Overhead charge & C.P@15%						1623.32
						12445.49
						4394.59
Rate per cum		Say Rs		4394.60		Per M ³
5.3.5	Providing and laying P.C.C. or R.C.C M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.					
	Unit :- Per Cum					
	Taking Out put=2.832 Cum					
A. MATERIALS						
Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)		2.436	M ³	642.67	1565.54	
Sand		1.218	M ³	150.80	183.67	
Cement		0.812	M ³	7582.00	6156.58	
Total						7905.80
B. LABOUR						
Head mason		0.5	nos	361.00	180.50	
Mason Gr II		1	nos	321.00	321.00	
Unskilled mazdoor		12	nos	268.00	3216.00	
Bhisti		1	nos	265.00	265.00	
Total						3982.50

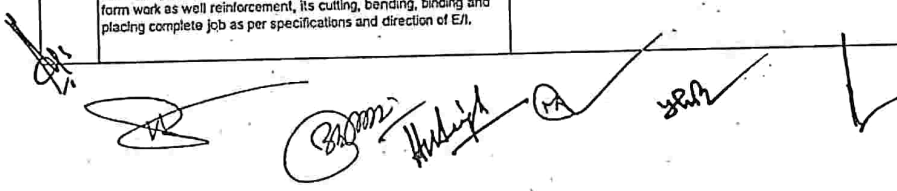
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C. HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98		82.30			117.71
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98		43.75			62.58
Total					12068.59
Add Overhead charge & C.P@15%					1810.29
					13878.88
					4900.73
Rate per cum		Say Rs		4900.73	Per M ³
5.3.6	Providing and laying P.C.C. or R.C.C M-250 with nominal mix of (1:1.2) in foundation of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
Unit :-Per Cum					
Taking Out put=2.832 Cum					
A. MATERIALS					
Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)		2.40	M ³	642.67	1542.41
Sand		1.20	M ³	150.80	180.96
Cement		1.20	M ³	7582.00	9098.4
Total					10921.77
B. LABOUR					
Head mason		0.5	nos	361.00	180.50
Mason Gr II		1	nos	321.00	321.00
Unskilled mazdoor		12	nos	268.00	3216.00
Bhisti		1	nos	265.00	265.00
Total					3982.50
C. HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98		82.30			117.714
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98		43.75			62.58
Total					14984.56
Add Overhead charge & C.P@15%					2247.68
					17232.24
					6084.83
Rate per cum		Say Rs		6084.83	Per M ³
5.3.7	Providing and laying P.C.C. M-75 with nominal mix of (1:4:8) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
Unit :-Per Cum					
Taking Out put=2.832 Cum					
A. MATERIALS					
Coarse aggregates Gr III (Rate of approved quality of aggregate as per Design)		2.718	M ³	458.22	1245.44
Sand		1.368	M ³	150.80	206.29
Cement		0.34	M ³	7582.00	2577.88
Total					4029.62
B. LABOUR					
Head mason		0.5	nos	361.00	180.50
Mason Gr II		1	nos	321.00	321.00
Unskilled mazdoor		12	nos	268.00	3216.00
Bhisti		1	nos	265.00	265.00
Total					3982.50
C. HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98		82.30			117.71
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98		43.75			62.58
Total					8192.41
Add Overhead charge & C.P@15%					1228.86
					9421.27



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Rate per cum		Say Rs		3326.72	Per M ³
5.3.8	Providing and laying P.C.C. M-100 with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
Unit :-Per Cum					
Taking Out put =2.832 Cum					
A. MATERIALS					
	Coarse aggregates Gr IV (Cost of coarse aggregate as per Design)	2.66	M ³	479.11	1274.43
	Sand	1.33	M ³	150.80	200.56
	Cement	0.443	M ³	7582.00	3358.83
	Total				4833.82
B. LABOUR					
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	1	nos	321.00	321.00
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				3982.50
C. HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P) for 2.832 cum consists on the basis of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98	82.30			117.714
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basis of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98	43.75			62.58
	Total				896.61
	Add Overhead charge & C.P@15%				1349.49
					10346.10
					3653.29
Rate per cum		Say Rs		3663.30	Per M ³
5.3.9	Providing and laying P.C.C. M-150 with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
Unit :-Per Cum					
Taking Out put =2.832 Cum					
A. MATERIALS					
	Coarse aggregates (20 mm to 10 mm) (Cost of coarse aggregate as per Design)	2.548	M ³	642.67	1637.52
	Sand	1.274	M ³	150.80	192.12
	Cement	0.637	M ³	7582.00	4829.73
	Total				6659.38
B. LABOUR					
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	1	nos	321.00	321.00
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				3982.50
C. HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P) for 2.832 cum consists on the basis of mixer production capacity 1.98 m3 per hour. Used rate per hour 2.832/1.98	82.30			117.714
	(ii) Vibrator 1no. to vibrate 2.832 cum on the basis of vibrator capacity 1.98 cum per hour. Used rate per hour 2.832/1.98	43.75			62.58
	Total				1082.17
	Add Overhead charge & C.P@15%				1623.32
					12445.49
					4394.59
Rate per cum		Say Rs		4394.60	Per M ³
5.3.10	Providing and laying P.C.C. or R.C.C M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				



		Unit :-Per Cum Taking Out put=2.832 Cum			
A. MATERIALS					
Coarse aggregates (20 mm to 10 mm) (Cost of coarse aggregate as per Design)		2.436	M ³	642.67	1565.54
Sand		1.218	M ³	150.80	183.67
Cement		0.812	M ³	7582.00	6156.58
Total					7905.80
B. LABOUR					
Head mason		0.5	nos	361.00	180.50
Mason Gr II		1	nos	321.00	321.00
Unskilled mazdoor		12	nos	268.00	3216.00
Bhisti		1	nos	265.00	265.00
Total					3982.50
C. HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour=2.832/1.98		82.30			117.714
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour=2.832/1.98		43.75			62.58
Total					12068.59
Add Overhead charge & C.P@15%					1810.29
					13878.88
Rate per cum		Say Rs		4900.73	Per M ³
5.3.11	Providing and laying P.C.C. or R.C.C M-250 with nominal mix of (1:1:2) superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
		Unit :-Per Cum Taking Out put=2.832 Cum			
A. MATERIALS					
Coarse aggregates (20 mm to 10 mm) (Cost of coarse aggregate as per Design)		2.379	M ³	642.67	1528.91
Sand		1.189	M ³	150.80	179.30
Cement		1.189	M ³	7582.00	9015.00
Total					10723.21
B. LABOUR					
Head mason		0.5	nos	361.00	180.50
Mason Gr II		1	nos	321.00	321.00
Unskilled mazdoor		12	nos	268.00	3216.00
Bhisti		1	nos	265.00	265.00
Total					3982.50
C. HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour=2.832/1.98		82.30			117.71
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour=2.832/1.98		43.75			62.58
Total					14889.00
Add Overhead charge & C.P@15%					2232.90
					17118.90
Rate per cum		Say Rs		6044.80	Per M ³
5.3.12	Providing and laying P.C.C. or R.C.C M-150 with nominal mix of (1:2:4) in deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M, washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
		Unit :-Per Cum Taking Out put=2.832 Cum			
A. MATERIALS					
Coarse aggregates (20 mm to 10 mm) (Cost of coarse aggregate as per Design)		2.549	M ³	642.67	1638.16583
Sand		1.274	M ³	150.80	192.12
Cement		0.637	M ³	7582.00	4829.73
Total					6660.02
B. LABOUR					
Head mason		0.5	nos	361.00	180.50
Mason Gr II		1.25	nos	321.00	401.25
Unskilled mazdoor		12	nos	268.00	3216.00

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	Bhistl	1	nos	265.00	265.00	
	Total				4062.75	
	C. HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	82.30			117.71	
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	43.75			62.58	
	Total				10903.06	
	Add Overhead charge & C.P@15%				1635.46	
					12538.52	
						4427.44
	Rate per cum	Say Rs		4427.40	Per M ³	
5.3.13	Providing and laying P.C.C. or R.C.C M-200 with nominal mix of (1:1.5:3) in deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc.excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put=2.832 Cum					
	A. MATERIALS					
	Coarse aggregates (20 mm to 10 mm) coarse aggregate as per Design (Cost of	2.436	M ³	642.67	1565.54	
	Sand	1.218	M ³	150.80	183.67	
	Cement	0.812	M ³	7582.00	6156.58	
	Total				7905.80	
	B. LABOUR					
	Head mason	0.5	nos	361.00	180.50	
	Mason Gr II	1.25	nos	321.00	401.25	
	Unskilled mazdoor	12	nos	268.00	3216.00	
	Bhistl	1	nos	265.00	265.00	
	Total				4062.75	
	C. HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	82.30			117.71	
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	43.75			62.58	
	Total				12148.84	
	Add Overhead charge & C.P@15%				1822.33	
					13971.17	
						4933.32
	Rate per cum	Say Rs		4933.30	Per M ³	
5.3.14	Providing and laying P.C.C. or R.C.C M-150 with nominal mix of (1:2:4) in wearing coat over deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put=2.832 Cum					
	A. MATERIALS					
	Coarse aggregates (10 mm to 5 mm) coarse aggregate as per Design (Cost of	2.548	M ³	528.94	1347.74	
	Sand	1.274	M ³	150.80	192.12	
	Cement	0.637	M ³	7582.00	4829.73	
	Total				6369.59	
	B. LABOUR					
	Head mason	0.5	nos	361.00	180.50	
	Mason Gr II	1.5	nos	321.00	481.50	
	Unskilled mazdoor	12	nos	268.00	3216.00	
	Bhistl	1	nos	265.00	265.00	
	Total				4143.00	
	C. HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	82.30			117.71	
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	43.75			62.58	
	Total				10692.88	
	Add Overhead charge & C.P@15%				1603.93	

				12296.81	
				4342.10	
		Say Rs		4342.10	Per M ³
5.3.15	Providing and laying P.C.C. or R.C.C.M-200 with nominal mix of (1:1.5:3) in wearing coat over deck slab with approved quality of graded coarse aggregate of required grade (as per design) and approved quality sand of requisite F.M washed and screened including necessary tools and plants, vibrating, curing, royalty etc. excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job as per specifications and direction of E/I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
A.	MATERIALS				
	Coarse aggregates (10 mm to 5 mm) (Cost of coarse aggregate as per Design)	2.435	M ³	528.94	1287.97
	Sand	1.217	M ³	150.80	183.52
	Cement	0.812	M ³	7582.00	6156.58
	Total				7628.08
B.	LABOUR				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	1.5	nos	321.00	481.50
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Total				4143.00
C.	HIRE CHARGES OF MACHINE				
	(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour=2.832/1.98	82.30			117.714
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour=2.832/1.98	43.75			62.58
	Total				11951.37
	Add Overhead charge & C.P@15%				1792.70
					13744.07
					4853.13
	Rate per cum	Say Rs		4853.10	Per M ³
5.3.16	Providing and laying dry pitching with precast cement concrete blocks of size 600 mm x 600 mm x 300 mm in M-75 with nominal mix of (1:4:8) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well as royalty complete job as per specifications and direction of E/I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
A.	MATERIALS				
	Coarse aggregates Gr III (Cost of coarse aggregate as per Design)	2.720	M ³	458.22	1246.36
	Sand	1.360	M ³	150.80	205.09
	Cement	0.34	M ³	7582.00	2577.88
	Total				4029.33
B.	LABOUR				
	Head mason	0.5	nos	361.00	180.50
	Mason Gr II	1	nos	321.00	321.00
	Unskilled mazdoor	12	nos	268.00	3216.00
	Bhisti	1	nos	265.00	265.00
	Unskilled mazdoor for placing blocks in position	4	nos	268.00	1072.00
	Total				5054.50
C	HIRE CHARGES OF MACHINE				
	(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour=2.832/1.98	82.30			117.714
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour=2.832/1.98	43.75			62.58
	Total				180.29
D	SHUTTERING CHARGES				
	Shuttering 25 blocks 25 mm thick mango planks with 10 % wastage 20.45 sqm 20.45x25/1000 Add 1 % for cost of nails and spikes	0.51	M ³	24199.00	12371.74
	LABOUR				
	Carpenter Gr II	3	Rs	321.00	963.00
	Unskilled mazdoor	8	Rs	268.00	2144.00
	Assuming 4 uses to calculate				18602.46
	Cost of shuttering for 2.832 cum = a/4				3900.61
	TOTAL(A+B+C+D)				13164.73
	Add Overhead charge & C.P@15%				1974.71
					15139.44
					5345.85

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Rate per cum		Say Rs	6346.80	Per M ³
5.3.17	Providing and laying dry pitching with precast cement concrete blocks of size 600 mm x 600 mm x 300 mm in M-100 with nominal mix of (1:3:6) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well as royalty and all complete as per specifications and direction of E/I.			
Unit :-Per Cum				
Taking Out put =2.832 Cum				
A	MATERIALS			
	Coarse aggregates Gr IV (Cost of coarse aggregate as per Design)	2.66	M ³	479.11
	Sand	1.33	M ³	150.80
	Cement	0.45	M ³	7582.00
	Total			4866.90
				A
B	LABOUR			
	Head mason	0.5	nos	361.00
	Mason Gr II	1	nos	321.00
	Unskilled mazdoor	12	nos	268.00
	Bhisti	1	nos	265.00
	Unskilled mazdoor for placing blocks in position	4	nos	268.00
	Total			5054.50
				B
C	HIRE CHARGES OF MACHINE			
	(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hour=2.832/1.98	82.30		117.71
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hour=2.832/1.98	43.75		62.58
	Total			180.29
				C
D	SHUTTERING CHARGES			
	Shuttering 25 blocks 25 mm thick mango planks with 10 % wastage 20.45 sqm 20.45x25/1000 0.51M3 @Rs11075.00	0.51	PerM ³	24199.00
	Add 1 % for cost of nails and spikes			123.72
	LABOUR			
	Carpenter Gr II	3	Rs	321.00
	Unskilled mazdoor	8	Rs	268.00
	Assuming 4 uses to calculate			15602.46
	Cost of shuttering for 2.832 cum = a/4			3900.61
	TOTAL=A+B+C+D			14022.30
	Add Overhead charge & C.P@15%			2103.35
				16125.65
				5694.08
	Rate per cum	Say Rs	6694.10	Per M ³
5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specifications and direction of E/I.			
Unit :-Per Sqm				
Taking Out put=9.30 Sqm				
A	MATERIALS			
	Local wood planks 38 mm thick =9.3 x 38 / 1000	0.353	cum	
	Add 5 % wastage	0.017	cum	
	Cost of 0.37 cum local wood planks	0.37	cum	24199.00
	Add cost for strutting and propping @ 10 % of above			895.36
	Total cost of wood			9848.99
	Assuming 4 uses to calculate	4	use	2462.25
	Cost of shuttering for 2.832 cum total cost/4			98.49
	Add 1 % for cost of nails and spikes on total cost of wood			2560.74
				A
B	LABOUR			
	Carpenter Gr II	1.5	nos	321.00
	Unskilled mazdoor	2.5	nos	268.00
				1151.50
				B
C	Carriage of materials			
	Cost of the carriage of materials from Godown and back to godown after use including loading unloading and stacking @ 1 % of Total cost of wooden materials			98.49
	TOTAL cost per 9.3 sqm =A+B+C			3810.73
	Add Overhead charge & C.P@15%			571.61
				4382.34
				471.22
	Rate pe sqm	Say Rs	471.20	Per M ²
5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.			
Unit :-Per Sqm				
Taking Out put=9.30 Sqm				
A	MATERIALS			
	Local wood planks 38 mm thick 9.3 x 38 / 1000 =0.353 cum	0.353	cum	

Handwritten signatures and initials: *Sam*, *Kishan*, *M*, *Sam*

	Add 5 % wastage	0.017	cum			
	Cost of 0.37 cum local wood planks	0.37	cum	24199.00	8953.63	
	Add cost for strutting and propping @ 10 % of above				895.35	
	Total cost of wood				9848.99	
	Assuming 4 uses to calculate	4	use		2462.25	
	Cost of shuttering for 2.832 cum total cost/A				98.49	
	Add 1 % for cost of nails and spikes on total cost of wood				2560.74	A
B	LABOUR					
	Carpenter Gr II	1.5	nos	321.00	481.50	
	Unskilled mazdoor	2.5	nos	268.00	670.00	
					1151.50	B
C	Carriage of materials					
	Cost of the carriage of materials from Godown and back to godown after use including loading unloading and stacking @ 1 % of Total cost of wooden materials				98.49	C
	TOTAL cost per 9.3 sqm =A+B+C				3810.73	
	Add Overhead charge & C.P@15%				571.61	
					4382.34	
						471.22
	Rate per sqm	Say Rs		471.22	Per M ²	
5.3.20	Providing centering including strutting,propping etc. and removing after use in deck slab as per specifications and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =22.326 Sqm					
	(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
A.	MATERIALS					
	a. 40 mm thick local wood planks 22.326 x40 / 1000					
	=0.85					
	Add 5 % for wastages					
	=0.04					
	=0.89	0.89	cum	24199.00		
	Assuming 4 uses to calculate					
	Cost of planks per use =0.89 x rate of local wood /4				5384.28	
	b. Assuming av. Height of slab from G.L=3.66 M					
	.150 mm sal bullah required =78 nos					
	Length of sal bullah =78 x3.66 =285.48 Mtr	285.48	M	67.02		
	(Assuming sal bullah to be used 10 times for centerins					
	=285.48 x Rate per Mtr / 10				1913.29	
	c. Salwood scantling required (75 mm x 63 mm size) =0.311 cum	0.311	cum	55843.00		
	(Assuming 10 uses)				1736.72	
	Cost per use =0.311 x Rate per Mtr/10				9034.28	
					90.34	
	Add 1 % for cost of nails and spikes				9124.62	(A)
B.	LABOUR					
	Carpenter Gr II	4	nos	321.00	1284.00	
	Unskilled mazdoor	7	nos	268.00	1876.00	
					3160.00	(B)
C.	Carriage of materials					
	Cost of the carriage of materials from Godown and back to godown after use including loading unloading and stacking @ 1 % of Total cost of wooden materials (A)				90.34	(C)
	TOTAL cost per 22.326 sqm =A+B+C				12374.97	
	Add Overhead charge & C.P@15%				1856.25	
					14231.21	
						637.43
	Rate per sqm	Say Rs		637.40	Per M ²	
5.3.21	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.					
	Unit :-Per M.T					
	Assumng 1.0CM.T					
	(a).Dia of bar 6mm					
(A).	Providing M.S reinforcement Plain	1.05	M.T	45903.00	48198.15	A
	(including 5 % wastage)				871.78	
(B).	i. Annealed wire	14	Kg	62.27	2899.00	
	ii Black smith Gr II	9	nos	321.00	361.00	
	iii. Head black smith	1	nos	415.00	3320.00	
	iv. Skilled mazdoor	8	nos	268.00	536.00	
	v Unskilled mazdoor	2	nos		7977.78	B
	Total of A+B				56175.93	
	Add Overhead charge & C.P@15%				8426.39	
					64602.32	64602.30
	Rate per MT	Say Rs		64602.30	Per M.T	
	(b)Dia. of bar above 6 mm to 12 mm					

(Handwritten signatures and initials)

(A)	Providing M.S reinforcement Plain (including 5% wastage)	1.05	M.T	45903.00	48198.15	A
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	415.00	3320.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					7977.78	B
	Total of A+B				56175.93	
	Add Overhead charge & C.P@15%				8426.39	
					64602.32	
						64602.30
	Rate per MT	Say Rs		64602.30	Per M.T	
(c) Dia of bar above 14 mm to 50 mm						
(A)	Providing M.S reinforcement Plain (including 5% wastage)	1.05	M.T	45903.00	48198.15	A
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	415.00	3320.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					7977.78	B
	Total of A+B				56175.93	
	Add Overhead charge & C.P@15%				8426.39	
					64602.32	
						64602.32
	Rate per MT	Say Rs		64602.30	Per M.T	
5.3.22	Providing M.S reinforcement (Tor steel) as per approved design , drawing, removal of rust, cutting, bending, blinding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.					
	Unit :-Per M.T Assuming 1.00 M.T					
(a).	T.M.T Fe-415 8 mm					
(A)	Providing M.S reinforcement Plain (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	415.00	3320.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(b).	T.M.T Fe-415 10 mm					
(A)	Providing M.S reinforcement Plain (including 5% wastage)	1.05	M.T	input	#VALUE!	
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	415.00	3320.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(c).	T.M.T Fe-415 12 mm					
(A)	Providing M.S reinforcement Plain (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	415.00	3320.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(d).	T.M.T Fe -415 16 mm					
(A)	Providing M.S reinforcement Plain (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	415.00	3320.00	

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	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(e).	T.M.T Fe -415- 20 mm	1.05	M.T	#VALUE!	#VALUE!	
(A).	Providing M.S reinforcement Plain (including 5% wastage)	14	Kg	62.27	871.78	
(B).	i. Annealed wire	9	nos	321.00	2889.00	
	ii Black smith Gr II	1	nos	361.00	361.00	
	iii. Head black smith	8	nos	415.00	3320.00	
	iv. Skilled mazdoor	2	nos	268.00	536.00	
	v Unskilled mazdoor				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(f).	T.M.T Fe -415- 25 mm	1.05	M.T	#VALUE!	#VALUE!	
(A).	Providing M.S reinforcement Plain (including 5% wastage)	14	Kg	62.27	871.78	
(B).	i. Annealed wire	9	nos	321.00	2889.00	
	ii Black smith Gr II	1	nos	361.00	361.00	
	iii. Head black smith	8	nos	415.00	3320.00	
	iv. Skilled mazdoor	2	nos	268.00	536.00	
	v Unskilled mazdoor				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(g).	T.M.T Fe-415 28 mm	1.05	M.T	#VALUE!	#VALUE!	
(A).	Providing M.S reinforcement Plain(including 5% wastage)	14	Kg	62.27	871.78	
(B).	i. Annealed wire	9	nos	321.00	2889.00	
	ii Black smith Gr II	1	nos	361.00	361.00	
	iii. Head black smith	8	nos	415.00	3320.00	
	iv. Skilled mazdoor	2	nos	268.00	536.00	
	v Unskilled mazdoor				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(h).	T.M.T Fe -415 32 mm	1.05	M.T	#VALUE!	#VALUE!	
(A).	Providing M.S reinforcement Plain (including 5% wastage)	14	Kg	62.27	871.78	
(B).	i. Annealed wire	9	nos	321.00	2889.00	
	ii Black smith Gr II	1	nos	361.00	361.00	
	iii. Head black smith	8	nos	415.00	3320.00	
	iv. Skilled mazdoor	2	nos	268.00	536.00	
	v Unskilled mazdoor				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(i).	T.M.T Fe -500 8 mm	1.05	M.T	43644.00	45826.20	
(A).	Providing M.S reinforcement Plain (including 5% wastage)	14	Kg	62.27	871.78	
(B).	i. Annealed wire	9	nos	321.00	2889.00	
	ii Black smith Gr II	1	nos	361.00	361.00	
	iii. Head black smith	8	nos	415.00	3320.00	
	iv. Skilled mazdoor	2	nos	268.00	536.00	
	v Unskilled mazdoor				53803.98	
	Add Overhead charge & C.P@15%				8070.60	
					61874.58	
		Say Rs		61874.60	Per M.T	61874.58
(j).	T.M.T Fe -500 10 mm	1.05	M.T	42712.00	44847.60	
(A).	Providing M.S reinforcement Plain (including 5% wastage)	14	Kg	62.27	871.78	
(B).	i. Annealed wire	9	nos	321.00	2889.00	
	ii Black smith Gr II	1	nos	361.00	361.00	
	iii. Head black smith	8	nos	415.00	3320.00	
	iv. Skilled mazdoor	2	nos	268.00	536.00	
	v Unskilled mazdoor				52825.38	
	Add Overhead charge & C.P@15%				7923.81	
					60749.19	

					Say Rs		60749.20	Per M.T	60749.19
(k).	T.M.T Fe -500 12 mm								
(A).	Providing M.S reinforcement Plain (including 5 % wastage)		1.05	M.T	42119.00	44224.95			
(B).	I. Annealed wire		14	Kg	62.27	871.78			
	ii Black smith Gr II		9	nos	321.00	2889.00			
	iii. Head black smith		1	nos	361.00	361.00			
	iv. Skilled mazdoor		8	nos	415.00	3320.00			
	v Unskilled mazdoor		2	nos	268.00	536.00			
	Add Overhead charge & C.P@15%					52202.73			
						7830.41			
						60033.14			
									60033.14
			Say Rs		60033.10		Per M.T		
(l).	T.M.T Fe -500 16 mm								
(A).	Providing M.S reinforcement Plain (including 5 % wastage)		1.05	M.T	42119.00	44224.95			
(B).	I. Annealed wire		14	Kg	62.27	871.78			
	ii Black smith Gr II		9	nos	321.00	2889.00			
	iii. Head black smith		1	nos	361.00	361.00			
	iv. Skilled mazdoor		8	nos	415.00	3320.00			
	v Unskilled mazdoor		2	nos	268.00	536.00			
	Add Overhead charge & C.P@15%					52202.73			
						7830.41			
						60033.14			
									60033.14
			Say Rs		60033.10		Per M.T		
(m).	T.M.T Fe -500 20 mm								
(A).	Providing M.S reinforcement Plain (including 5 % wastage)		1.05	M.T	42119.00	44224.95			
(B).	I. Annealed wire		14	Kg	62.27	871.78			
	ii Black smith Gr II		9	nos	321.00	2889.00			
	iii. Head black smith		1	nos	361.00	361.00			
	iv. Skilled mazdoor		8	nos	415.00	3320.00			
	v Unskilled mazdoor		2	nos	268.00	536.00			
	Add Overhead charge & C.P@15%					52202.73			
						7830.41			
						60033.14			
									60033.14
			Say Rs		60033.10		Per M.T		
(n).	T.M.T Fe -500 25 mm								
(A).	Providing M.S reinforcement Plain (including 5 % wastage)		1.05	M.T	42119.00	44224.95			
(B).	I. Annealed wire		14	Kg	62.27	871.78			
	ii Black smith Gr II		9	nos	321.00	2889.00			
	iii. Head black smith		1	nos	361.00	361.00			
	iv. Skilled mazdoor		8	nos	415.00	3320.00			
	v Unskilled mazdoor		2	nos	268.00	536.00			
	Add Overhead charge & C.P@15%					52202.73			
						7830.41			
						60033.14			
									60033.14
			Say Rs		60033.10		Per M.T		
(o).	T.M.T Fe -500- 28 mm								
(A).	Providing M.S reinforcement Plain (including 5 % wastage)		1.05	M.T	42712.00	44847.60			
(B).	I. Annealed wire		14	Kg	62.27	871.78			
	ii Black smith Gr II		9	nos	321.00	2889.00			
	iii. Head black smith		1	nos	361.00	361.00			
	iv. Skilled mazdoor		8	nos	415.00	3320.00			
	v Unskilled mazdoor		2	nos	268.00	536.00			
	Add Overhead charge & C.P@15%					52825.38			
						7923.81			
						60749.19			
									60749.19
			Say Rs		60749.20		Per M.T		
(p).	T.M.T Fe -500 32 mm								
(A).	Providing M.S reinforcement Plain (including 5 % wastage)		1.05	M.T	42712.00	44847.60			
(B).	I. Annealed wire		14	Kg	62.27	871.78			
	ii Black smith Gr II		9	nos	321.00	2889.00			
	iii. Head black smith		1	nos	361.00	361.00			
	iv. Skilled mazdoor		8	nos	415.00	3320.00			
	v Unskilled mazdoor		2	nos	268.00	536.00			
	Add Overhead charge & C.P@15%					52825.38			
						7923.81			
						60749.19			
									60749.19
			Say Rs		60749.20		Per M.T		

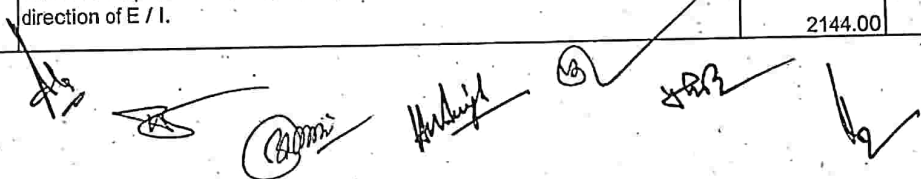
(Chommi)

	Say Rs		60749.20	Per M.T
(q) T.M.T Fe -500 36 mm				
(A) Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	Input	#VALUE!
(B) i. Annealed wire	14	Kg	62.27	871.78
ii Black smith Gr II	9	nos	321.00	2889.00
iii Head black smith	1	nos	361.00	361.00
iv. Skilled mazdoor	8	nos	415.00	3320.00
v Unskilled mazdoor	2	nos	268.00	536.00
				#VALUE!
Add Overhead charge & C.P@15%				#VALUE!
				#VALUE!
Rate per MT	Say Rs		#VALUE!	Per M.T

5.4 MASONRY WORK

Sr.No.	Item	Rate	Unit
5.4.1	Brick work in designation 100 A Brick with cement mortar (1 : 3) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4811.30	Per M ³
5.4.2	Brick work in designation 100 A Brick with cement mortar (1 : 4) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4662.30	Per M ³
5.4.3	Brick work in designation 100 A Brick with cement mortar (1 : 5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4540.90	Per M ³
5.4.4	Brick work in designation 100 A Brick with cement mortar (1 : 6) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4452.80	Per M ³
5.4.5	Brick work in designation 100 A Brick with cement mortar (1:3) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4920.10	Per M ³
5.4.6	Brick work in designation 100 A Brick with cement mortar (1 : 4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including Royalty as per specification and direction of E / I.	4771.10	Per M ³
5.4.7	Brick work in designation 100 A Brick with cement mortar (1 : 5) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4649.80	Per M ³
5.4.8	Brick work in designation 100 A Brick with cement mortar (1 : 6) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	4561.60	Per M ³
5.4.9	Providing rough dressed random rubble stone masonry in cement mortar (1:3) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E/I.	2351.00	Per M ³
5.4.10	Providing rough dressed random rubble stone masonry in cement mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	2139.80	Per M ³

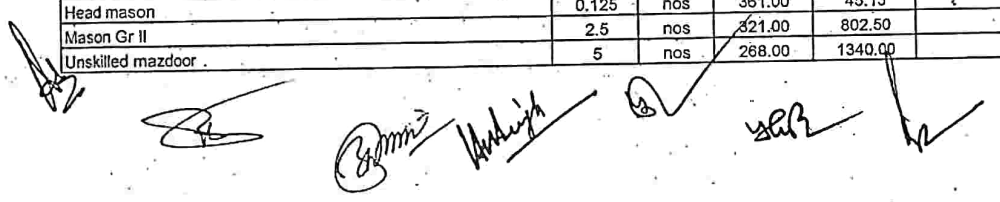
5.4.11	Providing rough dressed random rubble stone masonry in cement mortar (1:5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	2008.00	Per M ³
5.4.12	Providing rough dressed random rubble/coarse stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	2487.10	Per M ³
5.4.13	Providing rough dressed random rubble/coarse stone masonry in cement mortar (1 : 4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal, wherever required , all complete job including royalty as per specification and direction of E / I.	2275.80	Per M ³
5.4.14	Providing rough dressed random rubble/course stone masonry in cement mortar (1:5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal including royalty etc. wherever required all complete job as per specification and direction of E / I.	2144.00	Per M ³
5.4.15	Providing rough dressed coarse rubble stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	2487.10	Per M ³
5.4.16	Providing rough dressed coarse rubble stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2275.80	Per M ³
5.4.17	Providing rough dressed coarse stone masonry in cement mortar (1:5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2144.00	Per M ³



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5.4 MASONRY WORK

Sl.No.	Description	Quantity	Unit	Rate	Amount	Ref.
5.4.1	Brick work in designation 100 A Brick with cement mortar (1 : 3) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Bricks	1150	nos	6.21	7146.10	M-11
	Sand	0.84	cum	150.80	126.67	M-004
	Cement	0.28	cum	7582.00	2122.96	M-1
	Total				9395.73	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2.5	nos	321.00	802.50	
	Unskilled mazdoor	5	nos	268.00	1340.00	
	Bhisti	1	nos	265.00	265.00	
	Total				2452.63	
	Total				11848.36	
	Add Overhead charge & C.P@15%				1777.25	
					13625.61	
						4811.30
	Rate per cum	Say Rs		4811.30	Per M ³	
5.4.2	Brick work in designation 100 A Brick with cement mortar (1 : 4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Bricks	1150	nos	6.21	7146.10	
	Sand	0.92	cum	150.80	138.74	
	Cement	0.23	cum	7582.00	1743.86	
	Total				9028.70	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2.5	nos	321.00	802.50	
	Unskilled mazdoor	5	nos	268.00	1340.00	
	Bhisti	1	nos	265.00	265.00	
	Total				2452.63	
	Total				11481.32	
	Add Overhead charge & C.P@15%				1722.20	
					13203.52	
						4662.26
	Rate per cum	Say Rs		4662.30	Per M ³	
5.4.3	Brick work in designation 100 A Brick with cement mortar (1 : 5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put = 2.832 Cum					
	Materials					
	Bricks	1150	nos	6.21	7146.10	
	Sand	0.95	cum	150.80	143.26	
	Cement	0.19	cum	7582.00	1440.58	
	Total				8729.94	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2.5	nos	321.00	802.50	
	Unskilled mazdoor	5	nos	268.00	1340.00	

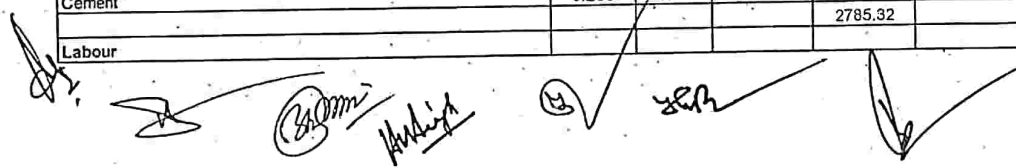


	Bhisti	1	nos	265.00	265.00	
	Total				2452.63	
	Add Overhead charge & C.P@15%				1677.38	
					12859.95	
						4540.94
	Rate per cum	Say Rs		4540.94	Per M ²	
5.4.4	Brick work in designation 100 A Brick with cement mortar (1 : 6) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Bricks	1150	nos	6.214	7146.10	
	Sand	0.968	cum	150.80	145.97	
	Cement	0.161	cum	7582.00	1220.70	
					8512.78	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2.5	nos	321.00	802.50	
	Unskilled mazdoor	5	nos	268.00	1340.00	
	Bhisti	1	nos	265.00	265.00	
					2452.63	
					10965.40	
	Add Overhead charge & C.P@15%				1644.81	
					12610.21	
						4452.76
	Rate per cum	Say Rs		4452.80	Per M ³	
5.4.5	Brick work in designation 100 A Brick with cement mortar (1 : 3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. all complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Bricks	1150	nos	6.214	7146.10	
	Sand	0.84	cum	150.80	126.67	
	Cement	0.28	cum	7582.00	2122.96	
					9395.73	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2.5	nos	321.00	802.50	
	Unskilled mazdoor	6	nos	268.00	1608.00	
	Bhisti	1	nos	265.00	265.00	
					2720.63	
					12116.36	
	Add Overhead charge & C.P@15%				1817.45	
					13933.81	
						4920.13
	Rate per cum	Say Rs		4920.10	Per M ³	
5.4.6	Brick work in designation 100 A Brick with cement mortar (1 : 4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Bricks	1150	nos	6.214	7146.10	
	Sand	0.92	cum	150.80	138.74	
	Cement	0.23	cum	7582.00	1743.86	
					9028.70	

Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2.5	nos	321.00	802.50	
Unskilled mazdoor	6	nos	268.00	1608.00	
Bhisti	1	nos	265.00	265.00	
				2720.63	
				11749.32	
Add Overhead charge & C.P@15%				1762.40	
				13511.72	
					4771.09
Rate per cum		Say Rs	4771.10	Per M ³	
5.4.7	Brick work in designation 100 A Brick with cement mortar (1 : 5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required Including royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Cum					
Taking Out put =2.832 Cum					
Materials					
Bricks	1150	nos	6.214	7146.10	
Sand	0.95	cum	150.80	143.26	
Cement	0.19	cum	7582.00	1440.58	
				8729.94	
Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2.5	nos	321.00	802.50	
Unskilled mazdoor	6	nos	268.00	1608.00	
Bhisti	1	nos	265.00	265.00	
				2720.63	
				11450.57	
Add Overhead charge & C.P@15%				1717.58	
				13168.15	
					4649.77
Rate per cum		Say Rs	4649.80	Per M ³	
5.4.8	Brick work in designation 100 A Brick with cement mortar (1 : 6) in superstructure with approved quality of coarse sand of requisite F.M. ,washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. all complete job as per specification and direction of E / I.				
Unit :-Per Cum					
Taking Out put =2.832 Cum					
Materials					
Bricks	1150	nos	6.214	7146.10	
Sand	0.968	cum	150.80	145.97	
Cement	0.161	cum	7582.00	1220.70	
				8512.78	
Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2.5	nos	321.00	802.50	
Unskilled mazdoor	6	nos	268.00	1608.00	
Bhisti	1	nos	265.00	265.00	
				2720.63	
				11233.40	
Add Overhead charge & C.P@15%				1685.01	
				12918.41	
					4561.59
Rate per cum		Say Rs	4561.60	Per M ³	
5.4.9	Providing rough dressed random rubble stone masonry in cement mortar (1:3) In foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc.complete job as per specification and direction of E / I.				

Unit :-Per Cum					
Taking Out put =2.832 Cum					
Materials					
Stone boulder	2.832	cum	288.85	818.02	
Sand	1.050	cum	150.80	158.34	
Cement	0.350	cum	7582.00	2653.70	
				3630.06	
Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2	nos	321.00	642.00	
Unskilled mazdoor	5	nos	268.00	1340.00	
Bhisti	0.5	nos	265.00	132.50	
				2159.63	
				5789.69	
Add Overhead charge & C.P@15%				868.45	
				6658.14	
					2351.04
Rate per cum		Say Rs	2351.00	Per M ³	
5.4.10	Providing rough dressed random rubble stone masonry in cement mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc.complete job as per specification and direction of E / I.				
Unit :-Per Cum					
Taking Out put =2.832 Cum					
Materials					
Stone boulder	2.832	cum	288.85	818.02	
Sand	1.120	cum	150.80	168.90	
Cement	0.280	cum	7582.00	2122.96	
				3109.88	
Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2	nos	321.00	642.00	
Unskilled mazdoor	5	nos	268.00	1340.00	
Bhisti	0.5	nos	265.00	132.50	
				2159.63	
				5269.50	
Add Overhead charge & C.P@15%				790.43	
				6059.93	
					2139.81
Rate per cum		Say Rs	2139.80	Per M ³	
5.4.11	Providing rough dressed random rubble stone masonry in cement mortar (1:5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc.complete job as per specification and direction of E / I.				
Unit :-Per Cum					
Taking Out put =2.832 Cum					
Materials					
Stone boulder	2.832	cum	288.85	818.02	
Sand	1.180	cum	150.80	177.94	
Cement	0.236	cum	7582.00	1789.35	
				2785.32	
Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2	nos	321.00	642.00	
Unskilled mazdoor	5	nos	268.00	1340.00	
Bhisti	0.5	nos	265.00	132.50	
				2159.63	
				4944.94	
Add Overhead charge & C.P@15%				741.74	
				5686.69	
					2008.01
Rate per cum		Say Rs	2008.00	Per M ³	

5.4.12	Providing rough dressed random rubble/coarse stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
	Materials				
	Stone boulder	2.832	cum	288.85	818.02
	Sand	1.050	cum	150.80	158.34
	Cement	0.350	cum	7582.00	2653.70
					3630.06
	Labour				
	Head mason	0.125	nos	361.00	45.13
	Mason Gr II	2	nos	321.00	642.00
	Unskilled mazdoor	6.25	nos	268.00	1675.00
	Bhisti	0.5	nos	265.00	132.50
					2494.63
					6124.69
	Add Overhead charge & C.P@15%				918.70
					7043.39
					2487.07
	Rate per cum	Say Rs		2487.10	Per M ³
5.4.13	Providing rough dressed random rubble/coarse stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
	Materials				
	Stone boulder	2.832	cum	288.85	818.02
	Sand	1.120	cum	150.80	168.90
	Cement	0.280	cum	7582.00	2122.96
					3109.88
	Labour				
	Head mason	0.125	nos	361.00	45.13
	Mason Gr II	2	nos	321.00	642.00
	Unskilled mazdoor	6.25	nos	268.00	1675.00
	Bhisti	0.5	nos	265.00	132.50
					2494.63
					5604.50
	Add Overhead charge & C.P@15%				840.68
					6445.18
					2275.84
	Rate per cum	Say Rs		2275.80	Per M ³
5.4.14	Providing rough dressed random rubble /coarse stone masonry in cement mortar (1:5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.				
	Unit :-Per Cum				
	Taking Out put =2.832 Cum				
	Materials				
	Stone boulder	2.832	cum	288.85	818.02
	Sand	1.180	cum	150.80	177.94
	Cement	0.236	cum	7582.00	1789.35
					2785.32
	Labour				



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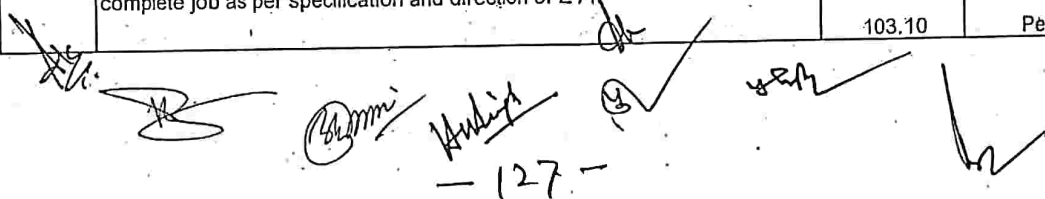
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2	nos	321.00	642.00	
	Unskilled mazdoor	6.25	nos	268.00	1675.00	
	Bhisti	0.5	nos	265.00	132.50	
					2494.63	
					5279.94	
	Add Overhead charge & C.P@15%				791.99	
					6071.94	
						2144.05
	Rate per cum	Say Rs		2144.00	Per M ³	
5.4.15	Providing rough dressed coarse rubble stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curring, scaffolding and its removal wherever required including royalty etc complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Stone boulder	2.832	cum	288.85	818.02	
	Sand	1.050	cum	150.80	158.34	
	Cement	0.350	cum	7582.00	2653.70	
					3630.06	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2	nos	321.00	642.00	
	Unskilled mazdoor	6.25	nos	268.00	1675.00	
	Bhisti	0.5	nos	265.00	132.50	
					2494.63	
					6124.69	
	Add Overhead charge & C.P@15%				918.70	
					7043.39	
						2487.07
	Rate per cum	Say Rs		2487.10	Per M ³	
5.4.16	Providing rough dressed coarse rubble stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curring, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Stone boulder	2.832	cum	288.85	818.02	
	Sand	1.120	cum	150.80	168.90	
	Cement	0.280	cum	7582.00	2122.96	
					3109.88	
	Labour					
	Head mason	0.125	nos	361.00	45.13	
	Mason Gr II	2	nos	321.00	642.00	
	Unskilled mazdoor	6.25	nos	268.00	1675.00	
	Bhisti	0.5	nos	265.00	132.50	
					2494.63	
					5604.50	
	Add Overhead charge & C.P@15%				840.68	
					6445.18	
						2275.84
	Rate per cum	Say Rs		2275.80	Per M ³	
5.4.17	Providing rough dressed coarse stone masonry in cement mortar (1:5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curring, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	Stone boulder	2.832	cum	288.85	818.02	

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Sand	1.180	cum	150.80	177.94	
Cement	0.236	cum	7582.00	1789.35	
				2785.32	
Labour					
Head mason	0.125	nos	361.00	45.13	
Mason Gr II	2	nos	321.00	642.00	
Unskilled mazdoor	6.25	nos	268.00	1675.00	
Bhisti	0.5	nos	265.00	132.50	
				2494.63	
				5279.94	
Add Overhead charge & C.P@15%				791.99	
				6071.94	
					2144.05
Rate per cum	Say Rs		2144.00	Per M ³	

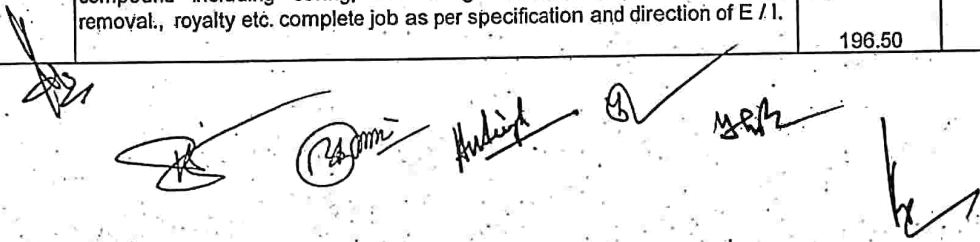
5.5. PLASTER WORK

Sr.No.	Item	Rate	Unit
5.5.1	Providing 12 mm thick cement plaster (1: 3) with approved quality sand of requisite F.M, washed and screened including curing, scaffolding wherever required, and its removal, royalty etc. all complete job as per specification and direction of E / I.	148.50	Per M ²
5.5.2	Providing 12 mm thick cement plaster (1: 4) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.	140.20	Per M ²
5.5.3	Providing 12 mm thick cement plaster (1:5) with approved quality sand of requisite F.M,washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.	134.60	Per M ²
5.5.4	Providing 25 mm thick cement plaster (1:3) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.	243.10	Per M ²
5.5.5	Providing 25 mm thick cement plaster (1:4) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever and its removal, royalty etc. complete job as per specification and direction of E / I.	227.60	Per M ²
5.5.6	Providing 25 mm thick cement plaster (1:5) with approved quality sand of requisite F.M,washed and screened including curing, scaffolding wherever and its removal , royalty etc. complete job as per specification and direction of E / I.	215.00	Per M ²
5.5.7	Providing 12 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal , royalty etc.complete job as per specification and direction of E / I.	158.20	Per M ²
5.5.8	Providing 25 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.	262.50	Per M ²
5.5.9	Providing 25 mm thick water proof cement plaster (1:4) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal , royalty etc. complete job as per specification and direction of E / I.	246.90	Per M ²
5.5.10	Providing 1.5 mm thick cement punning including curing complete job as per specification and direction of E / I.	44.00	Per M ²
5.5.11	Providing cement ruled pointing (1:3) with approved quality sand of requisite F.M, washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal., royalty etc. complete job as per specification and direction of E / I.	139.50	Per M ²
5.5.12	Providing cement flush pointing (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.	103.10	Per M ²



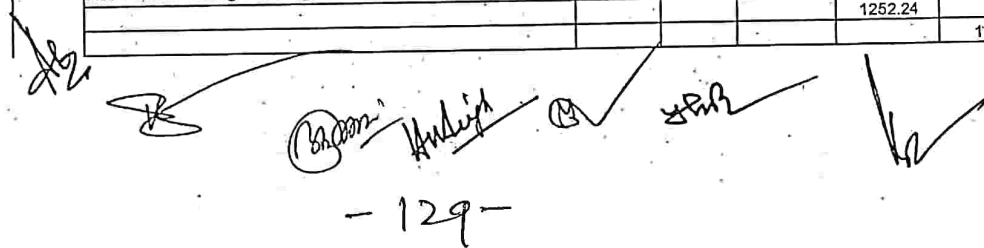
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5.5.13	Providing cement truck pointing (1:3) on Brick work with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.	152.10	Per M ²
5.5.14	Providing cement truck pointing (1:3) on stone masonry with approved quality sand of requisite F.M , washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal., royalty etc. complete job as per specification and direction of E / I.	196.50	Per M ²


 A series of handwritten signatures and initials are present below the table. From left to right, they include: a signature that appears to be 'S.S.', a signature that appears to be 'R.S.', a signature that appears to be 'R.S.', a signature that appears to be 'R.S.', a signature that appears to be 'R.S.', and a signature that appears to be 'R.S.'.

5.5. PLASTER WORK

Sl.No.	Description	Quantity	Unit	Rate	Amount	
5.5.1	Providing 12 mm thick cement plaster (1:3) with approved quality of sand of requisite F.M, washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	Materials					
	Cement	0.043	cum	7582.00	326.03	
	Sand	0.129	cum	150.80	19.45	
	Total				345.48	
	Labour					
	Mason Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	1.5	nos	268.00	402.00	
	Bhisti	0.5	nos	265.00	132.50	
	Total				855.50	
					1200.98	
	Add Overhead charge & C.P@15%				180.15	
					1381.13	
						148.51
	Rate per sqm	Say Rs		148.50	Per M ²	
5.5.2	Providing 12 mm thick cement plaster (1:4) with approved quality sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	Materials					
	Cement	0.034	cum	7582.00	257.79	
	Sand	0.136	cum	150.80	20.51	
	Total				278.30	
	Labour					
	Mason Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	1.5	nos	268.00	402.00	
	Bhisti	0.5	nos	265.00	132.50	
	Total				855.50	
					1133.80	
	Add Overhead charge & C.P@15%				170.07	
					1303.87	
						140.20
	Rate per sqm	Say Rs		140.20	Per M ²	
5.5.3	Providing 12 mm thick cement plaster (1:5) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	Materials					
	Cement	0.028	cum	7582.00	212.30	
	Sand	0.140	cum	150.80	21.11	
	Total				233.41	
	Labour					
	Mason Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	1.5	nos	268.00	402.00	
	Bhisti	0.5	nos	265.00	132.50	
	Total				855.50	
					1088.91	
	Add Overhead charge & C.P@15%				163.34	
					1252.24	
						134.65

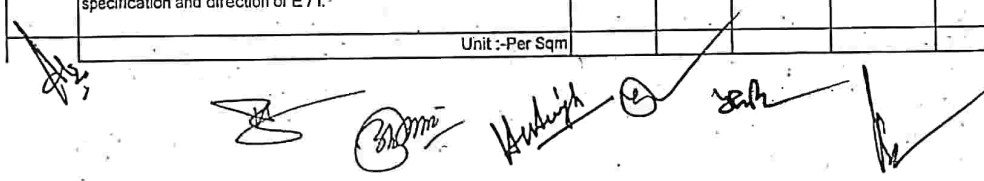


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Rate per sqm	Say Rs		134.60	Per M ²	
5.5.4	Providing 25 mm thick cement plaster (1: 3) with approved quality, sand of requisite F.M . Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.085	cum	7582.00	644.47	
Sand	0.250	cum	150.80	37.70	
Total				682.17	
Labour					
Mason Gr II	1.5	nos	321.00	481.50	
Unskilled mazdoor	2.5	nos	268.00	670.00	
Bhisti	0.5	nos	265.00	132.50	
Total				1284.00	
Add Overhead charge & C.P@15%					
294.93					
2261.10					
243.13					
Rate per sqm	Say Rs		243.10	Per M ²	
5.5.5	Providing 25 mm thick cement plaster (1: 4) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever and its removal, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.068	cum	7582.00	515.58	
Sand	0.272	cum	150.80	41.02	
Total				556.59	
Labour					
Mason Gr II	1.5	nos	321.00	481.50	
Unskilled mazdoor	2.5	nos	268.00	670.00	
Bhisti	0.5	nos	265.00	132.50	
Total				1284.00	
Add Overhead charge & C.P@15%					
276.09					
2116.68					
227.60					
Rate per sqm	Say Rs		227.60	Per M ²	
5.5.6	Providing 25 mm thick cement plaster (1: 5) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever and its removal, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.056	cum	7582.00	424.59	
Sand	0.200	cum	150.80	30.16	
Total				454.75	
Labour					
Mason Gr II	1.5	nos	321.00	481.50	
Unskilled mazdoor	2.5	nos	268.00	670.00	
Bhisti	0.5	nos	265.00	132.50	
Total				1284.00	
Add Overhead charge & C.P@15%					
1738.75					
260.81					
1999.56					
215.01					
Rate per sqm	Say Rs		215.00	Per M ²	

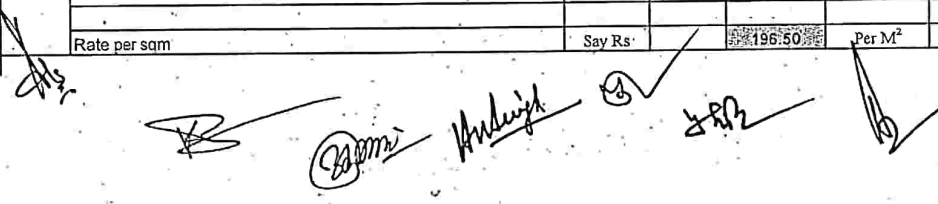
5.5.7	Providing 12 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M., washed and screened and stander water proofing compound including curing; scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.				
	Unit :-Per Sqm				
	Taking Out put =9.30 Sqm				
	Materials				
	Cement	0.043	cum	7582.00	326.03
	Sand	0.129	cum	150.80	19.45
	Cost of water proofing compound (Cico)	2.4	Kg	32.58	78.19
	Total				423.67
	Labour				
	Mason Gr II	1	nos	321.00	321
	Unskilled mazdoor	1.5	nos	268.00	402
	Bhisti	0.5	nos	265.00	132.5
	Total				855.5
					1279.17
	Add Overhead charge & C.P@15%				191.88
					1471.05
					158.18
	Rate per sqm	Say Rs		158.20	Per M ²
5.5.8	Providing 25 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.				
	Unit :-Per Sqm				
	Taking Out put =9.30 Sqm				
	Materials				
	Cement	0.085	cum	7582.00	644.47
	Sand	0.250	cum	150.80	37.70
	Cost of water proofing compound (Cico)	4.8	Kg	32.58	156.38
	Total				838.55
	Labour				
	Mason Gr II	1.5	nos	321.00	481.50
	Unskilled mazdoor	2.5	nos	268.00	670.00
	Bhisti	0.5	nos	265.00	132.50
	Total				1284.00
					2122.55
	Add Overhead charge & C.P@15%				318.38
					2440.94
					262.47
	Rate per sqm	Say Rs		262.50	Per M ²
5.5.9	Providing 25 mm thick water proof cement plaster (1:4) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.				
	Unit :-Per Sqm				
	Taking Out put =9.30 Sqm				
	Materials				
	Cement	0.068	cum	7582.00	515.58
	Sand	0.272	cum	150.80	41.02
	Cost of water proofing compound (Cico)	4.8	Kg	32.58	156.38
	Total				712.98
	Labour				
	Mason Gr II	1.5	nos	321.00	481.50
	Unskilled mazdoor	2.5	nos	268.00	670.00
	Bhisti	0.5	nos	265.00	132.50
	Total				1284.00
					1996.98
	Add Overhead charge & C.P@15%				299.55
					2296.52
					246.94

Rate per sqm	Say Rs		246.90	Per M ²	
5.5.10	Providing 1.5 mm thick. cement punning including curing, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.014	cum	7582.00	106.15	
Labour					
Head Mason	0.0625	nos	361.00	22.56	
Mason Gr II	0.5	nos	321.00	160.50	
Unskilled mazdoor	0.25	nos	268.00	67.00	
Total				250.06	
Add Overhead charge & C.P@15%					
				53.43	
				409.64	
					44.05
Rate per sqm	Say Rs		44.00	Per M ²	
5.5.11	Providing cement ruled pointing (1:3) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.014	cum	7582.00	106.15	
Sand	0.042	cum	150.80	6.33	
Total				112.48	
Labour					
Mason Gr II	1.5	nos	321.00	481.50	
Unskilled mazdoor	1.5	nos	268.00	402.00	
Bhisti	0.5	nos	265.00	132.50	
Total				1016.00	
Add Overhead charge & C.P@15%					
				128.48	
				169.27	
				1297.75	
					139.54
Rate per sqm	Say Rs		139.50	Per M ²	
5.5.12	Providing cement flush pointing (1:3) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.014	cum	7582.00	106.15	
Sand	0.042	cum	150.80	6.33	
Total				112.48	
Labour					
Mason Gr II	1	nos	321.00	321.00	
Unskilled mazdoor	1	nos	268.00	268.00	
Bhisti	0.5	nos	265.00	132.50	
Total				721.50	
Add Overhead charge & C.P@15%					
				833.98	
				125.10	
				959.08	
					103.13
Rate per sqm	Say Rs		103.10	Per M ²	
5.5.13	Providing cement truck pointing (1:3) on Brick work with approved quality sand of requisite F.M washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.				
Unit :-Per Sqm					



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Taking Out put =9.30 Sqm					
Materials					
Cement	0.021	cum	7582.00	159.22	
Sand	0.063	cum	150.80	9.50	
Total				168.72	
Labour					
Head Mason	0.125	nos	361.00	45.13	
Mason Gr II	1.5	nos	321.00	481.50	
Unskilled mazdoor	1.5	nos	268.00	402.00	
Bhisti	0.5	nos	265.00	132.50	
Total				1061.13	
				1229.85	
Add Overhead charge & C.P@15%				184.48	
				1414.32	
					152.08
Rate per sqm	Say Rs		152.10	Per M ²	
5.5.14	Providing cement truck pointing (1:3) on stone masonry with approved quality sand of requisite F.M, washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E/I.				
Unit :-Per Sqm					
Taking Out put =9.30 Sqm					
Materials					
Cement	0.032	cum	7582.00	242.62	
Sand	0.096	cum	100.80	9.68	
Total				252.30	
Labour					
Mason Gr II	2.5	nos	321.00	802.50	
Unskilled mazdoor	1.5	nos	268.00	402.00	
Bhisti	0.5	nos	265.00	132.50	
Total				1337.00	
				1589.30	
Add Overhead charge & C.P@15%				238.40	
				1827.70	
					196.53
Rate per sqm	Say Rs		196.50	Per M ²	



5.6 HUME PIPE LAYING

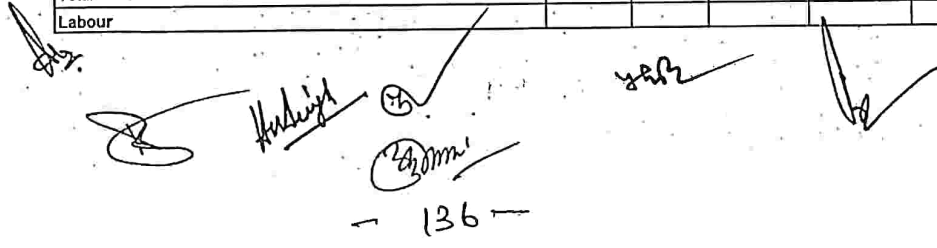
Sr.No.	Item	Rate	Unit
5.6.1	Labour for laying, fitting and fixing NP ₂ pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E / I.		
5.6.1.1	150 mm dia NP ₂ H.P	155.60	Per M
5.6.1.2	225 mm dia NP ₂ H.P	240.80	Per M
5.6.1.3	300 mm dia NP ₂ H.P	284.40	Per M
5.6.1.4	450 mm dia NP ₂ H.P	442.40	Per M
5.6.1.5	600 mm dia NP ₂ H.P	547.90	Per M
5.6.1.6	700 mm or 800 mm dia NP ₂ H.P	599.30	Per M
5.6.1.7	900 mm dia or 1000 mm dia NP ₂ H.P	722.90	Per M
5.6.1.8	1200 mm dia NP ₂ H.P	951.10	Per M
5.6.2	Labour for laying, fitting and fixing NP ₂ pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E / I. (Hume pipe available within a lead of 40 M)		
5.6.2.1	450 mm dia NP ₃ H.P	482.30	Per M
5.6.2.2	600 mm dia NP ₃ H.P	597.40	Per M
5.6.2.3	700 mm or 800 mm dia NP ₃ H.P	763.60	Per M
5.6.2.4	900 mm dia or 100 mm dia NP ₃ H.P	1106.80	Per M
5.6.2.5	1200 mm dia NP ₂ H.P	1327.20	Per M

5.6 HUME PIPE LAYING

Sl.No.	Description	quantity	Unit	Rate	Amount	Ref.
5.6.1	Labour for laying, fitting and fixing NP ₂ pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E / I.					
5.6.1.1	150 mm dia NP ₂ H.P					
	Unit :-Per M					
	Taking Out put =8.0M					
	(Assuming 4 pipes of 2 M length and three collars)					
	Materials					
	Cement	0.011	cum	7582.00	83.40	
	Sand	0.011	cum	150.80	1.66	
	Jute	1.5	Kg	20.44	30.66	
	Total				115.72	
	Labour					
	Head Mason	0.5	nos	361.00	180.50	
	Unskilled mazdoor	2.25	nos	268.00	603.00	
	Fitter Gr I	0.5	nos	367.00	183.50	
	Total				967.00	
					1082.72	
	Add Overhead charge & C.P@15%				162.41	
					1245.13	
						155.64
	Rate per M	Say	Rs	155.60	Per M	
5.6.1.2	225 mm dia NP ₂ H.P					
	Unit :-Per M					
	Taking Out put =8.0M					
	(Assuming 4 pipes of 2 M length and three collars)					
	Materials					
	Cement	0.014	cum	7582.00	106.15	
	Sand	0.014	cum	150.80	2.11	
	Jute	2	Kg	20.44	40.88	
	Total				149.14	
	Labour					
	Head Mason	0.75	nos	361.00	270.75	
	Unskilled mazdoor	4	nos	268.00	1072.00	
	Fitter Gr I	0.5	nos	367.00	183.50	
	Total				1526.25	
					1675.39	
	Add Overhead charge & C.P@15%				251.31	
					1926.70	
						240.84
	Rate per M	Say	Rs	240.80	Per M	
5.6.1.3	300 mm dia NP ₂ H.P					
	Unit :-Per M					
	Taking Out put =10.0M					
	(Assuming 4 pipes of 2.5 mtr length and three collars)					
	Materials					
	Cement	0.023	cum	7582.00	174.39	
	Sand	0.023	cum	150.80	3.47	
	Jute	2.5	Kg	20.44	51.10	
	Total				228.95	
	Labour					
	Head Mason	1	nos	361.00	361.00	
	Unskilled mazdoor	6	nos	268.00	1608.00	
	Fitter Gr I	0.75	nos	367.00	275.25	
	Total				2244.25	
					2473.20	
	Add Overhead charge & C.P@15%				370.98	
					2844.19	
						284.42
	Rate per M	Say	Rs	284.40	Per M	
5.6.1.4	450 mm dia NP ₂ H.P					

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	Unit :-Per M				
	Taking Out put =7.5 M				
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)				
	Materials				
	Cement	0.028	cum	7582.00	212.30
	Sand	0.028	cum	150.80	4.22
	Jute	3.25	Kg	20.44	66.43
	Total				282.95
	Labour				
	Head Mason	1.25	nos	361.00	451.25
	Unskilled mazdoor	7	nos	268.00	1876.00
	Fitter Gr I	0.75	nos	367.00	275.25
	Total				2602.50
					2885.45
	Add Overhead charge & C.P@15%				432.82
					3318.27
					442.44
	Rate per M	Say	Rs	442.40	Per M
5.6.1.5	600 mm dia NP ₂ H.P				
	Unit :-Per M				
	Taking Out put =7.5 M				
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)				
	Materials				
	Cement	0.034	cum	7582.00	257.79
	Sand	0.034	cum	150.80	5.13
	Jute	4	Kg	20.44	81.76
	Total				344.68
	Labour				
	Head Mason	1.5	nos	361.00	541.50
	Unskilled mazdoor	9	nos	268.00	2412.00
	Fitter Gr I	0.75	nos	367.00	275.25
	Total				3228.75
					3573.43
	Add Overhead charge & C.P@15%				536.01
					4109.44
					547.93
	Rate per M	Say	Rs	547.90	Per M
5.6.1.6	700 mm or 800 mm dia NP ₂ H.P				
	Unit :-Per M				
	Taking Out put =7.5 M				
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)				
	Materials				
	Cement	0.040	cum	7582.00	303.28
	Sand	0.040	cum	150.80	6.03
	Jute	5	Kg	20.44	102.20
	Total				411.51
	Labour				
	Head Mason	1.5	nos	361.00	541.50
	Unskilled mazdoor	10	nos	268.00	2680.00
	Fitter Gr I	0.75	nos	367.00	275.25
	Total				3496.75
					3908.26
	Add Overhead charge & C.P@15%				586.24
					4494.50
					599.27
	Rate per M	Say	Rs	599.30	Per M
5.6.1.7	900 mm dia or 1000 mm dia NP ₂ H.P				
	Unit :-Per M				
	Taking Out put =7.5 M				
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)				
	Materials				
	Cement	0.045	cum	7582.00	341.19
	Sand	0.045	cum	150.80	6.79
	Jute	7.5	Kg	20.44	153.30
	Total				501.28
	Labour				

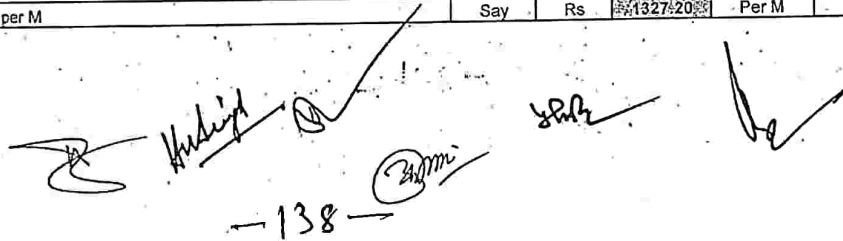


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	Head Mason	2	nos	361.00	722.00	
	Unskilled mazdoor	12	nos	268.00	3216.00	
	Fitter Gr I	0.75	nos	367.00	275.25	
	Total				4213.25	
					4714.53	
	Add Overhead charge & C.P@15%				707.18	
					5421.70	
						722.89
	Rate per M	Say	Rs	722.90	Per M	
5.6.1.8	1200 mm dia NP ₂ H.P.					
	Unit :-Per M					
	Taking Out put =7.5 M					
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)					
	Materials					
	Cement	0.057	cum	7582.00	432.17	
	Sand	0.057	cum	150.80	8.60	
	Jute	10	Kg	20.44	204.40	
					645.17	
	Labour					
	Head Mason	2.5	nos	361.00	902.50	
	Unskilled mazdoor	16	nos	268.00	4288.00	
	Fitter Gr I	1	nos	367.00	367.00	
					5557.50	
					6202.67	
	Add Overhead charge & C.P@15%				930.40	
					7133.07	
						951.08
	Rate per M	Say	Rs	951.10	Per M	
5.6.2	Labour for laying, fitting and fixing NP ₃ pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E / I. (Hume pipe available within a lead of 40 mtr)					
5.6.2.1	450 mm dia NP ₃ H.P.					
	Unit :-Per M					
	Taking Out put =7.5 M					
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)					
	Materials					
	Cement	0.028	cum	7582.00	212.30	
	Sand	0.028	cum	150.80	4.22	
	Jute	3.25	Kg	20.44	66.43	
					282.95	
	Labour					
	Head Mason	1.375	nos	361.00	496.38	
	Unskilled mazdoor	7.7	nos	268.00	2063.60	
	Fitter Gr I	0.825	nos	367.00	302.78	
					2662.75	
					3145.70	
	Add Overhead charge & C.P@15%				471.85	
					3617.55	
						482.34
	Rate per M	Say	Rs	482.30	Per M	
5.6.2.2	600 mm dia NP ₃ H.P.					
	Unit :-Per M					
	Taking Out put =7.5 M					
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)					
	Materials					
	Cement	0.034	cum	7582.00	257.79	
	Sand	0.034	cum	150.80	5.13	
	Jute	4	Kg	20.44	81.76	
	Total				344.68	
	Labour					
	Head Mason	1.65	nos	361.00	595.65	
	Unskilled mazdoor	9.9	nos	268.00	2653.20	
	Fitter Gr I	0.825	nos	367.00	302.78	

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	Total				3551.63	
	Add Overhead charge & C.P@15%				3896.30	
					584.45	
					4480.75	
						597.43
	Rate per M	Say	Rs	597.40	Per M	
5.6.2.3	700 mm or 800 mm dia NP ₃ H.P					
	Unit :-Per M					
	Taking Out put=7.5 M					
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)					
	Materials					
	Cement	0.040	cum	7582.00	303.28	
	Sand	0.040	cum	150.80	6.03	
	Jute	5	Kg	20.44	102.20	
	Total				411.51	
	Labour					
	Head Mason	1.5	nos	361.00	541.50	
	Unskilled mazdoor	14	nos	268.00	3752.00	
	Fitter Gr I	0.75	nos	367.00	275.25	
	Total				4568.75	
					4980.26	
	Add Overhead charge & C.P@15%				747.04	
					5727.30	
						763.64
	Rate per M	Say	Rs	763.60	Per M	
5.6.2.4	900 mm dia or 1000 mm dia NP ₃ H.P					
	Unit :-Per M					
	Taking Out put=7.5 M					
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)					
	Materials					
	Cement	0.045	cum	7582.00	341.19	
	Sand	0.045	cum	150.80	6.79	
	Jute	7.5	Kg	20.44	153.30	
	Total				501.28	
	Labour					
	Head Mason	2	nos	361.00	722.00	
	Unskilled mazdoor	21	nos	268.00	5628.00	
	Fitter Gr I	1	nos	367.00	367.00	
	Total				6717.00	
					7218.28	
	Add Overhead charge & C.P@15%				1082.74	
					8301.02	
						1106.80
	Rate per M	Say	Rs	1106.80	Per M	
5.6.2.5	1200 mm dia NP ₂ H.P.					
	Unit :-Per M					
	Taking Out put=7.5 M					
	(Assuming 3 pipes of 2.5 mtr length and 2 collars)					
	Materials					
	Cement	0.057	cum	7582.00	432.17	
	Sand	0.057	cum	150.80	8.60	
	Jute	12	Kg	20.44	245.28	
	Total				686.05	
	Labour					
	Head Mason	2.5	nos	361.00	902.50	
	Unskilled mazdoor	25	nos	268.00	6700.00	
	Fitter Gr I	1	nos	367.00	367.00	
	Total				7969.50	
					8655.55	
	Add Overhead charge & C.P@15%				1298.33	
					9953.88	
						1327.18
	Rate per M	Say	Rs	1327.20	Per M	



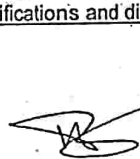
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5.7 PITCHING AND PILING

Sr.No.	Item	Rate	Unit
5.7.1	Labour for making 150 mm to 200 mm dia Sal ballah piles including cutting to size and dressing, making shoes for driving etc.all complete as per specification and direction of E/I.	18.50	Per pile
5.7.2	Providing two coats of coal tar painting over 150 mm to 200 mm dia Sal ballah piles and labour for driving it below ground level upto 5 meter including cost of all tools and plants required for the job all complete as per specification and direction of E/I.	204.70	Per M
5.7.3	Labour for fitting and fixing 100 mm to 150 mm dia sal ballah cross pieces 1350 mm length in position with 16 mm dia bolts, nuts and washers at each joints including the cost of bolts nuts and washers all complete job as per specification and direction of E/I.	79.90	Per M
5.7.4	Labour for fitting and fixing 150 mm dia sal ballah in position as back stay with 16 mm dia bolts, nuts and washers at each joints including the cost of bolts nuts and washers complete job as per specification and direction of E/I.	37.10	Per M
5.7.5	Labour for fitting and fixing 100 mm to 150 mm dia sal ballah walling pieces with 16 mm dia bolts, nuts and washers at each joints including the cost of bolts nuts and washers complete job as per specification and direction of E/I.	51.10	Per M
5.7.6	Labour for fitting and fixing 150 mm to 200 mm dia sal ballah piles with two nos 16 mm dia 225 mm long nuts and washers including the cost of bolts nuts and washers complete job as per specification and direction of E/I.	101.80	Per M
5.7.7	Labour for cutting 62 mm to 75 mm dia sal bamboo piles to size and making shoes and driving etc. complete job as per specification and direction of E/I.	28.30	Per M
5.7.8	Labour for fitting and fixing split bamboo woven chachari in position with 20 swg G.I. wire or 75 mm to 100 mm long nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of E/I.	74.60	Per M ²
5.7.9	Labour for fitting and fixing 62mm to 75 mm dia bamboo runners in position at every vertical pile with 150 mm long nails or 38 swg G.I. wire including cost of G.I. wire or nails complete job as per specification and direction of E/I.	5.10	Per M
5.7.10	Providing two coats of coal tar painting over 150 mm to 200 mm dia Sal ballah piles and labour for driving it below ground level in running water upto complete job as per specification and direction of E/I.	446.90	Per M
5.7.11	Labour for fitting and fixing 75 mm dia sal ballah runners on sal ballah verticals including cost of nails or spikes for fixing the same complete job as per specification and direction of E/I.	20.90	Per M
5.7.12	Labour for fitting and fixing 75 mm but upto 150 mm dia sal ballah runners on sal ballah verticals including cost of nails or spikes for fixing the same complete job as per specification and direction of E/I.	30.60	Per M
5.7.13	Labour for laying fine filter (Sand) or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc.all complete job as per specification and direction of E/I.	326.50	Per M ³
5.7.13(b)	Labour for laying River bed Material (70 % 40 mm to 20 mm size and 30 % Less than 20 mm and Sand) including light ramming etc.all complete job as per specification and direction of E/I.	231.10	Per M ³
5.7.14	Providing brick flat soling with designation 100A bricks joints filled with coarse sand of approved quality including royalty etc. all complete as per approved design, specifications and direction of E/I	285.60	Per M ²
5.7.15	Providing brick on edge soling with designation 100A bricks joints filled with coarse sand of approved quality including royalty etc. all complete as per approved design, specifications and direction of E/I	454.50	Per M ²

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5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge-over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I	740.10	Per M ²
5.7.17	Providing pitching work with designation 100A bricks in panel two brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I	1235.50	Per M ²
5.7.18.1	Labour charge for pitching work on apron slope of bank with stone boulder duly packed (Uncreated complete job) materials within 150 m lead with all lifts, including royalty etc. all complete as per approved design, specifications and direction of E/I	782.10	Per M ³
5.7.18.2	Labour charge for pitching work on apron slope of bank with stone boulder duly packed (Uncreated complete job) materials within 50 m lead with all lifts, including royalty etc. all complete as per approved design, specifications and direction of E/I	346.80	Per M ³
5.7.19	Labour charge for stone boulder (uncreated) laying in launching apron and slope (materials within 150 m lead all lifts), all complete as per approved design, specifications and direction of E/I	1442.50	Per M ³
5.7.20	Labour charge for pitching with jhama bricks closely packed over apron and including preparation of base, making proper slope and grade etc.all complete (materials withing 150 m lead with all lifts) as per approved design, specifications and direction of E/I	718.10	Per M ³
5.7.21.1	Labour charge for pitching above water on apron and slope of bank with boulder in crates of specified size (material within 150 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I	949.60	Per M ³
5.7.21.2*	Labour charge for pitching above water in apron and slope of bank with boulder in crates of specified size (material within 50 M lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I	459.80	Per M ³
5.7.22	Labour charge for pitching under water in apron and slope of bank with boulder in crates of specified size (material within 150 M lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I	2435.30	Per M ³
5.7.23	Labour charge for pitching under water in apron and slope with rubble having 600 mm to 300 mm size with all leads and lifts including royalty etc. all complete as per approved design, specifications and direction of E/I	1072.60	Per M ³
5.7.24.1	Labour charge for pitching above water in apron and slope of bank with bricks packed in crates of specified size (material within 150 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I	915.00	Per M ³
5.7.24.2	Labour charge for pitching above water in apron and slope of bank with bricks packed in crates of specified size (material within 50 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I	425.20	Per M ³
5.7.24.3	Extra for each lead of 30 M over the initial lead of 50 M (Boulder or Brick) as per approved design, specifications and direction of E/I	138.10	Per M ³
5.7.25	Labour charge for pitching under water in apron and slope of bank with bricks packed in crates of specified size (material within 150 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I	2489.70	Per M ³

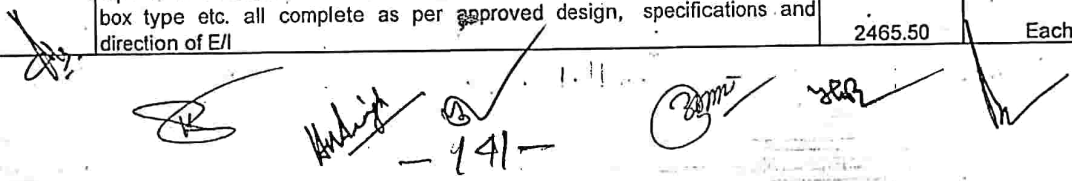








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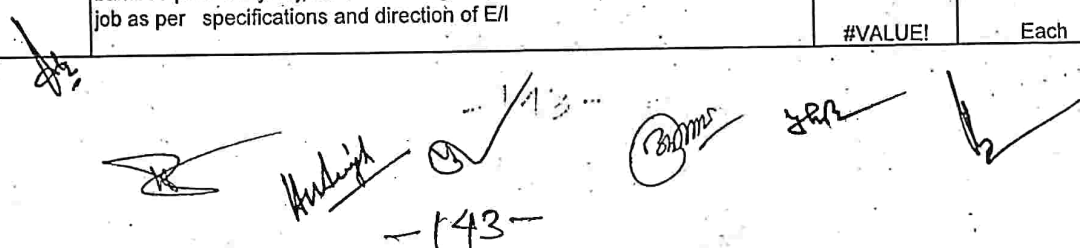
5.7.26	Providing brick block in designation 100 A bricks of size 600 x 600 x 300 mm for pitching in cement mortar (1:3) with approved quality of sand of requisite F.M. over 150 mm dry khoa rammed to make the inter spaces closer, keeping the thickness intact including royalty etc. complete job as per approved design, specifications and direction of E/I	2107.60	Per M ²
5.7.27	Providing brick block in designation 100 A bricks of size 600 x 600 x 300 mm duly pointed in cement mortar (1:3) with coarse sand of approved quality for staggered pitching over 150 mm dry khoa filter rammed to make the inter spaces closer, keeping the thickness intact. The inter spaces of blocks to be filled with coarse sand of approved quality including royalty etc. complete job as per approved design, specifications and direction of E/I	2162.70	Per M ²
5.7.28	Providing brick block in designation 100 A bricks of size 600 x 600 x 200 mm duly pointed in cement mortar (1:4) with coarse sand of approved quality for staggered pitching over 100 mm dry khoa filter rammed to make the inter spaces closer, keeping the thickness intact. The inter spaces of blocks to be filled with coarse sand of approved quality including royalty etc. complete job as per approved design, specifications and direction of E/I	1412.00	Per M ²
5.7.29.1	Supplying fitting and packing jhawa bush wood Kans grass or local wood brush in bundle of 600 mm dia tied with coir string as per specification including loading, unloading, stacking and carriage upto 1 K.M. lead etc.all complete job as per approved design, specifications and direction of E/I	#VALUE!	Per M ³
5.7.29.2	Extra for carriage of jhankhi for subsequent K.M. beyond initial 1st K.M.by bullock cart.	#VALUE!	Per K.M/ M ³
5.7.30	Supplying palm leaves and fixing in position all complete job as per approved design, specifications and direction of E/I	326.30	Per % nos
5.7.31	Labour charge for making crates including cutting Taranga wire roll of suitable size from G.I. wire in 8 nos.including cutting the wire and tying the joints with binding wire and making square mesh of 100 mm to 150 mm double knotted with 6 to 10 S.W.G. wire as per approved design, specifications and direction of E/I	29.80	Per M ²
5.7.32.A	(a).Labour charge for making crates box of size 3m x 1.5m x 0.6m including cutting of G.I wire or B.A wire, weaving of wire to make it Taranga wire having 150 mm square mesh with double knotte with 8 & 10 S.W.G. wire as per approved design, specifications and direction of E/I	166.30	Each
5.7.32.B	(a)Labour charge for making crates box size 3m x 1.5m x 0.6m including cutting of G.I wire or B.A.wire, weaving of wire to make it Taranga wire having 100 mm square mesh with double knotte with 8 &10 S.W.G. wire as per approved design, specifications and direction of E/I	284.50	Each
5.7.32.C	(a).Labour charge for making crates box of size 3m x 1.5m x 0.75m including cutting of G.I wire or B.A wire, weaving of wire to make it Taranga wire having 150 mm square mesh with double knotte with 8 & 10 S.W.G. wire as per approved design, specifications and direction of E/I	182.90	Each
5.7.32.D	(a)Labour charge for making crates box size 3m x 1.5m x 0.75m including cutting of G.I wire or B.A.wire, weaving of wire to make it Taranga wire having 100 mm square mesh with double knotte with 8 &10 S.W.G. wire as per approved design, specifications and direction of E/I	311.60	Each
5.7.33	(a)Labour charge for fitting and fixing empty coal tar drum sheets at piles in position with G.I. nails including cutting the coal tar drum and making it plain as per approved design, specifications and direction of E/I	122.50	Per M ²
5.7.34	Supplying G.I wire crates of size 3 M x 1.5 M x 0.75 M and 100 mm square mesh made out of G.I wire 8 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	2841.60	Each
5.7.35.1	Supplying wire mesh crates of size 3 M x 1.5 M x 0.75 M and 100 mm square mesh made out of G.I wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	2465.50	Each



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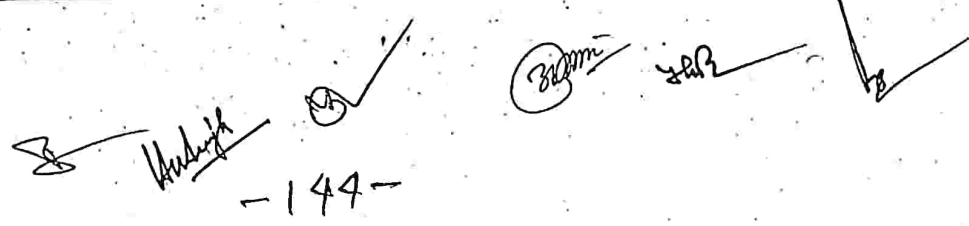
5.7.35.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 100 mm square mesh made out of G.I wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	2228.30	Each
5.7.36.1	Supplying wire mesh crates of size 3M x 1.5 M x 0.75 M and 150 mm square mesh made out of G.I wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	1686.60	Each
5.7.36.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 150 mm square mesh made out of G.I wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	1540.30	Each
5.7.37.1	Supplying wire mesh crates of size 3M x 1.5 M x 0.75 M and 100 mm square mesh made out of B.A.wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	2267.30	Each
5.7.37.2	Supplying wire mesh crates of size 3M x 1.5 M x 0.60 M and 100 mm square mesh made out of Black annealed wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	2049.40	Each
5.7.38.1	Supplying wire mesh crates of size 3 M x 1.5 M x 0.75 M and 150 mm square mesh made out of B.A.wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	1548.20	Each
5.7.38.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 150 mm square mesh made out of Black annealed wire 10 S.W.G. double knotte at each joints in box type etc. all complete as per approved design, specifications and direction of E/I	1413.90	Each
5.7.39.1	Carriage of boulder and metals by boat including, loading, unloading and stacking with lead of 1 K.M.all complete as per approved design, specifications and direction of E/I	924.00	Per M ³
5.7.39.2	Extra for carriage of boulder and metals by boat including, loading, unloading and stacking beyond 1 K.M. but upto 4 K.M.all complete as per approved design, specifications and direction of E/I	44.30	Per K.M /M ³
5.7.39.3	Carriage of Filled E.C Bags by boat including loading, unloading and stacking with lead of 1/2 K.M.all complete as per approved design, specifications and direction of E/I	1232.00	Per % nos
5.7.40.1	Labour for filling empty cement bags with local sand, stitching the bags and placing including supply of sutli etc. all complete as per approved design, specifications and direction of E/I	1552.40	Per % nos
A.	Labour for filling empty cement bags with local sand, stitching the bags and stacking including supply of sutli etc. all complete as per, specifications and direction of E/I	627.80	Per % nos
B.	Labour for placing sand filled E.C : Bags all complete as per specifications and direction of E/I	924.60	Per % nos
5.7.40.2	Labour for filling empty cement bags with local sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with a lead of 150 M including supply of sutli etc.in dry portion all complete as per approved design, specifications and direction of E/I	388.10	Each
5.7.40.3	Labour for filling empty cement bags with local sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with a lead of 150 M including supply of sutli etc.and placing the filled crates in water portion within a lead 30 M , all complete as per approved design, specifications and direction of E/I	634.70	Each
5.7.41	Labour charge for taking out disturbed boulder from boulder pitching or riprap or rock toe etc. and cleaning the surface and stacking the same within a lead of 100 meter as per approved design, specifications and direction of E/I	326.50	Per M ³
5.7.42	Labour charge for loading boulder and dumping etc. with all lead and lifts as per specifications and direction of E/I	326.50	Per M ³

5.7.43	Labour rate for fitting and fixing sal bullah runner in vertical ballah in river bed or canal bed including cost of nails complete job as per specifications and direction of E/I	32.80	Per M
5.7.44	Earth work in cutting and making slope in all kinds of soil with all leads and lifts as per specifications and direction of E/I	77.60	Per M
5.7.45.1	Providing and Laying of a Geotextile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment materials through the voids of the stone pitching/cement concrete block as well as to allow free movement of water without creating any uplift head on the pitching as per specifications and direction of E/I	109.80	Per M
5.7.45.2	Laying of a Geotextile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment materials through the voids of the stone pitching/cement concrete block as well as to allow free movement of water without creating any uplift head on the pitching as per specifications and direction of E/I	13.80	Per M
5.7.46(a)	Supplying and Placing bamboo roll each roll of 4 nos uncleaned full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with Annealed wire 20 to 25 SWG at least at three places along its length, 3 nos loads filled with boulder Spall in empty cement bags and tying it with B.A. Wire 8 to 10 SWG launching in river and placing in position and tying the bamboo roll at one end at least 15 M away from river bank to bamboo post, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I	1007.30	Each
5.7.46(b)	Supplying and Placing bamboo roll each roll of 4 nos uncleaned full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with Annealed wire 20 to 25 SWG at least at three places along its length, 3 nos loads filled with (brick 100B) in empty cement bags and tying it with B.A. Wire 8 to 10 SWG launching in river and placing in position and tying the bamboo roll at one end at least 15 M away from river bank to bamboo post, including Piling of bamboo post & royalty etc. and carriage of all materials at site all complete job as per specifications and direction of E/I	1190.90	Each
5.7.46©	Supplying and Placing bamboo roll each roll of 4 nos uncleaned full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with Annealed wire 20 to 25 SWG at least at three places along its length, 3 nos loads filled with Local sand in empty cement bags and tying it with G.I. Wire 8 to 10 SWG launching in river and placing in position and tying the bamboo roll at one end at least 15 M away from river bank to bamboo post, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I	999.90	Each
5.7.47(a)	Supplying making and Placing in position Tree branches and Jhankhi covering over all space of about of 2.832 M ³ providing 3 nos of loads by filling Boulder spall in E.C bags, tying with 20 to 25 SWG Annealed wire to the tree spur and anchoring the same with B.A. Wire 8 to 10 SWG to the bamboo post at least 15 M away from the river bank, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I	#VALUE!	Each
5.7.47(b)	Supplying making and Placing in position Tree branches and Jhankhi covering over all space of about of 2.832 M ³ providing 3 nos of loads by filling Bricks (100 B) in E.C bags, tying with 20 to 25 SWG Annealed wire to the tree spur and anchoring the same with B.A. Wire 8 to 10 SWG to the bamboo post at least 15 M away from the river bank, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I	#VALUE!	Each



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5.7.47(c)	Supplying making and Placing in position Tree branches and Jhankhi covering over all space of about of 2.832 M ³ providing 3-nos of loads by filling Local Sand in E.C bags, tying with 20 to 25 SWG Annealed wire to the tree spur and anchoring the same with B.A Wire 8 to 10 SWG to the bamboo post at least 15 M away from the river bank, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I	#VALUE!	Each
5.7.48	Providing , laying and filling Geo bags of size 1mx0.7m (Type A 300 GSM nonwoven) weight of bag 420 gm,volume of filled bag 0.07 cum, weight of filled Geo bag 126 kg with local sand including stitching in four lines by approved nylon thred with stitching machine and generator, stacking and placing in gabion of size 1.8mx1.8mx0.5m (18nos. Geo bags per gabion) after loading,unloading and carriage with the help of trolley within 150m lead all complete as per specification and direction of E/I	5076.00	Each
5.7.49	Supply of New bag and N.C with labour for filling New E.C bag with local sand (volume of filled bag 1.2 cft and weight 50kg),stiching on two lines by approved nylon thread with stiching machine & generator,Stacking the bags and placing in Nylon crate of size (1mx1mx1m) with a lead of 150m including supply of nylon threads etc , placing the filled crates in water portion within a lead of 30m,all complete as per approved design,specification and direction of E/I.	#VALUE!	Each
5.7.50	Providing,laying & filling Geo bags of size 1mX0.7m (Type A 300GSM nonwoven) Weight 420gm,volume of filled bag 0.07 cum,weight of filledf Geo bag 126kg with local sand including stitching in four lines by approved Nylon thread with stitching machine and generator,stacking and placing after loading,unloading and carriage with the help of Trolly within 150m lead and boat,including cess all complete as per specification and direction of E/I(where boat is used)	196.00	Each
5.7.51	Providing,laying & filling Geo bags of size 1mX0.7m (Type A 300GSM nonwoven) Weight 420gm,volume of filled bag 0.07 cum,weight of filledf Geo bag 126kg with local sand including stitching in four lines by approved Nylon thread with stitching machine and generator,stacking and placing in Nylon Crate of size 1.0mx1.0mx1.0m(6 nos. geo bag per N.C) after loading,unloading and carriage with the help of Trolly within 150m lead all complete as per specification and direction of E/I(where boat is used)	1055.40	Each
5.7.52	Supply of New bag and N.C with labour for filling New E.C bag with local sand (volume of filled bag 1.2 cft and weight 50kg),stiching on two lines by approved nylon thread with stiching machine & generator,Stacking the bags and placing in Nylon crate of size (1mx1mx1m) with a lead of 150m including supply of nylon threads etc , placing the filled crates in dry portion within a lead of 30m,all complete as per approved design,specification and direction of E/I.	#VALUE!	Each
5.7.53	Supply of New bag with labour for filling New E.C bag with local sand (volume of filled bag 1.2 cft and weight 50kg),stiching on two lines by approved nylon thread with stiching machine & generator,Stacking the bags and placing with a lead of 150m including supply of nylon threads etc ,all complete as per approved design,specification and direction of E/I.	#VALUE!	Each
5.7.54	Providing,laying & filling Geo bags of size 1mX0.7m (Type A 300GSM nonwoven) Weight 420gm,volume of filled bag 0.07 cum,weight of filledf Geo bag 126kg with local sand including stitching in four lines by approved Nylon thread with stitching machine and generator,stacking and placing after loading,unloading and carriage with the help of Trolly within 150m lead all complete as per specification and direction of E/I.	168.30	Each



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5.7 PITCHING AND PILING

Sl.no	Description	Quantity	Unit	Rate	Amount
5.7.1	Labour for making 150 mm to 200 mm dia Sal ballah piles including cutting to size and dressing, making shoes for driving etc.all complete as per specification and direction of E/I.				
	Unit :-Per Pile				
	Taking Out put =10 Piles				
	Labour				
	Carpenter Gr II	0.5	nos	321.00	160.50
					160.50
	Add Overhead charge & C.P@15%				24.08
					184.58
					18.46
	Rate per pile			18.50	Per pile
5.7.2	Providing two coats of coal tar painting over 150 mm to 200 mm dia Sal ballah piles and labour for driving it below ground level up to 5 metre including cost of all tools and plants required for the job all complete as per specification and direction of E / I.				
	Unit :-Per M				
	Taking Out put =30.5 M				
	Materials				
	Coal tar	9	Kg	35.00	314.98
	Labour				
	Unskilled mazdoor	18	nos	268.00	4824.00
	Mate	1	nos	289.00	289.00
					5427.98
	Add Overhead charge & C.P@15%				814.20
					6242.17
					204.66
	Rate per M			204.70	Per M
5.7.3	Labour for fitting and fixing 100 mm to 150 mm dia sal ballah cross pieces 1350 mm length in position with 16 mm dia bolts, nuts and washers at each joints including the cost of bolts nuts and washers complete job as per specification and direction of E / I.				
	Unit :-Per M				
	Taking Out put =13.7 M				
	(Assuming 10 nos. of piles)				
	Total nos. of joints 2x10 =20 nos				
	Length of one cross pipe = 1.37 mtr				
	Hence total length 10 x 1.37 metre =13.7 mtr				
	Materials				
	Nuts and bolts 16 mm dia 375 mm long with washer etc.	20	nos	32.88	657.60
	Labour				
	Carpenter Gr II	0.5	nos	321.00	160.50
	Unskilled mazdoor	0.5	nos	268.00	134.00
					952.1
	Add Overhead charge & C.P@15%				142.82
					1094.92
					79.92
	Rate per M			79.90	Per M
5.7.4	Labour for fitting and fixing 150 mm dia sal ballah in position as back stay with 16 mm dia bolts, nuts and washers at each joints including the cost of bolts nuts and washers complete job as per specification and direction of E / I.				
	Unit :-Per M				
	Taking Out put =48.80 M				
	(Assuming 10 nos. of back stay each of 4.88 mt)				
	Total nos. of joints 3x10 =30 nos				
	Length of back stay including 2 % wastage =49.8 m				
	Materials				
	Nuts and bolts 16 mm dia 375 mm long with washer etc.	30	nos	32.88	986.4
	Labour				

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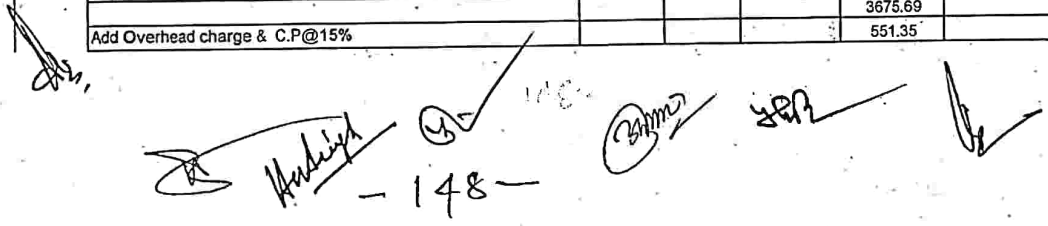
	Carpenter Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	1	nos	268.00	268.00	
					1575.4	
	Add Overhead charge & C.P@15%				236.31	
					1811.71	
						37.13
	Rate per M			37.10	Per M	
5.7.5	Labour for fitting and fixing 100 mm to 150 mm dia sal ballah walling pieces with 16 mm dia bolts, nuts and washers at each joints including the cost of bolts nuts and washers complete job as per specification and direction of E / I.					
	Unit :-Per M					
	Taking Out put =6.10 M					
	(Assuming 6.10 m long walling pieces)					
	Total nos. of joints with vertical pile at 1.22 m = 6 nos.					
	Materials					
	Nuts and bolts 16 mm dia 375 mm long with washer etc.	6	nos	32.88	197.28	
	Labour					
	Carpenter Gr II	0.125	nos	321.00	40.13	
	Unskilled mazdoor	0.125	nos	268.00	33.5	
					270.905	
	Add Overhead charge & C.P@15%				40.64	
					311.54	
						51.07
	Rate per M			51.10	Per M	
5.7.6	Labour for fitting and fixing 150 mm to 200 mm dia sal ballah piles with two nos 16 mm dia 225 mm long nuts and washers including the cost of bolts nuts and washers complete job as per specification and direction of E / I.					
	Unit :-Per M					
	Taking Out put =10 Joints					
	(Assuming 10 joints)					
	Materials					
	Nuts and bolts 16 mm dia 225 mm long with washer etc.	20	nos	32.88	657.60	
	Labour					
	Carpenter Gr II	0.5	nos	321.00	160.50	
	Unskilled mazdoor	0.25	nos	268.00	67.00	
					885.1	
	Add Overhead charge & C.P@15%				132.77	
					1017.87	
						101.79
	Rate per M			101.80	Per M	
5.7.7	Labour for cutting 62 mm to 75 mm dia bamboo piles to size and making shoes and driving etc. complete job as per specification and direction of E / I.					
	Unit :-Per M					
	Taking Out put =30.50M					
	(Assuming 20 nos. pile sunk 1.525 mtr deep)					
	Total depth sunk 30.50 meter					
	Labour					
	Carpenter Gr II	0.25	nos	321.00	80.25	
	Unskilled mazdoor for piling	2.5	nos	268.00	670.00	
					750.25	
	Add Overhead charge & C.P@15%				112.54	
					862.79	
						28.29
	Rate per M			28.30	Per M	
5.7.8	Labour for fitting and fixing split bamboo woven chachari in position with 20 swg G.I. wire or 75 mm to 100 mm long nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of E / I.					
	Unit :-Per Sqm					
	Taking Out put = 9.30 Sqm					
	(Assuming strip of 3.05x3.05 = 9.30 sqm)					
	Materials					

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	75 mm to 100 mm long nails	0.25	Kg	55.84	13.96	
	Labour					
	Carpenter Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	1	nos	268.00	268.00	
					602.96	
	Add Overhead charge & C.P@15%				90.44	
					693.40	
						74.56
	Rate per sqm			74.60	Per M ²	
5.7.9	Labour for fitting and fixing 62mm to 75 mm dia bamboo runners in position at every vertical pile with 150 mm long nails or 38 swg G.I. wire including cost of G.I. wire or nails complete job as per specification and direction of E/I.					
	Unit :-Per M					
	Taking Out put =30.50M					
	Materials					
	Cost of 150 mm long nails	0.5	Kg	55.84	27.92	
	Labour					
	Carpenter Gr II	0.125	nos	321.00	40.13	
	Unskilled mazdoor	0.25	nos	268.00	67	
	Total				107.13	
					135.05	
	Add Overhead charge & C.P@15%				20.26	
					155.30	
						5.09
	Rate per M			5.10	Per M	
5.7.10	Providing two coats of coal tar painting over 150 mm to 200 mm dia sal ballah piles and labour for driving it below ground level In running water upto complete job as per specification and direction of E/I. (Assuming 30.5 meter of piles)					
	Unit :-Per M					
	Taking Out put =30.50 M					
	Materials					
	Coal tar	9	Kg	35.00	314.98	
	Labour					
	Unskilled mazdoor	28	nos	268.00	7504.00	
	Mate	1	nos	289.00	289.00	
	Hire charge of 2 nos of boat of 40 quintal	2	nos	1872.00	3744.00	
					11851.98	
	Add Overhead charge & C.P@15%				1777.80	
					13629.77	
						446.88
	Rate per M			446.90	Per M	
5.7.11	Labour for fitting and fixing 75 mm dia sal ballah runners on sal ballah verticals including cost of nails or spikes for fixing the same complete job as per specification and direction of E/I.					
	Unit :-Per M					
	Taking Out put =30.50M					
	Materials					
	Cost of nails or spikes	2	Kg	55.84	111.68	
	Labour					
	Carpenter Gr II	0.75	nos	321.00	240.75	
	Unskilled mazdoor	0.75	nos	268.00	201.00	
					553.43	
	Add Overhead charge & C.P@15%				83.01	
					636.44	
						20.87
	Rate per M			20.90	Per M	
5.7.12	Labour for fitting and fixing 75 mm but upto 150 mm dia sal ballah runners on sal ballah verticals including cost of nails or spikes for fixing the same complete job as per specification and direction of E/I.					
	Unit :-Per M					
	Taking Out put =30.50M					
	Materials					

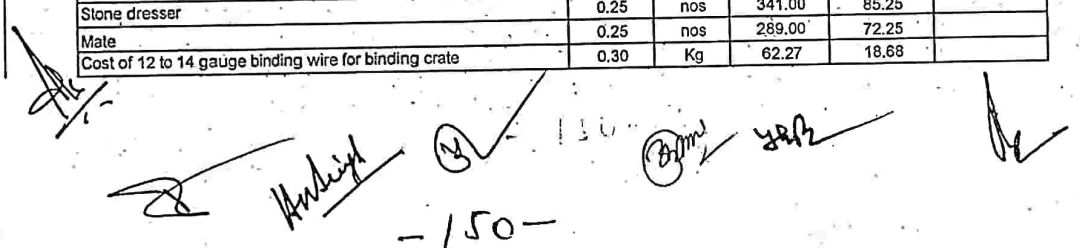
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	Cost of nails or spikes	4	Kg	55.84	223.36	
	Labour					
	Carpenter Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	1	nos	268.00	268.00	
					812.36	
	Add Overhead charge & C.P@15%				121.85	
					934.21	
						30.63
	Rate per M	Say Rs		30.60	Per M	
5.7.13	Labour for laying fine filter (Sand) or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc.all complete job as per specification and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put = 2.832 Cum					
	Unskilled mazdoor	3	nos	268.00	804.00	
					804.00	
	Add Overhead charge & C.P@15%				120.60	
					924.60	
						326.48
	Rate per cum	Say Rs		326.50	Per M ³	
5.7.13(b)	Labour for laying River bed Material (30 % sand and 70% Quarry spall) including light ramming etc.all complete job as per specification and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put =1 Cum					
	Unskilled mazdoor	0.75	nos	268.00	201.00	
					201	
	Add Overhead charge & C.P@15%				30.15	
					231.15	
						231.15
	Rate per cum	Say Rs		231.10	Per M ³	
5.7.14	Providing brick flat soling with designation 100A bricks joints filled with coarse sand of approved quality including royalty etc. all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	Materials					
	Bricks	300	per%0nos	6214.00	1864.20	
	Local Sand	0.142	M ³	116.85	16.59	
	Total				1880.79	
	Labours					
	Mason Gr II	0.50	nos	321.00	160.50	
	Unskilled mazdoor	1.00	nos	268.00	268.00	
	Total				428.50	
					2309.29	
	Add Overhead charge & C.P15%				346.39	
					2655.69	
						285.56
	Rate per sqm	Say Rs		285.60	Per M ²	
5.7.15	Providing brick on edge soling with designation 100A bricks joints filled with coarse sand of approved quality including royalty etc. all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put = 9.30 Sqm					
	Materials					
	Bricks	500	per%0nos	6214.00	3107.00	
	Local Sand	0.283	M ³	116.85	33.07	
	Total				3140.07	
	Labours					
	Mason Gr II	0.625	nos	321.00	200.63	
	Unskilled mazdoor	1.25	nos	268.00	335.00	
	Total				535.63	
					3675.69	
	Add Overhead charge & C.P@15%				551.35	



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	Mate	0.25	nos	289.00	72.25	
	Stone dresser	0.25	nos	341.00	85.25	
					854.00	
	Add Overhead charge & C.P@15%				128.10	
					982.10	
						346.79
	Rate per cum	Say Rs		346.80	Per M ³	
5.7.19	Labour charge for stone boulder (uncrated) laying in launching apron and slope (materials within 150 m lead all lifts), all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Unskilled mazdoor for carrying and laying boulder	6	nos	268.00	1608.00	
	Mate	0.25	nos	289.00	72.25	
	Hire charge of boat of 40 quintal capacity	1	nos	1872.00	1872.00	
					3552.25	
	Add Overhead charge & C.P@15%				532.84	
					4085.09	
						1442.47
	Rate per cum	Say Rs		1442.50	Per M ³	
5.7.20	Labour charge for pitching with jhama bricks closely packed over apron and including preparation of base, making proper slope and grade etc.all complete (materials withing 150 m lead with all lifts) as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put = 2.832 Cum					
	Mason Gr II	0.50	nos	321.00	160.50	
	Unskilled mazdoor	6	nos	268.00	1608.00	
					1768.50	
	Add Overhead charge & C.P@15%				265.28	
					2033.78	
						718.14
	Rate per cum	Say Rs		718.10	Per M ³	
5.7.21.1	Labour charge for pitching above water on apron and slope of bank with boulder in crates of specified size (material within 150 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put = 2.832 Cum					
	Skilled mazdoor	1.00	nos	340.00	340.00	
	Unskilled mazdoor	6.50	nos	268.00	1742.00	
	Black smith Gr II	0.25	nos	321.00	80.25	
	Stone dresser	0.25	nos	341.00	85.25	
	Mate	0.25	nos	289.00	72.25	
	Cost of 12 to 14 gauge binding wire for binding crate	0.30	Kg	62.27	18.68	
					2338.43	
	Add Overhead charge & C.P@15%				350.76	
					2689.20	
						949.57
	Rate per cum	Say Rs		949.60	Per M ³	
5.7.21.2	Labour charge for pitching above water in apron and slope of bank with boulder in crates of specified size (material within 50 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put = 2.832 Cum					
	Skilled mazdoor	1.00	nos	340.00	340.00	
	Unskilled mazdoor	2.00	nos	268.00	536.00	
	Black smith Gr II	0.25	nos	321.00	80.25	
	Stone dresser	0.25	nos	341.00	85.25	
	Mate	0.25	nos	289.00	72.25	
	Cost of 12 to 14 gauge binding wire for binding crate	0.30	Kg	62.27	18.68	

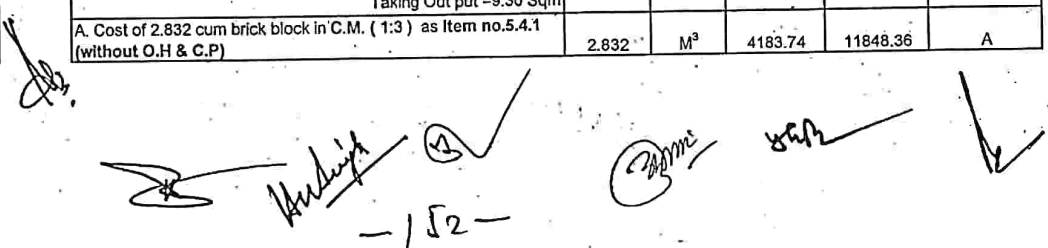


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					1132.43	
	Add Overhead charge & C.P@15%				169.86	
					1302.30	
						459.85
	Rate per sqm	Say Rs		459.80	Per M ³	
5.7.22	Labour charge for pitching under water in apron and slope of bank with boulder in crates of specified size (material within 150 M lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put = 2.832 Cum					
	Skilled mazdoor	1	nos	340.00	340.00	
	Unskilled mazdoor	6.50	nos	268.00	1742.00	
	Black smith Gr II	0.25	nos	321.00	80.25	
	Mate	0.25	nos	289.00	72.25	
	Cost of 12 to 14 gauge binding wire for binding crate	0.30	Kg	62.27	18.68	
	Hire charge of boat of 40 quintal capacity	2	hrs	1872.00	3744.00	
					5997.18	
	Add Overhead charge & C.P@15%				899.58	
					6896.76	
						2435.30
	Rate per cum	Say Rs		2435.30	Per M ³	
5.7.23	Labour charge for pitching under water in apron and slope with rubble having 600 mm to 300 mm size with all leads and lifts complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put = 2.832 Cum					
	Skilled mazdoor	1	nos	340.00	340.00	
	Unskilled mazdoor	8	nos	268.00	2144.00	
	Stone dresser	0.25	nos	341.00	85.25	
	Mate	0.25	nos	289.00	72.25	
					2641.50	
	Add Overhead charge & C.P@15%				396.23	
					3037.73	
						1072.64
	Rate per cum	Say Rs		1072.60	Per M ³	
5.7.24.1	Labour charge for pitching above water in apron and slope of bank with bricks packed in crates of specified size (material within 150 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Skilled mazdoor	1	nos	340.00	340.00	
	Unskilled mazdoor	6.5	nos	268.00	1742.00	
	Black smith Gr II	0.25	nos	321.00	80.25	
	Mate	0.25	nos	289.00	72.25	
	Cost of 12 to 14 gauge binding wire for binding crate	0.30	Kg	62.27	18.68	
					2253.18	
	Add Overhead charge & C.P@15%				337.98	
					2591.16	
						914.96
	Rate per cum	Say Rs		915.00	Per M ³	
5.7.24.2	Labour charge for pitching above water in apron and slope of bank with bricks packed in crates of specified size (material within 50 M lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Skilled mazdoor	1	nos	340.00	340.00	
	Unskilled mazdoor	2	nos	268.00	536.00	
	Black smith Gr. II	0.25	nos	321.00	80.25	

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	Mate	0.25	nos	289.00	72.25	
	Cost of 12 to 14 gauge binding wire for binding crate	0.30	Kg	62.27	18.68	
					1047.18	
	Add Overhead charge & C.P@15%				157.08	
					1204.26	
						425.23
	Rate per cum	Say Rs		425.20	Per M ³	
5.7.24.3	Extra for each lead of 30 M over the initial lead of 50 M (Boulder or Brick) as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Skilled mazdoor	1.0	nos	340.00	340.00	
	Add Overhead charge & C.P@15%				51.00	
					391.00	
						138.06
	Rate per cum	Say Rs		138.10	Per M ³	
5.7.25	Labour charge for pitching under water in apron and slope of bank with bricks packed in crates of specified size (material within 150 mtr lead and all lifts) including boxing and tying the crates with 12 to 14 gauge G.I wire including cost of G.I wire all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Skilled mazdoor	1	nos	340.00	340.00	
	Unskilled mazdoor	7	nos	268.00	1876.00	
	Black smith Gr II	0.25	nos	321.00	80.25	
	Mate	0.25	nos	289.00	72.25	
	Cost of 12 to 14 gauge binding wire for binding crate	0.30	Kg	62.27	18.68	
	Hire charge of boat of 40 quintal capacity	2	hrs	1872.00	3744.00	
					6131.18	
	Add Overhead charge & C.P@15%				919.68	
					7050.86	
						2489.71
	Rate per cum	Say Rs		2489.70	Per M ³	
5.7.26	Providing brick block in designation 100 A bricks of size 600 x 600 x 300 mm for pitching in cement mortar (1:3) with approved quality of sand of requisite F.M. over 150 mm dry khoa rammed to make the inter spaces closer, keeping the thickness intact including royalty etc. complete job as per approved design, specifications and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put = 9.30 Sqm					
	i. Rammed khoa					
	ii. Cost of rammed khoa before ramming (1.415+0.472) 40 mm to	1.887	M ³	1901.34	3587.83	
	Unskilled mazdoor	2	nos	268.00	536.00	
	iii. 9.3 Sqm of block is equivalent to 2.832 cum of brick work in C.M (1:3). Cost of 2.832 cum of B.W. in C.M. (1:3) vide item no 5.4.1 (without O.H & C.P)	2.832	M ³	4183.74	11848.36	
	Unskilled mazdoor for placing	4	nos	268.00	1072.00	
					17044.19	
	Add Overhead charge & C.P@15%				2556.63	
					19600.81	
						2107.61
	Rate per sqm	Say Rs		2107.60	Per M ²	
5.7.27	Providing brick block in designation 100 A bricks of size 600 x 600 x 300 mm duly pointed in cement mortar (1:3) with coarse sand of approved quality for staggered pitching over 150 mm dry khoa filter rammed to make the inter spaces closer, keeping the thickness intact. The inter spaces of blocks to be filled with coarse sand of approved quality including royalty etc. complete job as per approved design, specifications and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	A. Cost of 2.832 cum brick block in C.M. (1:3) as Item no.5.4.1 (without O.H & C.P)	2.832	M ³	4183.74	11848.36	A

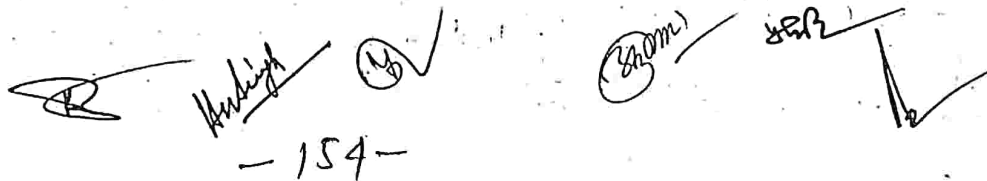


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	B. Unskilled mazdoor carrying and placing in position	4	nos	268.00	1072.00	B
	C. Cost of 150 mm graded jam filter sand packing					
	i. Jhama metal 20mm to 40mm	2.832	M ³	1449.00	4103.57	
	ii. Sand	0.425	M ³	150.80	64.09	
	iii. Unskilled mazdoor for packing	1.5	nos	268.00	402.00	
					4569.66	C
	Total (A+B+C)				17490.02	
	Add Overhead charge & C.P @15% on (A+B+C)				2623.50	
					20113.52	
						2162.74
	Rate per sqm	Say Rs		2162.70	Per M ²	
5.7.28	Providing brick block in designation 100 A bricks of size 600 x 600 x 200 mm duly pointed in cement mortar (1:4) with coarse sand of approved quality for staggered pitching over 100 mm dry khoa filter rammed to make the inter spaces closer, keeping the thickness intact. The inter spaces of blocks to be filled with coarse sand of approved quality including royalty etc. all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	A. 9.3 sqm of block is equivalent to 1.887 cum of brick work in C.M (1:4). Cost of 1.887 cum of B.W. in C.M. (1:4) vide item no 5.4.2	1.887	M ³	4662.30	8797.76	A
	B. Unskilled mazdoor for carrying and placing	3	M ³	268.00	804.00	B
	C. Cost of khoa	1.258	M ³	1901.34	2391.89	
	Unskilled mazdoor for carrying and ramming	1.5	nos	268.00	402.00	
					2793.89	C
	D. Extra materials for setting the block in position					
	Cement	0.011	M ³	7582.00	83.40	
	Sand	0.045	M ³	150.80	6.79	
	Mason Gr II	0.25	nos	321.00	80.25	
					170.44	D
	Sub-Total (B+C+D)				3768.32	
	Add Overhead charge & C.P on (B+C+D)@15%				565.25	
					4333.57	E
	Grand Total (A+E)				13131.33	1411.97
	Rate per sqm	Say Rs		1412.00	Per M ²	
5.7.29.1	Supplying fitting and packing jhawa bush wood ,Kans grass or local wood brush in bundle of 600 mm dia tied with coir string as per specification including loading, unloading, stacking and carriage up to 1 K.M. lead etc.all complete job as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Materials					
	1. Cost of 2.832 cum of Jhankhi					
	Carriage for 1 K.M lead					
	Hire charge of bullock cart per day	input				
	Taking lead of 1 km and speed 2 km per hour					
	Nos. of trips per day = $B/(2/S(L+3/4))$ =	4.56	trip			
	Cost per trip= Hire charges/4.56=136.6/4.56=	#VALUE!				
	Assuming bullock cart capacity as jhawa bush wood	1.70	cum			#VALUE!
	Carriage cost per 2.832 cum	=Cost				
	2. Cost of coir string	0.5	Kg	27.98	13.99	
	Labour					
	Unskilled mazdoor for loading, unloading and placing	0.5	nos	268.00	134.00	
	Unskilled mazdoor for cutting jhankhi	0.33	nos	268.00	88.44	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
						#VALUE!
	Rate per cum	Say Rs		#VALUE!	Per M ³	
5.7.29.2	Extra for carriage of jhankhi for subsequent K.M. beyond initial 1st K.M.by bullock cart.					

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	Unit :-Per Km per Cum Taking Out put =2.832 Cum					
	Assuming 5 K.M lead					
	Nos of trips per day= $8/(2/S(L+3/4))=$	1.4	trip			
	Hire charge of bullock cart per day	0.00	Rs			
	Cost per trip= Hire charges/1.4=136.6/1.4=	0.00	Rs			
	Assuming bullock cart capacity as jhawa bush wood	1.7	cum			
	Carriage cost for 5 K.M lead = Cost per trip x 2.832 /1.70					Input
	Hence rate for each subsequent K.M. beyond 1 k.m					
	(Carriage cost for 5 k.m-Carriage cost for 1 k.m)/4*2.832					#VALUE!
	Add Overhead charge & C.P@15%					#VALUE!
						#VALUE!
	Rate per cum	Say Rs		#VALUE!	Per K.M Per M ³	
5.7.30	Supplying palm leaves and fixing in position all complete job as per approved design, specifications and direction of E/I					
	Unit :-Per 100 Nos					
	Materials					
	Supplying palm leaves 100 nos					15.78
	Labour					
	Unskilled mazdoor for fixing	1	nos	268.00	268.00	
						283.78
	Add Overhead charge & C.P@15%					42.57
						326.35
	Rate per % nos	Say Rs		326.30	Per % nos	326.35
5.7.31	Labour charge for making crates including cutting taranga wire roll of suitable size from G.I. wire in 8 nos.including cutting the wire and tying the joints with binding wire and making square mesh of 100 mm to 150 mm double knotted with 8 to 10 S.W.G. wire as per approved design, specifications and direction of E/I					
	Vide T.E.C No 67 dated 26.6.90					
	Unit :-Per Sqm					
	Taking Out put =55.76 Sqm					
	Labour					
	Black smith Gr II	2	nos	321.00	642.00	
	Unskilled mazdoor as Helper	2	nos	268.00	536.00	
	Unskilled mazdoor for tying joints	1	nos	268.00	268.00	
						1446.00
	Add Overhead charge & C.P@15%					216.90
						1662.90
	Rate per sqm	Say Rs		29.80	Per M ²	29.82
5.7.32.A	(a).Labour charge for making crates box of size 3m x 1.5m x 0.6m including cutting of G.I wire or B.A wire, weaving of wire to make it taranga wire having 150 mm square mesh with double knot with 8 & 10 S.W.G. wire as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 33 dated 8.4.06					
	Unit :-Each					
	Taking Out put =10 nos.					
	Labour					
	Black smith Gr II for weaving the wire roll for cutting the taragana wire to size	2	nos	321.00	642.00	
	Unskilled mazdoor for weaving the wire, as helper in making creates & tying joints	3	nos	268.00	804.00	
						1446.00
	Add Overhead charge & C.P@15%					216.90
						1662.90
	Rate per Each	Say Rs		166.30	Each	166.29



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5.7.32.B	(a) Labour charge for making crates box size 3m x 1.5m x 0.6m including cutting of G.I wire or B.A.wire, weaving of wire to make it taranga wire having 100 mm square mesh with double knot with 8 & 10 S.W.G. wire as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 33 dated 8.4.06)					
	Unit :-Each					
	Taking Out put =10 nos.					
	Labour					
	Black smith Gr II for weaving the wire roll for cutting the taragana wire to size	4.2	nos	321.00	1348.20	
	Unskilled mazdoor for weaving the wire, as helper in making creates & tying joints	4.2	nos	268.00	1125.60	247.38
					2473.80	
	Add Overhead charge & C.P@15%				371.07	
					2844.87	
	Rate per Each	Say Rs		284.50	Each	284.49
5.7.32.C	(a). Labour charge for making crates box of size 3m x 1.5m x 0.75m including cutting of G.I wire or B.A wire, weaving of wire to make it taranga wire having 150 mm square mesh with double knot with 8 & 10 S.W.G. wire as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 33 dated 8.4.06)					
	Unit :-each					
	Taking Out put =10 nos.					
	Labour					
	Black smith Gr II for weaving the wire roll for cutting the taragana wire to size	2.2	nos	321.00	706.20	
	Unskilled mazdoor for weaving the wire, as helper in making creates & tying joints	3.3	nos	268.00	884.40	159.06
					1590.60	
	Add Overhead charge & C.P@15%				238.59	
					1829.19	
	Rate per Each	Say Rs		182.90	Each	182.92
5.7.32.D	(a) Labour charge for making crates box size 3m x 1.5m x 0.75m including cutting of G.I wire or B.A.wire, weaving of wire to make it taranga wire having 100 mm square mesh with double knot with 8 & 10 S.W.G. wire as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 33 dated 8.4.06)					
	Unit :-Each					
	Taking Out put =10 nos.					
	Labour					
	Black smith Gr II for weaving the wire roll for cutting the taragana wire to size	4.6	nos	321.00	1476.60	
	Unskilled mazdoor for weaving the wire, as helper in making creates & tying joints	4.6	nos	268.00	1232.80	270.94
					2709.40	
	Add Overhead charge & C.P@15%				406.41	
					3115.81	
	Rate per Each	Say Rs		311.60	Each	311.58
5.7.33	Supplying and Labour charge for fitting and fixing empty coal tar drum sheets at piles in position with G.I. nails including cutting the coal tar drum and making it plain as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 11 dated 7.3.94 and 1(E) dt 3.2.93					
	Unit :-Per Sqm					
	Taking Out put =10.76 Sqm					
	Material					
	Cola tar drum	6	nos	125.91	755.46	
	Nail and spike	0.4	Kg	55.84	22.34	
	Labour					
	Black smith Gr II	0.5	nos	321.00	160.50	
	Helper for cutting 12 drum and making plain	0.5	nos	281.00	140.50	
	Unskilled mazdoor for fitting and fixing drums	0.25	nos	268.00	67.00	
					1145.80	

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	Add Overhead charge & C.P@15%				171.87	
					1317.67	
						122.46
	Rate per sqm	Say Rs		122.50	Per M ²	
5.7.34	Supplying G.I wire crates of size 3 M x 1.5 M x 0.75M and 100 mm square mesh made out of G.I wire 8 S.W.G. double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	Unit :-Each					
	Materials					
	Cost of one M.T. of G.I Wire of 8 S.W.G					
	including carriage	1	M.T	69300.00		
	Av nos of crate manufactured (30+33)/2=31.5 nos	31.5	nos			
	Materials cost of one box=Cost of 1 M.T G.I wire/31.5					2200.00
	Labour					270.94
	Labour charge as item 5.7.32.D					2470.94
	Add Overhead charge & C.P@15%					370.64
						2841.58
	Rate per Each	Say Rs		2841.60	Each	
5.7.35.1	Supplying wire mesh crates of size 3 M x 1.5M x 0.75 M and 100 mm square mesh made out of G.I wire 10 S.W.G. double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of G.I Wire of 10 S.W.G					
	including carriage	1	M.T	69300.00		
	Av nos of crate manufactured 37 nos	37	nos			
	Materials cost of one box=Cost of 1 M.T G.I wire/37					1872.97
	Labour					270.94
	Labour charge as item 5.7.32.D					2143.91
	Add Overhead charge & C.P@15%					321.59
						2465.50
	Rate per Each	Say Rs		2465.50	Each	
5.7.35.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 100 mm square mesh made out of G.I wire 10 S.W.G. double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of G.I Wire of 10 S.W.G					
	including carriage	1	M.T	69300.00		
	Av nos of crate manufactured 41 nos	41	nos			
	Materials cost of one box=Cost of 1 M.T G.I wire/41					1690.24
	Labour					247.38
	Labour charge as item 5.7.32.B					1937.62
	Add Overhead charge & C.P@15%					290.64
						2228.27
	Rate per Each	Say Rs		2228.30	Each	
5.7.36.1	Supplying wire mesh crates of size 3 M x 1.5 M x 0.75 M and 150 mm square mesh made out of G.I wire 10 S.W.G. double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of G.I Wire of 10 S.W.G					

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	including carriage	1	M.T	69300.00		
	Av nos of crate manufactured 53nos	53	nos			1307.55
	Materials cost of one box=Cost of 1 M.T G.I wire/53					
	Labour					159.06
	Labour charge as item 5.7.32.C					1466.61
	Add Overhead charge & C.P@15%					219.99
						1686.60
						1686.60
	Rate per Each	Say Rs		1686.60	Each	
5.7.36.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 150 mm square mesh made out of G.I wire 10 S.W.G double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of G.I Wire of 10 S.W.G					
	including carriage	1	M.T	69300.00		
	Av nos of crate manufactured 58 nos	58	nos			1194.83
	Materials cost of one box=Cost of 1 M.T G.I wire/58					
	Labour					144.60
	Labour charge as item 5.7.32.A					1339.43
	Add Overhead charge & C.P@15%					200.91
						1540.34
						1540.34
	Rate per Each	Say Rs		1540.30	Each	
5.7.37.1	Supplying wire mesh crates of size 3 M x 1.5 M x 0.75 M and 100 mm square mesh made out of B.A.wire 10 S.W.G double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of B.A Wire of 10 S.W.G					
	including carriage	1	M.T	62924.00		
	Av nos of crate manufactured 37nos	37	nos			1700.65
	Materials cost of one box=Cost of 1 M.T G.I wire/37					
	Labour					270.94
	Labour charge as item 5.7.32.D					1971.59
	Add Overhead charge & C.P@15%					295.74
						2267.33
						2267.33
	Rate per Each	Say Rs		2267.30	Each	
5.7.37.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 100 mm square mesh made out of Black annealed wire 10 S.W.G double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of B.A Wire of 10 S.W.G					
	including carriage	1	M.T	62924.00		
	Av nos of crate manufactured 41nos	41	nos			1534.73
	Materials cost of one box=Cost of 1 M.T G.I wire/41					
	Labour					247.38
	Labour charge as item 5.7.32.B					1782.11
	Add Overhead charge & C.P@15%					267.32
						2049.43
						2049.43
	Rate per Each	Say Rs		2049.40	Each	

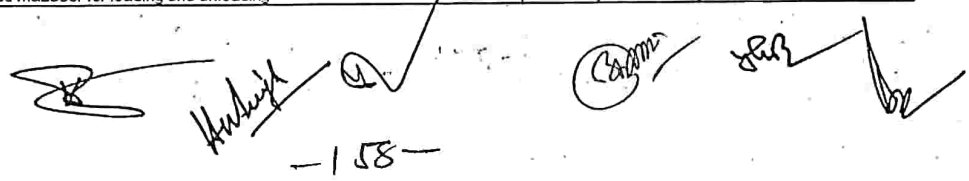
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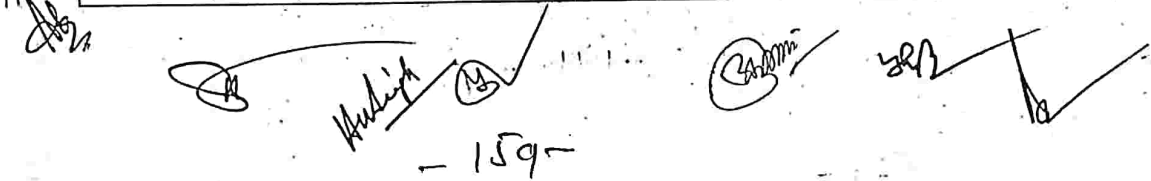
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5.7.38.1	Supplying wire mesh crates of size 3 M x 1.5 M x 0.75 M and 150 mm square mesh made out of B.A.wire 10 S.W.G. double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of B.A Wire of 10 S.W.G					
	Including carriage	1	M.T	62924.00		
	Av nos of crate manufactured 53nos	53	nos			
	Materials cost of one box=Cost of 1 M.T G.I wire/53					1187.25
	Labour					
	Labour charge as item 5.7.32.C					159.06
						1346.31
	Add Overhead charge & C.P@15%					201.95
						1548.25
	Rate per Each	Say Rs		1548.25	Each	1548.25
5.7.38.2	Supplying wire mesh crates of size 3 M x 1.5 M x 0.60 M and 150 mm square mesh made out of Black annealed wire 10 S.W.G. double knot at each joints in box type etc. all complete as per approved design, specifications and direction of E/I					
	As per T.E.C.letter no 37 dated 30.4.06)					
	Unit :-Each					
	Materials					
	Cost of one M.T. of B.A Wire of 10 S.W.G					
	Including carriage	1	M.T	62924.00		
	Average nos of crate manufactured= 58nos	58	nos			
	Materials cost of one box=Cost of 1 M.T G.I wire/58					1084.90
	Labour					
	Labour charge as item 5.7.32.A					144.60
						1229.50
	Add Overhead charge & C.P@15%					184.42
						1413.92
	Rate per Each	Say Rs		1413.92	Each	1413.92
5.7.39.1	Carriage of boulder and metals by boat including, loading, unloading and stacking with lead of 1 K.M.all complete as per approved design, specifications and direction of E/I					
	Unit :- Per Cum					
	Taking Out put =8.0 Cum					
	Assuming three trips per day by 40 quintal capacity boat boulder carried in each trip					
	100x40/42=95.2 cft					
	Total carried per day=3x95.2=285.6 cft=8.08cum					
	Say 8.00 cum					
	Hire charge of 40 Qt Boat	1	Day	1872.00		1872.00
	Unskilled mazdoor for loading and unloading	17	nos	268.00		4556.00
						6428.00
	Add Overhead charge & C.P@15%					964.20
						7392.20
	Rate per cum	Say Rs		924.00	PerM ³	924.03
5.7.39.2	Extra for carriage of boulder and metals by boat including, loading, unloading and stacking beyond 1 K.M. but up to 4 K.M., all complete as per approved design, specifications and direction of E/I					
	Unit :-Per Km per Cum					
	Taking Out put =5.39 Cum					
	Assuming 4 K.M lead two trips per day by 40 quintal capacity boat boulder carried in each trip					
	100x40/42=95.2 cft					
	Total carried per day=2x95.2=190.4 cft=5.39cum					
	Hire charge of 40 Qt Boat	1	Day	1872.00		1872.00
	Unskilled mazdoor for loading and unloading	11.5	nos	268.00		3082.00



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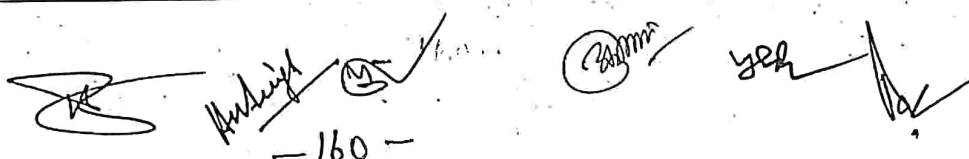
				4954.00	
	Add Overhead charge & C.P@15%			743.10	
				5697.10	
					1056.98
	Hence Rate per K.M per M ³ =				44.32
	(Rate vide item no 5.7.39.2 - Rate vide Item no 5.7.39.1)/3	Say Rs		44.30	Per K.M Per M ³
5.7.39.3	Carriage of Filled E.C Bags by boat including loading, unloading and stacking with lead of 1/2 K.M.all complete as per approved design, specifications and direction of E/I				
	Unit :- Per % nos.				
	Taking Out put =600 nos.				
	Assuming Six trips per day by 40 quintal				
	Capacity of boat Filled E.C Bags carried in each trip 100 nos filled E.C Bags				
	Total carried per day=6 x100=600 nos				
	Hire charge of 40 Qt Boat	1	Day	1872.00	1872
	Unskilled mazdoor for loading and unloading	17	nos	268.00	4556.00
					6428.00
	Add Overhead charge & C.P@15%				964.20
					7392.20
					1232.03
	Rate per % nos	Say Rs		1232.00	Per % nos
5.7.40.1	Labour for filling empty cement bags with local sand, stitching the bags and placing including supply of suttli etc. all complete as per approved design, specifications and direction of E/I				
	Unit :-Per % nos				
	Taking Out put =100 nos				
	(a)For filling & stitching & stacking				
	Unskilled mazdoor for filling sand into bags and sewing	2	nos	268.00	536.00
	Suttali	0.5	Kg	19.75	9.88
					545.88
	Add Overhead charge & C.P@15%				81.88
					627.76
	Rate per % nos	Say Rs		627.80	Per % nos (a)
	(b)Labour rate for carrying & placing filled E.C.Bags				
	Unskilled mazdoor for carrying filled bags and placing to work site	3	nos	268.00	804.00
	Add Overhead charge & C.P@15%				120.60
					924.60
	Rate per % nos	Say Rs		924.60	Per % nos (b)
	Total (a+b)			1552.40	Per % nos
5.7.40.2	Labour for filling empty cement bags with local sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with a lead of 150 M including supply of suttli etc. at site in dry portion all complete as per approved design, specifications and direction of E/I				
	Unit :-Each N.C				
	Taking Out put =25 nos.filled E.C Bags in each N/C				
	Cost of 25 nos of filled E.C.Bag (vide item no 5.7.40.1)	25	nos	1552.40	388.1
	Rate per Each			388.10	Each N.C
5.7.40.3	Labour for filling empty cement bags with local sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with a lead of 150 M including supply of suttli etc.and placing the filled crates in water portion within a lead 30 M , all complete as per approved design, specifications and direction of E/I				
	Unit :-Each N.C				
	(i) Labour Cost for filling bags in one Nylon crate in dry portion (vide item no 5.7.40.2)	1	nos	388.10	388.10
	(ii).Placing of filled N/C with 30 m lead in water Portion				
	a. Skilled mazdoor	1	No	340.00	340.00
	b.Unskilled mazdoor	1	No	268.00	268.00
	c. Mate	0.37	No	289.00	106.93
					714.93
	Add Overhead charge & C.P@15%				107.24
	Hence, Total Labour for 100cft				822.17
	Taking one E.C.bags to contain 1.20 cft of Sand				
	Hence, labour rate for placing one filled N.C	246.65			246.65



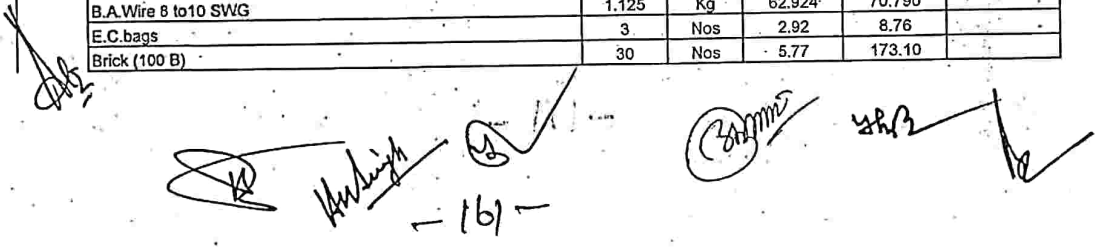
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	Hence rate Per Nylon crate in water Portion(Hii)				634.75	634.75
	Rate per Each N.C	Say Rs		634.75	Each	
5.7.41	Labour charge for taking out disturbed boulder from boulder pitching or riprap or rock toe etc. and cleaning the surface and stacking the same within a lead of 100 metre as per approved design, specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Labour					
	Unskilled mazdoor for picking and carrying	2.5	nos	268.00		670.00
	Unskilled mazdoor for making stacking	0.5	nos	268.00		134.00
						804.00
	Add Overhead charge & C.P@15%					120.60
						924.60
						326.48
	Rate per cum	Say Rs		326.50	Per M ³	
5.7.42	Labour charge for loading boulder and dumping etc. with all lead and lifts as per specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Labour					
	Unskilled mazdoor for carriage and dumping boulder	3	nos	268.00		804.00
	Add Overhead charge & C.P@15%					120.60
						924.60
						326.48
	Rate per cum	Say Rs		326.50	Per M ³	
5.7.43	Labour rate for fitting and fixing sal ballah runner in vertical ballah in river bed or canal bed including cost of nails complete job as per specifications and direction of E/I					
	Unit :-Per M					
	Taking Out put =30.48 M					
	Materials					
	Cost of nails or spikes	5	Kg	55.84		279.20
	Labour					
	Carpenter Gr II	1	nos	321.00		321.00
	Unskilled mazdoor	1	nos	268.00		268.00
						868.20
	Add Overhead charge & C.P@15%					130.23
						998.43
						32.76
	Rate per M	Say Rs		32.80	Per M	
5.7.44	Earth work in cutting and making slope in all kinds of soil with all leads and lifts as per specifications and direction of E/I					
	Unit :-Per Cum					
	Taking Out put =28.32 Cum					
	Labour					
	Unskilled mazdoor for cutting earth	4	nos	268.00		1072.00
	Unskilled mazdoor for carrying earth and clod breaking and rough dressing of slope	3	nos	268.00		804.00
	Mate	0.125	nos	289.00		36.13
						1912.13
	Add Overhead charge & C.P@15%					286.82
						2198.94
						77.65
	Rate per cum	Say Rs		77.60	Per M ³	
5.7.45.1	Providing and Laying of a Geo-textile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment materials through the voids of the stone pitching/cement concrete block as well as to allow free movement of water without creating any uplift head on the pitching as per specifications and direction of E/I					
	Vide T.E.C. letter no 48 (e) dated 10.05.04					
	Unit :-Per Sqm					
	Taking Out put =10.0 Sqm					
	Material					
	Permeable synthetic Geotextile including 5 % for overlap and wastage	10.50	Sqm	79.47		834.44

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Labour					
Mate	0.02	nos	289.00	5.78	
Unskilled mazdoor	0.30	nos	268.00	80.40	
Skilled mazdoor	0.10	nos	340.00	34.00	
				954.62	
Add Overhead charge & C.P@15%				143.19	
				1097.81	
					109.78
Rate per sqm	Say Rs		109.80	Per M ²	
5.7.45.2	Laying of a Geo-textile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment materials through the voids of the stone pitching/cement concrete block as well as to allow free movement of water without creating any uplift head on the pitching as per specifications and direction of E/I				
	Unit :- Per Sqm				
	Taking Out put =10.0 Sqm				
Mate	0.02	nos	289.00	5.78	
Unskilled mazdoor	0.30	nos	268.00	80.40	
Skilled mazdoor	0.10	nos	340.00	34.00	
				120.18	
Add Overhead charge & C.P@15%				18.03	
				138.21	
					13.82
Rate per sqm	Say Rs		13.80	Per M ²	
5.7.46(a)	Supplying and Placing bamboo roll each roll of 4 nos uncleaned full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with Annealed wire wire 20 to 25 SWG at least at three places along its length, 3 nos loads filled with boulder Spall in empty cement bags and tying it with B.A.Wire 8 to 10 SWG launching in river and placing in position and tying the bamboo roll at one end at least 15 M away from river bank to bamboo post, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I				
	Unit :- Each				
Materials					
Bamboo 75 mm dia 6 m to 8 m long	4.25	Nos	141.50	601.38	
Annealed wire 20 to 25 SWG	0.5	Kg	62.92	31.46	
B.A.Wire 8 to 10 SWG	1.125	Kg	62.924	70.790	
E.C.bags	3	Nos	2.92	8.76	
Boulder spall					
Taking compact volume 0.75 cft per bags	0.064	Cum	210.35	13.46	
Labour					
Unskilled labour for Tying and Placing etc.	0.5		268.00	134.00	
Unskilled Laour for filling E.C.Bags	0.06		268.00	16.08	
				875.93	
Add Overhead charge & C.P@15%				131.39	
				1007.32	
					1007.32
Rate	Say Rs		1007.30	Each	
5.7.46(b)	Supplying and Placing bamboo roll each roll of 4 nos uncleaned full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with Annealed wire 20 to 25 SWG at least at three places along its length, 3 nos loads filled with (brick 100B) in empty cement bags and tying it with B.A.Wire 8 to 10 SWG launching in river and placing in position and tying the bamboo roll at one end at least 15 M away from river bank to bamboo post, including Piling of bamboo post & royalty etc. and carriage of all materials at site all complete job as per specifications and direction of E/I				
	Unit :- Each				
Materials					
Bamboo 75 mm dia 6 m to 8 m long	4.25	Nos	141.50	601.38	
Annealed wire 20 to 25 SWG	0.5	Kg	62.92	31.46	
B.A.Wire 8 to 10 SWG	1.125	Kg	62.924	70.790	
E.C.bags	3	Nos	2.92	8.76	
Brick (100 B)	30	Nos	5.77	173.10	



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Labour				
Unskilled labour for Tying and Placing etc.	0.5	Cum	268.00	134.00
Unskilled Labour for filling E.C.Bags	0.06	Cum	268.00	16.08
				1035.57
Add Overhead charge & C.P@15%				155.33
				1190.90
				1190.90
Rate	Say Rs		1190.90	Each
5.7.46(c) Supplying and Placing bamboo roll each roll of 4 nos uncleaned full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with Annealed wire 20 to 25 SWG at least at three places along its length, 3 nos loads filled with Local sand in empty cement bags and tying it with G.I.Wire 8 to 10 SWG launching in river and placing in position and tying the bamboo roll at one end at least 15 M away from river bank to bamboo post, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I				
Unit :-Each				
Assuming one nos of bamboo roll				
Materials				
Bamboo 75 mm dia 6 m to 8 m long	4.25	Nos	141.50	601.38
Annealed wire 20 to 25 SWG	0.5	Kg	62.92	31.46
B.A.Wire 8 to 10 SWG	1.125	Kg	62.924	70.790
E.C.bags	3	Nos	2.92	8.76
Local sand				
Taking compact volume 0.75 cft per bags	0.06	Cum	116.85	7.01
Labour				
Unskilled labour for Tying and Placing etc.	0.5	Nos	268.00	134.00
Unskilled Labour for filling E.C.Bags	0.06	Nos	268.00	16.08
				869.48
Add Overhead charge & C.P@15%				130.42
				999.90
				999.90
Rate	Say Rs		999.90	Each
5.7.47(a) Supplying making and Placing in position Tree branches and Jhankhi covering over all space of about of 2.832 M ³ providing 3 nos of loads by filling Boulder spall in E.C bags, tying with 20 to 25 SWG Annealed wire to the tree spur and anchoring the same with B.A.Wire 8 to 10 SWG to the bamboo post at least 15 M away from the river bank, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I				
Unit :- Each				
Assuming 10 nos Tree branches				
Materials				
Cost of Tree branches of dia 150 mm to 200 mm and 3 M to 4.5 M long with jhankhi covering the space of 100 cft in volume	10	Nos	Input	#VALUE!
Bamboo 75 mm dia 6 m to 8 m long	3.25	Nos	141.50	459.88
Annealed wire 20 to 25 SWG	1.5	Kg	62.92	94.39
B.A.Wire 8 to 10 SWG	11.25	Kg	62.924	707.895
E.C.bags	30	Nos	2.92	87.60
Boulder spall (compact volume)	0.64	Cum	210.35	134.62
Labour				
Unskilled labour for Tying and Placing etc.	5	nos	268.00	1340.00
Unskilled Labour for filling E.C.Bags	0.6	nos	268.00	160.80
				#VALUE!
Add Overhead charge & C.P@15%				#VALUE!
				#VALUE!
				#VALUE!
Rate	Say Rs		#VALUE!	Each

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5.7.47(b)	Supplying, making and Placing in position Tree branches and Jhankhi covering over all space of about of 2.832 M ³ providing 3 nos of loads by filling Bricks (100 B) in E.C bags, tying with 20 to 25 SWG Annealed wire to the tree spur and anchoring the same with B.A.Wire - 8 to 10 SWG to the bamboo post at least 15 M away from the river bank, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I				
	Unit :- Each				
	Assuming 10 nos Tree branches				
	Materials				
	Cost of Tree branches of dia150 mm to 200 mm and 3 M to 4.5 M long with jhankhi covering the space of 100 cft in volume	10	Nos	INPUT	#VALUE!
	Bamboo 75 mm dia 6 m to 8 m long	3.25	Nos	141.50	459.88
	Annealed wire 20 to 25 SWG	1.5	Kg	62.92	94.39
	B.A.Wire 8 to 10 SWG	11.3	Kg	62.924	711.041
	E.C.bags	30	Nos	2.92	87.60
	Bricks(100B)	300	Nos	5.770	1731.00
	Labour				
	Unskilled labour for Tying and Placing etc.	5		268.00	1340.00
	Unskilled Labour for filling E.C.Bags	0.6		268.00	160.80
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
					#VALUE!
	Rate	Say Rs		#VALUE!	Each
5.7.47(c)	Supplying making and Placing in position Tree branches and Jhankhi covering over all space of about of 2.832 M ³ providing 3 nos of loads by filling Local Sand in E.C bags, tying with 20 to 25 SWG Annealed wire to the tree spur and anchoring the same with B.A.Wire - 8 to 10 SWG to the bamboo post at least 15 M away from the river bank, including Piling of bamboo post & royalty etc and carriage of all materials at site all complete job as per specifications and direction of E/I				
	Unit :- Each				
	Assuming 10 nos Tree branches				
	Materials				
	Cost of Tree branches of dia150 mm to 200 mm and 3 M to 4.5 M long with jhankhi covering the space of 100 cft in volume	10	Nos	INPUT	#VALUE!
	Bamboo 75 mm dia 6 m to 8 m long	3.25	Nos	141.50	459.88
	Annealed wire 20 to 25 SWG	1.5	Kg	62.92	94.39
	B.A.Wire 8 to 10 SWG	11.25	Kg	62.924	707.895
	E.C.bags	30	Nos	2.92	87.60
	Local sand				
	Taking compact volume 0.75 cft per bags	0.64	Cum	116.85	74.78
	Labour				
	Unskilled labour for Tying and Placing etc.	5		268.00	1340.00
	Unskilled Labour for filling E.C.Bags	0.6		268.00	160.80
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
					#VALUE!
	Rate	Say Rs		#VALUE!	Each
5.7.48	Providing, laying and filling Geo bags of size 1mx0.7m (Type A 300 GSM nonwoven) weight of bag 420 gm, volume of filled bag 0.07 cum, weight of filled Geo bag 126 kg with local sand including stitching in four lines by approved nylon thred with stitching machine and generator, stacking and placing in gabion of size 1.8mx1.8mx0.5m (18nos. Geo bags per gabion) after loading,unloading and carriage with the help of trolley within 150m lead all complete as per specification and direction of E/I				
	Unit Each bag				
	A. Assuming out put of filling and stitching of 40 nos. of Geo Bags per day				
	Materials				

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Stiching Roll(Nylon)	2	nos	30.00	60.00	
Labour					
Unskilled labour for filling,stacking	2	nos	268.00	536.00	
Skilled labour for stacking	0.33	nos	340.00	112.20	
Unskilled labour for carrying and placing	4	nos	268.00	1072.00	
Mate	0.25	nos	289.00	72.25	
Machine					
Hire charge of Stiching Machine	0.33	day	50.00	16.50	
Hire Charge of manual Trolley	1	day	50.00	50.00	
Hire charge of 3 KVA Generator	2.67	hrs	74.00	197.58	
Total				2116.53	
Add Overhead charge & C.P@15%				317.48	
				2434.01	
Rate per bag=Total/40				60.85	
Cost of filling & stiching of 18 nos of Geo bags	18	nos	60.85	1095.30	A
B. Materials					
Geo Bag	18	nos	93.40	1681.20	
Gabion	1	nos	1780.00	1780.00	
Total				3461.20	
Add Overhead charge & C.P@15%				519.18	
				3980.38	B
Total(A+B)				5075.68	
Rate			Say,Rs	5076.00	Each
5.7.49	Supply of New bag and N.C with labour for filling New E.C bag with local sand (volume of filled bag 1.2 cft and weight 50kg),stiching on two lines by approved nylon thread with stiching machine & generator,Stacking the bags and placing in Nylon crate of size (1mX1mX1m) with a lead of 150m including supply of nylon threads etc , placing the filled crates in water portion within a lead of 30m,all complete as per approved design,specification and direction of E/I.				
Unit-	Each Bag				
	Taking output 100 nos. filled New bags in 4 nos N.C.				
Material					
New bag (volume of filled bag 1.2 cft)	100	each	INPUT	#VALUE!	
Nylon Crate(N.C)	4	each	39.85	159.40	
				#VALUE!	
Add Overhead charge & C.P @15%				#VALUE!	
				#VALUE!	
Rate of material per N.C.(25 bags per N.C)				#VALUE!	A
Labour					
Unskilled mazdoor for filling sand,stiching& stacking	1.67	nos	268.00	447.56	
Unskilled labour for carrying and placing	3	nos	268.00	804.00	
Skilled labour for stiching	0.33	nos	340.00	112.20	
Material for stiching					
Stiching Roll(Nylon)	2	nos	30.00	60.00	
Hire charge of Machine					
Hire charge of Stiching Machine	0.33	day	50.00	16.50	
Hire charge of generator 3KVA	2.67	hrs	74.00	197.58	
				1637.84	
Add Overhead charge & C.P @15%				245.68	
				1883.52	
Rate per Each N.C				470.88	(i)
Placing of filled N.C. with 30m lead in water portion					
Skilled Labour	1	nos	340.00	340.00	
Unskilled labour	1	nos	268.00	268.00	
Mate	0.37	nos	289.00	106.93	
				714.93	
Add Overhead charge & C.P @15%				107.24	
				822.17	V
Taking orie E.C.bag to contain 1.2 cft of sand,hence rate for 100 nos. of bags(V*120/100*4)				246.65	(ii)
Rate for N.C in water Portion (i+ii)				717.53	B
Hence, finish rate of N.C in water portion(A+B)				#VALUE!	
Rate			Say,Rs	#VALUE!	

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5.7.50	Providing,laying & filling Geo bags of size 1mX0.7m (Type A 300GSM nonwoven) Weight 420gm,volume of filled bag 0.07 cum,weight of filled Geo bag 126kg with local sand including stitching in four lines by approved Nylon thread with stitching machine and generator,stacking and placing after loading,unloading and carriage with the help of Trolley within 150m. lead and boat all complete as per specification and direction of E/I(where boat is used)					
	Unit Each bag					
	out put 40 nos bags					
	Labour					
	Unskilled labour for filling,stacking	2	nos	268.00	536.00	
	Skilled labour for Stacking	0.33	nos	340.00	112.20	
	Unskilled labour for carrying and placing	4	nos	268.00	1072.00	
	Mate	0.25	nos	289.00	72.25	
	Stiching Roll(Nylon)	2	each	30.00	60.00	
	Hire charge of Stiching Machine	0.33	day	50.00	16.50	
	Hire Charge of manual Trolley	1	day	50.00	50.00	
	Hire charge of generator 3KVA	2.67	hrs	74.00	197.58	
	Total				2116.53	
	Add Overhead charge &C.P @15%				317.48	
					2434.01	
	Rate per bag (total/40)				60.85	A
	Charge for placing & dumping with the help of Powe boat of 40 Quintal					
	Out put per day - 256 nos bags carriage by Boat					
	Hire charge of 40 quintal Boat	1	day	1400.00	1400.00	
	Unskilled labour for loading,unloading & dumping	16	nos	268.00	4288.00	
	Mate	1	nos	289.00	289.00	
	Hire charge of Trolley	4	each	50.00	200.00	
					6177.00	
	Add Overhead charge &C.P @15%				926.55	
					7103.55	
	Rate per bag (Total/256)				27.75	B
	Materials					
	Cost of Geo bag	1	each	93.40	93.40	
	Add Overhead charge &C.P @15%				14.01	
					107.41	C
	Total Cost (A+B+C)				196.01	
	Rate per bag			Say,Rs	196.00	
5.7.51	Providing,laying & filling Geo bags of size 1mX0.7m (Type A 300GSM nonwoven) Weight 420gm,volume of filled bag 0.07 cum,weight of filled Geo bag 126kg with local sand including stitching in four lines by approved Nylon thread with stitching machine and generator,stacking and placing in Nylon Crate of size 1.0mx1.0mx1.0m(6 nos. geo bag per N.C) after loading,unloading and carriage with the help of Trolley within 150m lead , all complete as per specification and direction of E/I(where boat is used)					
	Out put - 40 nos bags					
	Labour					
	Unskilled labour for filling,stacking	2	nos	268.00	536.00	
	Skilled labour for stacking	0.33	nos	340.00	112.20	
	Unskilled labour for carrying and placing	4	nos	268.00	1072.00	
	Mate	0.25	nos	289.00	72.25	
	Stiching roll(nylon)	2	each	30.00	60.00	
	Hire Charge of Stiching Machine	0.33	each	50.00	16.50	
	Hire Charge of manual Trolley	1	day	50.00	50.00	
	Hire charge of Generator 3KVA	2.67	hrs	74.00	197.58	
	Total				2116.53	
	Add Overhead charge &C.P @15%				317.48	
					2434.01	
	Rate per bag (Total/40)				60.85	A
	Material					
	Cost of Geo bag	1	each	93.40	93.40	
	Add Overhead charge &C.P @15%				14.01	

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				107.41	B	
	Rate of Geo bag including filling ,stiching placing (A+B)				168.26	
	Rate of Geo bag including filling ,stiching placing per Nylon Crate				1009.56	C
	Material					
	1	Each	39.85	39.85		
	Add Overhead charge &C.P @15%				5.98	
					45.83	D
	Rate of N.C with Geo Bag(C+D)				1055.39	
					say, Rs	1055.40
5.7.52	Supply of New bag and N.C with labour for filling New E.C bag with local sand (volume of filled bag 1.2 cft and weight 50kg),stiching on two lines by approved nylon thread with stiching machine & generator,Stacking the bags and placing in Nylon crate of size (1m x1m x1m) with a lead of 150m including supply of nylon threads etc , placing the filled crates in dry portion within a lead of 30m,all complete as per approved design,specification and direction of E/I.					
	Unit - Each bag					
	Taking output of 100 nos filled new bags in 4 nos N.C					
	Material					
	100	nos	INPUT	#VALUE!		
	4	nos	39.85	159.40		
	Nylon Crate(N.C)				#VALUE!	
	Add Overhead charge &C.P @15%				#VALUE!	
	Total				#VALUE!	
	Rate of material for each N.C(Totalx25/100)				#VALUE!	A
	Labour					
	1.67	nos	268.00	447.56		
	3	nos	268.00	804.00		
	0.33	nos	340.00	112.20		
	2	nos	30.00	60.00		
	0.33	day	50.00	16.50		
	2.67	hrs	74.00	197.58		
					1637.84	
	Add Overhead charge &C.P @15%				245.68	
	Total				1883.52	
	Rate for each N.C(Totalx25/100)				470.88	B
	Rate for each N.C in dry portion (A+B)				#VALUE!	
					say, Rs	#VALUE!
5.7.53	Supply of New bag with labour for filling New E.C bag with local sand (volume of filled bag 1.2 cft and weight 50kg),stiching on two lines by approved nylon thread with stiching machine & generator,Stacking the bags and placing with a lead of 150m including supply of nylon threads etc ,all complete as per approved design,specification and direction of E/I.					
	Unit- Each bag					
	Taking output 100nos filled new bags					
	Material					
	100	nos	INPUT	#VALUE!		
	2	nos	30.00	60.00		
	Stiching Roll(Nylon)				#VALUE!	A
	Labour					
	1.67	nos	268.00	447.56		
	3	nos	268.00	804.00		
	0.33	nos	340.00	112.20		
					1363.76	B
	Hire Charge of Machine					
	0.33	day	50.00	16.50		
	2.67	hrs	74.00	197.58		
					214.08	C
	Total (A+B+C)				#VALUE!	
	Add Overhead charge &C.P @15%				#VALUE!	
					#VALUE!	
	Rate for 100 nos. E.C. bag (A+B+C)				#VALUE!	
	Rate per N.C				#VALUE!	
					say, Rs	#VALUE!

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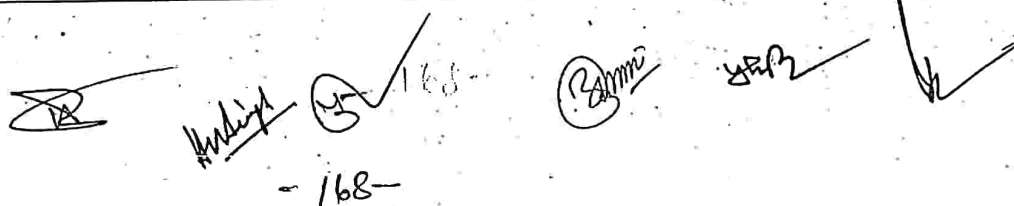
5.7.54	Providing, laying & filling Geo bags of size 1mX0.7m (Type A 300GSM nonwoven) Weight 420gm, volume of filled bag 0.07 cum, weight of filled Geo bag 126kg with local sand including stitching in four lines by approved Nylon thread with stitching machine and generator, stacking and placing after loading, unloading and carriage with the help of Trolley within 150m lead, all complete as per specification and direction of E/I.				
	Unit- Each Bag				
	Taking output of 40 nos Geo bags				
	Material				
	Geo bag	40	nos	93.40	3736.00
	Stitching roll (nylon)	2	nos	30.00	60.00
	Labour				
	Unskilled labour for filling, stacking	2	nos	268.00	536.00
	Unskilled labour for crying & placing at work site	4	nos	268.00	1072.00
	Skilled labour for stitching	0.33	nos	340.00	112.20
	Mate	0.25	nos	289.00	72.25
	Hire Charge of Machine				
	Hire Charge of Stitching Machine	0.33	nos	50.00	16.50
	Hire Charge of manual Trolley	1	day	50.00	50.00
	Hire charge of Generator 3KVA	2.67	hrs	74.00	197.58
	Total				5852.53
	Add Overhead charge & C.P @15%				877.88
					6730.41
	Rate per geo Bag				168.26
				say, Rs	168.30

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5.8 MISCELLANEOUS

Sr.No.	Item	Rate	Unit
5.8.1	Supplying, fitting and fixing copper strip of 16 gauge of approved quality (with 90 % purity) in expansion joints all complete as per approved design, specifications and direction of E/I	891.20	Per KG
5.8.2	Supplying, fitting and fixing rubber seal of (water stop) of approved quality for construction joints all complete as per approved design, specifications and direction of E/I .	#VALUE!	Per Mtr
5.8.3	Supplying, and fixing in position 25 mm thick Bituminous board (ShaliteX or equivalent) in expansion or construction joint all complete as per approved design, specifications and direction of E/I	#VALUE!	Per M ²
5.8.4	Supplying, and fixing (Bitumen, cement and sand) in construction joints all complete as per approved design, specifications and direction of E/I	154.60	cm width/ cm depth/ 100 M length
5.8.5.1	Providing and driving steel sheet piles on specified alignment and up to designed level including painting the sheet piles with two coats of anti corrosive bitumen paint (portion of sheet pile inside concrete shall not be painted) including cost of sheet piles and hire charge of sheet pile, driving plant etc as per approved design, specifications and direction of E/I (For the purpose of payment of sheet pile driving measurement of sheet pile dully driven shall be taken only)	#VALUE!	Per M.T
5.8.5.2	Labour rate for extracting steel sheet piles on specified alignment with hire charges of sheet pile driving plant etc. all complete as per specifications and direction of E/I :(For the purpose of payment of sheet pile extracting, measurement of sheet pile dully extracted shall be taken only)	#VALUE!	Per M.T
5.8.6(a)	Providing weep holes with dry graded stone single filter of 20 mm to 40 mm size in abutment and wing wall including royalty as per specification and direction of E/I	63.70	Each
5.8.6(b)	Providing weep holes with dry graded Jhama metal filter of 20 mm to 40 mm size in abutment and wing wall including royalty as per specification and direction of E/I	226.00	Each
5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 Meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	439.80	Per M ³
5.8.8	Dismantling plain cement or lime concrete work including stacking serviceable materials in stacks within 15 Meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	775.20	Per M ³
5.8.9	Dismantling R.C.C work including stacking serviceable materials in stacks within 15 Meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	1576.90	Per M ³
5.8.10	Dismantling old plaster and pointing in cement or lime and raking out joints to 15 mm. depth, watering and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	17.40	Per M ²



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5.8. MISCELLANEOUS

Sl.No	Description	Quantity	Unit	Rate	Amount	Ref.
5.8.1	Supplying, fitting and fixing copper strip of 16 gauge of approved quality (with 99 % purity) in expansion joints complete job as per drawing, specifications and direction of E/I.					
	Unit-Per Kg					
	Furnishing and installing seal					
	A. Cost of copper seal and accessories					
	Size of copper seal 250 mm x 1.6 mm					
	weight per sq metre= 14.70 kg	14.7	kg			
	Weight of strips per linear metre Allowing 2.5 % for wastage and incidental to work)= $0.25 \times 14.70 \times 1.025 = 3.77$ kg					
	i. Cost per linear metre. Including furnishing, storing, handling and cutting etc.	3.77	kg	746.00	2810.09	
	ii. Cost of bracing, washers and nails etc. per running metre @ 3 % of item (i)				84.30	
	Sub-Total				2894.39	
	B. Labour charge					
	Taking that 1/4 mason and 1 helper can place seal in one lift of 15 mtr in one shift.					
	Head mason.	0.25	nos	361.00	90.25	
	Helper	1	nos	281.00	281.00	
	Total labour charge				371.25	
	Total charge per mtr= total labour charge / 15				24.75	
	Total A+B				2919.14	
	Hence rate per kg = Total (A+B)/ wt. Of seal per mtr				774.95	
	Add Overhead charge & C.P@15%				116.24	
					891.19	891.19
	Hence rate per kg of copper seal	Say Rs		891.20	Per kg	
5.8.2	Supplying, fitting and fixing rubber seal of (water stop) of approved quality for construction joints expansion joints complete job as per drawing, specifications and direction of E/I.					
	Unit-Per M					
	Taking Out put,=1 M					
	Cost of rubber seal	1	m	#VALUE!	#VALUE!	
	Add for overlapping and vulcanizing 10 % of the materials cost				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Hence rate per mtr of rubber seal			#VALUE!	Per mtr	
5.8.3	Supplying, and fixing in position 25 mm thick Bituminous board (Shalltex or equivalent) in expansion or construction joint in dam and its allied works all complete as per approved design, specifications and direction of E/I					
	Unit-Per Sqm					
	Taking Out put =9.30 Sqm					
	Material					
	Bituminastic board	9.3	M ²	input	#VALUE!	
	Shalltex primer	2.25	Kg	input	#VALUE!	
	Labour					
	Mason Gr II	0.25	nos	321.00	80.25	
	Unskilled mazdoor	0.25	nos	268.00	67.00	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Rate pe sqm	Say Rs		#VALUE!	Per M ²	
5.8.4	Supplying, and fixing Bitumen filter (Bitumen, cement and sand) in construction joints in dam and its allied works all complete as per approved design, specifications and direction of E/I					
	Unit- Per cm width per cm depth per 100M					
	Consider a joint =2.5 cm wide 15 cm deep and 292.75 mtr in length					

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Hence cubical contents of a joint					
292.75 x 0.15 x 0.025 = 1.1 cum					
Material					
Bitumen	0.282	M.T	35879.39	10117.99	
Cement	0.088	Cum	7582.00	667.22	
Coarse sand	0.0283	Cum	150.80	4.27	
Steam coal @ 2 quintal / M.T(including carriage charge)	0.58	Qnt	372.29	215.93	
Total				11005.40	
Labour					
Mason Gr II	5	nos	321.00	1605.00	
Unskilled mazdoor	8	nos	268.00	2144.00	
Total				3749.00	
				14754.40	
Add Overhead charge & C.P@15%					
				2213.16	
				16967.56	154.56
Rate per cm width per cm depth per 100M					
	Say Rs			154.60	
5.8.5.1	Providing and driving steel sheet piles on specified alignment and upto designed levels including painting the sheet piles with two coats of anti- corrosive bitumen paint (portion of sheet pile inside concrete shell not be painted) including cost of sheet piles and hire charges of sheet pile driving plant etc. all complete as per specifications and direction of E.I . (For the purpose of payment of sheet pile driving, measurement of sheet pile duly driven shall be taken only)				
	Unit-Per M				
	Assuming piling that can be expected to be driven per hour= 65.37 x 6.70= 437.98 Kg (Assuming I.S.P.S. 1625 U& piling section vide I.S. 2314, 1963)				
	Hourly use rate of sheet pile				
A.	Material				
	Cost of Sheet Pile with 10 % wastage	1.1	M.T	#VALUE!	#VALUE!
	Sheet pile Driving plant			#VALUE!	
B.	(i). Cost of driving pile per M.T = (x)x1000 / 437.98			Rs	#VALUE!
	(ii). Shifting of 3 to 4 nos of pile per M.T at the place ready for driving @ 1.5 % of Sub item (i)			Rs	#VALUE!
	(iii). Erecting piling machines and dismantling @ 0.5 % of sub item (i)			Rs	#VALUE!
	(iv). Depreciation charges for track and wooden sleeper, fish plates, bolts dog spikes @ 0.5 % of sub item (i)			Rs	#VALUE!
	(v). Depreciation charges for supply of rails @ 1 % of sub item (i)			Rs	#VALUE!
	(vi). Welding piles 3 to 4 nos @ 8 % of sub item b(i)			Rs	#VALUE!
	(vii). Cutting piles 2 to 4 nos @ 2 % of sub item (i)			Rs	#VALUE!
	(viii). Driving hole 3 to 4 nos @ 0.5 % of sub item (i)			Rs	#VALUE!
	(ix). Carriage of sheet piles 1 M.T. @ 2 % of sub item (i)			Rs	#VALUE!
C.	Surface area of 1 M.T. sheet piles to be painted both side with anti-corrosive bitumen, paint				
	Length of sheet pile per M.T=1 x 1000 / 65.37 = 15.29 m				
	Area of both side of sheet piles=15.29 x 1.71 =24.62 sqm .				
	Surface of sheet piles to be painted with two coats of bitumen (Assuming 0.5 Kg / M ² =24.62 x 0.5 =	12.31	Kg	35.88	441.68
D.	Unskilled mazdoor	2	nos	268.00	536.00
	Total (A+B+C+D)				#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Say		Rs	#VALUE!	Per M.T

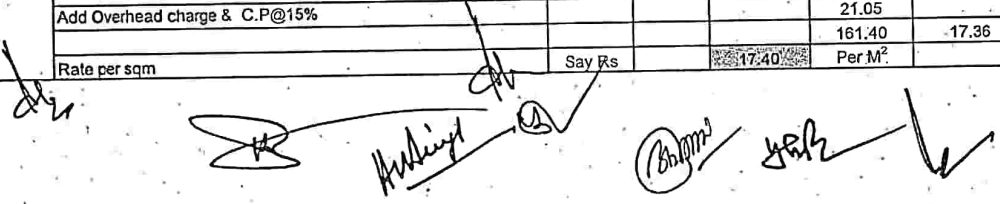
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5.8.5.2	Labour rate for extracting steel sheet piles on specified alignment with hire charges of sheet pile driving plant etc. all complete as per specifications and direction of E/I. (For the purpose of payment of sheet pile extracting, measurement of sheet pile duly extracted shall be taken only)					
	Unit:-Per M					
	Assuming piling that can be expected to be extracting					
	per hour= 65.37 x 6.70= 437.98 Kg (Assuming I.S.P.S. 1625 U& piling section vide I.S. 2314, 1963)					
	Hourly use rate of sheet pile					
	Sheet pile Driving plant		#VALUE!			
A.	(i) Cost of Extracting pile per M.T = (x)x1000 / 437.98			Rs	#VALUE!	
	(ii) Shifting of 3 to 4 nos of pile per M.T at the place ready for driving @ 1.5 % of Sub item (i)			Rs	#VALUE!	
	(iii) Erecting piling machines and dismantling @ 0.5 % of sub item (i)			Rs	#VALUE!	
	(iv) Depreciation charges for track and wooden sleeper, fish plates, bolts dog spikes @ 0.5% of sub item (i)			Rs	#VALUE!	
	(v) Depreciation charges for supply of rails @ 1 % of sub item (i)			Rs	#VALUE!	
	(vi) Welding piles 3 to 4 nos @ 8 % of sub item b(i)			Rs	#VALUE!	
	(vii) Cutting piles 2 to 4 nos @ 2 % of sub item (i)			Rs	#VALUE!	
	(viii) Driving hole 3 to 4 nos @ 0.5 % of sub item (i)			Rs	#VALUE!	
	(ix) Carriage of sheet piles 1 M.T. @ 2 % of sub item (i)			Rs	#VALUE!	
B.	Unskilled mazdoor	2	nos	268.00	536.00	
	Total (A+B)				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	#VALUE!
	Say			Rs	#VALUE!	Per M.T.
5.8.6(a)	Providing weep holes with dry graded Stone metal filter of 20 mm to 40 mm siz in abutment and wing wall as per specification and direction of E/I					
	Unit :-Each					
	Stone metal filter 20 mm to 40 mm	0.113	M ³	408.83	46.20	
	Fitting and cost of Wire netting @ 20% of above				9.24	
	Add Overhead charge & C.P@15%				55.44	
					8.32	
	Rate	Say Rs		637.70	Each	63.75
5.8.6(b)	Providing weep holes with dry graded Jhama metal filter of 20 mm to 40 mm siz in abutment and wing wall, as per specification and direction of E/I					
	Unit :-Each					
	Jhama metal filter 20 mm to 40 mm	0.113	M ³	1449.00	163.74	
	Fitting and cost of Wire netting @ 20% of above				32.75	
	Add Overhead charge & C.P@15%				196.48	
					29.47	
	Rate	Say Rs		226.00	Each	225.96
5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 Metre lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Semi skilled mazdoor	1	nos	279.00	279.00	
	Unskilled mazdoor	3	nos	268.00	804.00	
	Add Overhead charge & C.P@15%				1083.00	
					162.45	
	Rate per cum	Say Rs		439.80	Per M ³	439.78

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5.8.8	Dismantling plain cement or lime concrete work including stacking serviceable materials in stacks within 15 Metre lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
	Unit :-Per Cum	Per M ³				
	Taking Out put =2.832 Cum	2.832	Cum			
	Semi skilled mazdoor	3	nos	279.00	837.00	
	Unskilled mazdoor	4	nos	268.00	1072.00	
					1909.00	
	Add Overhead charge & C.P@15%				286.35	
					2195.35	775.19
	Rate per cum	Say Rs		175.20	Per M ³	
5.8.9	Dismantling R.C.C work including stacking serviceable materials in stacks within 15 Metre lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
	Unit :-Per Cum					
	Taking Out put =2.832 Cum					
	Hammer man	2.25	nos	281.00	632.25	
	Skilled mazdoor	2.25	nos	340.00	765.00	
	Unskilled mazdoor	7	nos	268.00	1876.00	
	Blacksmith Gr II	1	nos	321.00	321.00	
	Mate	1	nos	289.00	289.00	
					3883.25	
	Add Overhead charge & C.P@15%				582.49	
					4465.74	1,576.88
	Rate per cum	Say Rs		1576.90	Per M ³	
5.8.10	Dismantling old plaster and pointing in cement or lime and raking out joints to 15 mm. depth, watering and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
	Unit :-Per Sqm					
	Taking Out put =9.30 Sqm					
	Semi skilled mazdoor	0.35	nos	279.00	97.65	
	Unskilled mazdoor	0.10	nos	268.00	26.80	
	Bhisti	0.06	nos	265.00	15.90	
					140.35	
	Add Overhead charge & C.P@15%				21.05	
					161.40	17.36
	Rate per sqm	Say Rs		17.40	Per M ²	



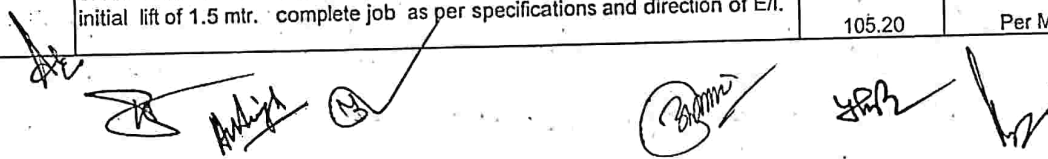
CHAPTER VI

BARRAGE AND WEIR

6.1 EARTH WORK

Sr.No.	Item	Rate	Unit
6.1.1	Cutting of trees along with branches and their removal away from the work site and stacking the same as per specifications and direction of E/I. (Measurement of girth at a height of one meter above the ground level)		
	(a) Girth above 0.50 meter but up to 0.75 meter	246.40	Each
	(b) Girth above 0.75 meter but upto 1.50 meter	492.80	Each
	(c) Girth above 1.5 meter but upto 2.50 meter	893.30	Each
	(d) Girth above 2.50 meter but up to 4.00 meter	1447.80	Each
	(e) Girth above 4.00 meter	2094.70	Each
6.1.2	Uprooting of stumps and their removal away from the work site as per specifications and direction of E/I.		
	(a) Girth above 0.50 meter but up to 0.75 meter	154.10	Each
	(b) Girth above 0.75 meter but up to 1.50 meter	154.10	Each
	(c) Girth above 1.5 meter but upto 2.50 meter	205.50	Each
	(d) Girth above 2.50 meter but up to 4.00 meter	308.20	Each
	(e) Girth above 4.00 meter	385.20	Each
6.1.3.1	Preparation of borrow areas by removing the grass and the jungle, bushes from the top before excavation as per specifications and direction of E/I.	2.50	Per M ²
6.1.3.2	Jungle clearance and weeding out shrubs including small tree up to 0.50 mtr girth and removal as per specifications and direction of E/I.	7.50	Per M ²
6.1.4	Removal of stone boulder of more than 300 mm size from alignment of the dam and stacking the same (beyond 50 M away from Toe of the dam base in the country side) within initial lead of 150 M as per specifications and direction of E/I.	97.90	Per M ³
6.1.5	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials (beyond 50 M away from Toe of the dam base in the country side) with initial lead of 150 M and all lifts as per specifications and direction of E/I.	182.50	Per M ³
6.1.6	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 mtr but within 1.00 K.M and all lifts by Tipper including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.	335.00	Per M ³
6.1.7	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Tipper including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.	359.50	Per M ³

6.1.8	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained (50 m away from the edge of the trench) with initial lead of 150 M and initial lifts of 1.5 M all complete as per specifications and direction of E/I.	145.10	Per M ³
6.1.9	Extra for earth work in hard soil (vide classification of soil item-B) as per specification and direction of E/I.	21.80	Per M ³
6.1.10	Extra for earth work in marshy soil , slushy and daldal (vide classification of soil item-F)	32.60	Per M ³
6.1.11.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50 mtr away from the edge of the trench) with initial lead of 150 m and initial lifts of 1.5 mtr all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	601.90	Per M ³
6.1.11.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock(Where blasting is not required) (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50 mtr away from the edge of the trench) with initial lead of 150 m and initial lifts of 1.5 mtr all complete as per specifications and direction of E/I.	464.00	Per M ³
6.1.12	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is required and stacking properly in approved stack size in approved stack yard (beyond 50 M away from the edge of the trench in country side) with initial lead of 150M and initial lifts of 1.5 mtr all	1054.70	Per M ³
6.1.13	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Truck (50M. away from the edge of the trench)beyond initial lead of 150 m but up to 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete. as per specifications and direction of E/I.	330.20	Per M ³
6.1.14.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C)and disposal of soil by truck (50M away from the edge of the trench beyond initial lead of 150 mtr but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	731.50	Per M ³
6.1.14.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) and disposal of soil by truck (50 M away from the edge of the trench beyond initial lead of 150 M but upto 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	524.90	Per M ³
6.1.15	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by truck (50M away from the edge of the trench beyond initial lead of 150M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	731.50	Per M ³
6.1.16	Earth work in filling in foundation trenches and back filling of masonry structures with suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30 mtr and lift of 1.5M complete job as per specifications and direction of E/I.	94.30	Per M ³
6.1.17	Earth work in filling in foundation trenches and back filling of masonry structures with semi pervious or suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits with initial lead of 30 mtr and initial lift of 1.5 mtr. complete job as per specifications and direction of E/I.	105.20	Per M ³



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6.1.18	Extra for each subsequent lift upto 1 M over the initial lift of 1.5 M (for ordinary or hard soil) as per specification and direction of E/I.	10.90	Per M ³
6.1.19	Extra for each subsequent lead upto 25 M beyond the initial lead of 30 M (for ordinary or hard soil) as per specification and direction of E/I.	10.90	Per M ³
6.1.20	Extra for each subsequent lift upto 1 M over the initial lift of 1.5 M (for ordinary soft or hard rock) as per specification and direction of E/I.	16.30	Per M ³
6.1.21	Extra for each subsequent lead upto 25 Mtr beyond the initial lead of 30 M (for ordinary soft or hard rock) as per specification and direction of E/I.	16.30	Per M ³
6.1.22	Deleted		
6.1.23	deleted		
6.1.24.1	Fine dressing of the canals banks or embankment and turfing with 75 mm thick grass sod obtained within a lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.	2164.30	Per % M ²
6.1.24.2	Extra for each lead of 150 M over initial lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.	462.30	Per % M ²
6.1.25	Close timbering in trenches including strutting, shoring and packing cavities (wherever required) depth not exceeding 1.5M, complete as per specifications and direction of E/I.	100.60	Per M ²
6.1.26	Close timbering in trenches including strutting, shoring and packing cavities (wherever required) depth not exceeding 1.5 M, but upto 3.0M complete as per specifications and direction of E/I.	105.10	Per M ²
6.1.27	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 mtr but within 1.00 K.M and all lifts by Tipper including loading, unloading and maintenance of haul road as per specifications and direction of E/I.	328.40	Per M ³
6.1.28	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Tipper including loading, unloading and maintenance of haul roads. as per specifications and direction of E/I.	364.00	Per M ³
6.1.29	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Tipper (50M away from the edge of the trench) beyond initial lead of 150M but upto 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc. all complete as per specifications and direction of E/I.	323.70	Per M ³
6.1.30.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) and disposal of soil by Tipper (50 M away from the edge of the trench beyond initial lead of 150M but upto 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	676.30	Per M ³
6.1.30.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) and disposal of soil by Tipper (50 M away from the edge of the trench beyond initial lead of 150 mtr but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	469.70	Per M ³

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6.1.31	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by Tipper (50 mtr away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	676.30	Per M ³
6.1.32	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 150 M lead but up to 1/2 K.M. with all lift and carriage by Tipper complete job as per specifications and direction of E/I.	422.50	Per M ³
6.1.33	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 1/2 K.M lead but up to 1 K.M. with all lift and carriage by Tipper complete job as per specifications and direction of E/I.	440.30	Per M ³

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CHAPTER VI

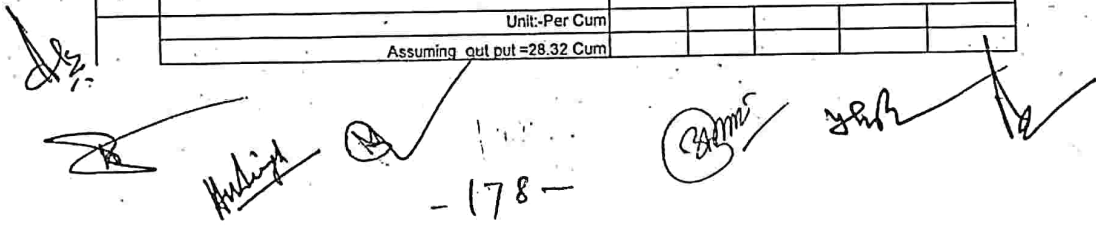
BARRAGE AND WEIR

6.1 EARTH WORK

Sl.no.	Description	Quantity	Unit	Rate	Amount	Ref.
6.1.1	Cutting of trees along with branches and their removal away from the work site and stacking the same including . as per specifications and direction of E/I.(Measurement of girth at a height of one metre above the ground level)					Analysis same as Item 5.1.4
6.1.2	Uprooting of stumps and their removal, away from the work site . as per specifications and direction of E/I.					Analysis same as Item 5.1.5
6.1.3.1	Preparation of borrow areas by removing the grass and the jungles, bushes from the top before excavation as per specifications and direction of E/I.					Analysis same as Item 5.1.2
6.1.3.2	Jungle clearance and weeding out shrubs including small tree up to 0.50 meter girth and their removal as per specifications and direction of E/I.					Analysis same as Item 5.1.3
6.1.4	Removal of stone boulder of more than 300 mm size from alignment of the Barrage / Weir and stacking the same (beyond 50 M away from the edge of the foundation trenches in the country side) within initials lead of 150 M : as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =28.32 Cum	28.32	Cum			
	Unskilled mazdoor for removal and stacking	9	nos	268.00	2412.00	
					2412.00	
	Add Overhead charge & C.P@15%				361.8	
					2773.80	97.94
	Rate per cum	Say Rs		97.90	Per M ³	
6.1.5	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials (beyond 50M away from the edge of the foundation trenches in the country side) with initial lead of 150M and all lifts as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =28.32 Cum					
	Unskilled mazdoor for dagbelling	0.50	nos	268.00	134.00	
	Unskilled mazdoor for for cutting earth as well as removing	6	nos	268.00	1608.00	
	Unskilled mazdoor for preparation of sheet	1	nos	268.00	268.00	
	Unskilled mazdoor for disposal of earth and organic materials	9	nos	268.00	2412.00	
	Mate	0.25	nos	289.00	72.25	
					4494.25	
	Add Overhead charge & C.P@15%				674.14	
					5168.39	182.50
	Rate per cum	Say Rs		182.50	Per M ³	
6.1.6	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150M but within 1.00 K.M and all lifts by Truck including loading, unloading and maintenance of haul roads : as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	268.00	134.00	
	Unskilled mazdoor for for cutting earth as well as removing organic materials etc.	6	nos	268.00	1608.00	
	Unskilled mazdoor for preparation of sheet	1	nos	268.00	268.00	
	Mate	0.25	nos	289.00	72.25	
B.	Carriage of earth by 10 M.T capacity Truck					
	Carriage cost of earth for 1 k.m lead					
	Average lead	575	M			
	Truck capacity 8 MT (compacted earth)	4.8	Cum			
	Cycle time— Average speed	16	km/hr			

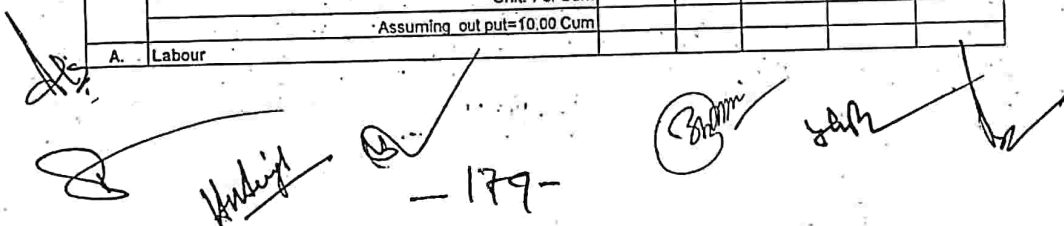
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	(a) Hauling time = x 60 x 2/1000 x Average speed	Average lead	4.31	minutes			
	(b) Loading unloading turning and spolling time=		60	minutes			
	Total hauling cycle time=		64.31	minutes			
	No of trip per working hour =	Loading					
	unloading turning and spolling time / Total hauling time		0.93	trips			
	Material carried=trips x net capacity		4.48	M ³			
	Hourly use rate of truck (Vide Item no P& M-057)		929.00	hr			
	Rate per 28.32 cum for carriage only=	Use rate of					
	truck x 28.32 / material carried				Rs	5875.05	
	(c). Construction and maintenance of haul road @ 5 % of				Rs	293.75	
	Item (B)					8251.06	
	Add Overhead charge & C.P@15%					1237.66	
						9488.72	335.05
	Rate per cum	Say Rs				335.00	Per M ³
6.1.7	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Truck including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.						
	Unit:-Per Cum						
	Assuming out put=28.32 Cum						
A.	Unskilled mazdoor for dagbelling		0.50	nos	268.00	134.00	
	Unskilled mazdoor for cutting earth as well as removing organic materials etc.		6	nos	268.00	1608.00	
	Unskilled mazdoor for preparation of sheet		1	nos	268.00	268.00	
	Mate		0.25	nos	289.00	72.25	
B.	Carriage of earth by 10 M.T capacity Truck						
	Carriage cost of earth for 2 k.m lead						
	Average lead		1500	M			
	Truck capacity 8 MT (compacted earth)		4.8	Cum			
	Cycle time= Average speed		17	km/hr			
	(a) Hauling time =	Average lead	10.59	minutes			
	x 60 x 2/1000 x Average speed						
	(b) Loading unloading turning and spolling time=		60	minutes			
	Total hauling cycle time=		70.59	minutes			
	No of trip per working hour =	Loading					
	unloading turning and spolling time / Total hauling time		0.85	trips			
	Material carried=trips x net capacity		4.08	M ³			
	Hourly use rate of truck		929.00	hr			
	Rate per 28.32 cum for carriage only=	Use rate of			Rs	6448.35	
	truck x 28.32 / material carried						
	@ Construction and maintenance of haul road @ 5 % of Item (B)				Rs	322.42	
						8853.02	
	Add Overhead charge & C.P@15%					1327.95	
						10180.97	359.50
	Rate per cum	Say Rs				359.50	Per M ³
6.1.8	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of the excavated earth so obtained (50 M away from the edge of the trench) with initial lead of 150M and initial lifts of 1.5M all complete as per specifications and direction of E/I.						
	Unit:- Per Cum						
	Assuming out put= 28.32 Cum						
	Unskilled mazdoor for cutting earth		6	nos	268.00	1608.00	
	Unskilled mazdoor for carrying		7	nos	268.00	1876.00	
	Head Mason		0.25	nos	361.00	90.25	
						3574.25	
	Add Overhead charge & C.P@15%					536.1375	
						4110.39	145.14
	Rate per cum	Say Rs				145.10	Per M ³
6.1.9	Extra for earth work in hard soil (vide classification of soil item-B) all complete as per specification and direction of E/I.						
	Unit:-Per Cum						
	Assuming out put=28.32 Cum						



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	Unskilled mazdoor	2	nos	268.00	536.00	
					536.00	
	Add Overhead charge & C.P@15%				80.40	
					616.40	21.77
	Rate per cum		Say Rs	2180		Per M ³
6.1.10	Extra for earth work in marshy soil, slush and daldal (vide classification of soil item-F) all complete as per specification and direction of E/I.					
	Unit- Per Cum					
	Assuming out put= 28.32 Cum					
	Unskilled mazdoor for cutting	1.50	nos	268.00	402.00	
	Unskilled mazdoor for carrying	1.50	nos	268.00	402.00	
					804.00	
	Add Overhead charge & C.P@15%				120.60	
					924.60	32.65
	Rate per cum		Say Rs	3260		Per M ³
6.1.11.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50M away from the edge of the trench) with initial lead of 150M and initial lifts of 1.5M all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)					
	Unit- Per Cum					
	Assuming out put=10.00 Cum					
	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	9.50	nos	268.00	2546.00	
	Mason Gr I	0.33	nos	361.00	119.13	
	Blaster	0.33	nos	444.00	146.52	
	Blasting material including carriage from Gomla to work site, storage etc.					
	Special Gelatin	2.00	Kg	781.83	1563.66	
	Detonator	10	nos	5.73	57.29	
	Fuse coil	1	nos	13.96	13.96	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					5234.31	
	Add Overhead charge & C.P@15%				785.15	
					6019.45	601.95
	Rate per cum		Say Rs	60190		Per M ³
6.1.11.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (Where blasting is not required) (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50 M away from the edge of the trench) with initial lead of 150M and initial lifts of 1.5M all complete as per specifications and direction of E/I.					
	Unit- Per Cum					
	Assuming out put=10.00 Cum					
	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	11.50	nos	268.00	3082.00	
	Mason Gr I	0.50	nos	361.00	180.50	
					4035.25	
	Add Overhead charge & C.P@15%				605.29	
					4640.54	464.05
	Rate per cum		Say Rs	46400		Per M ³
6.1.12	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is required and stacking properly in approved stack size in approved stack yard (beyond 50 M away from the edge of the trench in country side) with initial lead of 150 m and initial lifts of 1.5M all complete as per specifications and direction of E/I.					
	Unit-Per Cum					
	Assuming out put=10.00 Cum					
A.	Labour					



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	Hammer man	10.50	nos	281.00	2950.50
	Unskilled mazdoor for all work	13.00	nos	268.00	3484.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.67	nos	444.00	296.00
B.	Blasting material including carriage from Gomia to work site, storage etc.				
	Special Gelatin	2.75	Kg	781.83	2150.03
	Detonator	18	nos	5.73	103.11
	Fuse coil	3	nos	13.96	41.88
C.	Tools and Plants				
	Cost of hire charge of compressor, drilling equipment and other accessories				26.50
					9171.16
	Add Overhead charge & C.P@15%				1375.67
					10546.83
					1054.70
	Rate per cum	Say Rs			Per M ³
6.1.13	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Truck (50M away from the edge of the trench) beyond initial lead of 150M but up to 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete as per specifications and direction of E/I.				
	Unit:-Per Cum				
	Assuming out put =28.32 Cum				
A.	Unskilled mazdoor for cutting earth	6	nos	268.00	1608.00
	Unskilled mazdoor for carrying	1	nos	268.00	268.00
	Head Mason	0.25	nos	361.00	90.25
B.	Cost of carriage of 28.32 cum earth by Truck including loading				
	Carriage cost of earth for 1 k.m lead				
	Average lead	575	M		
	Truck capacity 8 MT (compacted earth)	4.8	Cum		
	Cycle time--- Average speed	16	km/hr		
	(a) Hauling time = Average lead	4.31	minutes		
	(b) Loading unloading, turning and spolling time=	60	minutes		
	Total hauling cycle time=	64.31	minutes		
	No of trip per working hour = Loading,				
	unloading, turning and spolling time / Total hauling time	0.93	trips		
	Material carried=trips x net capacity	4.48	M ³		
	Hourly use rate of truck	929.00	hr.		
	Rate per 28.32 cum for carriage only= Use rate of truck x 28.32 / material carried			Rs	5872.61
C.	Construction and maintenance of haul road @ 5 % of Item (B)			Rs	293.63
					8132.49
	Add Overhead charge & C.P@15%				1219.87
					9352.36
					330.24
	Rate per cum	Say Rs			Per M ³
6.1.14.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C)and disposal of soil by Truck (50M away from the edge of the trench) beyond initial lead of 150 M but up to 1 k.m away ,with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
	Unit:- Per Cum				
	Assuming out put= 10.00 Cum				
A.	Labour				
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.33	nos	444.00	146.52
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading				
	Carriage cost of earth for 1 k.m lead				
	Average lead=	575	M		
	Truck capacity 8 MT	6	cum		

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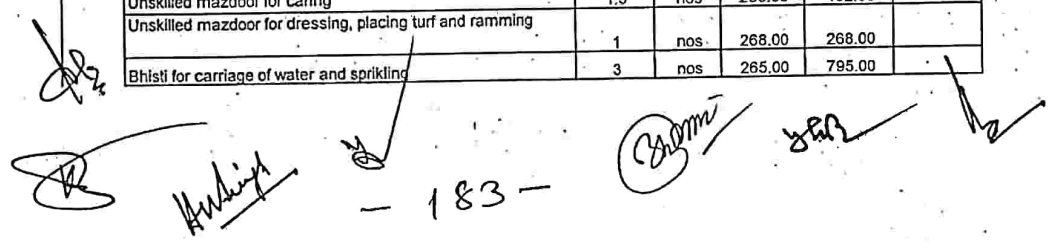
	Swell factor	0.67				
	Net capacity=Truck capacity swell factor	4.02	Cum			
	Cycle time— Average speed	16	km/hr			
	(a) Hauling time =Average leadx2/1000xAverage speed	4.31	minutes			
	(b) Loading unloading turning and spolling time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading					
	unloading turning and spolling time / Total hauling time	0.93	trips			
	Material carried=trips X net capacity	3.75	M ³			
	Hourly use rate of truck	929.00	hr			
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2477.04	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	123.85	
C.	Blasting material Including carriage from Gomia to work site, storage etc.					
	Special Gelatin	2.00	Kg	781.83	1583.66	
	Detonator	10	nos	5.73	57.29	
	Fuse coil	1	nos	13.96	13.96	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and				15.00	
					6361.20	
	Add Overhead charge & C.P@15%				954.18	
					7315.38	731.54
	Rate per cum	Say Rs		731.50	Per M ³	
6.1.14.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C)and disposal of soil by Truck (50M away from the edge of the trench) beyond initial lead of 150 M but upto 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =10.00 Com-					
A.	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00	
	Mason Gr I	0.33	nos	361.00	119.13	
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead					
	Average lead=	575	M			
	Truck capacity 8 MT	6	cum			
	Swell factor	0.67				
	Net capacity=Truck capacity X swell factor	4.02	Cum			
	Cycle time— Average speed	16	km/hr			
	(a) Hauling time = Average	4.31	minutes			
	lead X 60 X 2/1000 X Average speed					
	(b) Loading unloading turning and spolling time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading					
	unloading turning and spolling time / Total hauling time	0.93	trips			
	Material carried=tripsXnet capacity	3.75	M ³			
	Hourly use rate of truck	929.00	hr			
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2477.04	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	123.85	
					4564.78	
	Add Overhead charge & C.P@15%				684.72	
					5249.49	524.95
	Rate per cum	Say Rs		524.90	Per M ³	

Handwritten signatures and initials are present below the table. A central handwritten number '181' is also visible.

6.1.15	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by Truck (50M away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.				
	Unit-Per Cum				
	Assuming out put=10.0 Cum				
A.	Labour				
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.33	nos	444.00	146.52
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading				
	Carriage cost of earth for 1 k.m lead				
	Average lead=	575	M		
	Truck capacity 8 MT	6	cum		
	Swell factor	0.67			
	Net capacity=Truck capacity X swell factor	4.02	Cum		
	Cycle time— Average speed	16	km/hr		
	(a) Hauling time =Average leadx60x2/1000xAverage speed	4.31	minutes		
	(b) Loading unloading turning and spolling time=	60	minutes		
	Total hauling cycle time=	64.31	minutes		
	No of trip per working hour = Loading				
	unloading turning and spolling time / Total hauling time	0.93	trips		
	Material carried=trips X net capacity	3.75	M ³		
	Hourly use rate of truck	929.00	hr		
	Rate per 10 cum for carriage only=Use rate of truck X 10/material carried			Rs	2477.04
	@ Construction and maintenance of haul road @ 5% of Item (B)			Rs	123.85
C.	Blasting material including carriage from Gomla to work site, storage etc.				
	Special Gelatin	2.00	Kg	781.83	1563.66
	Detonator	10	nos	5.73	57.29
	Fuse coil	1	nos	13.96	13.96
D.	Tools and Plants				
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00
					6361.20
	Add Overhead charge & C.P@15%				954.18
					7315.38
	Rate per cum	Say Rs		7315.38	Per M ³
6.1.16	Earth work in filling in foundation trenches and back filling of masonry structures with suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30M and lift of 1.5M complete job as per specifications and direction of E/I.				
	Unit-Per Cum				
	Assuming out put=28.32 Cum				
	Unskilled mazdoor for cutting	4.5	nos	268.00	1206.00
	Unskilled mazdoor for carrying	4	nos	268.00	1072.00
	Head mason	0.125	nos	361.00	45.13
					2323.13
	Add Overhead charge & C.P@15%				348.47
					2671.59
	Rate per cum	Say Rs		2671.59	Per M ³

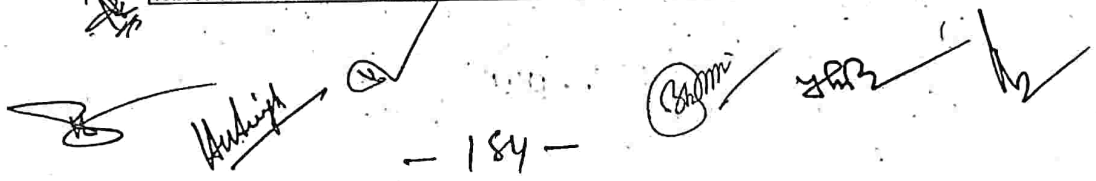
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6.1.17	Earth work in filling in foundation trenches and back filling of masonry structures with semi pervious or suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits with initial lead of 30 M and initial lift of 1.5 M complete job as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting	5.5	nos	268.00	1474.00	
	Unskilled mazdoor for carrying	4	nos	268.00	1072.00	
	Head mason	0.125	nos	361.00	45.13	
					2591.13	
	Add Overhead charge & C.P@15%				388.67	
					2979.79	105.22
	Rate per cum	Say Rs		105.20	Per M ³	
6.1.18	Extra for each subsequent lift up to 1 M over the initial lift of 1.5 M (for ordinary or hard soil) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting	1	nos	268.00	268.00	
					268.00	
	Add Overhead charge & C.P@15%				40.20	
					308.20	10.88
	Rate per cum	Say Rs		10.90	Per M ³	
6.1.19	Extra for each subsequent lead up to 25 M beyond the initial lead of 30 M (for ordinary or hard soil) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor	1	nos	268.00	268.00	
	Add Overhead charge & C.P@15%				40.20	
					308.20	10.88
	Rate per cum	Say Rs		10.90	Per M ³	
6.1.20	Extra for each subsequent lift up to 1 M over the initial lift of 1.5 M (for ordinary soft or hard rock) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting	1.5	nos	268.00	402.00	
	Add Overhead charge & C.P@15%				60.30	
					462.30	16.32
	Rate per cum	Say Rs		16.30	Per M ³	
6.1.21	Extra for each subsequent lead up to 25 M beyond the initial lead of 30 M (for ordinary soft or hard rock) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor	1.5	nos	268.00	402.00	
	Add Overhead charge & C.P@15%				60.30	
					462.30	16.32
	Rate per cum	Say Rs		16.30	Per M ³	
6.1.22	Deleted					
6.1.23	Deleted					
6.1.24.1	Fine dressing of the canals banks or embankment and turfing with 75 mm thick grass sode obtained within a lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.					
	Unit:-Per % Sqm					
	Assuming out put=100Sqm					
	Unskilled mazdoor for cutting	1.5	nos	268.00	402.00	
	Unskilled mazdoor for caring	1.5	nos	268.00	402.00	
	Unskilled mazdoor for dressing, placing turf and ramming	1	nos	268.00	268.00	
	Bhisti for carriage of water and sprinkling	3	nos	265.00	795.00	



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	Cost of watering till the growth				15.00	
					1882.00	
	Add Overhead charge & C.P@15%				282.30	
					2164.30	2164.30
	Rate per % sqm	Say Rs		2164.30		Per % M ²
6.1.24.2	Extra for each lead of 150 M over initial lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.					
	Unit-Per % Sqm					
	Assuming out put=100Sqm					
	Unskilled mazdoor for carrying	1.50	nos	268.00	402.00	
					402.00	
	Add Overhead charge & C.P@15%				60.30	
					462.30	462.30
	Rate per % sqm	Say Rs		462.30		Per % M ²
6.1.25	Close timbering in trenches including strutting, shoring and packing cavities (whereve required) depth not exceeding 1.5 M, complete as per specifications and direction of E/I. (Measurement to be taken of the face area timbered)					
	Unit-Per Sqm					
	Assuming out put=90' Sqm					
	Assuming 30 mtr long 1.5 mtr deep					
	Area= 2 x 30 x 1.5 = 90 sqm.					
	Poling Boards					
	Local wood/kail planks 90 x 0.38= 3.42 cum	3.42	cum	24199.00	82760.58	
	100 mm x100 mm					
	Local wood planks 4 x30x 0.1 x0.1 = 1.2 cum	1.2	Cum	24199.00	29038.80	
	Balli struts					
	Sal ballah 120 mm dia 1.5 m long 2 x17x1.5=51 mtr	51	mtr	53.99	2753.49	
	Total Cost of material				114552.87	
	Carriage					
	Cost of carriage of material including loading, unloading and stacking @ 1% of total of cost materials				1145.53	
	Total cost of material with carriage cost				115698.40	
	Deduct credit for materials 75 % of the cost.of material				85914.65	
					29783.75	(A)
	This (A) can be used four times					
	Therefore cost per use A/4				7445.94	
	Labour					
	Carpenter Gr II	0.5	nos	321.00	160.50	
	Unskilled mazdoor	1	nos	268.00	268.00	
	Total				7874.44	
	Add Overhead charge & . C.P@15%				1181.17	
					9055.60	100.62
	Rate per sqm	Say Rs		100.60		Per M ²
6.1.26	Close timbering in trenches including strutting, shoring and packing cavities (whereve required) depth exceeding 1.5M ,but upto 3.0 M complete as per specifications and direction of E/I. (Measurement to be taken of the face area timbered)					
	Unit-Per Sqm					
	Assuming out put=90 Sqm					
	Assuming 30 mtr long 1.5 mtr deep					
	Area= 2 x 30 x 1.5 = 90 sqm.					
	Poling Boards					
	Local wood planks 90 x 0.38= 3.42 cum	3.42	cum	24199.00	82760.58	
	100 mm x100 mm					
	Local wood planks 4 x30x 0.1 x0.1 = 1.2 cum	1.2	Cum	24199.00	29038.80	
	Balli struts					
	Sal ballah 120 mm dia 1.5 m long 2 x17x1.5=51 mtr.	51	mtr	53.99	2753.49	
	Total Cost of material				114552.87	
	Cost of carriage of material including loading, unloading and stacking @ 1 % of total of cost materials				1145.53	
	Total cost of material with carriage cost				115698.40	

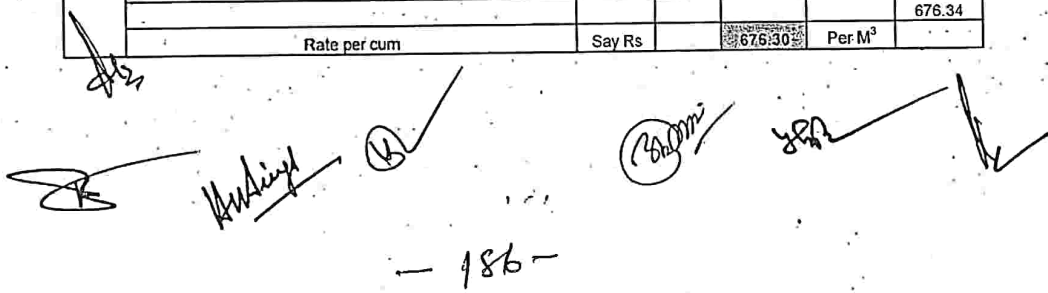


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	Deduct credit for materials 75 % of the cost of material				85914.65	
					29783.75	(A)
	This (A) can be used four times Therefore, cost per use A/4				7445.94	
	Labour					
	Carpenter Gr II	0.75	nos	321.00	240.75	
	Unskilled mazdoor	2	nos	268.00	536.00	
	Total				8222.69	
	Add Overhead charge & C.P@15%				1233.40	
					9456.09	105.07
	Rate per sqm	Say Rs		105.10		Per Sqm
6.1.27	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 M but within 1.00 K.M and all lifts by Tipper including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	268.00	134.00	
	Unskilled mazdoor for cutting earth as well as removing organic materials etc.	6	nos	268.00	1608.00	
	Unskilled mazdoor for preparation of sheet	1	nos	268.00	268.00	
	Mate	0.25	nos	289.00	72.25	
					2082.25	
	Add Overhead charge & C.P@15%				312.34	
					2394.59	84.55
B.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manual means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	35.60	35.60	Lead x H _{ka}
					243.90	243.9
						328.45
	Rate per sam	Say Rs		328.40		Per M ³
6.1.28	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Tipper including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	268.00	134.00	
	Unskilled mazdoor for cutting earth as well as removing organic materials etc.	6	nos	268.00	1608.00	
	Unskilled mazdoor for preparation of sheet	1	nos	268.00	268.00	
	Mate	0.25	nos	289.00	72.25	
					2082.25	
	Add Overhead charge & C.P@15%				312.3375	
					2394.59	84.55
B.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manual means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	71.20	71.20	Lead x H _{ka}
					279.50	279.5
						364.05
	Rate per cum	Say Rs		364.00		Per M ³

Handwritten signatures and initials are present below the table, including a signature that appears to be "Anil" and another that looks like "Bhims".

6.1.29	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Tipper (50M away from the edge of the trench) beyond initial lead of 150M but up to 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for cutting earth	6	nos	268.00	1608.00	
	Unskilled mazdoor for carrying	1	nos	268.00	268.00	
	Head Mason	0.25	nos	361.00	90.25	
					1966.25	
	Add Overhead charge & C.P@15%				294.9375	
					2261.19	79.84
B.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4 (c)	1	cum.km	35.60	35.60	Lead x H _{ka}
					243.90	243.9
						323.74
	Rate per cum	Say Rs		323.70	Per M ³	
6.1.30.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) and disposal of soil by Tipper (50 M away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)					
	Unit:-Per Cum					
	Assuming out put=10.00 Cum					
A.	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00	
	Mason Gr I	0.33	nos	361.00	119.13	
	Blaster	0.33	nos	444.00	146.52	
					2110.40	
	Add Overhead charges & C.P@15%				316.56	
					2426.96	242.70
B.	Blasting material including carriage from Gomia to work site, storage etc.					
	Special Gelatin	2.00	Kg	781.83	1563.66	
	Detonator	10	nos	5.73	57.29	
	Fuse coil	1	nos	13.96	13.96	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					1649.91	
	Add Overhead charge & C.P@15%				247.49	
					1897.39	189.74
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4 (c)	1	cum.km	35.60	35.60	Lead x H _k
					243.90	243.90
						676.34
						676.34
	Rate per cum	Say Rs		676.30	Per M ³	

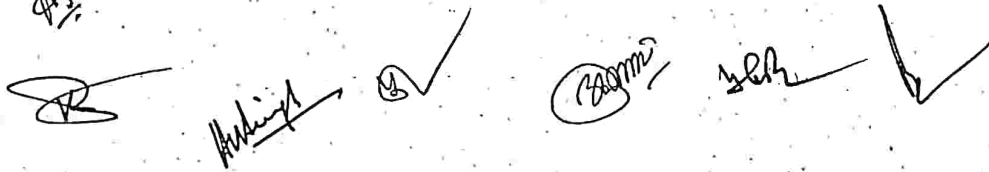


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6.1.30.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) and disposal of soil by Tipper (50 M away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Assuming 10cum					
	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00	
	Mason Gr I	0.33	nos	361.00	119.13	
					1963.88	
	Add Overhead charge & C.P@15%				294.58	
					2258.46	225.85
	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	35.60	35.60	Lead x H _{ca}
					243.90	243.9
					469.75	
					469.75	
	Rate per cum	Say Rs		469.70	Per M ³	
6.1.31	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by Tipper (50M away from the edge of the trench beyond initial lead of 150 M but upto 1-k.m away with all lifts, including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit-Per Cum					
	Assuming out put=10.00 Cum					
A.	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00	
	Mason Gr I	0.33	nos	361.00	119.13	
	Blaster	0.33	nos	444.00	146.52	
B.	Blasting material Including carriage from Gomia to work site, storage etc.					
	Special Gelatin	2.00	Kg	781.83	1563.66	
	Detonator	10	nos	5.73	57.29	
	Fuse coil	1	nos	13.96	13.96	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					3760.31	
	Add Overhead charge & C.P@15%				564.05	
					4324.35	432.44
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4 (c)	1	cum.km	35.60	35.60	Lead x H _k
					243.90	243.90
					676.34	
					676.34	
	Rate per cum	Say Rs		676.30	Per M ³	
6.1.32	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 150 M lead but up to 1/2 K.M. with all lift and carriage by Tipper complete job as per specifications and direction of E/I.					

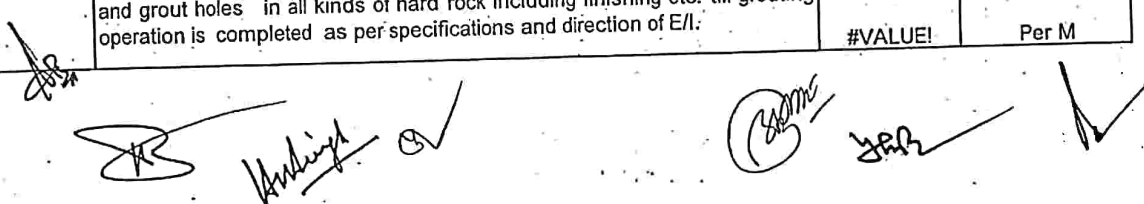
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		Unit-Per Cum				
		Assuming out put=28.32 Cum				
A.	Labour					
	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for cutting earth	9.50	nos	268.00	2546.00	
	Mate	1.00	nos	289.00	289.00	
B.	Cost of compaction(vide Itm no 6.1.38)					
	Unskilled mazdoor	3	nos	268.00	804.00	
	Bhisti for carriage of water and sprinkling	3	nos	265.00	795.00	
	Total (A+B)				4836.00	
	Add Overhead charge & C.P	15	%		725.40	
					5561.40	196.38
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	17.80	17.80	Lead x H _k
					226.10	226.1
						422.48
						422.48
	Rate per cum	Say Rs		422.50	Per M ³	
6.1.33	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 1/2 K.M lead but up to 1 K.M. with all lift and carriage by Tipper complete job as per specifications and direction of E/I.					
		Unit-Per Cum				
		Assuming out put=28.32 Cum				
A.	Labour					
	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for cutting earth	9.50	nos	268.00	2546.00	
	Mate	1.00	nos	289.00	289.00	
B.	Cost of compaction(vide Item no 6.1.38)					
	Unskilled mazdoor	3	nos	268.00	804.00	
	Bhisti for carriage of water and sprinkling	3	nos	265.00	795.00	
	Total (A+B)				4836.00	
	Add Overhead charge & C.P@15%				725.40	
					5561.40	196.38
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	208.30	208.30	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	35.60	35.60	Lead x H _k
					243.90	243.9
						440.28
						440.28
	Rate per cum	Say Rs		440.30	Per M ³	



6.2 DRILLING WORK

Sr.No.	Item	Rate	Unit
6.2.1.1	Core drilling of N x (53 mm To 75 mm) (Internal dia To External dia) size by Rotary core drilling machine up to 20 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.1.2	Core drilling of N x (Internal dia To External dia) (53 mm To 75 mm) (Internal dia To External dia) size by Rotary core drilling machine up to 20 meters depth and up to 30 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.2	Core drilling of 41mm To 75 mm (Internal dia To External dia) size by Rotary core drilling machine with T.C drill bit in all kinds of soil mixed with boulder, pebbles, shingles etc. including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction maintenance of core and sludge for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.3.1	Core drilling of B x (41 mm To 59 mm) (Internal dia To External dia) size by Rotary core drilling machine up to 20 meters depth and up to 30 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete . as per specifications and direction of E/I.	#VALUE!	Per M
6.2.3.2	Core drilling of B x (Internal dia To External dia) (41 mm To 59 mm) size by Rotary core drilling machine up to 20 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete . as per specifications and direction of E/I.	#VALUE!	Per M
6.2.4.	Drilling by Rotary core drilling machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill bit for grout and test holes in all kinds of soil including moorum, hard soil mixed with pebbles, shingles and compacted soil up to 20-meter depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till operation is completed as per specifications and direction of E/I.	#VALUE!	Per M
6.2.5	Drilling by Rotary drill machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill BUT for grout and test holes in clay soft and decomposed rock upto 20 meter depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till grouting, complete including as per specifications and direction of E/I.	#VALUE!	Per M
6.2.6	Drilling B x (41 mm To 59 mm) (Internal dia To External dia) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.	#VALUE!	Per M



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6.2.7	Drilling N x (53 mm To 75 mm) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.	#VALUE!	Per M
6.2.8.	Drilling Jack Hammer in hard of all kinds for grout holes up to 5 meter depth (for contact grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.	#VALUE!	Per M
6.2.9	Drilling by wagon drill machine in hard of all kinds for grout holes up to 5 meter depth (for consolidation grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.	#VALUE!	Per M

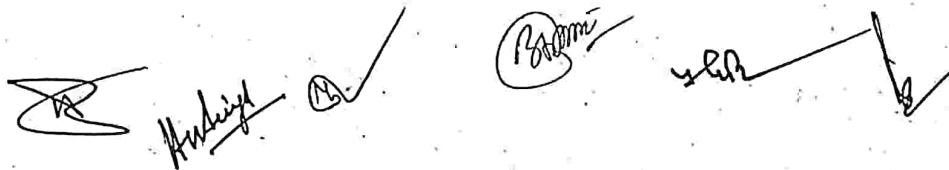
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6.2 DRILLING WORK

Sl.no	Description	Quantity	Unit	Rate	Amount	Ref.
6.2.1.1	Core drilling of N x (53 mm To 75 mm) (Internal dia To External dia) size by Rotary core drilling machine up to 20 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.					
	(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
	(ii). Average progress of core drilling has been found to be 1.5 metre in 3 hrs. Therefore cost of drilling /m= R/0.5	0.5	M		#VALUE!	
	(iii). Cost of Diamond bit for N x size at site Rs 'D'	IINPUT				
	Life of the bit = 10 metres	10	M			
	Cost of bit per metre = D/10				#VALUE!	
	(iv). Cost of (N x Size) Reaming shell at site = 'S'	IINPUT				
	Life of Reaming shell = 50 metres / shell	50	M/shell			
	Cost of shell per metre = S / 50				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
	Cost of core box = 'X'	IINPUT				
	Cost per meter= X/15				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
	Rate per M		Say Rs	#VALUE!	Per M	
6.2.1.2	Core drilling of N x (Internal dia To External dia) (53 mm To 75 mm) (Internal dia To External dia) size by Rotary core drilling machine up to 20 metres depth and up to 30 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.					
	The rate for item 6.2.1.1 has been worked out for drilling up to 20 metres depth while drilling beyond 20 metres depth. The depth covered per hour gets reduced to 0.33 metres in place of 0.50 metre per hour, therefore affecting the cost of drilling as per item 8.2.1 ii. Hence cost of drilling per metre = R x 3					
	(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
	ii. Hence cost of drilling per metre = R /0.33	0.33	M		#VALUE!	
	(iii). Cost of Diamond bit for N x size at site Rs 'D'	IINPUT				
	Life of the bit = 10 metres	10	M			
	Cost of bit per metre = D/10				#VALUE!	
	(iv). Cost of (NxSize) Reaming shell at site = 'S'	IINPUT				
	Life of Reaming shell = 50 metres / shell	50	mtr/shell			
	Cost of shell per metre = S / 50				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	

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(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
Cost of core box = 'X'	INPUT				#VALUE!
Cost per metre = X/15					#VALUE!
Add Overhead charge & C.P.@15%					#VALUE!
Rate per M		Say Rs	#VALUE!	Per M	#VALUE!
Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.2	Core drilling of 41mm To 75 mm (Internal dia To External dia) size by Rotary core drilling machine with T.C drill bit In all kinds of soil mixed with boulder, pebbles, shingles etc. including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction maintenance of core and sludge for foundation exploration only complete as per specifications and direction of E/I.				
(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4).	#VALUE!				
(ii). Average progress of core drilling has been found to be 2.50 metre per hour (As per actual observation). Therefore cost of drilling /m= Use rate of DCDM/2.5	2.5	mtr			#VALUE!
(iii). Cost of Tungsten Carbide bit at site Rs. Assuming Life of the bit = 20 metres / bit	INPUT	20			#VALUE!
Cost of bit per metre = R/20					#VALUE!
(iv). Cost of Reaming shell at site = 'N'	INPUT				
Life of Reaming shell = 100 metres / shell	100				#VALUE!
Cost of shell per metre = N / 100					#VALUE!
(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above (On the basis of item on 20(iii) page 125 of report of committee on control of R.V.Project)	40	%			#VALUE!
(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
Cost of core box = 'CB'	INPUT				#VALUE!
Cost per meter= CB/15					#VALUE!
(vii). Lowering 50 m dia light duty G.I casing pipe and its extraction including cutting , threading an providing socket wherever necessary.					
(a). Cost of 50 mm dia light duty G.I pipe= (assuming 50 % of light G.I pipe will be salvaged hence only 50 % cost should be taken)	INPUT				#VALUE!
(b) Unskilled mazdoor for raising (Extracting) the casing pipe	0.17	nos	268.00	44.67	
Total (ii)+(iii)+(iv)+(v)+(vi)+(vii)					#VALUE!
Add Overhead charge & C.P.@15%					#VALUE!
Rate per M		Say Rs	#VALUE!	Per M	#VALUE!



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	<p>Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work</p> <p>(i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only</p> <p>(ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only</p> <p>(iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only</p>						
6.2.3.1	Core drilling of B x (41 mm To 59 mm)(Internal dia To External dia) size by Rotary core drilling machine up to 20 metres depth and up to 30 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.						
	(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!					
	(ii). Average progress of core drilling has been found to be 0.80 metre per hrs(as per actual observation at Latratu Dam site). Therefore cost of drilling /m= R/0.80	0.8	M			#VALUE!	
	(iii). Cost of Diamond bit or (Bxsize) at site Rs 'T'	IINPUT					
	Life of the bit = 10 metres	10					
	Cost of bit per metre = T/10					#VALUE!	
	(iv). Cost of (Bxsize) Reaming shell at site = 'TK'	IINPUT					
	Life of Reaming shell = 50 metres / shell	50					
	Cost of shell per metre = TK / 50					#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%			#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly; Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M				
	Cost of core box = 'CB'	IINPUT					
	Cost per meter= CB/15					#VALUE!	
	Add Overhead charge & C.P@15%					#VALUE!	
						#VALUE!	#VALUE!
						#VALUE!	#VALUE!
	Rate per M		Say Rs	#VALUE!		Per M	
6.2.3.2	Core drilling of B x (Internal dia To External dia) (41 mm To 59 mm) size by Rotary core drilling machine up to 20 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.						
	-The rate for Item 8.2.3.1 has been worked out for drilling up to 20 metres depth while drilling beyond 20 metres depth. The depth covered per hour gets reduced to 0.50 metres in place of 0.80 metre per hour, therefor affecting the cost of drilling as per item 8.2.1 (ii). Hence cost of drilling per metre = R x 0.50.						
	(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!					
	(ii). Average progress of core drilling has been found to be 0.50 metre per hrs(as per actual observation at Latratu Dam site). Therefore cost of drilling /m= R/0.50	0.5	mtr			#VALUE!	
	(iii). Cost of Diamond bit or (Bxsize) at site Rs 'T'	IINPUT					
	Life of the bit = 10 metres	10					
	Cost of bit per metre = T/10					#VALUE!	
	(iv). Cost of (Bxsize) Reaming shell at site = 'TK'	IINPUT					
	Life of Reaming shell = 50 metres / shell	50					

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Cost of shell per metre = TK / 50				#VALUE!	
(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
Cost of core box = 'CB'	INPUT			#VALUE!	
Cost per metre= CB/15				#VALUE!	
Add Overhead charge & C.P@15%				#VALUE!	#VALUE!
				#VALUE!	#VALUE!
Rate per M		Say Rs	#VALUE!	Per M	
Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (i). Up to Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.4. Drilling by Rotary core drilling machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill bit for grout and test holes in all kinds of soil including moorum, hard soil mixed with pebbles, shingles and compacted soil up to 20 metre depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till operation is completed as per specifications and direction of E/I.					
(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
(ii). Average progress of core drilling has been found to be 2.50 metre per hour (As per actual observation). Therefore cost of drilling /m= D/2.5	2.5	M		#VALUE!	
(iii). Cost of Tungsten Carbide bit at site Rs.T.C Assuming Life of the T.C bit = 20 metres	INPUT 20				
Cost of bit per metre = T.C/20				#VALUE!	
(iv). Cost of Reaming shell at site = 'RS' Assuming Life of Reaming shell = 100 metres	INPUT 100				
Cost of shell per metre = RS / 100				#VALUE!	
(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
(vi). Lowering 50 metre dia light duty G.I casing pipe and its extraction including cutting, threading and providing socket wherever necessary.(vide T.E.C Item no 12.1.61)	1	M	#VALUE!	#VALUE!	
Analysis (vide T.E.C Item no 12.1.61) Supplying labour, materials and equipment for lowering 100 mm G.I.pipe (casing) up to 12 m depth for protecting the sides from filling during the process of drilling as per specification and direction of E/I. (G.I casing to be supplied departmentally)					
i. Carriage of pipe for an average lead of 50 K.M from store to site (12 mtr. in length as per carriage schedual					
ii. Cutting two pipe in four pieces) lowering of pipe is made in length of 3 metre)					
iii. Making thread in cut pieces	4	nos	INPUT	#VALUE!	
iv. Supplying and fitting two extra socket	2	nos	INPUT	#VALUE!	
v. Red lead and jute etc. for socket fixing				3.00	
vi. Plumber Gr I	0.5	nos	341.00	170.50	
				#VALUE!	
Add Overhead charge & C.P @15%				#VALUE!	#VALUE!

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	Rate per M	Say Rs	#VALUE!	Per mtr
(a). Cost of 50 mm dia light duty G.I pipe= (assuming 50 % of light G.I pipe will be salvaged hence only 50 % cost should be taken)	1.00	mtr	INPUT	#VALUE!
(b). Labour for cutting, threading and inserting etc.	0.08		268.00	21.44
(c) Unskilled mazdoor for raising (Extracting) the casing pipe	0.17	nos	268.00	45.56
(d). Clearing the pipe				
Final Rate (ii)+(iii)+(iv)+(v)+(vi)+(vii)				#VALUE!
Add Overhead charge & C.P@15%				#VALUE!
				#VALUE!
				#VALUE!
Rate per M	Say Rs	#VALUE!	Per M	
Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depending on the valu of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only				
6.2.5	Drilling by Rotary drill machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill BUT for grout and test holes in clay soft and decomposed rock upto 20 metre depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till grouting, complete as per specifications and direction of E/I.			
	(i) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!		
	(ii). Average progress of core drilling has been found to be 1.50 metre per hour (As per actual observation at Latrau Dam site). Therefore cost of drilling /m= R/1.5	1.5	M	#VALUE!
	(iii). Cost of Tungston Carbide bit at site Rs. Assuming Life of the T.C bit = 20 metres	INPUT		
	Cost of bit per metre = T.C/20	20		#VALUE!
	(iv). Cost of Reaming shell at site = 'RS' Assuming Life of Reaming shell =100 metres	INPUT		
	Cost of shell per metre = RS / 100	100		#VALUE!
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%	#VALUE!
	(vi). Lowering 50 metre dia light duty G.I casing pipe and its extraction including cutting, threading and providing socket wherever necessary.	1	mtr	#VALUE! #VALUE!
	(a). Cost of 50 mm dia light duty G.I pipe= (assuming 50 % of light G.I pipe will be salvaged hence only 50 % cost should be taken)	1.00	M	INPUT #VALUE!
	(b). Labour for cutting, threading and inserting etc.	0.08		INPUT #VALUE!
	(c) Unskilled mazdoor for raising (Extracting) the casing pipe	0.17	nos	INPUT #VALUE!
	(d). Clearing the pipe			
	Final Rate (ii)+(iii)+(iv)+(v)+(vi)+(vii)			#VALUE!
	Add Overhead charge & C.P@15%			#VALUE!
				#VALUE!
				#VALUE!
Rate per M	Say Rs	#VALUE!	Per M	
Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depending on the valu of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only				

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6.2.6	Drilling 8 x (41 mm To 59 mm) (Internal dia To External dia) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.					
	(A). 40% drilling is done by wagon drill machine. Hence cost of drilling per metre by wagon drill vide item no 8.2.9 x 0.4 =				#VALUE!	
	(B). 60 % drilling is done by diamond core drilling machine because beyond filled up portion of cut off trench diamond core drilling machine is utilised in place of wagon drill for deeper depth machine. Drilling for the purpose of test and grout holes take place only in fissures and fractured rock. Hence cost of drilling per metre by Diamond core drilling= 0.60 x Rate of B x Size drilling by Rotary core drilling machine. Cost of core box, indexing, marking etc.) vide item 8.2.3.1. Total cost of drilling per metre.				#VALUE!	
	Total				#VALUE!	#VALUE!
	Add Overhead charge & C.P.@15%					#VALUE!
	Rate pe M		Say Rs	#VALUE!		Per M
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depending on the valu of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.7	Drilling N x (53 mm To 75 mm) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I:					
	(One a fission and Zeological condition as per report received from zeological and actual obervation)					
	(A). 40% drilling is done by wagon drill machine. Hence cost of drilling per metre by wagon drill vide item no 8.2.9 x 0.4 =				#VALUE!	
	(B). 60 % drilling is done by diamond core drilling machine because beyond filled up portion of cut off trench diamond core drilling machine is utilised in place of wagon drill for deeper depth machine. Drilling for the purpose of test and grout holes take place only in fissures and fractured rock. Hence cost of drilling per metre by Diamond core drilling= 0.60 x Rate of N x Size drilling by Rotary core drilling machine. Cost of core box, indexing, marking etc.) vide item 8.2.1.2. Total cost of drilling per metre				#VALUE!	
	Total				#VALUE!	#VALUE!
	Add Overhead charge & C.P.@15%					#VALUE!
	Rate per M		Say Rs	#VALUE!		Per M
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depending on the valu of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.8	Drilling Jack Hammer in hard of all kinds for grout holes upto 5 metre depth (for contact grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.					
	(A) Cost of drilling. Use rate of Jack Hammer (52 lbs) (vide item 3.2)	#REF!				
	Average rate of drilling 35 mm hole per hour-- 2.3 metre	2.3	M			

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Hence rate of drilling per metre = Use rate of Jack Hammer/2.3				#REF!
(B). Cost of drill rod per metre of drilling. Drilling with Jack Hammer Cost of 5.6 metre drill rod at site including cost of bit 'P'. Bit life 130 metre	#VALUE!			
(a). Rate per metre of drill rod and bit= P/130				#VALUE!
(b). Sharpening charge of bit @Rs 1.00 per m				1.00
Use rate of drill rods with bit / M= (a+b)				#VALUE!
(C). Labour, lighting and scaffolding etc. = 60 % of use rate of drill rods with bit per metre				#VALUE!
(D). Ventilation and work shop charges = = 40 % of use rate of drill rods with bit per metre				#VALUE!
(E). Washing the hole				#VALUE!
Total				#VALUE!
Add Overhead charge & C.P@15%				#VALUE!
				#VALUE!
				#REF!
Rate per M		Sav Rs	#VALUE!	Per M
Note:- To the rates derived above following may be included as mobilisation and demobilisation charge depending on the value of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000/- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only				
6.2.9 Drilling by wagon drill machine in hard of all kinds for grout holes upto 5 metre depth (for consolidation grouting) all complete Including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.				
(On the basis of item on 20 page 125 of report of committee on control of R.V.Project vii II)				
(i) Hourly use rate of Wagon drilling machine and diesel pump. (vide item 3.5)	#VALUE!			
(ii). Average progress of core drilling has been found to be 6 metre per hour 50 % progress due to source limitation etc. . The rate of drilling /hr= Use rate of wagon drill M/C=R/3				#VALUE!
(iii). Cost of drill steel per metre of drilling				
(a). Drill steel used with wagon drill The following drill equipments will be required for 10 metre deep drill holes with one wagon drill.				
Shank adopter	1	no	INPUT	#VALUE!
Coupling sleeves	4	no	INPUT	#VALUE!
Extension rod 1 x 3.00metre	1	no	INPUT	#VALUE!
Extension rod 1 x 2.50 metre	1	no	INPUT	#VALUE!
Extension rod 1 x 2.00 metre	1	no	INPUT	#VALUE!
Extension rod 1 x 1.50 metre	1	no	INPUT	#VALUE!
Extension rod 1 x 1.00 metre	1	no	INPUT	#VALUE!
				#VALUE!
Economic lift=460 metre	460			
Cost of drill steel per metre of drilling				#VALUE!
(b). Cost of 4 point drill bit at site= R.S (Vide item no 3.5h)	INPUT			
Total life of bit 130 metre	130			
Cost of bit/ metre of drilling= R.S/130				#VALUE!
(c). Sharpening charge @ 1.00 per metre				1.00
(iv). Cost of shifting of wagon drill @ 40 % of item (iii).				#VALUE!
(v). Lightening, ventilation and workshop charge @ 40 % of item (iii)				#VALUE!
(iv). Washing hole				#VALUE!
Total				#VALUE!
Add Overhead charge & C.P@15%				#VALUE!
				#VALUE!
				#VALUE!
Rate per M		Sav Rs	#VALUE!	Per M

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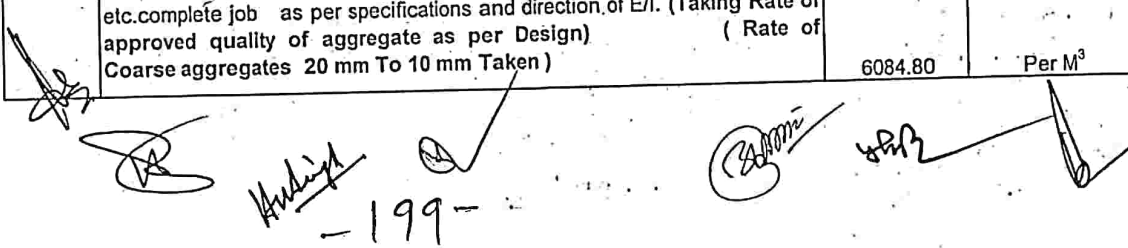
<p>Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (i). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii). Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only</p>					
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- A circled signature that appears to be "Rajendra"
- A signature that appears to be "YR" with a downward arrow

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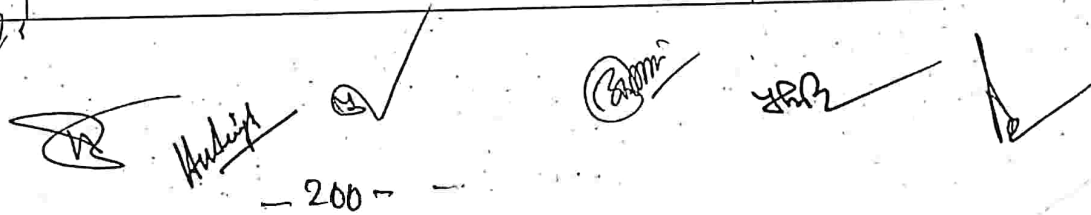
6.3. CONCRETE WORK

Sr.No.	Item	Rate	Unit
6.3.1	Providing and laying P.C.C with nominal mix of (1: 4 : 8) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)	3326.70	Per M ³
6.3.2	Providing and laying P.C.C M-100 with nominal mix of (1: 3 : 6) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr IV Taken)	3653.30	Per M ³
6.3.3	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1:2:4) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm to 10 mm Taken)	4394.60	Per M ³
6.3.4	Providing and laying P.C.C or R.C.C M-200 with nominal mix of (1:1.5:3) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm to 10 mm Taken)	4900.70	Per M ³
6.3.5	Providing and laying P.C.C or R.C.C M-250 with nominal mix of (1:1:2) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm To 10 mm Taken)	6084.80	Per M ³



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6.3.6	Providing and laying P.C.C M-75 with nominal mix of (1: 4 : 8) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr IV Taken)	3382.40	Per M ³
6.3.7	Providing and laying P.C.C M-100 with nominal mix of (1: 3 : 6) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)	3663.30	Per M ³
6.3.8	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1:2:4) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per design) (Rate of Coarse aggregates 20 mm to 10 mm Taken)	4394.60	Per M ³
6.3.9	Providing and laying P.C.C or R.C.C M-200 with nominal mix of (1:1.5:3) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm to 10 mm Taken)	4900.70	Per M ³
6.3.10	Providing and laying P.C.C or R.C.C M-250 with nominal mix of (1:1:2) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm to 10 mm Taken)	6117.40	Per M ³
6.3.11	Providing and laying R.C.C M-150 with nominal mix of (1: 2 : 4) in deck slab with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	4427.40	Per M ³



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6.3.12	Providing and laying R.C.C M-200 with nominal mix of (1:1.5:3) in deck slab with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing royalty etc.complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm to 10 mm Taken)	4933.30	Per M ³
6.3.13	Providing and laying mass concrete of M-100 with nominal mix of (1:3:6) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty but excluding the cost of form work etc. wherever provided and removed after use,all complete as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr IV Taken)	#VALUE!	Per M ³
6.3.14	Providing and laying mass concrete of M-150 with nominal mix of (1:2:4) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty but excluding the cost of form work etc. wherever provided and removed after use, all complete including royalty as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	#VALUE!	Per M ³
6.3.15	Providing and laying mass concrete of M-200 with nominal mix of (1:1.5:3) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc as well as royalty but excluding the cost of form work etc. wherever provided and removed after use, all complete including royalty, as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	#VALUE!	Per M ³
6.3.16	Providing and laying mass concrete of M-250 with nominal mix of (1:1:2) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc.as well as royalty but excluding the cost of form work etc. wherever provided and removed after use, all complete including royalty as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	#VALUE!	Per M ³
6.3.17	Providing and laying dry pitching with precast cement concrete block 600 mm x 600 mm x 300 mm size of M-75 with nominal mix of (1:4:8) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well as royalty complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr III Taken)	5342.70	Per M ³



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6.3.18	Providing and laying dry pitching with precast cement concrete block 600 mm x 600 mm x 300 mm size of M-100 with nominal mix of (1:3:6) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well as royalty complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr III Taken)	5668.40	Per M ³
6.3.19	Centering and shuttering in major Barrage work involving mass concrete including cost of form work, their carriage from work shop to work site, erection with the help of suitable crane and stripping etc. complete job as per specifications and direction of E/I.	#VALUE!	Per M ²
6.3.20	Providing shuttering including strutting. Propping etc. and its removal after use in foundation work as per specifications and direction of E/I.	471.20	Per M ²
6.3.21	Providing shuttering including strutting. Propping etc. and its removal after use in superstructure portion of various components of dam work. as per specifications and direction of E/I.	471.20	Per M ²
6.3.22	Providing centering including strutting. Propping etc. and removing after use in deck slab as per specifications and direction of E/I.	617.90	Per M ²
6.3.23	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
	(a).Dia of bar 6 mm	64602.30	Per M.T
	(B).Dia of bar above 6 mm to 12 mm	64602.30	Per M.T
	(B).Dia of bar above 14 mm to 50 mm	64602.30	Per M.T
6.3.24	Providing M.S reinforcement (Tor steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
(a)	T.M.T.GRADE Fe-415- 8 mm	#VALUE!	Per M.T
(b)	T.M.T.GRADE Fe-415- 10 mm	#VALUE!	Per M.T
(c)	T.M.T.GRADE Fe-415- 12 mm	#VALUE!	Per M.T
(d)	T.M.T.GRADE Fe-415- 16 mm	#VALUE!	Per M.T
(e)	T.M.T.GRADE Fe-415- 20 mm	#VALUE!	Per M.T
(f)	T.M.T.GRADE Fe-415- 25 mm	#VALUE!	Per M.T
(g)	T.M.T.GRADE Fe-415- 28 mm	#VALUE!	Per M.T
(h)	T.M.T. GRADE Fe-415- 32 mm	#VALUE!	Per M.T
(i)	T.M.T.GRADE Fe-500- 8 mm	61874.60	Per M.T
(j)	T.M.T. GRADE Fe-500- 10 mm	60749.20	Per M.T
(k)	T.M.T.GRADE Fe-500- 12 mm	60033.10	Per M.T
(l)	T.M.T. Fe-500- 16 mm	60033.10	Per M.T
(m)	T.M.T. Fe-500- 20 mm	60033.10	Per M.T
(n)	T.M.T. Fe-500- 25 mm	60033.10	Per M.T
(o)	T.M.T. Fe-500- 28 mm	60749.20	Per M.T
(p)	T.M.T. Fe-500- 32 mm	60749.20	Per M.T
(q)	T.M.T. Fe-500- 36 mm	#VALUE!	Per M.T
6.3.25	Grouting for Dam foundation per bags of cement all complete as per specifications and direction of E/I.	331.40	Per Bags of cement
6.3.26	Providing and laying mass concrete of M-100 with nominal mix of (1:3:6) in flow and non-over flow of dam section with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating,precooling etc.as well as royalty.but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.(With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr IV Taken)	2710.60	Per M ³

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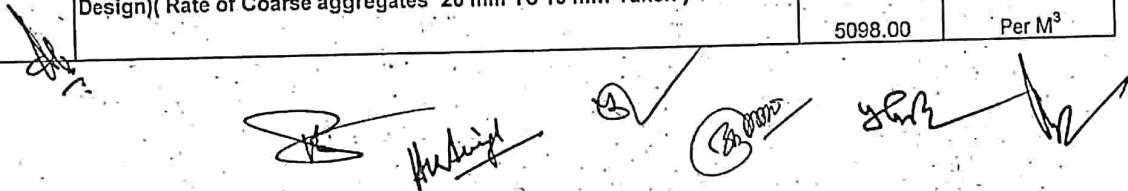
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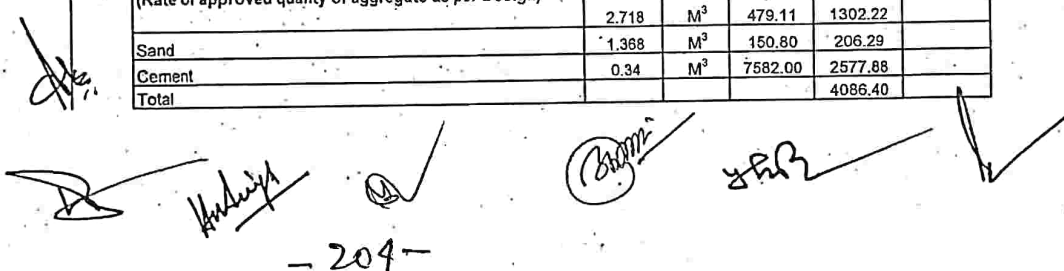
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6.3.27	Providing and laying mass concrete of M-150 with nominal mix of (1:2:4) in over flow and non-over flow section of dry intake, structures and bridges etc with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, precooling etc. as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. (With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	3447.20	Per M ³
6.3.28	Providing and laying mass concrete of M-200 with nominal mix of (1:1.5 :3) in Dam and Spillways with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, precooling etc. as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. (With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	3954.80	Per M ³
6.3.29	Providing and laying mass concrete of M-250 with nominal mix of (1: 1 : 2) in Dam, Spillways and Head works with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, precooling etc. as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. (With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)	5098.00	Per M ³



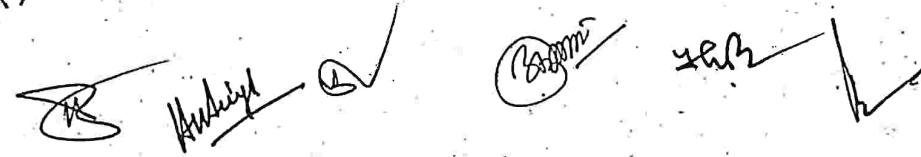
6.3. CONCRETE WORK

Sl.No.	Description	Quantity	Unit	Rate	Amount	Ref.
6.3.1	Providing and laying P.C.C with nominal mix of (1: 4 : 8) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr III Taken)					Analysis same as Item 5.3.2
6.3.2	Providing and laying P.C.C or R.C.C M-100 with nominal mix of (1: 3 : 6) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.					Analysis same as Item 5.3.3
6.3.3	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1: 2 : 4) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.					Analysis same as Item 5.3.4
6.3.4	Providing and laying P.C.C or R.C.C M-200 with nominal mix of (1:1.5:3) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.					Analysis same as Item 5.3.5
6.3.5	Providing and laying P.C.C or R.C.C M-250 with nominal mix of (1: 1 : 2) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.					Analysis same as Item 5.3.6
6.3.6	Providing and laying P.C.C or R.C.C M-75 with nominal mix of (1: 4 : 8) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put=2.832 Cum					
MATERIALS						
	Coarse aggregates Gr IV (Rate of approved quality of aggregate as per Design)	2.718	M ³	479.11	1302.22	
	Sand	1.368	M ³	150.80	206.29	
	Cement	0.34	M ³	7582.00	2577.88	
	Total				4086.40	



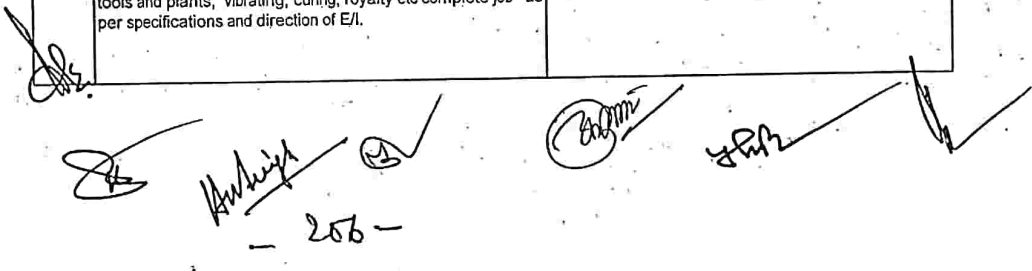
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Labour					
Head mason	0.5	nos	361.00	180.50	
Mason-Gr-II	1.25	nos	321.00	401.25	
Unskilled mazdoor	12	nos	268.00	3216.00	
Bhisti	1	nos	265.00	265.00	
Total				4062.75	
HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 M ³ per hour. (vide item 3.25)					
	82.30			117.71	
Used rate per hour $2.832/1.98$					
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour.					
	43.75			62.58	BCD SOR
Used rate per hour $2.832/1.98$				180.29	
				8329.44	
Add Overhead charge & C.P@15%				1249.42	
				9578.85	3382.36
Rate per cum		Say Rs	3382.40	Per M ³	
6.3.7	Providing and laying P.C.C or R.C.C M-100 with nominal mix of (1: 3 : 6) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.				
		Unit-Per Cum			
		Assuming out put=2.832 Cum			
MATERIALS					
Coarse aggregates Gr III (Rate of approved quality of aggregate as per Design)					
	2.66	M ³	458.22	1218.87	
Sand	1.330	M ³	150.80	200.56	
Cement	0.443	M ³	7582.00	3358.83	
				4778.26	
Labour					
Head mason	0.5	nos	361.00	180.50	
Mason Gr II	1.25	nos	321.00	401.25	
Unskilled mazdoor	12	nos	268.00	3216.00	
Bhisti	1	nos	265.00	265.00	
Total				4062.75	
HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 M ³ per hour. (vide Item 3.25)					
	82.30			117.71	
Used rate per hour $2.832/1.98$					
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour.					
	43.75			62.58	BCD SOR
Used rate per hour $2.832/1.98$					
				9021.29	
Total				1353.19	
Add Overhead charge & C.P@15%				10374.49	3663.31
Rate per cum		Say Rs	3663.30	Per M ³	



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6.3.8	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1: 2 : 4) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job , as per specifications and direction of E/I.	Analysis same as Item 5.3.9			
6.3.9	Providing and laying P.C.C or R.C.C M-200 with nominal mix of (1: 1.5 : 3) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.	Analysis same as Item 5.3.10			
6.3.10	Providing and laying P.C.C or R.C.C M-250 with nominal mix of (1: 1: 2) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.				
		Unit-Per Cum			
		Assuming out put=2.832 Cum			
MATERIALS					
Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)		2.40	M ³	642.67	1542.41
Sand		1.20	M ³	150.80	180.96
Cement		1.20	M ³	7582.00	9098.40
					10821.77
Labour					
Head mason		0.5	nos	361.00	180.50
Mason Gr II		1.25	nos	321.00	401.25
Unskilled mazdoor		12	nos	268.00	3216.00
Bhisti		1	nos	265.00	265.00
					4062.75
HIRE CHARGES OF MACHINE					
(i) Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 M ³ per hour. (vide item 3.25)		82.30			117.71
Used rate per hourx2.832/1.98					
(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour.		43.75			62.58
Used rate per hourx2.832/1.98					
Total					15064.81
Add Overhead charge & C.P@15%					2259.72
					17324.53
					6117.42
Rate per cum		Say Rs		6117.42	Per M ³
6.3.11	Providing and laying R.C.C M-150 with nominal mix of (1: 2 : 4) in deck slab with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc complete job as per specifications and direction of E/I.	Analysis same as Item 5.3.12			

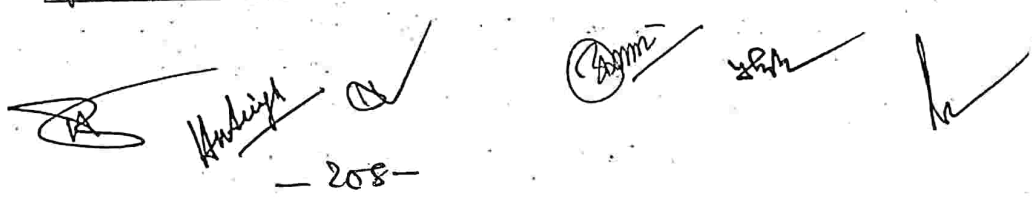


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6.3.12	Providing and laying R.C.C M-200 with nominal mix of (1:1.5:3) in deck slab with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty etc. complete job as per specifications and direction of E/I.	Analysis same as Item 5.3.13			
6.3.13	Providing and laying mass concrete of M-100 with nominal mix of (1:3:6) in flow and non-over flow of dam section with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, precooling etc as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.				
	Unit-Per Cum				
	Taking Out put=1.00 Cum				
	MATERIALS				
	Coarse aggregates Gr IV (Rate of approved quality of aggregate as per Design)				
		0.94	M ³	479.11	450.36
	Sand	0.470	M ³	150.80	70.88
	Cement	0.157	M ³	7582.00	1190.37
(B)	(a). Batching and mixing charge				
	Use rate of Batching and mixing plant (vide Item 3.13a)	2851.00			P&M-002
	Batching and mixing plant capacity 26.76 cum (35 cuyd)	26.76	cum		
	(Taking job management factor as 0.69)	0.69			
	Rate per cum= Use rate/26.76*0.69	73.51			73.51
	(b) Transport of concrete by 3.06 cum (4 cuyd) buckets hauled by 5 T Diesel Locomotive from batching and mixing plant to pick up point	3.06	cum		
	Average lead= 1.0 Km	1.00	Km		
	Hauling Cycle time				
	Ideal production at Batching plant=57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	i.Loading time of a Train =3.06 x2 x60/39.56 =9.28 minutes	9.28	minute		
	ii.spotting time and waiting time =	1.50	minutes		
	iii.Turning and unloading time	9.28	minutes		
	iv.Empty haul @6.00 KM per hour =Average Leadx60/6	10.00	minutes		
	v.Loaded haul @ 6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	Total hauling cycle time=(i+ii+iii+iv+v)	40.06	minutes		
	No of trips in 50 cum in working	1.25			
	Output of one train with 2 buckets per hr	7.65	cum		
	Use rate of Diesel Locomotive (Vide item 3.17a)	#VALUE!			
	Use rate of concrete buckets 2.nos (Vide item 3.30a)	24.20			P&M-008
	Total use rate	#VALUE!			
	Transport rate per cum= Total use rate/7.65	#VALUE!			#VALUE!
	(c). Placement of concrete by Hammer Head Crane	1282.00			P&M-071
	Use rate per cum (vide Item 3.20 b)				
	Output of crane per hour (production) using 2 no Bucates of 3.06 cum (4 cuyd) capacity each	3.06	cum		
	(Taking job management factor as 0.69)	0.69			
	Ideal production =57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	Rate per cum= Use rate/26.76*0.69	32.40			32.40
	(d). Vibrating the concrete.				43.75
					#VALUE!

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Add Overhead charge & C.P.@15%					#VALUE!
Rate per cum		Say Rs		#VALUE!	Per M ³
6.3.14	Providing and laying mass concrete of M-150 with nominal mix of (1:2:4) In over flow and non-over flow section of dry intake, structures and bridges etc with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, precooling etc. as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.				
Unit:-Per Cum					
Taking Out put=1.00Cum					
A MATERIALS					
	Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)	0.90	M ³	642.67	578.40
	Sand	0.450	M ³	150.80	67.86
	Cement	0.225	M ³	7582.00	1705.95
(B)	(a). <u>Batching and mixing charge</u>				
	Use rate of Batching and mixing plant (vide Item 3.13a)	2851.00			
	Batching and mixing plant capacity 26.76 cum (35 cuyd)	26.76	cum		
	(Taking job management factor as 0.69)	0.69			
	Rate per cum= Use rate/26.76*0.69	73.51			73.51
	(b) Transport of concrete by 3.06 cum (4 cuyd) buckets hauled by 5 T Diesel Locomotive from batching and mixing plant to pick up point	3.06	cum		
	Average lead= 1.0 Km	1.00	Km		
	Hauling Cycle time				
	Ideal production at Batching plant=57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	i.Loading time of a Train =3.06 x2 x60/39.56 =9.28 minutes	9.28	minute		
	ii.spotting time and waiting time =	1.50	minutes		
	iii.Turning and unloading time	9.28	minutes		
	iv.Empty haul @6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	v.Loaded haul @ 6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	Total hauling cycle time=(i +ii+iii+iv+v)	40.06	minutes		
	No of trips in 50 cum in working	1.25			
	Output of one train with 2 buckets per hr	7.65	cum		
	Use rate of Diesel Locomotive (Vide item 3.17a)	#VALUE!			
	Use rate of concrete buckets 2.nos (Vide item 3.30a)	24.20			
	Total use rate	#VALUE!			
	Transport rate per cum= Total use rate/7.65	#VALUE!		#VALUE!	
	(c). <u>Placement of concrete by Hammer Head Crane</u>				
	Use rate per cum (vide item 3.20 b)	1282.00			P&M-071
	Output of crane per hour (production) using 2 no Bucates of 3.06 cum (4 cuyd) capacity each	3.06	cum		
	(Taking job management factor as 0.69)	0.69			
	Ideal production =57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	Rate per cum= Use rate/26.76*0.69	32.40			32.40
	(d). <u>Vibrating the concrete.</u>				
					43.75
					#VALUE!
	Add Overhead charge & C.P.@15%				#VALUE!
					#VALUE!
	Rate per cum	Say Rs		#VALUE!	Per M ³

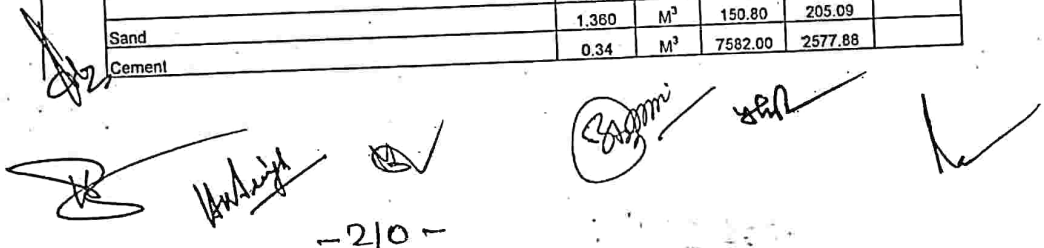


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6.3.15	Providing and laying mass concrete of M-200 with nominal mix of (1:1.5:3) in Dam and Spillways with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, precooling etc. as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.				
	Unit:-Per Cum Taking Out put=1.00Cum				
(A)	MATERIALS				
	Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)	0.860	M ³	642.67	552.70
	Sand	0.430	M ³	150.80	64.84
	Cement	0.287	M ³	7582.00	2176.03
(B)	(a). Batching and mixing charge				
	Use rate of Batching and mixing plant (vide item 3.13a)	2851.00			
	Batching and mixing plant capacity 26.76 cum (35 cuyd)	26.76	cum		
	(Taking job management factor as 0.69)	0.69			
	Rate per cum= Use rate/26.76*0.69	73.51			73.51
	(b) Transport of concrete by 3.06 cum (4 cuyd) buckets hauled by 5 T Diesel Locomotive from batching and mixing plant to pick up point	3.06	cum		
	Average lead= 1.0 Km	1.00	Km		
	Hauling Cycle time:				
	Ideal production at Batching plant=57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	i.Loading time of a Train =3.06 x2 x60/39.56 =9.28 minutes	9.28	minute		
	ii.spotling time and waiting time =	1.50	minutes		
	iii.Turning and unloading time	9.28	minutes		
	iv.Empty haul @6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	v.Loaded haul @ 6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	Total hauling cycle time=(i +ii+iii+iv+v)	40.06	minutes		
	No of trips in 50 cum in working	1.25			
	Output of one train with 2 buckets per hr	7.65	cum		
	Use rate of Diesel Locomotive (Vide item 3.17a)	#VALUE!			
	Use rate of concrete buckets 2.nos (Vide item 3.30a)	24.20			
	Total use ratr	#VALUE!			
	Transport rate per cum= Total use rate/7.65	#VALUE!			#VALUE!
	(c). Placement of concrete by Hammer Head Crane				
	Use rate per cum (vide item 3.20 b)	1282.00			P&M-071
	Output of crane per hour (production) using 2 no Bucates of 3.06 cum (4 cuyd) capacity each	3.06	cum		
	(Taking job management factor as 0.69)	0.69			
	Ideal production =57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	Rate per cum= Use rate/26.76*0.69	32.40			32.40
	(d). Vibrating the concrete.				
					43.75 BCD SOR
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum	Say Rs		#VALUE!	Per M ³
6.3.16	Providing and laying mass concrete of M-200 with nominal mix of (1: 1 : 2) in Dam , Spillways and Head works with approved quality of graded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating, pre cooling etc. as well as royalty but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.				

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		Unit-Per Cum			
		Taking Out put=1.00 Cum			
A	MATERIALS				
	Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)	0.64	M ³	642.67	539.84
	Sand	0.420	M ³	150.80	63.34
	Cement	0.42	M ³	7582.00	3184.44
(B)	(a). Batching and mixing charge				
	Use rate of Batching and mixing plant (vide item 3.13a).	2851.00			
	Batching and mixing plant capacity 26.76 cum (35 cuyd)	26.76	cum		
	(Taking job management factor as 0.69)	0.69			
	Rate per cum= Use rate/26.76*0.69	73.51			73.51
	(b) Transport of concrete by 3.06 cum (4 cuyd) buckets hauled by 5 T Diesel Locomotive from batching and mixing plant to pick up point	3.06	cum		
	Average lead= 1.0 Km	1.00	Km		
	Hauling Cycle time				
	Ideal production at Batching plant=57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	i.Loading time of a Train =3.06 x2 x60/39.56 =9.28 minutes	9.28	minute		
	ii.spolling time and waiting time =	1.50	minutes		
	iii.Turning and unloading time	9.28	minutes		
	iv.Empty haul @6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	v.Loaded haul @ 6.00 K.M per hour =Average Leadx60/6	10.00	minutes		
	Total hauling cycle time=(i +ii+iii+iv+v)	40.06	minutes		
	No of trips in 50 cum in working	1.25			
	Output of one trian with 2 buckets per hr	7.65	cum		
	Use rate of Diesel Locomotive (Vide item 3.17a)	#VALUE!			
	Use rate of concrete buckets 2.nos (Vide item 3.30a)	24.20			
	Total use ratr	#VALUE!			#VALUE!
	Transport rate per cum= Total use rate/7.65	#VALUE!			#VALUE!
	(c). Placement of concrete by Hammer Head Crane	1282.00			P&M-071
	Use rate per cum (vide item 3.20 b)				
	Output of crane per hour (production) using 2 no Bucates of 3.06 cum (4 cuyd) capacity each	3.06	cum		
	(Taking job management factor as 0.69)	0.69			
	Ideal production =57.34 cum (75 cuyd)	57.34	cum		
	Actual production with 0.69 x 57.34=39.56 cum	39.56	cum		
	Rate per cum= Use rate/26.76*0.69	32.40			32.40
	(d). Vibrating the concrete.				
					43.75
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum	Say Rs		#VALUE!	Per M ³
6.3.17	Providing and laying dry pitching with precast cement concrete block 600 mm x 600 mm x 300 mm size of M-75 with nominal mix of (1:4:8) in floor and flank wall with approved quality of graded coarse aggregate of required grade(as per design) and approved quality of sand of requisite F.M washed and screened Including necessary form work, tools and plants, vibrating, curing as well as royalty complete job as per specifications and direction of E/I.				
		Unit-Per Cum			
		Taking Out put=2.832 Cum			
A	MATERIALS				
	Coarse aggregates Gr III (Rate of approved quality of aggregate as per Design)	2.720	M ³	458.22	1246.36
	Sand	1.360	M ³	150.80	205.09
	Cement	0.34	M ³	7582.00	2577.88



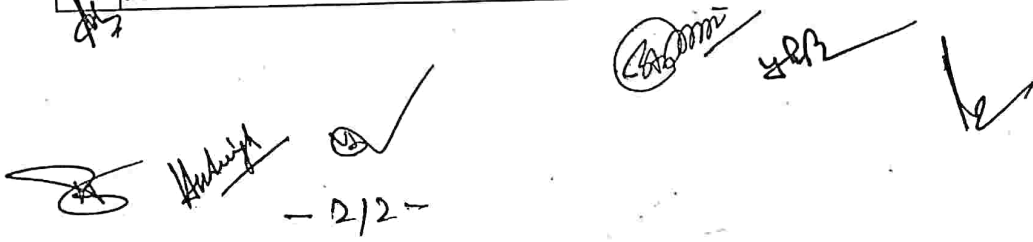
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					4029.33	A
B	LABOUR					
	Head mason	0.5	nos	361.00	180.50	
	Mason Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	12	nos	268.00	3216.00	
	Bhisti	1	nos	265.00	265.00	
	Unskilled mazdoor for placing blocks in position	4	nos	268.00	1072.00	
					5054.50	B
C	HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	82.30			117.71	
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	43.75			62.58	BCD SOR
					180.29	C
D	SHUTTERING CHARGES					
	Shuttering 25 blocks 25 mm thick mango planks with 10 % wastage 20.45 sqm 20.45X25/1000	0.51	M ³	24199.00	12341.49	
	Add 1 % for cost of nails and spikes				123.41	
	LABOUR for shuttering					
	Carpenter Gr II	3	nos	321.00	963.00	
	Unskilled mazdoor	8	nos	268.00	2144.00	
	Total cost of Shuttering				15571.90	
	Assuming 4 uses to calculate				3892.98	D
	Cost of Shuttering for 2.832 Cum=total cost/4				13157.09	
	Total Cost =A+B+C+D				1973.56	
	Add Overhead charge & -C.P@15%				15130.66	5342.75
	Rate per cum	Say Rs		5342.75	Per M ³	
6.3.18	Providing and laying dry pitching with precast cement concrete block 600 mm x 600 mm x 300 mm size of M-100 with nominal mix of (1:3:6) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well royally complete job as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Taking Out put=2.832 Cum					
A	MATERIALS					
	Coarse aggregates GR III (Rate of approved quality of aggregate as per Design)	2.66	M ³	458.22	1218.87	
	Sand	1.33	M ³	150.80	200.56	
	Cement	0.45	M ³	7582.00	3411.90	
					4831.33	A
B	LABOUR					
	Head mason	0.5	nos	361.00	180.50	
	Mason Gr II	1	nos	321.00	321.00	
	Unskilled mazdoor	12	nos	268.00	3216.00	
	Bhisti	1	nos	265.00	265.00	
	Unskilled mazdoor for placing blocks in position	4	nos	268.00	1072.00	
					5054.50	B
C	HIRE CHARGES OF MACHINE					
	(i) Concrete mixer (10 H.P.) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	82.30			117.71	
	(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	43.75			62.58	BCD SOR
					180.29	C
D	SHUTTERING CHARGES					
	Shuttering 25 blocks 25 mm thick mango planks with 10 % wastage 20.45 sqm 20.45X25/1000 0.51M3 @Rs11075.00	0.51	PerM ³	24199.00	12341.49	
	Add 1 % for cost of nails and spikes				123.41	
	LABOUR					

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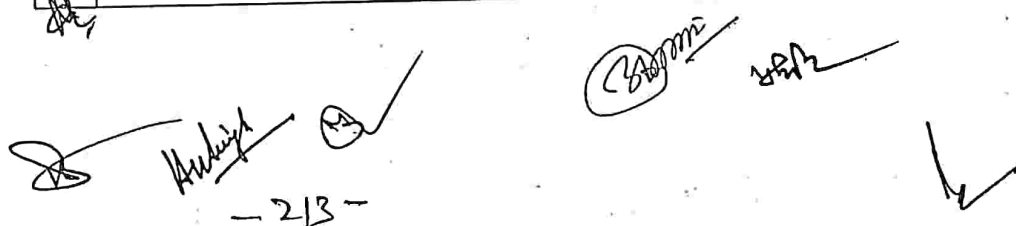
	Carpenter Gr II	3	nos	321.00	963.00	
	Unskilled mazdoor	8	nos	268.00	2144.00	
	Total cost of Shuttering				15571.90	
	Assuming 4 uses to calculate					
	Cost of shuttering for 2.832 cum total cost/4				3892.98	D
	TOTAL Cost=A+B+C+D				13959.10	
	Add overhead charges & C.P @15%				2093.86	
	Add GST 12%				16052.96	
	Rate per cum	Say Rs		5668.42	Per M ³	
6.3.19	Centering and shuttering in major Barrage work involving mass concrete including cost of form work, their carriage from work shop to work site, erection with the help of suitable crane and stripping etc. complete job as per specifications and direction of E/I.					
	Brief specification					
	Heavir type steel shuttering for use in dams					
	Working with suitable crane					
	Shuttering once manufactured shall be used thirty four times.					
	Materials (for 100 sqm).					
	(A).Materials (for 100 sqm).					
	M.S. plates 3 mm thick	57	kg	#VALUE!	#VALUE!	
	M.S. plates 2 mm thick	23	kg	#VALUE!	#VALUE!	
	M.S. plates 60x60x10 mm thick	47	kg	#VALUE!	#VALUE!	
	M.S. plates 65x45x8 mm thick	20	kg	#VALUE!	#VALUE!	
	M.S. channel 125 x 50 mm	82	kg	#VALUE!	#VALUE!	
	M.S. channel 150x55 mm	42	kg	#VALUE!	#VALUE!	
	M.S. channel 100x45 mm	30	kg	#VALUE!	#VALUE!	
	M.S. plates 63x6 mm	22	kg	#VALUE!	#VALUE!	
	G.I pipe 50 mm dia	3.5	M	IINPUT	#VALUE!	
	Nuts and bolts 10 mm dia and 65 mm long(31 nos)	4.5	kg	61.19	275.36	M-130
	Slotted pins and wedges 10 mm dia and 60 mm long	30	nos	#VALUE!	#VALUE!	
	Tube and nuts 25 mm dia and above	26	nos	#VALUE!	#VALUE!	
	Total of materials cost				#VALUE!	
	Deduct salvage @ 20 % of the above sub total				#VALUE!	
	Net total cost of materials				#VALUE!	
	Additional materials (per 50 % sqm)	50	%		#VALUE!	
	M.S. rods 16 mm and 25 mm dia for ancorage 24 kg	24	kg	45.90	1101.67	M-126
	Linssed oil @ 8 litres per % sqm	8	lit	186.14	1489.12	
	Sub Total of materials				#VALUE!	
	(B). Transportation and fabrication (per % sqm)					
	i. Transportation shuttering from work shops to work site including loading, unloading for lead below 5 km @ 5% of sub Total of materials cost at sl (A)				#VALUE!	
	ii. Fabrication charge including cutting, welding, marking and oil other operations @ 90 % of the materials item 1 to 12				#VALUE!	
	Total transportaion and febrication charge per sqm.				#VALUE!	
	(C). Machinery charge					
	Taking in output of crane / hr	8.33	sqm			
	Hourly use rate or crane	1282.00				
	Machinery charge per sqm = Use rate of crane x 100 / 8.33				15390.16	
	(D). Labour charge					
	Foreman	0.25	nos	454.00	113.5	
	Semi Skilled mazdoor	20	nos	340.00	6800	
	Carpenters Gr II	4	nos	321.00	1284	
	Total				8197.5	
	Total Of A+B+C				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
	Rate per sqm	Say Rs		#VALUE!	Per M ²	
6.3.20	Providing shuttering including structting proping etc. and its removal after use in foundation work as per specifications and direction of E/I.					Analysis same as Item 5.3.18



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6.3.21	Providing shuttering including structing, Proping etc. and its removal after use in superstructure portion of various components of Barrage work as per specifications and direction of E/I.	Analysis same as Item 5.3.19			
6.3.22	Providing centering including strutting, Proping etc. and removing after use in deck slab as per specifications and direction of E/I. (Assuming size in slab 7.32 x 3.05 =22.326 sqm)				
A. MATERIALS					
	a. 40 mm thick local wood planks 22.326 x40 / 1000 =0.85				
	Add 5 % for wastages =0.04				
	=0.89	0.89	cum	24199.00	
	Assuming 4 uses to calculate				
	Cost of planks per use =0.89 x rate of local wood /4				5384.28
	b. Assuming av. Hight of slab from G.L=3.66 M 150 mm salbullah required =78 nos				
	Length of sal bullah =78 x3.66 =285.48 Mtr (Assuming sal bullah to be used 10 times for centerins =285.48 x Rate per Mtr / 10	285.48	mtr	53.99	
	c. Salwood scantling required (75 mm x 63 mm size) =0.311 cum (Assuming 10 uses)				1541.31
	Cost per use =0.311 x Rate per Mtr/10				1736.72
	Add 1 % for cost of nails and spikes				8662.30
					86.62
					8748.92 (A)
B. LABOUR					
	Carpenter Gr II	4	nos	321.00	1284.00
	Unskilled mazdoor	7	nos	268.00	1876.00
					3160.00 (B)
C. Carriage of materials					
	Cost of the carriage of materials from Godown and back to godown after use including loading unloading and stacking @ 1 % of Total cost of wooden materials				86.62 (C)
	TOTAL cost per 22.326 sqm =A+B+C				11995.55
	Add Overhead charge & C.P@15%				1799.33
					13794.88
	Rate per sqm	Say Rs		617.90	Per M ² 617.88
6.3.23	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position etc. complete job as per specifications and direction of E/I.	Analysis same as Item 5.3.21			
6.3.24	Providing M.S reinforcement (Tor steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.	Analysis same as Item 5.3.22			
6.3.25	Grouting for Dam foundation per bags of cement all complete as per specifications and direction of E/I.				
	Unit-Per Bag of Cement Taking Out put=1.0 Bag				
	(A). Cost of 1.05 bag of cement at site including 5 % wastage and incidental charge	0.0357	Cum	7582.00	270.68
	(B). Grouting				
	i. Hourly use rate of grouting machine	140.04			
	Taking progress of grouting 8 bags of cement per hour	8	Bags		
	Cost of Grouting= use rate/8				17.51
	Add Overhead charge & C.P@15%				288.18
					43.23
					331.41
		Say Rs		331.40	Bags of cement 331.41

- 2/3 -



6.3.26	Providing and laying mass concrete of M-100 with nominal mix of (1:3:6) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing as well royalty etc. but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.					
With Batching Plant, Transit Mixer And Concrete Pump						
Unit-Per Cum						
Taking Out put=1.0 Cum						
MATERIALS						
Coarse aggregates Gr IV (Rate of approved quality of aggregate as per Design)						
	0.94	M ³	479.11	450.36		
Sand	0.470	M ³	150.80	70.88		
Cement	0.157	M ³	7582.00	1190.37		
				1711.61		
(b) LABOURS						
Mate	0.01	nos	289.00	2.89		
Mason	0.03	nos	321.00	9.63		
Mazdoor	0.15	nos	268.00	40.20		
				52.72		
c) Machinery						
Batching Plant @ 20 cum/hour	0.05	hr	1853.00	92.65	P&M-003	
Generator 100 KVA	0.05	hr	1923.00	96.15	P&M-080	
Loader 1 cum capacity	0.05	hr	1373.00	68.65	P7M-017	
Transit Mixer 4 cum capacity for lead up to 1 km.	0.13	hr	1398.00	181.74	Lead	
Lead beyond 1 km, L-lead in km	2.50	t.km	6.94	17.35	1	
Concrete Pump	0.05	hr	385.00	19.25	P&M-007	
				475.79		
(d), Vibrating the concrete.						
				116.89		
				2357.01		
Add Overhead charge & C.P@15%						
				353.55		
				2710.57	2710.57	
Rate per cum						
	Say Rs		2710.60	Per M ³		
6.3.27	Providing and laying mass concrete of M-150 with nominal mix of (1:2:4) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty etc. but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.					
With Batching Plant, Transit Mixer And Concrete Pump						
Unit-Per Cum						
Taking Out put=1.0 Cum						
MATERIALS						
Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)						
	0.90	M ³	642.67	578.40		
Sand	0.450	M ³	150.80	67.86		
Cement	0.225	M ³	7582.00	1705.95		
				2352.21		
(b) LABOURS						
Mate	0.01	nos	289.00	2.89		
Mason	0.03	nos	321.00	9.63		
Mazdoor	0.15	nos	268.00	40.20		
				52.72		
c) Machinery						
Batching Plant @ 20 cum/hour	0.05	hr	1853.00	92.65	P&M-003	
Generator 100 KVA	0.05	hr	1923.00	96.15	P&M-081	
Loader 1 cum capacity	0.05	hr	1373.00	68.65		
Transit Mixer 4 cum capacity for lead upto 1 km.	0.13	hr	1398.00	181.74	Lead	
Lead beyond 1 km, L-lead in km	2.50	t.km	6.94	17.35	1	
Concrete Pump	0.05	hr	385.00	19.25		

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				475.79	
				116.89	
				2997.61	
				449.64	
				3447.25	3447.25
	Rate per cum	Say Rs	3447.25		Per M ³
6.3.28	Providing and laying mass concrete of M-200 with nominal mix of (1:1.5:3) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty but excluding the cost of form work etc. wherever provided and removed after use, all complete including royalty as per specifications and direction of E/I.				
	With Batching Plant, Transit Mixer And Concrete Pump				
	Unit:-Per Cum				
	Taking Out put=1.0 Cum				
	MATERIALS				
	Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)				
	0.86	M ³	642.67	552.70	
	0.430	M ³	150.80	64.84	
	0.287	M ³	7582.00	2176.03	
				2793.57	
	(b) LABOURS				
	0.01	nos	289.00	2.89	
	0.03	nos	321.00	9.63	
	0.15	nos	268.00	40.20	
				52.72	
	(c) Machinery				
	0.05	hr	1853.00	92.65	
	0.05	hr	1923.00	96.15	
	0.05	hr	1373.00	68.65	
	0.13	hr	1398.00	181.74	Lead
	2.50	t.km	6.94	17.35	1
	0.05	hr	385.00	19.25	
				475.79	
				116.89	
				3438.97	
				515.85	
				3954.82	3954.82
	Rate per cum	Say Rs	3954.80		Per M ³
6.3.29	Providing and laying mass concrete of M-250 with nominal mix of (1:1:2) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.				
	With Batching Plant, Transit Mixer And Concrete Pump				
	Unit:-Per Cum				
	Taking Out put=1.0 Cum				
	MATERIALS				
	Coarse aggregates (20 mm To 10 mm) (Rate of approved quality of aggregate as per Design)				
	0.84	M ³	642.67	539.84	
	0.420	M ³	150.80	63.34	
	0.42	M ³	7582.00	3184.44	
				3787.62	
	(b) LABOURS				
	0.01	nos	289.00	2.89	
	0.03	nos	321.00	9.63	
	0.15	nos	268.00	40.20	
				52.72	
	(c) Machinery				
	0.05	hr	1853.00	92.65	

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Generator 100 KVA	0.05	hr	1923.00	96.15	
Loader 1 cum capacity	0.05	hr	1373.00	68.65	
Transit Mixer 4 cum capacity for lead upto 1 km.	0.13	hr	1398.00	181.74	Lead
Lead beyond 1 km, L-lead in km	2.50	t.km	6.94	17.35	1
Concrete Pump	0.05	hr	385.00	19.25	
				475.79	
(d). Vibrating the concrete.				116.89	
				4433.02	
Add Overhead charge & C.P@15%				664.95	
				5097.97	5097.97
Rate per cum	Say Rs		5098.00	Per M ³	

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6.4 MASONRY WORK

Sr.No	Item	Rate	Uni
6.4.1	Brick work in designation 100 A Brick with cement mortar (1 : 3) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	4811.30	Per M ³
6.4.2	Brick work in designation 100 A Brick with cement mortar(1 : 4) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	4662.30	Per M ³
6.4.3	Brick work in designation 100A Brick with cement mortar (1 : 5) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required. including royalty complete job as per specification and direction of E / I.	4540.90	Per M ³
6.4.4	Brick work in designation 100 A Brick with cement mortar (1:3) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	4920.10	Per M ³
6.4.5	Brick work in designation 100 A Brick with cement mortar (1 : 4) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required. including royalty complete job as per specification and direction of E / I.	4771.10	Per M ³
6.4.6	Brick work in designation 100 A Brick with cement mortar (1 : 5) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	4649.80	Per M ³
6.4.7	Providing rough dressed random rubble stone masonry in cement mortar (1:3) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E/I.	2351.00	Per M ³
6.4.8	Providing rough dressed random rubble stone masonry in cement mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E/I.	2139.80	Per M ³
6.4.9	Providing rough dressed random rubble stone masonry in cement mortar (1:5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E/I.	2008.00	Per M ³
6.4.10	Providing rough dressed random rubble stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2487.10	Per M ³

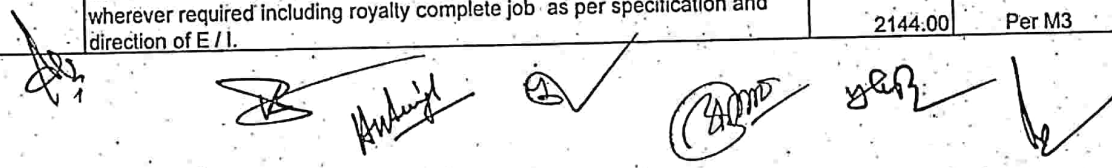
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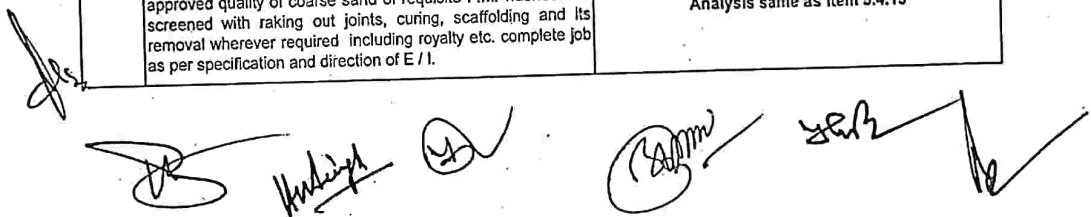


6.4.11	Providing rough dressed random rubble stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2275.80	Per M ³
6.4.12	Providing rough dressed random rubble stone masonry in cement mortar (1:5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E/I.	2144.00	Per M ³
6.4.13	Providing rough dressed coarse rubble stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2487.10	Per M ³
6.4.14	Providing rough dressed coarse rubble stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2275.80	Per M ³
6.4.15	Providing rough dressed coarse stone masonry in cement mortar (1:5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.	2144.00	Per M ³



6. 4 MASONARY WORK

Sl.No.	Description	Quantity	Unit	Rate	Amount	Ref.
6.4.1	Brick work in designation 100 A Brick with cement mortar (1 : 3) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.4.1
6.4.2	Brick work in designation 100 A Brick with cement mortar (1 : 4) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc complete job as per specification and direction of E / I.					Analysis same as Item 5.4.2
6.4.3	Brick work in designation 100 A Brick with cement mortar (1 : 5) in foundation with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.4.3
6.4.4	Brick work in designation 100 A Brick with cement mortar (1 : 3) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required complete job including royalty etc. as per specification and direction of E / I.					Analysis same as Item 5.4.5
6.4.5	Brick work in designation 100 A Brick with cement mortar (1 : 4) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.					Analysis same as Item 5.4.6
6.4.6	Brick work in designation 100 A Brick with cement mortar (1 : 5) in superstructure with approved quality coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required complete job including royalty as per specification and direction of E / I.					Analysis same as Item 5.4.7
6.4.7	Providing rough dressed random rubble stone masonry in cement mortar (1:3) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required complete job including royalty as per specification and direction of E / I.					Analysis same as Item 5.4.9
6.4.8	Providing rough dressed random rubble stone masonry in cement mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.4.10
6.4.9	Providing rough dressed random rubble stone masonry in cement mortar (1:5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty complete job as per specification and direction of E / I.					Analysis same as Item 5.4.11
6.4.10	Providing rough dressed random/coursed rubble stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.4.12
6.4.11	Providing rough dressed random /coursed rubble stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.4.13



6.4.12	Providing rough dressed random/coursed rubble stone masonry in cement mortar (1:5) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	Analysis same as Item 5.4.14
6.4.13	Providing rough dressed coarse rubble stone masonry in cement mortar (1:3) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	Analysis same as Item 5.4.15
6.4.14	Providing rough dressed coarse rubble stone masonry in cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	Analysis same as Item 5.4.16
6.4.15	Providing rough dressed coarse stone masonry in cement mortar (1:5) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E / I.	Analysis same as Item 5.4.17


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6.5. PLASTER WORK

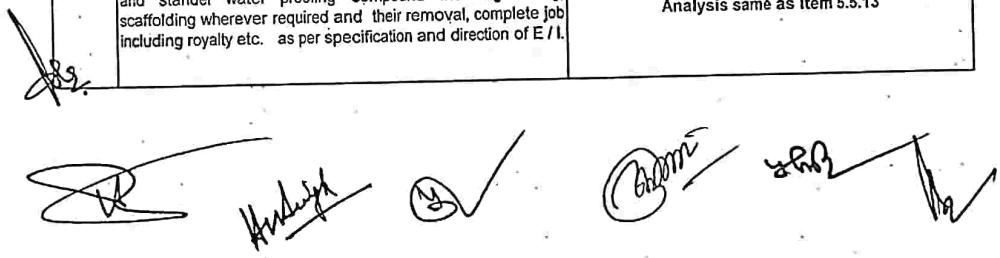
Sr.No.	Item	Rate	Unit
6.5.1	Providing 12 mm thick cement plaster (1: 3) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever required and its removal royalty etc. complete job as per specification and direction of E / I.	148.50	Per M ²
6.5.2	Providing 12 mm thick cement plaster (1: 4) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever required and its removal royalty etc. complete job as per specification and direction of E / I.	140.20	Per M ²
6.5.3	Providing 12 mm thick cement plaster (1: 5) with approved quality sand of requisite F.M., washed and screened, including curing, scaffolding wherever required and its removal royalty etc. complete job as per specification and direction of E / I.	134.60	Per M ²
6.5.4	Providing 25 mm thick cement plaster (1: 3) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job including as per specification and direction of E / I.	243.10	Per M ²
6.5.5	Providing 25 mm thick cement plaster (1: 4) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever and its removal, royalty complete job as per specification and direction of E / I.	227.60	Per M ²
6.5.6	Providing 25 mm thick cement plaster (1: 5) with approved quality sand of requisite F.M . Washed and screened including curing, scaffolding wherever and its removal, royalty complete job as per specification and direction of E / I.	215.00	Per M ²
6.5.7	Providing 12 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty complete job as per specification and direction of E / I.	158.20	Per M ²
6.5.8	Providing 25 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty complete job as per specification and direction of E / I.	262.50	Per M ²
6.5.9	Providing 25 mm thick water proof cement plaster (1:4) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty complete job as per specification and direction of E / I.	246.90	Per M ²
6.5.10	Providing 1.5 mm thick cement punning including curing, royalty complete job as per specification and direction of E / I.	44.00	Per M ²
6.5.11	Providing cement ruled pointing (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.	139.50	Per M ²
6.5.12	Providing cement flush pointing (1:3) with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc.. complete job as per specification and direction of E / I.	103.10	Per M ²

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6.5.13	Providing cement truck pointing (1:3) on Brick work with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, . royalty etc.. complete job as per specification and direction of E / I.	152.10	Per M ²
6.5.14	Providing cement truck pointing (1:3) on stone masonry with approved quality sand of requisite F.M . Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc.. complete job as per specification and direction of E / I.	196.50	Per M ²

6.5 PLASTER WORK

Sl.no.	Description	Quantity	Unit	Rate	Amount	Ref.
6.5.1	Providing 12 mm thick cement plaster (1: 3) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.1
6.5.2	Providing 12 mm thick cement plaster (1: 4) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.2
6.5.3	Providing 12 mm thick cement plaster (1: 5) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.3
6.5.4	Providing 25 mm thick cement plaster (1: 3) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever required and its removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.4
6.5.5	Providing 25 mm thick cement plaster (1: 4) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever and its removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.5
6.5.6	Providing 25 mm thick cement plaster (1: 5) with approved quality sand of requisite F.M. Washed and screened including curing, scaffolding wherever and its removal, complete job including royalty etc. as per specification and direction of E / I.					Analysis same as Item 5.5.6
6.5.7	Providing 12 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty complete job as per specification and direction of E / I.					Analysis same as Item 5.5.7
6.5.8	Providing 25 mm thick water proof cement plaster (1:3) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.8
6.5.9	Providing 25 mm thick water proof cement plaster (1:4) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.9
6.5.10	Providing 1.5 mm thick cement punning including curing, royalty etc. complete job including royalty etc. as per specification and direction of E / I.					Analysis same as Item 5.5.10
6.5.11	Providing cement ruled pointing (1:3) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.11
6.5.12	Providing cement flush pointing (1:3) with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.					Analysis same as Item 5.5.12
6.5.13	Providing cement truck pointing (1:3) on Brick work with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, complete job including royalty etc. as per specification and direction of E / I.					Analysis same as Item 5.5.13



6.5.14	Providing cement truck pointing (1:3) on stone masonry with approved quality sand of requisite F.M. Washed and screened and stander water proofing compound including curing, scaffolding wherever required and their removal, royalty etc. complete job as per specification and direction of E / I.	Analysis same as Item 5.5.14
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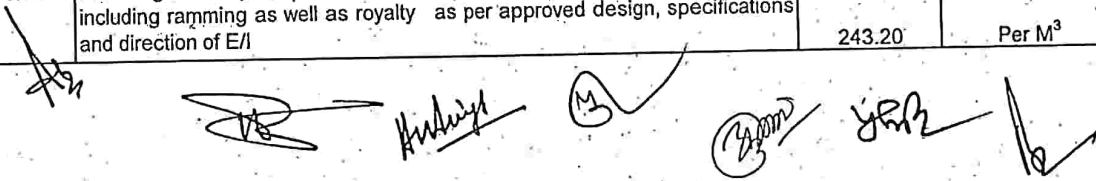
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6.6 PITCHING & PILING

Sr.No.	Item	Rate	Unit
6.6.1	Labour for laying dry graded jhama khoa or stone filter under brick pitching or boulder pitching in slope or apron including light ramming etc.all complete job as per specification and direction of E/I.	326.50	Per M ³
6.6.2	Labour for laying sand filter under brick pitching or boulder pitching in slope or apron including light ramming etc.all complete job as per specification and direction of E/I.	326.50	Per M ³
6.6.3	Providing pitching work with designation 100A bricks in panel in herring bond pattern one brick on edge over a brick flat soling filled with local sand free from clay contents including royalty as per approved design, specifications and direction of E/I	740.10	Per M ²
6.6.4	Providing pitching work with designation 100A bricks in panel two brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty as per approved design, specifications and direction of E/I	1235.50	Per M ²
6.6.5	Providing Brick flat soling work with designation 100A bricks joints filled with local sand free from clay contents including royalty as per approved design, specifications and direction of E/I	285.60	Per M ²
6.6.6	Labour charge for pitching with stone boulder duly packed in slope and apron with materials within 150 meter of work site and all lifts as per approved design, specifications and direction of E/I	782.10	Per M ²
6.6.7	Providing and laying coarse clean sand in filling in foundation trenches including ramming as well as royalty as per approved design, specifications and direction of E/I	243.20	Per M ³

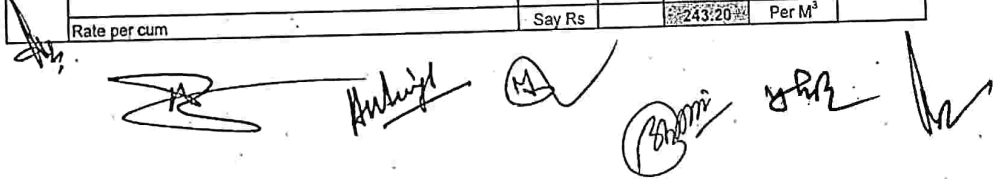


6.6 PITCHING & PILING

Sl.No.	Description	Quantity	Unit	Rate	Amount	Ref.
6.6.1	Labour for laying dry graded jhama khoa or stone filter under brick pitching or boulder pitching in slope or apron including light ramming etc.all complete job as per specification and direction of E/I.					
	Unit:-Per Cum					
	Taking Out put=2.832 Cum					
	Unskilled mazdoor	3	nos	268.00	804.00	
					804.00	
	Add Overhead charge & C.P@15%				120.60	
					924.60	326.48
	Rate per cum	Say Rs		326.50	Per M ³	
6.6.2	Labour for laying sand filter under brick pitching or boulder pitching in slope or apron including light ramming etc.all complete job as per specification and direction of E/I.					
	Unit:-Per Cum					
	Taking Out put=2.832 Cum					
	Unskilled mazdoor	3	nos	268.00	804.00	
					804.00	
	Add Overhead charge & C.P@15%				120.60	
					924.60	326.48
	Rate per cum	Say Rs		326.50	Per M ³	
6.6.3	Providing pitching work with designation 100A bricks in panel in herring bond pattern one brick on edge over a brick flat soling filled with local sand free from clay contents including royalty etc. as per approved design, specifications and direction of E/I					
	Unit:-Per Sqm					
	Taking Out put=9.30 Sqm					
	Materials					
	Bricks	800	per%0no	6214.00	4971.20	
	Local Sand	0.43	M ³	116.85	49.66	M-006
	Labour					
	Mason Gr II	1.13	nos	321.00	361.13	
	Unskilled mazdoor	2.25	nos	268.00	603.00	
					5984.99	
	Add Overhead charge & C.P@15%				897.75	
					6882.73	740.08
	Rate per sqm	Say Rs		740.10	Per M ²	
6.6.4	Providing pitching work with designation 100A bricks in panel two brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty as per approved design, specifications and direction of E/I					
	Unit:-Per Sqm					
	Taking Out put=9.30 Sqm					
	Materials					
	Bricks	1300	per%0no	6214.00	8078.20	
	Local Sand	0.56	M ³	116.85	64.97	
	Labour					
	Mason Gr II	2	nos	321.00	642.00	
	Unskilled mazdoor	4.50	nos	268.00	1206.00	
					9991.17	
	Add Overhead charge & C.P@15%				1498.68	
					11489.84	1235.47
	Rate per sqm	Say Rs		1235.50	Per M ²	
6.6.5	Providing Brick flat soling work with designation 100A bricks joints filled with local sand free from clay contents including royalty etc. as per approved design, specifications and direction of E/I					
	Unit:-Per Sqm					
	Taking Out put=9.30 Sqm					
	Materials					
	Bricks	300	per%0no	6214.00	1864.20	
	Local Sand	0.142	M ³	116.85	16.59	
	Labour					

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	Mason Gr II	0.50	nos	321.00	160.50	
	Unskilled mazdoor	1	nos	268.00	268.00	
					2309.29	
	Add Overhead charge & C.P@15%				346.39	
					2655.69	285.56
	Rate per sqm	Say Rs		285.60		Per M ²
6.6.6	Labour charge for pitching with stone boulder duly packed in slope and apron with materials within 150 metre of work site and all lifts as per approved design, specifications and direction of E/I					
	Unit:-Per Cum					
	Taking Out put=2.832 Cum					
	Unskilled mazdoor for lifting stone boulder on head carrying to work site and unloading from head at place of work site	6	nos	268.00	1608.00	
	Mason Gr II	0.50	nos	321.00	160.50	
	Stone dresser	0.25	nos	341.00	85.25	
	Mate	0.25	nos	289.00	72.25	
					1926.00	
	Add Overhead charge & C.P@15%				288.90	
					2214.90	782.10
	Rate per cum	Say Rs		782.10		Per M ²
6.6.7	Providing and laying coarse clean sand in filling in foundation trenches including ramming as per approved design, specifications and direction of E/I					
	Unit:-Per Cum					
	Taking Out put=2.832 Cum					
	Materials					
	Local sand	2.832	cum	116.85	330.92	
	Labour					
	Unskilled mazdoor	1	nos	268.00	268.00	
					598.92	
	Add Overhead charge & C.P@15%				89.84	
					688.76	243.21
	Rate per cum	Say Rs		243.20		Per M ³



6.7 MISCELLANEOUS






Sr.No	Item	Rate	Unit
6.7.1	Supplying, fitting and fixing copper strip of 16 gauge of approved quality (with 99 % purity) in expansion joints complete job as per drawing, specifications and direction of E/I.	891.20	Per kg
6.7.2	Supplying, fitting and fixing rubber seal of (water stop) of approved quality for construction joints expansion joints complete job as per drawing, specifications and direction of E/I.	#VALUE!	Per mtr
6.7.3	Supplying, and fixing in position 25 mm thick Bituminous board (Shalitek or equivalent) in expansion or construction joint in dam and its allied works all complete as per approved design, specifications and direction of E/I	#VALUE!	Per M ²
6.7.4	Supplying, and fixing Bitumen filter (Bitumen, cement and sand) in construction joints in dam and its allied works all complete including royalty as per approved design, specifications and direction of E/I.	154.60	per cm width per cm depth per 100M
6.7.5.1	Providing and driving steel sheet piles on specified alignment and upto designed levels including painting the sheet piles with two coats of anti-corrosive bitumen paint (portion of sheet pile inside concrete shell not be painted) including cost of sheet piles and hire charges of sheet pile driving plant etc. all complete. as per specifications and direction of E/I . (For the purpose of payment of sheet pile driving, measurement of sheet pile duly driven shall be taken only)	#VALUE!	Per M.T
6.7.5.2	Labour rate for extracting steel sheet piles on specified alignment with hire charges of sheet pile driving plant etc. all complete as per specifications and direction of E/I . (For the purpose of payment of sheet pile extracting, measurement of sheet pile duly extracted shall be taken only)	#VALUE!	Per M.T
6.7.6	Providing weep holes with dry graded Stone metal filter of 20 mm to 40 mm size in abutment and wing wall including royalty as per specification and direction of E/I	63.70	Each



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6.7 MISCELLANEOUS

Sl.No.	Description	Quantity	Unit	Rate	Amount	Ref.
6.7.1	Supplying, fitting and fixing copper strip of 16 gauge of approved quality (with 99 % purity) in expansion joints complete job as per drawing, specifications and direction of E/I.					Analysis same as Item 5.8.1
6.7.2	Supplying, fitting and fixing rubber seal of (water stop) of approved quality for construction joints expansion joints complete job as per drawing, specifications and direction of E/I.					Analysis same as Item 5.8.2
6.7.3	Supplying, and fixing in position 25 mm thick Bituminous board (Shalitex or equivalent) in expansion or construction joint in dam and its allied works all complete as per approved design, specifications and direction of E/I					Analysis same as Item 5.8.3
6.7.4	Supplying, and fixing Bitumen filter (Bitumen, cement and sand) in construction joints in dam and its allied works all complete including royalty etc. as per approved design, specifications and direction of E/I					Analysis same as Item 5.8.4
6.7.5.1	Providing and driving steel sheet piles on specified alignment and up to designed levels including painting the sheet piles with two coats of anti- corrosive bitumen paint (portion of sheet pile inside concrete shell not be painted) including cost of sheet piles and hire charges of sheet pile driving plant etc. all complete as per specifications and direction of E/I.(For the purpose of payment of sheet pile driving, measurement of sheet pile duly driven shall be taken only)					Analysis same as Item 5.8.5.1
6.7.5.2	Labour rate for extracting steel sheet piles on specified alignment with hire charges of sheet pile driving plant etc. all complete as per specifications and direction of E/I .(For the purpose of payment of sheet pile extracting, measurement of sheet pile duly extracted shall be taken only)					Analysis same as Item 5.8.5.2
6.7.6	Providing weep holes with dry graded Stone metal filter of 20 mm to 40 mm size in abutment and wing wall including royalty etc. as per specification and direction of E/I					Analysis same as Item 5.8.6(a)

CHAPTER VII

EARTHEN MASONARY AND CONCRETE DAM WITH SPILLWAY OUTLET INTAKE WELL, SURGE TANK AND TUNNELLING ETC

7.1 EARTH WORK

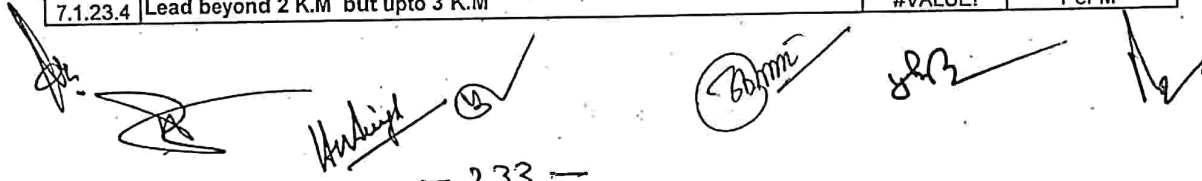
Sr.No	Item	Rate	Unit
7.1.1	Cutting of trees along with branches and their removal away from the work site and stacking the same as per specifications and direction of E/I. (Measurement of girth at a height of one meter above the ground level)		
	(a) Girth above 0.50 meter but upto 0.75 meter	246.40	Each
	(b) Girth above 0.75 meter but upto 1.50 meter	492.80	Each
	(c) Girth above 1.5 meter but upto 2.50 meter	893.30	Each
	(d) Girth above 2.50 meter but upto 4.00 meter	1447.80	Each
	(e) Girth above 4.00 meter	2094.70	Each
7.1.2	Uprooting of stumps and their removal away from the work site as per specifications and direction of E/I.		
	(a) Girth above 0.50 meter but upto 0.75 meter	154.10	Each
	(b) Girth above 0.75 meter but upto 1.50 meter	154.10	Each
	(c) Girth above 1.5 meter but upto 2.50 meter	205.50	Each
	(d) Girth above 2.50 meter but upto 4.00 meter	308.20	Each
	(e) Girth above 4.00 meter	385.20	Each
7.1.3.1	Preparation of borrow areas by removing the grass and the jungle, bushes from the top before excavation as per specifications and direction of E/I.	2.50	Per M ²
7.1.3.2	Jungle clearance and weeding out shrubs including small tree upto 0.50 M girth and removal as per specifications and direction of E/I.	7.50	Per M ²
7.1.4	Removal of stone boulder of more than 300 mm size from alignment of the dam and stacking the same (beyond 50 M away from Toe of the dam base in the country side) within initial lead of 150M as per specifications and direction of E/I.	97.90	Per M ³
7.1.5	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials (beyond 50M away from Toe of the dam base in the country side) with initial lead of 150M and all lifts as per specifications and direction of E/I.	182.50	Per M ³
7.1.6	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150M but within 1.00 K.M and all lifts by Truck including loading unloading and maintenance of haul roads as per specifications and direction of E/I.	335.00	Per M ³
7.1.7	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Truck including loading unloading and maintenance of haul roads as per specifications and direction of E/I.	359.50	Per M ³

7.1.8	Earth work in excavation of cut-off trenches as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same (beyond 50 mtr away from Toe of the dam base in the country side) with initial lead of 150 m and initial lifts of 1.5 mtr as per specifications and direction of E/I.	166.50	Per M ³
7.1.9	Earth work in excavation of cut-off trenches as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same in country side beyond initial lead of 150 mtr but up to 1 K.M away with all lifts by truck including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	341.20	Per M ³
7.1.10.1	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil (beyond 50 M away from Toe of the dam base in the country side) with initial lead of 150M and initial lifts of 1.5 M including making the section in proper profile, dressing side in proper slope and bed in proper grade etc.all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	601.90	Per M ³
7.1.10.2	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (Where blasting is not required) (vide classification of soil item C) disposal of soil (beyond 50M away from Toe of the dam base in the country side) with initial lead of 150M and initial lifts of 1.5M including making the section in proper profile, dressing side in proper slope and bed in proper grade etc.all complete as per specifications and direction of E/I.	464.00	Per M ³
7.1.11.1	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil beyond 150 M from the Toe of the dam but within 1 k.m with all lifts by Truck including loading unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	732.20	Per M ³
7.1.11.2	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock. (Where blasting is not required) (vide classification of soil item C) with disposal of soil beyond 150 mtr from the Toe of the dam but within 1 k.m with all lifts by truck including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I	524.90	Per M ³
7.1.12	Earth work in excavation of cut-off trenches as per designed section in hard rock and stacking properly in approved stack size in approved stack yard (beyond 50 M away from Toe of the dam base in the country side) with initial lead of 150 M and initial lifts of 1.5 M as per specifications and direction of E/I.	1054.90	Per M ³
7.1.13	Earth work in excavation of cut-off trenches as per designed section in hard rock and stacking properly in approved stack size in approved stack yard beyond initial lead of 150 M but upto 1 k.m in country side with all lifts by truck including loading, unloading, stacking properly in approved stack yards, construction and maintenance of haul roads as per specifications and direction of E/I.	1261.50	Per M ³
7.1.14.1	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc.as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same (beyond 50 M away the edge of the trench) with initial lead of 150 M and initial lift of 1.5 M as per specifications and direction of E/I.	166.50	Per M ³

7.1.14.2	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same in country side beyond initial lead of 150 M but up to 1 K.M away with all lifts by truck including loading, unloading, construction and maintenance of haul roads as per specifications	432.50	Per M ³
7.1.15.1	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil (beyond 50 M from Toe the edge of the trench) with initial lead of 150 M and initial lifts of 1.5 M, all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	449.20	Per M ³
7.1.15.2	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) disposal of soil (beyond 50M from Toe the edge of the trench) with initial lead of 150 M and initial lifts of 1.5 M, all complete as per specifications and direction of E/I.	457.00	Per M ³
7.1.15.3	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil beyond 150 mtr but upto 1 k.m away from toe of the dam with all lifts by truck including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	731.50	Per M ³
7.1.15.4	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in soft rock or ordinary rock (Where blasting is not required) (vide classification of soil item C) disposal of soil beyond 150 M but upto 1 k.m away from toe of the dam with all lifts by truck including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	524.90	Per M ³
7.1.16.1	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in hard rock where blasting needed and staking properly in approved stack size in approved stack yard (beyond 50 M from the edge of the trench in country side) with initial lead of 150 M and initial lifts of 1.5 M, all complete as per	1054.80	Per M ³
7.1.16.2	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in hard rock where blasting needed and disposal of excavated rock by truck beyond initial lead of 150 M but upto 1 k.m away from toe of the dam with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	1261.50	Per M ³
7.1.17.1	Earth work in excavation of the toe drain and heel trench as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same (beyond 50M away the edge of the trench) with initial lead of 100 M and initial lift of 1.5 M, all complete as per specifications and direction of E/I.	156.00	Per M ³
7.1.17.2	Earth work in excavation of the drain and heel trench as per designed section in soft rock or ordinary rock (vide classification of soil item C) with disposal of the soil (beyond 50M away from the toe drain in country side) with initial lead of 100M and initial lifts of 1.5 M, all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	572.40	Per M ³
7.1.17.3	Earth work in excavation of the drain and heel trench as per designed section in soft rock or ordinary rock (Where blasting is not required) (vide classification of soil item C) with disposal of the soil (beyond 50 M away from the toe drain in country side) with initial lead of 100 M and initial lifts of 1.5 M, all complete as per specifications and direction of E/I.	457.00	Per M ³

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7.1.17.4	Earth work in excavation of the toe drain and heel trench as per designed section in hard rock where blasting needed and and stacking properly in approved stack yard (beyond 50 M away from the toe drain in country side)and approved stack size with initial lead of 150 M and initial lifts of 1.5 M,all complete as per specifications and direction of E/I.	1054.90	Per M ³
7.1.17.5	Earth work in excavation of the toe drain and heel trench as per designed section in hard rock with chisel and hammer and stacking properly in approved stack yard (beyond 50M away from the toe drain with initial lead of 100 m and initial lifts of 1.5 M,all complete as per specifications and direction of E/I.	446.60	Per M ³
7.1.18	Earth work in excavation of foundation trenches in hard rock (on- blasting zone) or dismantling cement concrete (1:2:4) by manual labour with chisel hammer, wedging barring etc. disposal of excavated materials with an initial lead of and initial lifts of 1.5M including making the edges straight, dressing, profiling and final preparation of surface all complete as per specifications and direction of E/I.	446.60	Per M ³
7.1.19	Earth work in dam fill by head load in semi previous or impervious soil with initial lead of 150 M and initial lift of 1.5 M including breaking clods to maximum 63 mm cubs, placing the earth in layer not exceeding 225 mm thick all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).	234.80	Per M ³
7.1.20.1	Extra for earth work in all kinds of soil for each additional lead of 25 Mtr or part there of over the initial lead as per specification and direction of E/I.	10.90	Per M ³
7.1.20.2	Extra for earth work in rock for each additional lead of 25M or part there of over the initial lead as per specification and direction of E/I.	16.30	Per M ³
7.1.21.1	Extra for earth work in all kinds of soil for each additional lift of 1 Mtr or part there of over the initial lift of 1.50M as per specification and direction of E/I.	10.90	Per M ³
7.1.21.2	Extra for earth work in rock each additional lift of 1 M or part there of over the initial lift of 1.50 M as per specification and direction of E/I.	16.30	Per M ³
7.1.22	Earth work in dam fill in semi previous or impervious zone by manual excavation and carriage by Tipper and loading by manual labours including , making dam in proper design section including earth to be laid in layers of not more than 225 mm thick with all lift and breaking clods to maximum 63 mm cubs as well as construction and maintenance of haul roads, all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).		
7.1.22.1	Lead beyond 150 mtr but upto 1/2 K.M	374.60	Per M ³
7.1.22.2	Lead beyond 1/2 K.M but upto 1 K.M	387.10	Per M ³
7.1.22.3	Lead beyond 1 K.M but upto 2 K.M	406.40	Per M ³
7.1.22.4	Lead beyond 2 K.M but upto 3 K.M	#VALUE!	Per M ³
7.1.23	Earth work in dam fill in semi previous or impervious zone fill materials to be loosened and excavated by Ripper and shovel at the borrow area and transported by truck to the dam fill site with all lift as well as spreading leveling by Dozer including construction and maintenance of haul roads, all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).		
7.1.23.1	Lead beyond 150 mtr but upto 1/2 K.M	#VALUE!	Per M ³
7.1.23.2	Lead beyond 1/2 K.M but upto 1 K.M	#VALUE!	Per M ³
7.1.23.3	Lead beyond 1 K.M but upto 2 K.M	#VALUE!	Per M ³
7.1.23.4	Lead beyond 2 K.M but upto 3 K.M	#VALUE!	Per M ³

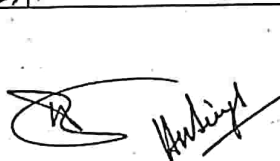


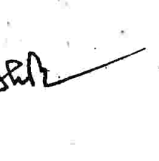



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7.1.24	Earth work in dam fill in semi pervious or impervious zone fill materials to be loosened and excavated by Ripper and shovel at the borrow area and transported by Dumper to the dam fill site with all lift as well as spreading leveling by Dozer including construction and maintenance of haul roads, all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).		
7.1.24.1	Lead beyond 150 mtr but upto 1/2 K.M	#VALUE!	Per M ³
7.1.24.2	Lead beyond 1/2 K.M but upto 1 K.M	#VALUE!	Per M ³
7.1.24.3	Lead beyond 1 K.M but upto 2 K.M	#VALUE!	Per M ³
7.1.24.4	Lead beyond 2 K.M but upto 3 K.M	#VALUE!	Per M ³
7.1.25	Earth work in dam fill in semi pervious or impervious zone fill materials to be loosened and excavated by Ripper and scraper at the borrow area and transported by Scraper itself to the dam fill site with all lift as well as spreading leveling by Dozer including construction and maintenance of haul roads, all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).		
7.1.25.1	Lead beyond 150 mtr but upto 1/2 K.M	#VALUE!	Per M ³
7.1.25.2	Lead beyond 1/2 K.M but upto 1 K.M	#VALUE!	Per M ³
7.1.25.3	Lead beyond 1 K.M but upto 2 K.M	#VALUE!	Per M ³
7.1.25.4	Lead beyond 2 K.M but upto 3 K.M	#VALUE!	Per M ³
7.1.26*	Labour for initial Rolling and compacting the ground before forming the embankment with power road roller at O.M.C to achieve minimum 95 % of dry density including sprinkling the required quanting of water, making arrangement for supply and carriage of water with all leads and lifts, finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine and other tools and plants etc. all complete as per specifications and direction of E/I.	72.20	Per 10 M ²
7.1.27	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C by sheep foot roller driven by tractor to achieve minimum 95 % of dry density includingsprinkling the required quanting of water making arrangement for supply and carriage of water with all leads and lifts, finishing the surfaces plan and drawing including hire charge of compaction, machine and other tools and plants etc. for lined canal all complete as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)	#VALUE!	Per M ³
7.1.28	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by road roller to achieve minimum 95 % of maximum dry density including sprinkling the required quanting of water by tanker within 1 km. lead and all lifts including cost of water, finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/I. .(Mode of measurement - Sectional measurement of compacted earth)	34.60	Per M ³
7.1.29	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 90 % of maximum dry density including sprinkling the required quanting of water by tanker within 1 km. lead and all lifts including cost of water, finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/I. .(Mode of measurement - Sectional measurement of compacted earth)	#VALUE!	Per M ³

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7.1.30	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by road roller to achieve minimum 90 % of maximum dry density including sprinkling the required quanting of water by tanker within 1 km. lead and all lifts including cost of water, finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/I. (Mode of measurement - Sectional measurement of compacted earth)	33.40	Per M ³
7.1.31	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95 % of maximum dry density including sprinkling the required quanting of water making arrangement for supply and carriage of water with all leads and lift finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/I. (Mode of measurement - Sectional measurement of compacted earth)	#VALUE!	Per M ³
7.1.32	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by road roller to achieve minimum 95 % of maximum dry density including sprinkling the required quanting of water making arrangement for supply and carriage of water with all leads and lift finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/I. (Mode of measurement - Sectional measurement of compacted earth)	45.60	Per M ³
7.1.33	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 90 % of maximum dry density including sprinkling the required quanting of water making arrangement for supply and carriage of water with all leads and lift	#VALUE!	Per M ³
7.1.34	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by road roller to achieve minimum 90 % of maximum dry density including sprinkling the required quanting of water making arrangement for supply and carriage of water with all leads and lift finishing the surface with proper grade, camber or super elevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/I. (Mode of measurement - Sectional measurement of compacted earth)	44.30	Per M ³
7.1.35	Close timbering in trenches including shuttering, shoring and packing cavities (wherever required) depth not exceeding 1.5 meter all complete as per specifications and direction of E/I. (Measurement to be taken of the face area timbered)	97.90	Per M ²
7.1.36	Close timbering in trenches including shuttering, shoring and packing cavities (wherever required) depth not exceeding 1.5 meter but upto 3.0 meter all complete as per specifications and direction of E/I. (Measurement to be taken of the face area timbered)	102.30	Per M ²
7.1.37	Supply and laying 300 mm thick humous earth layer on slopes of dam with manual compaction and turfing the surface with approved dub grass with 1 k.m lead including watering and ramming till growth of grass all complete as per specifications and direction of E/I.	#VALUE!	Per M ²
7.1.38	Trimming an dressing the side slope of dam to proper section with all lead and lifts as per drawing, specifications and direction of E/I.	29.50	Per M ²
7.1.39	Earth work in foundation excavation as per designed section in ordinary or soft rock (vide classification of soil item C) by shovel and its disposal upto 1 k.m by dumper with all lift including construction and maintenance of haul roads, all complete as per specifications and direction of E/I.	#VALUE!	Per M ³

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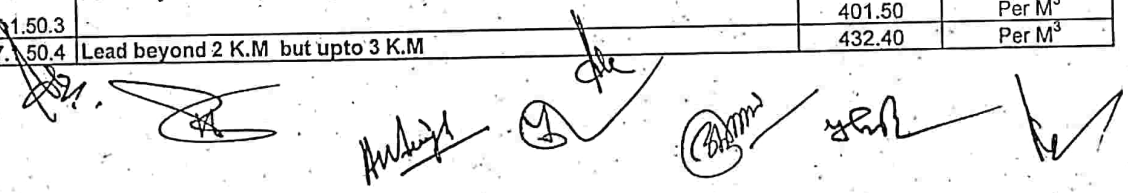
7.1.40	Earth work in foundation excavation as per designed section in hard rock where blasting is needed and disposal of excavated rock with the combination of machines shovel, Dumper and Tractor - Dozer within one k.m with all lift including stacking properly in approved stack yard as well as construction and maintenance of haul roads, all complete as per specifications and direction of E/I.	#VALUE!	Per M ³
7.1.41	Earth work in foundation excavation as per designed section in sand and slushes soil in river bed and disposal of the same upto 1/2 k.m with the combination of machines Dragline Dumper and Tractor - Dozer complete job including construction and maintenance of haul roads, all complete as per specifications and direction of E/I.	#VALUE!	Per M ³
7.1.42	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 mtr but within 1.00 K.M and all lifts by Tipper and loading by Front end loader, including unloading and maintenance of haul roads as per specifications and direction of E/I.	285.20	Per M ³
7.1.43	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials, in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by by Tipper and loading by Front end loader, including unloading and maintenance of haul roads as per specifications and direction of E/I.	320.70	Per M ³
7.1.44	Earth work in excavation of cut -off trenches as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same in country side beyond initial lead of 150 M but up to 1 K.M away with all lifts by Tipper and loading by Front end loader, including unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	291.30	Per M ³
7.1.45.1	Earth work in excavation of cut -off trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil beyond 150 M from the Toe of the dam but within 1 k.m with all lifts by by Tipper and loading by Front end loader, including unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	633.00	Per M ³
7.1.45.2	Earth work in excavation of cut -off trenches as per designed section in soft rock or ordinary rock. (Where blasting is not required) (vide classification of soil item C) with disposal of soil beyond 150 M from the Toe of the dam but within 1 k.m with all lifts by Tipper and loading by Front end loader, including unloading, construction and maintenance of haul roads as per specifications and direction of E/I	400.20	Per M ³
7.1.46	Earth work in excavation of cut -off trenches as per designed section in hard rock and stacking properly in approved stack size in approved stack yard beyond initial lead of 150 M but upto 1 k.m in country side with all lifts by Tipper and loading by Front end loader, including unloading, stacking properly in approved stack yards, construction and maintenance of haul roads as per specifications and direction of E/I.	1136.80	Per M ³
7.1.47	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same in country side beyond initial lead of 150 M but up to 1 K.M away with all lifts by Tipper and loading by Front end loader, including unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	265.10	Per M ³

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7.1.48.1	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil beyond 150 M but upto 1 k.m away from toe of the dam with all lifts by Tipper and loading by Front end loader, including unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	606.80	Per M ³
7.1.48.2	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in soft rock or ordinary rock(Where blasting is not required) (vide classification of soil item C) disposal of soil beyond 150 M but upto 1 k.m away from toe of the dam with all lifts by Tipper and loading by Front end loader, including unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	400.20	Per M ³
7.1.49	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in hard rock where blasting needed and disposal of excavated rock by Tipper and loading by Front end loader, including beyond initial lead of 150 M but upto 1 k.m away from toe of the dam with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	1136.80	Per M ³
7.1.50	Earth work in dam fill in semi pervious or impervious zone by manual excavation and carriage by Tipper and loading by manual labours including making dam in proper design section including earth to be laid in layers of not more than 225 mm thick with all lift and breaking clods to maximum 63 mm cubs as well as construction and maintenance of haul roads, all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).		
7.1.50.1	Lead beyond 150 mtr but upto 1/2 K.M	355.20	Per M ³
7.1.50.2	Lead beyond 1/2 K.M but upto 1 K.M	370.60	Per M ³
	Lead beyond 1 K.M but upto 2 K.M		
7.1.50.3		401.50	Per M ³
7.1.50.4	Lead beyond 2 K.M but upto 3 K.M	432.40	Per M ³



CHAPTER -VIII

EARTHEN MASONARY AND COCRETE DAM WITH SPILLWAY OUTLET INTAKE WELL, SURGE TANK AND TUNNELLING ETC.

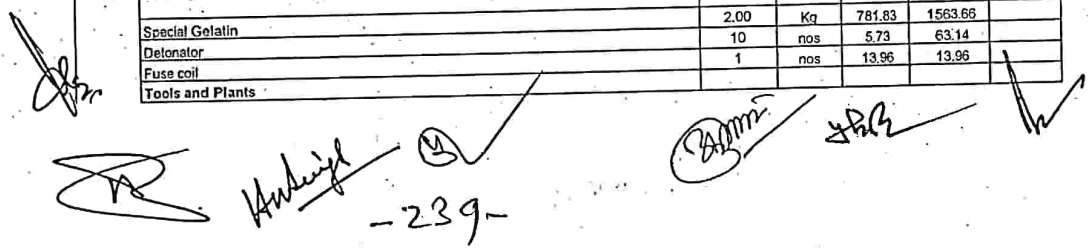
7.1 EARTH WORK

S.No.	Description	Quantity	unit	Rate	amount	Ref.
7.1.1	Cutting of trees alongwith branches and their removal away from the work site and stacking the same as per specifications and direction of E/L.(Measurement of girth at a height of one metre above the ground level.)					Analysis same as Item 5.1.4
7.1.2	Up.rooting of stumps and their removal away from the work site as per specifications and direction of E/L.					Analysis same as Item 5.1.5
7.1.3.1	Preparation of borrow areas by removing the grass and the junglo, bushes from the top befor excavation as per specifications and direction of E/L.					Analysis same as Item 5.1.2
7.1.3.2	Jungle clearance and weeding out shrubs including small tree upto 0.50 mtr girth and removal as per specifications and direction of E/L.					Analysis same as Item 5.1.3
7.1.4	Removal of stone boulder of more than 300 mm size from alignment of the dam and stacking the same (beyond 50 mtr away from Toe of the dam base in the country side) within initial lead of 150 m as per specifications and direction of E/L.					Analysis same as Item 6.1.4
7.1.5	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials (beyond 50 mtr. away from Toe of the dam base in the country side) with initial lead of 150 m and all lifts. as per specifications and direction of E/L.					Analysis same as Item 6.1.5
7.1.6	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 mtr but within 1.00 KM and all lifts by Truck including loading unloading and maintenance of haul roads . as per specifications and direction of E/L.					Analysis same as Item 6.1.6
7.1.7	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 KM but up to 2 KM away with all lifts by Truck including loading unloading and maintenance of haul roads . as per specifications and direction of E/L.					Analysis same as Item 6.1.7
7.1.8	Earth work in excavation of cut -off trenches as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same (beyond 50 M away from Toe of the dam base in the country side) with initial lead of 150M and initial lifts of 1.5M as per specifications and direction of E/L.					
		Unit:-Per Cum				
		Assuming out put=28.32 Cum				
	Unskilled mazdoor for cutting earth	7	nos	268.00	1876.00	
	Unskilled mazdoor for profiling dressing and making edge straight	1	nos	268.00	268.00	
	Unskilled mazdoor for carrying excavated materials	7	nos	268.00	1876.00	
	Mason Gr II	0.25	nos	321.00	80.25	
					4100.25	
	Add Overhead charge & C.P@15%				615.04	
					4715.29	
						166.50
	Rate per cum	Say Rs		166.50	Per M ³	
7.1.9	Earth work in excavation of cut -off trenches as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same in country side beyond initial lead of 150M but up to 1KM away with all lifts by Truck including loading unloading, construction and maintenance of haul roads as per specifications and direction of E/L.					
		Unit:-Per Cum				
		Assuming out put=28.32 Cum				
A.	Unskilled mazdoor for cutting earth	7.00	nos	268.00	1876.00	
	Unskilled mazdoor for profiling dressing and making edge straight	1.00	nos	268.00	268.00	
	Mason Gr I	0.25	nos	361.00	90.25	
B.	Carriage of earth by 10 M.T capacity Truck					
	Carriage cost of earth for 1 k.m lead					
	Average lead	575	M			
	Truck capacity 8 MT (compacted earth)	4.8	Cum			
	Cycle time— Average speed	16	km/hr			
	(a) Hauling time =Average leadx60x2/1000xAverage speed	4.31	minutes			
	(b) Loading unloading turning and spolling time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = L,U & S time / Total hauling time=0.93 trips	0.93	trips			
	Material carried=tripsxnet capacity	4.48	M ³			
	Hourly use rate of truck (Vide item no 3.26)	929.00	hr			P&M 057
	Rate per 28.32 cum for carriage only=Use rate of truckx28.32/material carried			Rs	5875.05	
	Construction and maintenance of haul road @ 5 % of Item (B)			Rs	293.75	
					8403.06	
	Add Overhead charge & C.P 15%				1260.46	
					9663.52	
						341.23
	Rate per cum	Say Rs		341.20	Per M ³	

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7.1.10.1	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil (beyond 50M away from Toe of the dam base in the country side) with initial lead of 150M and initial lifts of 1.5M Including making the section in proper profile, dressing side in proper slope and bed in proper grade etc.all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
	Unit-Per Cum				
	Assuming out put=10 Cum				
	Labour				
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work	9.50	nos	268.00	2546.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.33	nos	444.00	146.52
	Materials				
	Blasting material including carriage from Gomla to work site, storage etc.				
	Special Gelatin	2.00	Kg	781.83	1563.66 M-104
	Detonator	10	nos	5.73	57.29 M-094
	Fuse coil	1	nos	13.96	13.96 326
	Tools and Plants				
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00
	Add Overhead charge & C.P @15%				785.15
					6019.45
					601.95
	Rate per cum	Say Rs		601.95	Per M ³
7.1.10.2	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (Where blasting is not required) vide classification of soil (item C) disposal of soil (beyond 50M away from Toe of the dam base in the country side) with initial lead of 150M and initial lifts of 1.5M Including making the section in proper profile, dressing-side in proper slope and bed in proper grade etc.all complete as per specifications and direction of E/I.				
	Unit-Per Cum				
	Assuming out put=10 Cum				
	Labour				
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work (i.e cutting & carrying etc.)	11.50	nos	268.00	3082.00
	Mason Gr I	0.50	nos	361.00	180.50
					4035.25
	Add Overhead charge & C.P15%				605.2875
					4640.54
					464.05
	Rate per cum	Say Rs		464.05	Per M ³
7.1.11.1	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of soil beyond 150M from the Toe of the dam but within 1 km with all lifts by Truck including loading unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
	Unit-Per Cum				
	Assuming out put=10 Cum				
A.	Labour				
	Hammer man	2.75	nos	281.00	772.75
	Unskilled mazdoor for all work	4.00	nos	268.00	1072.00
	Mason Gr I	0.33	nos	361.00	119.13
	Blaster	0.33	nos	444.00	146.52
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading				
	Carriage cost of earth for 1 k.m lead				
	Average lead=	575	M		
	Truck capacity 8 MT	6	cum		
	Swell factor	0.67			
	Net capacity=Truck capacityx swell factor	4.02	Cum		
	Cycle time= Average speed	16	km/hr		
	(a) Hauling time =Average leadx50x2/1000xAverage speed	4.31	minutes		
	(b) Loading unloading turning and spolling time=	60	minutes		
	Total hauling cycle time=	64.31	minutes		
	No of trip per working hour = Loading unloading turning and spolling time / Total hauling time	0.93	trips		
	Material carried=tripsxnet capacity	3.75	M ³		
	Hourly use rate of truck (Vide item no 3.26)	929.00	hr		
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2477.04
	⊗ Constuction and maintenance of haul road @ 5 % of Item (B)			Rs	123.85
C.	Materials				
	Blasting material including carriage from Gomla to work site, storage etc.				
	Special Gelatin	2.00	Kg	781.83	1563.66
	Detonator	10	nos	5.73	63.14
	Fuse coil	1	nos	13.96	13.96
	Tools and Plants				

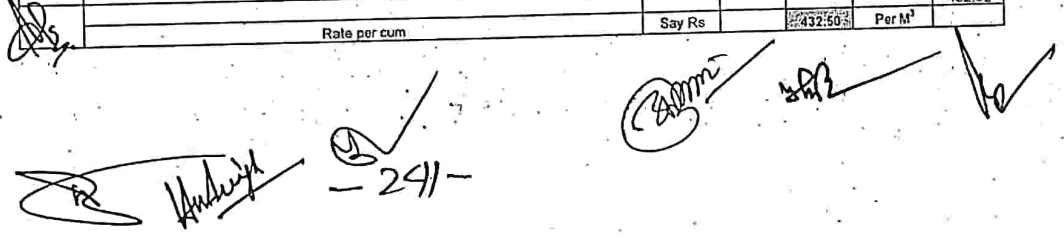


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	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					6367.06	
	Add Overhead charge & C.P@15%				955.06	
					7322.12	
						732.21
	Rate per cum	Say Rs			Per M ³	
7.1.11.2	Earth work in excavation of cut-off trenches as per designed section in soft rock or ordinary rock (Where blasting is not required) (vide classification of soil item C) with disposal of soil beyond 150M from the Toe of the dam but within 1 k.m with all lifts by Truck including loading, unloading, construction and maintenance of haul roads, as per specifications and direction of E/I					
	Unit:-Per Cum					
	Assuming out put=10 Cum					
A.	Labour					
	Hammer man	2.75	nos	281.00	772.75	
	Unskilled mazdoor for all work	4	nos	268.00	1072.00	
	Mason Gr I	0.33	nos	361.00	119.13	
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead					
	Average lead=	575	M			
	Truck capacity 8 MT	6	cum			
	Swell factor	0.67				
	Net capacity=Truck capacity X swell factor	4.02	Cum			
	Cycle time— Average speed	16	km/hr			
	(a) Hauling time = Average lead X 60 X 2/1000 X	4.31	minutes			
	Average speed					
	(b) Loading unloading turning and spotting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading unloading turning and spotting time / Total hauling time	0.93	trips			
	Material carried=tripsxnet capacity	3.75	M ³			
	Hourly use rate of truck (Vide Item no 3.26)	929.00	hr			
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2477.04	
	(c) Constuction and maintenance of haul road @ 5% of Item (B)			Rs	123.85	
					4564.78	
	Add Overhead charge & C.P@15%				684.72	
					5249.49	
						524.95
	Rate per cum	Say Rs		524.95	Per M ³	
7.1.12	Earth work in excavation of cut-off trenches as per designed section in hard rock and stacking properly in approved stack size in approved stack yard (beyond 50 m away from Toe of the dam base in the country side) with initial lead of 150 m and initial lifts of 1.5 m as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=10 Cum					
A.	Labour					
	Hammer man	10.50	nos	281.00	2950.50	
	Unskilled mazdoor for all work	13.00	nos	268.00	3484.00	
	Mason Gr I	0.33	nos	361.00	119.13	
	Blaster	0.67	nos	444.00	297.48	
	Materials					
B.	Blasting material Including carriage from Gomla to work site, storage etc.					
	Special Gelatin	2.75	Kg	781.83	2150.03	
	Detonator	18	nos	5.73	103.11	
	Fuse coil	3	nos	13.95	41.88	
C.	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				26.50	
					9172.64	
	Add Overhead charge & C.P@15%				1375.90	
					10548.53	
						1054.85
	Rate per cum	Say Rs		1054.90	Per M ³	
7.1.13	Earth work in excavation of cut-off trenches as per designed section in hard rock and stacking properly in approved stack size in approved stack yard beyond initial lead of 150 m but upto 1 k.m in country side with all lifts by Truck including loading, unloading, stacking properly in approved stack yards, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=10 Cum					
A.	Labour					
	Hammer man	10.50	nos	281.00	2950.50	
	Unskilled mazdoor for all work	10.00	nos	268.00	2680.00	
	Mason Gr I	0.33	nos	361.00	119.13	
	Blaster	0.67	nos	444.00	297.48	
	Materials					
B.	Blasting material Including carriage from Gomla to work site, storage etc.					
	Special Gelatin	2.75	Kg	781.83	2150.03	

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	Detonator	18	nos	5.73	103.11	
	Fuse coil	3	nos	13.96	41.88	
C.	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				26.50	
D.	Cost of carriage of 10 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead	575	M			
	Average lead=	6	cum			
	Truck capacity 8 MT	0.67				
	Swell factor	4.02	Cum			
	Net capacity=Truck capacityx swell factor	15	km/hr			
	Cycle time= Average speed					
	(a) Hauling time = Average leadx60x2/1000xAverage speed	4.31	minutes			
	(b) Loading unloading turning and spotting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading unloading turning and spotting time / Total hauling time	0.93	trips			
	Material carried=tripsxnet capacity	3.75	M ³			
	Hourly use rate of truck (Vide Item no 3.26 b)	929.00	hr			
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2477.04	
	@ Constuction and maintenance of haul road @ 5 % of Item (B)			Rs	123.85	
					10959.53	
	Add Overhead charge & C.P@15%				1645.43	
					12614.95	
						1261.50
	Rate per cum	Say Rs			Per M ³	
7.1.14.1	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc.as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same (beyond 50M away the edge of the trench) with initial lead of 150M and initial lift of 1.5M as per specifications and direction of E/I.					
	Unit-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting earth	7	nos	268.00	1876.00	
	Unskilled mazdoor for profiling dressing and making edge straight	1	nos	268.00	268.00	
	Unskilled mazdoor for carrying excavated materials	7	nos	268.00	1876.00	
	Mason Gr II	0.25	nos	321.00	80.25	
					4100.25	
	Add Overhead charge & C.P@15%				615.0375	
					4715.29	
						166.50
	Rate per cum	Say Rs			Per M ³	
7.1.14.2	Earth work in excavation of foundation trenches of toe wall, spillway, head regulators, outlets, intake wells etc as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same in country side beyond initial lead of 150M but up to 1 K.M away with all lifts by Truck including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit-Per Cum					
	Assuming out put=28.32 Cum					
A.	Labour	7	nos	268.00	1876.00	
	Unskilled mazdoor for cutting foundation	1	nos	268.00	268.00	
	Unskilled mazdoor for forming spoil	0.25	nos	321.00	80.25	
	Mason Gr II				4.50	
B.	Cost of carriage of 28.32 cum earth by Truck including loading and unloading		L.S		2228.75	
	Carriage cost of earth for 1 k.m lead	575	M			
	Average lead	4.8	Cum			
	Truck capacity 8 MT (compacted earth)	17	km/hr			
	Cycle time= Average speed					
	(a) Hauling time =Average leadx60x2/1000xAverage speed	4.06	minutes			
	(b) Loading unloading turning and spotting time=	60	minutes			
	Total hauling cycle time=	64.06	minutes			
	No of trips per working hour = Loading, unloading, turning and spotting time / Total hauling time	0.94	trips			
	Material carried=trips x net capacity	4.46	M ³			
	Hourly use rate of truck (Vide Item no 3.26)	929.00	hr			
	Rate per cum= Use rate of truck x 28.32/material carried			Rs	5898.94	
	@ Construction and maintenance of haul road @ 5 % of Item (B)			Rs	294.95	
					10651.39	
	Add Overhead charge & C.P@15%				1597.71	
					12249.10	
						432.52
	Rate per cum	Say Rs			Per M ³	



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Average lead=	575	M			
Truck capacity 8 MT	6	cum			
Swell factor	0.67				
Net capacity=Truck capacity X swell factor	4.02	Cum			
Cycle time— Average speed	16	km/hr			
(a) Hauling time =Average leadx60x2/1000xAverage speed	4.31	minutes			
(b) Loading unloading turning and spotting time=	60	minutes			
Total hauling cycle time=	64.31	minutes			
No of trip per working hour = Loading ,unloading ,turning and spotting time / Total hauling time	0.93	trips			
Material carried=tripsxnet capacity	3.75	M ³			
Hourly use rate of truck (Vide Item no 3.26)	929.00	hr			
Rate per cum=Use rate of truck x 10/material carried			Rs	2477.04	
Constuction and maintenance of haul road @ 5 % of Item (B)			Rs	123.85	
Materials					
C. Blasting material including carriage from Gomla to work site, storage etc.					
Special Gelatin	2.75	Kg	781.83	2150.03	
Detonator	18	nos	5.73	103.11	
Fuse coil	3	nos	13.96	41.88	
d. Tools and Plants					
Cost of hire charge of compressor, drilling equipment and other accessories				26.50	
				10969.53	
Add Overhead charge & C.P.@15%				1645.43	
				12614.96	
					1261.50
Rate per cum	Say Rs		1261.50	Per M ³	
7.1.17.1	Earth work in excavation of the toe drain and heel trench as per designed section in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same (beyond 50 m away the edge of the trench.) with initial lead of 100 m and initial lift of 1.5 m as per specifications and direction of E/L.				
	Unit-Per Cum				
	Assuming out put=28.32 Cum				
Unskilled mazdoor for cutting earth	7	nos	268.00	1876.00	
Unskilled mazdoor for profiling dressing and making edge straight	1	nos	268.00	268.00	
Unskilled mazdoor for carrying excavated materials	6	nos	268.00	1608.00	
Mason Gr I	0.25	nos	361.00	90.25	
				3842.25	
Add Overhead charge & C.P.@15%				576.34	
				4418.59	
					156.02
Rate per cum	Say Rs		156.02	Per M ³	
7.1.17.2	Earth work in excavation of the drain and heel trench as per designed section in soft rock or ordinary rock (vide classification of soil item C) with disposal of the soil (beyond 50 m away from the toe drain in country side) with initial lead of 100 m and initial lifts of 1.5 m all complete as per specifications and direction of E/L. (Soft rock where blasting is required and approved by concerned Chief Engineer)				
	Unit-Per Cum				
	Assuming out put=10 Cum				
Labour					
Hammer man	2.75	nos	281.00	772.75	
Unskilled mazdoor for cutting	4.00	nos	268.00	1072.00	
Unskilled mazdoor for carrying and stacking	4.50	nos	268.00	1206.00	
Mason Gr I	0.33	nos	361.00	119.13	
Blaster	0.33	nos	444.00	146.52	
Materials					
Blasting material including carriage from Gomla to work site, storage etc.					
Special Gelatin	2.00	Kg	781.83	1563.66	
Detonator	10	nos	5.73	57.29	
Fuse coil	1	nos	13.96	13.96	
Tools and Plants					
Cost of hire charge of compressor, drilling equipment and other accessories				26.50	
				4977.82	
Add Overhead charge & C.P.@15%				746.67	
				5724.49	
					572.45
Rate per cum	Say Rs		572.45	Per M ³	
7.1.17.3	Earth work in excavation of the drain and heel trench as per designed section in soft rock or ordinary rock (Where blasting is not required) (vide classification of soil item C) with disposal of the soil (beyond 50 mtr away from the toe drain in country side) with initial lead of 100 m and initial lifts of 1.5 mtr all complete as per specifications and direction of E/L.				
	Unit-Per Cum				
	Assuming out put=10 Cum				
Labour					
Hammer man	2.75	nos	281.00	772.75	
Unskilled mazdoor for cutting	7	nos	268.00	1876.00	
Unskilled mazdoor for carrying and stacking	4.50	nos	268.00	1206.00	

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	Mason Gr. I	0.33	nos	361.00	119.13		
					3973.88		
	Add Overhead charge & C.P@15%				595.08		
					4569.96		
						457.00	
	Rate per cum	Say Rs		457.00	Per M ³		
7.1.17.4	Earth work in excavation of the toe drain and heel trench as per designed section in hard rock where blasting needed and stacking properly in approved stack yard (beyond 50M away from the toe drain in country side) and approved stack size with initial lead of 150 m and initial lifts of 1.5 M all complete as per specifications and direction of E/I.						
	Unit-Per Cum						
	Assuming out put=10 Cum						
	Labour						
	Hammer man	10.50	nos	281.00	2950.50		
	Unskilled mazdoor for all work	13	nos	268.00	3484.00		
	Mason Gr I	0.33	nos	361.00	119.13		
	Blaster	0.67	nos	444.00	297.48		
	Materials						
	Blasting material including carriage from Gomia to work site, storage etc.						
		2.75	Kg	781.83	2150.03		
	Special Gelatin	18	nos	5.73	103.11		
	Detonator	3	nos	13.96	41.88		
	Fuse coil						
	Tools and Plants				26.50		
	Cost of hire charge of compressor, drilling equipment and other accessories				9172.64		
					1375.90		
	Add Overhead charge & C.P@15%				10548.53		
						1054.85	
	Rate per cum	Say Rs		1054.90	Per M ³		
7.1.17.5	Earth work in excavation of the toe drain and heel trench as per designed section in hard rock with chisel and hammer and stacking properly in approved stack yard (beyond 50 m away from the toe drain with initial lead of 100 m and initial lifts of 1.5 m all complete as per specifications and direction of E/I.						
	Unit-Per Cum						
	Assuming out put=10 Cum						
	Labour						
	Hammer man	2.25	nos	281.00	632.25		
	Skilled mazdoor for all work	2.25	nos	340.00	765.00		
	Unskilled mazdoor for collecting the excavated materials and carrying the same beyond 50 m and stacking properly	4	nos	268.00	1072.00		
	Unskilled mazdoor for making edge straight, dressing, profiling and final preparation of surface	3	nos	268.00	804.00		
	Blacksmith	1	nos	321.00	321.00		
	Mate	1	nos	289.00	289.00		
					3883.25		
	Add Overhead charge & C.P@15%				582.49		
					4465.74		
						446.57	
	Rate per cum	Say Rs		446.60	Per M ³		
7.1.18	Earth work in excavation of foundation trenches in hard rock (non-blasting zone) or dismantling cement concrete (1:2:4) by manual labour with chisel hammer, wedging barring etc. disposal of excavated materials with an initial lead of and initial lifts of 1.5 m including making the edges straight, dressing, profiling and final preparation of surface all complete as per specifications and direction of E/I.						
	Unit-Per Cum						
	Assuming out put=10 Cum						
	Labour						
	Hammer man	2.25	nos	281.00	632.25		
	Skilled mazdoor for all work	2.25	nos	340.00	765.00		
	Unskilled mazdoor for collecting the excavated materials and carrying the same beyond 50 m and stacking properly	4	nos	268.00	1072.00		
	Unskilled mazdoor for making edge straight, dressing, profiling and final preparation of surface	3	nos	268.00	804.00		
	Blacksmith	1	nos	321.00	321.00		
	Mate	1	nos	289.00	289.00		
					3883.25		
	Add Overhead charge & C.P@15%				582.49		
					4465.74		
						446.57	
	Rate per cum	Say Rs		446.60	Per M ³		
7.1.19	Earth work in dam fill by head load in semi pervious or impervious soil with initial lead of 150 m and initial lift of 1.5 m including breaking clods to maximum 63 mm cubs, placing the earth in layer not exceeding 225 mm thick all complete as per specifications and direction of E/I. (Mode of measurement- sectional measurement of compacted earth).						
	Unit-Per Cum						
	Assuming out put=28.32 Cum						
	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00		
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00		
	Unskilled mazdoor for cutting earth	5	nos	268.00	1340.00		
	Unskilled mazdoor for carriage of earth	14	nos	268.00	3752.00		

	Mate	1	nos	289.00	289.00				
	Add Overhead charge & C.P@15%							867.45	
								6650.45	
									234.83
	Rate per cum			Say Rs	234.80			Per M ³	
7.1.20.1	Extra for earth work in all kinds of soil for each additional lead of 25 M or part there of over the initial lead as per specification and direction of E/L.								
	Unit-Per Cum								
	Assuming out put=28.32 Cum								
	Unskilled mazdoor for cutting	1	nos	268.00	268.00			268.00	
								40.20	
	Add Overhead charge & C.P@15%							308.20	
									10.88
	Rate per cum			Say Rs	10.90			Per M ³	
7.1.20.2	Extra for earth work in rock for each additional lead of 25 M or part there of over the initial lead as per specification and direction of E/L.								
	Unit-Per Cum								
	Assuming out put=28.32 Cum								
	Unskilled mazdoor for cutting	1.50	nos	268.00	402.00			402.00	
								60.30	
	Add Overhead charge & C.P@15%*							462.30	
									16.32
	Rate per cum			Say Rs	16.30			Per M ³	
7.1.21.1	Extra for earth work in all kinds of soil for each additional lift of 1 M or part there of over the initial lift of 1.50 m as per specification and direction of E/L.								
	Unit-Per Cum								
	Assuming out put=28.32 Cum								
	Unskilled mazdoor for cutting	1	nos	268.00	268.00			268.00	
								40.20	
	Add Overhead charge & C.P@15%							308.20	
									10.88
	Rate per cum			Say Rs	10.90			Per M ³	
7.1.21.2	Extra for earth work in rock each additional lift of 1 M or part there of over the initial lift of 1.50 m as per specification and direction of E/L.								
	Unit-Per Cum								
	Assuming out put=28.32 Cum								
	Unskilled mazdoor for cutting	1.50	nos	268.00	402.00			402.00	
								60.30	
	Add Overhead charge & C.P@15%							462.30	
									16.32
	Rate per cum			Say Rs	16.30			Per M ³	
7.1.22	Earth work in dam fill in semi pervious or impervious zone by manual excavation and carriage by Truck including loading, including making dam in proper design section including earth to be laid in layers of not more than 225 mm thick with all lift and breaking clods to maximum 63 mm cubs as well as construction and maintenance of haul roads; all complete as per specifications and direction of E/L. (Mode of measurement- sectional measurement of compacted earth).								
	Unit-Per Cum								
	Assuming out put=28.32 Cum								
7.1.22.1	Lead beyond 150 m but up to 1/2 K.M								
A.	Labour								
	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00				
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00				
	Unskilled mazdoor for cutting earth	9.50	nos	268.00	2546.00				
	Mate	1	nos	289.00	289.00				
B.	Carriage of earth by 10 M.T capacity Truck								
	Average lead	325	M						
	Truck capacity 8 MT	4.8	Cum						
	Cycle time—								
	(a) Hauling time @ 16 KM (Average) speed per hours	16	km/hr						
	=Average leadx60x2/100xhauling time=	2.44	minutes						
	(b) Loading unloading turning and spotting time=	60	minutes						
	Total hauling cycle time=(a+b)	62.44	minutes						
	No of trip per working hour = 60 / Total hauling time	0.96	Trips						
	Material carried=TripsxTruck capacity =	4.61	Cum						
	Hourly use rate of truck (Vide item no 3.26)	929.00	hr						
	Rate per cum=Use rate of truckx28.32/material carried							Rs	5703.77
	© Construction and maintenance of haul road @ 5 % of Item (B).							Rs	285.19
									9225.96
	Add Overhead charge & C.P@15%								1383.89
									10603.85
									374.64
	Rate per cum			Say Rs	374.60			Per M ³	
7.1.22.2	Lead beyond 1/2 K.M but up to 1 K.M								
A.	Labour								

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	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for cutting earth	9.50	nos	268.00	2546.00	
	Mate	1.00	nos	289.00	289.00	
B.	Carriage of earth by 10 M.T capacity Truck					
	Average lead	750	M			
	Truck capacity 8 MT	4.8	Cum			
	Cycle time—					
	(a) Hauling time @ 16 KM (Average) speed per hours	16	k.m/hr			
	=Average leadx60x2/1000hauling time=5.63 minutes	5.63	minutes			
	(b) Loading unloading turning and spolling time=	60	minutes			
	Total hauling cycle time=(a+b)	65.63	minutes			
	No of trip per working hour = 60 / Total hauling time	0.91	Trips			
	Material carried=TripsxTruck capacity =	4.39	Cum			
	Hourly use rate of truck (Vide item no 3.26)	929.00	hr			
	Rate per cum=Use rate of truckx28.32/material carried			Rs	6994.95	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	299.75	
					9531.70	
	Add Overhead charge & C.P@15%				1429.7551	
					10961.46	
						387.06
	Rate per cum			Say Rs	11348.51	Per M ³
7.1.22.3	Lead beyond 1 K.M but up to 2 K.M					
A.	Labour					
	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for cutting earth	9.50	nos	268.00	2546.00	
	Mate	1.00	nos	289.00	289.00	
B.	Carriage of earth by-10 M.T.capacity Truck					
	Average lead	1.5	M			
	Truck capacity 8 MT	4.8	Cum			
	Cycle time—					
	(a) Hauling time @ 17 KM (Average) speed per hours	17	k.m/hr			
	=Average leadx60x2/hauling time=5.63 minutes	10.59	minutes			
	(b) Loading unloading turning and spolling time=	60	minutes			
	Total hauling cycle time=(a+b)	70.59	minutes			
	No of trip per working hour = 60 / Total hauling time	0.85	Trips			
	Material carried=TripsxTruck capacity =	4.080	Cum			
	Hourly use rate of truck (Vide item no 3.26)	929.00	hr			
	Rate per cum=Use rate of truckx28.32/material carried			Rs	6448.35	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	322.42	
					10007.77	
	Add Overhead charge & C.P@15%				1501.17	
					11508.94	
						406.39
	Rate per cum			Say Rs	12915.13	Per M ³
7.1.22.4	Lead beyond 2 K.M but up to 3 K.M					
A.	Labour					
	Unskilled mazdoor for stripping the borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	268.00	201.00	
	Unskilled mazdoor for cutting earth	9.50	nos	268.00	2546.00	
	Mate	1.00	nos	289.00	289.00	
B.	Carriage of earth by 8 M.T capacity Truck					
	Taking efficiency factor	0.88				
	Job management factor	0.69				
	Out put of shovel per hour 172.48x0.69x0.88=104.72 Say 100 cum					
	Truck capacity	8	M.T			
	Machinery charges					
	i. Ripper with D-9 tractor dozer					
	Out put per working hour =	150	cum			
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!				P&M-041
	Cost of ripping per Cum= Use rate / out put					
	ii.Shovel					
	Use rate per working hour (vide item no 3.10)	#VALUE!				
	Out put per working hour =	100	cum			
	Rate per Cum= Use rate of shovel / out put					#VALUE!
	iii. Carriage by Truck					
	Truck capacity 8 MT =4.8 cum (compacted earth)	4.8	cum			
	Average lead 2.5 k.m	2.5	k.m			
	Cycle time—					
	(i). Loading time per minute= Body capacityx60/ shovel	2.88	minute			
	(ii) Hauling time @ 17.5 KM (Average) speed per hours	17.50	k.m/hr			
	=Average leadx60x2/hauling time=	17.14	minutes			
	(b) Loading unloading turning and spolling time=	20	minutes			
	Total hauling cycle time=(a+b)	37.14	minutes			
	No of trip per working hour = 60 / Total hauling time	1.62	Trips			
	Material carried=TripsxTruck capacity =	7.75	Cum			

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	Hourly use rate of truck (Vide item no 3.26)	929.00	hr		
	Rate per cum= Use rate of trucks/28.32/material carried			Rs	3393.06
	© Construction and maintenance of haul road @ 5 % of item			Rs	169.65
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.23	Earth work in dam fill in semi pervious or impervious zone fill materials to be loosened and excavated by Ripper and shovel at the borrow area and transported by truck to the dam fill site with all fill as well as spreading leveling by Dozer including construction and maintenance of haul roads, all complete as per specifications and direction of E/L. (Mode of measurement- sectional measurement of compacted earth).				
	Unit-Per Cum				
	Assuming out put=1.0 Cum				
7.1.23.1	Lead beyond 150 m but up to 1/2 K.M (Ref.Report of committee on cost control of River valley projects vol. II. Jan. 1981 page 89 to 93)				
	Average lead =	325	Metre		
	Diesel Shovel capacity	2	cum		
	Ideal production per hour=196 cum (Bank volume)	196	cum		
	Taking depth of cut and angle of swing factor =0.88	0.88			
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.88			
	Job management factor	0.69			
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Truck capacity 10 M.T	10	M.T		
A.	Clearing and grubbing of borrow area		L.S		1.00
B.	Machinery charges				
	i. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =				
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!			
	Cost of ripping per Cum= Use rate / out put				#VALUE!
	ii. Shovel				
	Use rate per working hour (vide item no 3.10)	#VALUE!			
	Out put per working hour =	100	cum		
	Rate per Cum= Use rate of shovel / out put				#VALUE!
	iii. Carriage by Truck				
	Truck capacity 8-MT =4.8 cum (compacted earth)	4.8	cum		
	Average lead 325 M	325	M		
	Cycle time--	2.88	minute		
	(a) Loading time per minute= Body capacity / shovel out put	16.00	k.m/hr		
	(b) Hauling time @ 16 KM (Average)speed per hours =Average leadx60x2/1000xhauling time=	2.44	minutes		
	(c) Loading unloading turning and spollting time=	20	minutes		
	Total hauling cycle time=(a+b+c)	25.32	minutes		
	No of trip per working hour of 50 minute = 50 / Total hauling time	1.97	Trips		
	Material carried=TripsxTruck capacity =	9.48	Cum		
	Hourly use rate of truck (Vide Item no 3.26)	929.00			
	Rate per cum=Use rate of truck / Material carried				98.00
	(iv) Spreading charge at placement by D- 8 Tractor Dozer	300	cum		
	Out put per working hour =	5598.00			P&M-014
	Use Rate of D-8 Tractor Dozer				18.66
	Rate per cum =Use rate of D-8 / Out put				
	Total Machinery charges (i+ii+iii+iv)	#VALUE!			#VALUE!
c.	Add for				
	i. Construction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Leveling and trimming of waste pile etc. @ 5 % of machinery charges				#VALUE!
					#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.23.2	Lead beyond 1/2 K.M but up to 1 K.M (Ref.Report of committee on cost control of River valley projects vol. II. Jan. 1981 page 89 to 93)				
	Average lead =	750	Metre		
	Diesel Shovel capacity	2	cum		
	Ideal production per hour=196 cum (Bank volume)	196	cum		
	Taking depth of cut and angle of swing factor =0.88	0.88			
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.88			
	Job management factor	0.69			

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	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Truck capacity 10 M.T	10	M T		
A.	Clearing and grubbing of borrow area		L S		1.00
B.	Machinery charges				
	i. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =				
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!			#VALUE!
	Cost of ripping per Cum= Use rate / out put				
	ii. Shovel	#VALUE!			
	Use rate per working hour =	100	cum		
	Out put per working hour =				#VALUE!
	Rate per Cum= Use rate of shovel / out put				
	iii. Carriage by Truck	4.8	cum		
	Truck capacity 8 MT =4.8 cum (compacted earth)	750	M		
	Average lead 750 M				
	Cycle time—				
	(a) Loading time per minute= Body capacity / shovel out put	2.88	minute		
	(b) Hauling time @ 16 KM (Average speed per hours	16.00	k.m/hr		
	=Average leadx60x2/1000xhauling time=	5.63	minutes		
	(c) Loading unloading turning and spolling time=	20	minutes		
	Total hauling cycle time=(a+b+c)	28.51	minutes		
	No of trip per working hour of 50 minute = 50 / Total hauling time	1.75	Trips		
	Material carried=TripsxTruck capacity =	8.42	Cum		
	Hourly use rate of truck (Vide item no 3.26)	929.00			
	Rate per cum=Use rate of truck / Material carried				110.34
	(iv). Spreading charge at placement by D- 8 Tractor Dozer	300	cum		
	Out put per working hour =	5598.00			
	Use Rate of D-8 Tractor Dozer				18.66
	Rate per cum=Use rate of D-8 / Out put				
	Total Machinery charges (i+ii+iii+iv)				#VALUE!
C.	Add for				#VALUE!
	i. Construction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Leveling and trimming of waste pile etc. @ 5 % of machinery charges				#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum			Say Rs	#VALUE! Per M ³
7.1.23.3	Lead beyond 1 K.M but up to 2 K.M				
	(Ref.Report of committee on cost control of River valley projects vol II, Jan. 1981 page 89 to 93)	1500	Metre		
	Average lead =	2	cum		
	Diesel Shovel capacity	196	cum		
	Ideal production per hour=196 cum (Bank volume)	0.88			
	Taking depth of cut and angle of swing factor =0.88				
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.88			
	Job management factor	0.69			
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Truck capacity 10 M.T	10	M T		
A	Machinery charges				
	i. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =				
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!			#VALUE!
	Cost of ripping per Cum= Use rate / out put				
	ii. Shovel	#VALUE!			
	Use rate per working hour (Vide item no 3,10)	100	cum		
	Out put per working hour =				#VALUE!
	Rate per Cum= Use rate of shovel / out put				
	iii. Carriage by Truck	4.8	cum		
	Truck capacity 8 MT =4.8 cum (compacted earth)	1500	M		
	Average lead				
	Cycle time—				
	(a) Loading time per minute= Body capacity / shovel out put	2.88	minute		
	(b) Hauling time @ 16 KM (Average speed per hours	16.00	k.m/hr		
	=Average leadx60x2/1000xhauling time=	11.25	minutes		
	(c) Loading unloading turning and spolling time=	20	minutes		
	Total hauling cycle time=(a+b+c)	34.13	minutes		
	No of trip per working hour of 50 minute = 50 / Total hauling time	1.46	Trips		

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	Material carried=TripsxTruck capacity =	7.03	Cum		
	Hourly use rate of truck (Vide Item no 3.26)	929.00			
	Rate per cum=Use rate of truck / Material carried				132.11
	(iv). Spreading charge at placement by D- 8 Tractor Dozer				
	Out put per working hour =	300	cum		
	Use Rate of D-8 Tractor Dozer (vide Item no 3.11 a)	5598.00			
	Rate per cum of D-8=Use rate of / Out put				18.66
	Total Machinery charges (i+ii+iii+iv)				#VALUE!
B.	Add for				#VALUE!
	i. Constuction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Levelling and trimming of waste pile etc. @ 5 % of machinery charges				#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.23.4	Lead beyond 2 K.M but upto 3 K.M (Ref.Report of committee on cost control of River vally projects vol II. Jan. 1981 page 89 to 93)				
	Average lead =	2500	Metre		
	Diesel Shovel capacity	2	cum		
	Ideal production per hour=196 cum (Bank volume)	196	cum		
	Taking depth of cut and angle of swing factor =0.83	0.83			
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.89			
	Job management factor	0.69			
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Truck capacity 10 M.T	10	M.T		
A.	Machinery charges				
	i. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =	#VALUE!			
	Use rate per working hour (Vide Item no 3.11 b+3.27c)	#VALUE!			#VALUE!
	Cost of ripping per Cum= Use rate / out put				
	ii. Shovel				
	Use rate per working hour (Vide Item no 3.10)	#VALUE!			
	Out put per working hour =	100	cum		#VALUE!
	Rate per Cum= Use rate of shovel / out put				
	iii. Carriage by Truck	4.8	cum		
	Truck capacity 8 MT =4.8 cum (compacted earth)	2500	M		
	Average lead 750 M				
	Cycle time--	2.88	minute		
	(a). Loading time per minute= Body capacity / shovel out put	16.00	k.m/hr		
	(b) Hauling time @ 16 KM (Average) speed per hours =Average leadx60x2/1000xhauling time=	18.75	minutes		
	(c) Loading unloading turning and spolling time=	20	minutes		
	Total hauling cycle time=(a+b+c)	41.63	minutes		
	No of trip per working hour of 50 minute = 50 / Total hauling time	1.20	Trips		
	Material carried=TripsxTruck capacity =	5.77	Cum		
	Hourly use rate of truck (Vide Item no 3.26)	929.00			
	Rate per cum=Use rate of truck / Material carried				161.14
	(iv). Spreading charge at placement by D- 8 Tractor Dozer				
	Out put per working hour =	300	cum		
	Use Rate of D-8 Tractor Dozer (vide Item no 3.11 a)	5598.00			
	Rate per cum of D-8=Use rate of / Out put				18.66
	Total Machinery charges (i+ii+iii+iv)				#VALUE!
B.	Add for				#VALUE!
	i. Constuction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Levelling and trimming of waste pile etc. @ 5 % of machinery charges				#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³

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7.1.24	Earth work in dam fill in semi previous or Impervious zone fill materials to be loosened and excavated by Ripper and shovel at the borrow area and transported by Dumper to the dam fill site with all lift as well as spreading levelling by Dozer including construction and maintenance of haul roads, all complete as per specifications and direction of E.I. (Mode of measurement- sectional measurement of compacted earth).				
		Unit-Per Cum			
		Assuming out put=1.0 Cum			
7.1.24.1	Lead beyond 150 mtr but upto 1/2 K.M				
	(Ref. Report of committee on cost control of River vally projects vol II. Jan. 1981 page 89 to 91)	325	Metre		
	Average lead =	2	cum		
	Diesel Shovel capacity	195	cum		
	Ideal production per hour=195 cum (Bank volume)	0.88			
	Taking depth of cut and angle of swing factor =0.88				
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.69			
	Job management factor				
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Dumper 15 M.T	10	M.T		
	Capacity 8.33 cum	8.33	cum		
	Swell factor= 0.75	0.75			
A	Machinery charges.				
	I. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =	#VALUE!	Per hr		
	Use rate per working hour (Vide item no 3.11 b+3.27c)			#VALUE!	
	Cost of ripping per Cum= Use rate / out put				
	ii. Shovel	#VALUE!			
	Use rate per working hour	100	cum		
	Out put per working hour =			#VALUE!	
	Rate per Cum= Use rate of shovel / out put				
	iii. Dumper	325	M		
	Average lead	6.25	cum (Bank volume)		
	Body capacity= capacity x Swell factor				
	Handling Cycle time—	3.75	minute		
	(a). Loading time per minute= Body capacity / shovel out put	0.30	minutes		
	(b) spolling time=	2.00	minutes		
	(c). Turning and dumping time				
	(d). Empty haul @ 15 K.M per hour =Average Leadx60/15x1000	1.3	minutes		
	(e). Loaded haul @ 10 K.M per hour. =Average Leadx60/15x1000	1.95	minutes		
	Total hauling cycle time=(a+b+c+d+e)	9.30	minutes		
	No of dumper trip per working hour of 50 minute = 50 / Total hauling time	5.38	Trips		
	Material carried=TripsxDumper capacity =	33.59	Cum		
	Hourly use rate of Dumper 15 T (vide item no 3.12)	#VALUE!			
	Rate per cum=Use rate of Dumper/ Material carried			#VALUE!	
	(iv). Spreading charge at placement by D- 8 Tractor Dozer	300	cum		
	Out put per working hour =	5598.00			
	Use Rate of D-8 Tractor Dozer			18.65	
	Rate per cum of D-8=Use rate of / Out put				
	Total Machinery charges (i+ii+iii+iv)			#VALUE!	
B	Add for			#VALUE!	
	i. Constuction and maintenance of haul road @ 5 % of machinery charges			#VALUE!	
	ii. Levelling and triming of waste pile etc. @ 5 % of machinery charges			#VALUE!	
	Add Overhead charge & C.P@15%			#VALUE!	
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.24.2	Lead beyond 1/2 K.M but upto 1 K.M				
	(Ref. Report of committee on cost control of River vally projects vol II. Jan. 1981 page 89 to 91)	750	Metre		
	Average lead =	2	cum		
	Diesel Shovel capacity	195	cum		
	Ideal production per hour=195 cum (Bank volume)	0.88			
	Taking depth of cut and angle of swing factor =0.88				
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.69			
	Job management factor				
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Dumper 15 M.T	10	M.T		

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	Capacity 8.33 cum	8.33	cum		
	Swell factor= 0.75	0.75			
A	Machinery charges				
	i. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =				
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!			#VALUE!
	Cost of ripping per Cum= Use rate / out put				
	ii. Shovel	#VALUE!			
	Use rate per working hour (vide Item 3.10a) =				
	Out put per working hour =	100	cum		#VALUE!
	Rate per Cum= Use rate of shovel / out put				
	iii. Dumper	750	M		
	Average lead	6.25	(Bank volume)		
	Body capacity= capacity x Swell factor				
	Handling Cycle time—	3.75	minute		
	(a). Loading time per minute= Body capacity / shovel out put	0.30	minutes		
	(b) spotting time=	2.00	minutes		
	(c). Turning and dumping time				
	(d). Empty haul @ 25 K.M per hour =Average Leadx60/25x1000	1.8	minutes		
	(e). Loaded haul @20 K.M per hour =Average Leadx60/20x1000	2.25	minutes		
	Total hauling cycle time=(a+b+c+d+e)	10.10	minutes		
	No of dumper trip per working hour of 50 minute = 50 / Total hauling time	4.95	Trips		
	Material carried=TripsxDumper capacity =	30.93	Cum		
	Hourly use rate of Dumper	#VALUE!			#VALUE!
	Rate per cum=Use rate of Dumper/ Material carried				
	(iv). Spreading charge at placement by D- 8 Tractor Dozer	300	cum		
	Out put per working hour = (vide Item 3.11a)	5598.00			18.66
	Use Rate of D-8 Tractor Dozer				#VALUE!
	Rate per cum of D-8=Use rate of / Out put				#VALUE!
	Total Machinery charges (i+ii+iii+iv)				
B	Add for				
	i. Constuction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Levelling and trimming of waste pile etc. @ 5 % of machinery charges				#VALUE!
	Add Overhead charge & C.P.@15%				#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.24.3	Lead beyond 1 K.M but upto 2 K.M (Ref. Report of committee on cost control of River vally projects vol II. Jan. 1981 page 89 to 93)	1500	Metre		
	Average lead =	2	cum		
	Diesel Shovel capacity	196	cum		
	Ideal production per hour=196 cum (Bank volume)	0.88			
	Taking depth of cut and angle of swing factor =0.88				
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	172.48	cum		
	Taking efficiency factor	0.88			
	Job management factor	0.69			
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	104.73	cum		
	Say	100	cum		
	Dumper 15 M.T	10	M.T		
	Capacity 8.33 cum	8.33	cum		
	Swell factor= 0.75	0.75			
A	Machinery charges				
	i Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =				
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!			#VALUE!
	Cost of ripping per Cum= Use rate / out put				
	ii Shovel	#VALUE!			
	Use rate per working hour (vide Item 3.10a) =				
	Out put per working hour =	100	cum		#VALUE!
	Rate per Cum= Use rate of shovel / out put				
	iii. Dumper	1500	M		
	Average lead	6.25	(Bank volume)		
	Body capacity= capacity x Swell factor				
	Handling Cycle time—	3.75	minute		
	(a). Loading time per minute= Body capacity / shovel out put	0.30	minutes		
	(b) spotting time=	2.00	minutes		
	(c). Turning and dumping time				
	(d). Empty haul @ 25 K.M per hour =Average Leadx60/25x1000	3.6	minutes		
	(e). Loaded haul @20 K.M per hour =Average Leadx60/20x1000	4.5	minutes		
	Total hauling cycle time=(a+b+c+d+e)	14.15	minutes		
	No of dumper trip per working hour of 50 minute = 50 / Total hauling time	3.53	Trips		
	Material carried=TripsxDumper capacity =	22.08	Cum		

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	Hourly use rate of Dumper (Vide Item no 3.12c)	#VALUE!			
	Rate per cum=Use rate of Dumper/ Material carried				#VALUE!
	(iv). Spreading charge at placement by D- 8 Tractor Dozer	300	cum		
	Out put per working hour =	5598.00			
	Use Rate of D-8 Tractor Dozer (vide item 3.11a)				18.66
	Rate per cum of D-8=Use rate of / Out put				
	Total Machinery charges (i+ii+iii+iv)				#VALUE!
B.	Add for				#VALUE!
	i. Constuction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Levelling and triming of waste pile etc. @ 5 % of machinery charges				#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.24.4	Lead beyond 2 K.M but upto 3 K.M				
	(Ref.Report of committee on cost control of River vally projects vol II. Jan. 1981 page 89 to 93)	2500	Metre		
	Average lead =	2	cum		
	Diesel Shovel capacity	196	cum		
	Ideal production per hour=196 cum (Bank volume)	0.88			
	Taking depth of cut and angle of swing factor =0.88	172.48	cum		
	Production per hour=Ideal production per hour X depth of cut and angle of swing factor	0.88			
	Taking efficiency factor	0.69			
	Job management factor	104.73	cum		
	Out put of shovel per hour=Production per hr x efficiency factor x Job management factor	100	cum		
	Say	10	M.T		
	Dumper 15 M.T	8.33	cum		
	Capacity 8.33 cum	0.75			
	Swell factor= 0.75				
A.	Machinery charges				
	i. Ripper with D-9 tractor dozer	150	cum		
	Out put per working hour =				
	Use rate per working hour (Vide item no 3.11 b+3.27c)	#VALUE!			#VALUE!
	Cost of ripping per Cum= Use rate / out put				
	ii.Shovel				
	Use rate per working hour (vide Item 3.10a) =	#VALUE!			
	Out put per working hour =	100	cum		
	Rate per Cum= Use rate of shovel / out put				#VALUE!
	iii.Dumper	2500	M		
	Average lead	6.25	cum (Bank volume)		
	Body capacity= capacity x Swell factor				
	Handling Cycle time---	3.75	minute		
	(a). Loading time per minute= Body capacity / shovel out put	0.30	minutes		
	(b) spotting time=	2.00	minutes		
	(c). Turning and dumping time				
	(d). Empty haul @ 25 K.M per hour =Average Leadx60/25x1000	6	minutes		
	(e). Loaded haul @20 KM per hour =Average Leadx60/20x1000	7.5	minutes		
	Total hauling cycle time=(a+b+c+d+e)	19.55	minutes		
	No of dumper trip per working hour of 50 minute = 50 / Total hauling time	2.56	Trips		
	Material carried=TripsxDumper capacity =	15.98	Cum		
	Hourly use rate of Dumper (Vide Item no 3.12c)	#VALUE!			
	Rate per cum=Use rate of Dumper/ Material carried				#VALUE!
	(iv). Spreading charge at placement by D- 8 Tractor Dozer	300	cum		
	Out put per working hour =	5598.00			
	Use Rate of D-8 Tractor Dozer (vide item 3.11a)				18.66
	Rate per cum of D-8=Use rate of / Out put				
	Total Machinery charges (i+ii+iii+iv)				#VALUE!
C.	Add for				#VALUE!
	i. Constuction and maintenance of haul road @ 5 % of machinery charges				#VALUE!
	ii. Levelling and triming of waste pile etc. @ 5 % of machinery charges				#VALUE!
	Add Overhead charge & C.P@15%				#VALUE!
					#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³

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7.1.25	Earth work in dam fill in semi previous or impervious zone fill materials to be loosened and excavated by Dozer and scraper at the borrow area and transported by Scraper itself to the dam fill site with all lift as well as spreading levelling by Dozer including construction and maintenance of haul roads, all complete as per specifications and direction of E/L. (Mode of measurement- sectional measurement of compacted earth).						
Unit-Per Cum							
7.1.25.1	Lead beyond 150 mtr but upto 1/2 K.M	325	Metre				
	Average lead =	7.645	cum				
	Capacity of scraper 9.175 cum (12 cyd) but actually loaded to 7.645 cum (10 cyd) for all practical purpose.	8	km/hr				
	Assuming speed of scraper as 8 km per hr For average condition (Ref- Back "construction planing, equipment and methods" by R.L .Peurifey)	1.00	minute				
	(a). Loading time	0.50	minutes				
	(b) Time of dumping and running	0.40	minutes				
	(c). Time for accelerating and decelerating	1.90	minutes				
	Total time=(a+b+c)	0.83					
	Operating efficiency of scraper	10.22	Trips				
	No of trip per hour = 1000x8efficiency / average leadx2	19.41	minutes				
	Loading and unloading time =Tripsx total time	1.32	hr				
	Total time taken by scraper in 10.21 trips=1 per 19.41 minutes	472.07	cum				
	Earl work involved per day= Actu.capacityx no of tripsx 8 hr/Total time taken by scraper in no of trips	1.51	hr				
	Time taken by ripper per day @ 15 minutes per 1.32 hr	8	hr	#VALUE!	#VALUE!		
	(i). Cost of 8 hour of scraper (vide Item no 3.23a)	1.51	hr	5598.00	8459.47		
	(ii). Cost of 1.51 hour of dozer (vide Item no 3.11a)						
	Add for						
	i. Constuction and _maintenance of haul road @ 5 % of (i+ii)	#VALUE!			#VALUE!		
	ii. Unskilled mazdoor for controlling slope	1.00	nos	268.00	268.00		
	Add Overhead charge & C.P@15%				#VALUE!		
					#VALUE!		
					#VALUE!		
	Rate per cum		Say Rs	#VALUE!	Per M ³	#VALUE!	
7.1.25.2	Lead beyond 1/2 K.M. but upto 1 K.M	750	Metre				
	Average lead =500+500/2	7.645	cum				
	Capacity of scraper 9.175 cum (12 cyd) but actually loaded to 7.645 cum (10 cyd) for all practical purpose.	8	km/hr				
	Assuming speed of scraper as 8 km per hr For average condition (Ref- Back "construction planing, equipment and methods" by R.L .peurifey)	1.00	minute				
	(a). Loading time ut	0.50	minutes				
	(b) Time of dumping and running	0.40	minutes				
	(c). Time for accelerating and decelerating	1.90	minutes				
	Total time=(a+b+c)	0.83					
	Operating efficiency of scraper	4.43	Trips				
	No of trip per hour = 1000x8efficiency / average leadx2	8.41	minutes				
	Loading and unloading time =Tripsx total time	1.14	hr				
	Total time taken by scraper in 10.21 trips=1 per 19.41 minutes	237.45	cum				
	Earl work involved per day= Actu.capacityx no of tripsx 8 hr/Total time taken by scraper in no of trips	0.94	hr				
	Time taken by dozer per day @ 8 minutes per 1.14 hr	8	hr	#VALUE!	#VALUE!		
	(i). Cost of 8 hour of scraper (vide Item no 3.23a)	0.94	hr	5598.00	5237.078		
	(ii). Cost of 0.94 hour of dozer. (vide Item no 3.11a)						
	Add for						
	i. Constuction and maintenance of haul road @ 5 % of (i+ii)	#VALUE!			#VALUE!		
	ii. Unskilled mazdoor for controlling slope	1.00	nos	268.00	268.00		
	Add Overhead charge & C.P@15%				#VALUE!		
					#VALUE!		
					#VALUE!		
	Rate per cum		Say Rs	#VALUE!	Per M ³	#VALUE!	
7.1.25.3	Lead beyond 1 K.M but upto 2 K.M	1500	Metre				
	Average lead =	7.645	cum				
	Capacity of scraper 9.175 cum (12 cyd) but actually loaded to 7.645 cum 9 10 cyd 0 for all practical purpose.	8	km/hr				
	Assuming speed of scraper as 8 km per hr For average condition (Ref- Back "construction planing, equipment and methods" by R.L .Peurifey)	1.00	minute				
	(a). Loading time ut	0.50	minutes				
	(b) Time of dumping and running	0.40	minutes				
	(c). Time for accelerating and decelerating	1.90	minutes				
	Total time=(a+b+c)	0.83					
	Operating efficiency of scraper	2.21	Trips				
	No of trip per hour = 1000x8efficiency / average leadx2						

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	Loading and unloading time = Trips x total time	4.21	minutes		
	Total time taken by scraper in 10.21 trip = 1 per 19.41 minutes	1.07	hr		
	Ear work involved per day = Act. capacity x no of trips x 8 hr / Total time taken by scraper in no of trips	126.50	cum		
	Time taken by dozer per day @ 4 minutes per 1.07 hr	0.50	hr		
	(i). Cost of 8 hour of scraper (vide Item no 3.23a)	8	hr	#VALUE!	#VALUE!
	(ii). Cost of 0.50 hour of dozer (vide Item no 3.11a)	0.50	hr	5598.00	2790.0486
	Add for				
	i. Constuction and maintenance of haul road @ 5 % of (i+ii)	#VALUE!			#VALUE!
	ii. Unskilled mazdoor for controlling slope	1.00	nos	268.00	268.00
	Add Overhead charge & C.P@15%				#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.25.4	Lead beyond 2 K.M. but upto 3 K.M				
	Average lead =	2500	Metre		
	Capacity of scraper 9.175 cum (12 cyd) but actually loaded to 7.645 cum 9 10 cyd 0 for all practical purpose.	7.645	cum		
	Assuming speed of scraper as 8 km per hr	8	km/hr		
	For average condition (Ref:- Back "construction planing, equipment and methods" by R.L. Peurifoy)	0.88			
	Production per hour = Ideal production per hour X depth of cut and angle of swing factor				
	(a). Loading time ut	1.00	minute		
	(b) Time of dumping and running	0.50	minutes		
	(c). Time for accelerating and decelerating	0.40	minutes		
	Total time=(a+b+c)	1.90	minutes		
	Operating efficiency of scraper	0.83			
	No of trip per hour = 1000 x efficiency / average lead x 2	1.33	Trips		
	Loading and unloading time = Trips x total time	2.52	minutes		
	Total time taken by scraper in 10.21 trip = 1 per 19.41 minutes	1.04	hr		
	Ear work involved per day = Act. capacity x no of trips x 8 hr / Total time taken by scraper in no of trips	77.94	cum		
	Time taken by dozer per day @ 2.5 minutes per 1.04 hr	0.32	hr		
	(i). Cost of 8 hour of scraper (vide Item no 3.23a)	8	hr	#VALUE!	#VALUE!
	(ii). Cost of 0.32 hour of dozer (vide Item no 3.11a)	0.32	hr	5598.00	1790.70
	Add for				
	i. Constuction and maintenance of haul road @ 5 % of (i+ii)	#VALUE!			#VALUE!
	ii. Unskilled mazdoor for controlling slope	0.5	nos	268.00	134.00
	Add Overhead charge & C.P@15%				#VALUE!
	Rate per cum		Say Rs	#VALUE!	Per M ³
7.1.26	Labour for initial Rolling and compacting the ground before forming the embankment with power road roller at O.M.C to achieve minimum 95 % of dry density including sprinkling the required quanting of water, making arrangement for supply and carriage of water with all leads and lifts, finishing the surface with proper grade, camber or superelevation including, hire charges of compaction machine and other tools and plants etc. all complete as per specifications and direction of E/L.				
	Unit-Per Sqm				
	Assuming out put=83 Sqm				
	Unskilled mazdoor	0.2	nos	268.00	53.60
	Bhisti for carriage of water and sprinkling	1	nos	265.00	265.00
	Cost of water				15.00
	Hire charge of Roller (Vide item no 3.16a)				
	Assuming 2300 sqm. to be rolled in 8 hrs	0.32	hrs	781.00	249.92
	Add Overhead charge & C.P@15%				583.52
	Rate per sqm				87.53
					671.05
			Say Rs	72.20	Per 10 M ²
7.1.27	Labour for Rolling and compacting the earth in layers of 225 mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95 % of maximum dry density including sprinkling the required quanting of water by tanker within 1 km. lead and all lifts including cost of water, finishing the surface with proper grade, camber or superelevation including, hire charges of compaction machine tanker and other tools and plants etc. all complete as per specifications and direction of E/L. (Mode of measurement - Sectional measurement of compacted earth)				
	Unit-Per Cum				
	Assuming out put=100 Cum Fill				
	(A). Watering for compaction				
	Assuming additional moisture required 7 % including 1 % loss. Quantity of water required = 100 x 62.5 x 35.3 x 7 / 10 x 100 = 1544.38 gal for 100 cum fill	1544.38	Gal for 100 cm fill		
	One Imp gail = 10 lbs	10	lbs		

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नेदेशक. जी.पी.डी.

19/9/19

बिहार सरकार
राज्य स्तरीय अनुसूचित दर निर्धारण समिति
पथ निर्माण विभाग, बिहार, पटना।
E-mail ID-sorrcd2012@gmail.com

पत्रांक :- सु.नि. (पथ)-22/07
प्रेषक,

36 (अनु०)

पटना दिनांक :- 16/9/2019

भवानी नन्दन,
संयोजक,
राज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख, पथ निर्माण विभाग, बिहार, पटना।

ई0 अंजनी कुमार सिंह,
अध्यक्ष,
विभागीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख (मुख्यालय),
जल संसाधन विभाग, बिहार, पटना।

विषय :- दिनांक-15.07.2019 से प्रभावी जल संसाधन विभाग, बिहार का अनुसूचित दर पुस्तिका, 2019 के मद संख्या-5.1.44 के दर एवं दर-विश्लेषण में त्रुटि के निवारण हेतु निर्गत शुद्धि-पत्र के अनुमोदन के संबंध में।

प्रसंग :- आपका पत्रांक-398, दिनांक-01.08.2019
महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के संदर्भ में जल संसाधन विभाग के अनुसूचित दर पुस्त, 2019 (दिनांक-15.07.2019 से प्रभावी) के मद संख्या-5.1.44 के उपमद संख्या-5.1.44.2 से 5.1.44.5 से संबंधित शुद्धि-पत्र की राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा अनुमोदित प्रति संलग्न की जाती है।

अनु०-यथोक्त।

विश्वासभाजन

(भवानी नन्दन)
संयोजक,

राज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख, पथ निर्माण विभाग,
बिहार, पटना।

16/9/19

अभियंता प्रमुख (मुख्यालय)
जल संसाधन विभाग, बिहार, पटना

पथ सं० 2411
18/9/19

569 (अनु०)
19/09/19

संज्ञिका सं० - 02/अथ-08-01/2012 खंड VI

आपांक 503

1 पटना दिनांक 23-9-19

प्रतिलिपि: सभी मुख्य अभियंता, जल संसाधन विभाग बिहार
की सूचनाएं एवं आवश्यक कारवाई हेतु समर्पित।
अनु० - यथोक्त।

(अंजनी कुमार)
निदेशक

अभियंता एवं सामग्री प्रबंधक
मुख्यालय, जल संसाधन विभाग, पटना

State level schedule rate committee, Bihar, Patna

Compendium for S.O.R of W.R.D (Water resource department), Bihar, effective from 15-07-2019

Rates of Item no. 5.1.44.2 to 5.1.44.5 mentioned in column no. 20 is read as follows:-

Earth work by tractor (Rajasthan) with bucket (Doil) with spreader (Tractor leveler or Tractor Dozer) in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or embankments, unloading, spreading, clod-breaking and laying in layers and construction & removal of dhalas properly with lead of meter (lead will be considered as perpendicular distance from C.G. of Pit to C.G. of banks or embankment) and with all lifts all complete as per specifications and direction of E.I. (mode of measurement-sectional measurement of compacted earth) (Lead should be taken C.G to C.G perpendicular to the bank Maximum Lead Up to -150 mtr. Note:- Track Path may not be taken as lead)

(A) Analysis (Page no. 89)		Corrected Revised Rate (Column no.-17 to 20)			
Rate Published in S.O.R column no.-17 to 20					
5.1.44.2	17	18	19	20	
	2.89	89.69	13.45	103.10	2.68
5.1.44.3	3.61	101.49	15.22	116.70	2.68
5.1.44.4	3.21	110.01	16.50	126.50	2.68
5.1.44.5	3.41	115.86	17.38	133.20	2.68
(B) Abstract (Page no. 77)					
	Lead	Rate	Unit		
5.1.44.2	For C.G To C.G Lead 30M	102.90	per M ³		
5.1.44.3	For C.G To C.G Lead 55M	115.60	per M ³		
5.1.44.4	For C.G To C.G Lead 80M	125.90	per M ³		
5.1.44.5	For C.G To C.G Lead 100M	132.40	per M ³		

Other matters in S.O.R will remain unchanged.

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, नयन निर्माण
विभाग, बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, ग्रामीण कार्य
विभाग, बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, लघु जल
संसाधन विभाग, बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-मुख्य अभियंता (असैनिक)
बिहार स्टेट पावर डेवलपिंग कॉर्पोरेशन लिमिटेड,
बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-मुख्य अभियंता (विद्युत) भवन
निर्माण विभाग, बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, तकनीकी
परीक्षण कोषागार, पियरानी विभाग, बिहार,
पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, लोक स्वास्थ्य
अभियंता विभाग, बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, मुख्यालय जल
संसाधन विभाग, बिहार, पटना।

सरस्य
राज्य स्तरीय अनुसूचित दर निर्धारण
समितिके-सह-अभियंता प्रमुख, पत्र
निर्माण विभाग, बिहार, पटना।

बिहार सरकार

राज्य स्तरीय अनुसूचित दर निर्धारण समिति
पथ निर्माण विभाग, बिहार, पटना।

E-mail ID-sorrcd2012@gmail.com

25/10/19

25/10/19

D.P.T.

25/10/19

पत्रांक :- मु0नि0(पथ)-22/07

41(अ)5

पटना दिनांक :- 25/10/19

प्रेषक,

भवानी नन्दन,
संयोजक,
राज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख, पथ निर्माण विभाग, बिहार, पटना।

सेवा में,

ई0 अंजनी कुमार सिंह,
अध्यक्ष,
विभागीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख (मुख्यालय),
जल संसाधन विभाग, बिहार, पटना।

विषय :-

दिनांक-15.07.2019 से प्रभावी जल संसाधन विभाग, बिहार का अनुसूचित दर पुस्तिका, 2019 के मद संख्या-5.2.23, 5.3.21 एवं 5.3.22 के दर एवं दर-विश्लेषण में त्रुटि के निवारण हेतु निर्गत शुद्धि-पत्र के अनुमोदन के संबंध में।

प्रसंग :-

आपका पत्रांक-541, दिनांक-18.10.2019

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के संदर्भ में जल संसाधन विभाग के अनुसूचित दर पुस्तिका 2019 (दिनांक-15.07.2019 से प्रभावी) के मद संख्या-5.2.23, 5.3.21 एवं 5.3.22 से संबंधित शुद्धि-पत्र की राज्य स्तरीय अनुसूचित दर निर्धारण समिति द्वारा अनुमोदित प्रति संलग्न की जाती है।
अनु-यथोक्त।अभियंता प्रमुख (मुख्यालय)
जल संसाधन विभाग, बिहार, पटना

दफ्तरी सं० 2800

28/10/19

विश्वासभाजन

(भवानी नन्दन)
संयोजकराज्य स्तरीय अनुसूचित दर निर्धारण समिति
-सह-अभियंता प्रमुख, पथ निर्माण विभाग,
बिहार, पटना।

25/10/19

संख्या सं० - 02/अथ-08-01/2012 खंड VI

पत्रांक 555

दिनांक - 31-10-19

प्रतिमिति: सभी मुख्य अभियंता, जल संसाधन विभाग, बिहार की
सूचना के एवं आवेदन कारवाई हेतु समीपित।
अनु: प्रयाप्त।

(शुजीत कुमार)

निदेशक
निदेशात्मक, जल संसाधन विभाग, पटना

State Level Schedule Rate Committee, Bihar, Patna
Corrigendum for SOR of WRD (Water Resource Department), Bihar, Patna
(Effective From 15-07-2019)

Item no.	Items	Corrected Revised Rate	Unit	Remarks
5.2.23	Providing and laying LDPE film of 250 micron or kg/sqm in the bed of canal and side slope as per specification and direction of E/I	55.40	Per M ²	
5.3.21	Providing M.S reinforcement(Plain steel) as per approved design drawing, removal of rust, cutting bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.			
	(a).Dia of bar 6 mm	63912.30	Per M.T	
	(B).Dia of bar above 6 mm to 12 mm	63912.30	Per M.T	
	(B).Dia of bar above 14 mm to 50 mm	63912.30	Per M.T	
5.3.22	Providing M.S reinforcement (Tor steel) as per approved design drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.			
(a)	T.M.T.GRADE Fe-415- 8 mm	#VALUE!	Per M.T	
(b)	T.M.T.GRADE Fe-415- 10 mm	#VALUE!	Per M.T	
(c)	T.M.T.GRADE Fe-415- 12 mm	#VALUE!	Per M.T	
(d)	T.M.T.GRADE Fe-415- 16 mm	#VALUE!	Per M.T	
(e)	T.M.T.GRADE Fe-415- 20 mm	#VALUE!	Per M.T	
(f)	T.M.T.GRADE Fe-415- 25 mm	#VALUE!	Per M.T	
(g)	T.M.T.GRADE Fe-415- 28 mm	#VALUE!	Per M.T	
(h)	T.M.T.GRADE Fe-415- 32 mm	#VALUE!	Per M.T	
(i)	T.M.T.GRADE Fe-500- 8 mm	81184.60	Per M.T	
(j)	T.M.T.GRADE Fe-500- 10 mm	60059.20	Per M.T	
(k)	T.M.T.GRADE Fe-500- 12 mm	59343.10	Per M.T	
(l)	T.M.T.GRADE Fe-500- 16 mm	59343.10	Per M.T	
(m)	T.M.T.GRADE Fe-500- 20 mm	59343.10	Per M.T	
(n)	T.M.T.GRADE Fe-500- 25 mm	59343.10	Per M.T	
(o)	T.M.T.GRADE Fe-500- 28 mm	60059.20	Per M.T	
(p)	T.M.T.GRADE Fe-500- 32 mm	60059.20	Per M.T	
(q)	T.M.T.GRADE Fe-500- 38 mm	#VALUE!	Per M.T	

सदस्य
24/10/19
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, भवन निर्माण विभाग, बिहार, पटना।

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार, पटना

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लघु जल संसाधन विभाग, बिहार, पटना

सदस्य
24/10/19
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (असैनिक) बिहार स्टेट पावर होल्डिंग कंपनी लि0, बिहार, पटना

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता, (विद्युत) भवन निर्माण विभाग, बिहार, पटना

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, तकनीकी परीक्षण कोषांग, निगरानी विभाग, बिहार, पटना

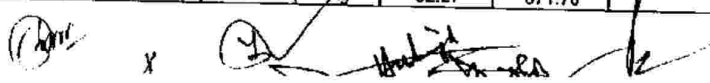
सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लोक स्वास्थ्य अभियंत्रण विभाग, बिहार,

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, मुख्यालय जल संसाधन विभाग, बिहार,

सदस्य
राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख,

Corrigendum of SOR of WRD, Bihar Effective from 15.07.2019
Analysis

5.2.23	Providing and laying LDPE film of 250 micron or kg/sqm in the bed of canal and side slope as per specification and direction of E/I					
	(Analysis Page No.- 100)					
	Unit- per Sqm					
	Taking output =10 Sqm					
	Materials					
	250 micron LDPE film @ 230 gm/sqm(including 5%v for overlap and wastage)	2.415	kg	141.42	341.53	
	Adhesive and cello Tape		LS		20.00	
	Labour					
	Mate	0.02	nos	289.00	5.78	
	Unskilled labour	0.30	nos	268.00	80.40	
	skilled labour	0.1	nos	340.00	34.00	
	Add Overhead charge & C.P@15%				481.71	
					72.26	
	Rate per sqm				553.97	
				say,Rs	55.40	
5.3.21	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.					
	(Analysis Page No.- 113 & 114)					
	Unit :-Per M.T					
	Assuming 1.00M.T					
	(a)Dia of bar 6mm					
(A).	Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	45903.00	48198.15	A
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Total of A+B				7377.78	B
	Add Overhead charge & C.P@15%				55575.93	
					8336.39	
					63912.32	
	Rate per MT					63912.30
	(b)Dia. of bar above 6 mm to 12 mm	Say Rs		63912.30	Per M.T	
(A).	Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	45903.00	48198.15	A
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Total of A+B				7377.78	B
	Add Overhead charge & C.P@15%				55575.93	
					8336.39	
					63912.32	
	Rate per MT					63912.30
	(c)Dia of bar above 14 mm to 50 mm	Say Rs		63912.30	Per M.T	
(A).	Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	45903.00	48198.15	A
(B).	i. Annealed wire	14	Kg	62.27	871.78	



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	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					7377.78	B
	Total of A+B				55575.93	
	Add Overhead charge & C.P@15%				8336.39	
					63912.32	
						63912.32
	Rate per MT	Say Rs		63912.30	Per M.T	
5.3.22	Providing M.S reinforcement (Tor steel) as per approved design , drawing , removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.					
	(Analysis Page No.- 114 & 117)					
	Unit :-Per M.T					
	Assuming 1.00 M.T					
(a).	T.M.T Fe-415 8 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
						#VALUE!
		Say Rs		#VALUE!	Per M.T	
(b).	T.M.T Fe-415 10 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	input	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
						#VALUE!
		Say Rs		#VALUE!	Per M.T	
(c).	T.M.T Fe-415 12 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
						#VALUE!
		Say Rs		#VALUE!	Per M.T	
(d).	T.M.T Fe -415 16 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					#VALUE!	

(Handwritten signatures and initials)

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				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(e).	T.M.T Fe -415- 20 mm					
(A).	Providing M.S reinforcement (Tor steel) (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(f).	T.M.T Fe -415- 25 mm					
(A).	Providing M.S reinforcement (Tor steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(g).	T.M.T Fe-415 28 mm					
(A)	Providing M.S reinforcement (Tor steel) (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B)	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(h).	T.M.T Fe -415 32 mm					
(A).	Providing M.S reinforcement (Tor steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs		#VALUE!	Per M.T	
(i).	T.M.T Fe -500 8 mm					
(A).	Providing M.S reinforcement (Tor steel) (including 5 % wastage)	1.05	M.T	43644.00	45826.20	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					53203.98	
	Add Overhead charge & C.P@15%				7980.60	

(Handwritten signatures and initials)

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					61184.58	
						61184.58
		Say Rs		61184.60	Per M.T	
(j).	T.M.T Fe -500	10 mm				
(A).	Providing M.S reinforcement (Tor steel)					
	(Including 5 % wastage)		1.05	M.T	42712.00	44847.60
(B).	i. Annealed wire		14	Kg	62.27	871.78
	ii Black smith Gr II		9	nos	321.00	2889.00
	iii. Head black smith		1	nos	361.00	361.00
	iv. Skilled mazdoor		8	nos	340.00	2720.00
	v Unskilled mazdoor		2	nos	268.00	536.00
						52225.38
	Add Overhead charge & C.P@15%					7833.81
						60059.19
						60059.19
		Say Rs			60059.20	Per M.T
(k).	T.M.T Fe -500	12 mm				
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95
(B).	i. Annealed wire		14	Kg	62.27	871.78
	ii Black smith Gr II		9	nos	321.00	2889.00
	iii. Head black smith		1	nos	361.00	361.00
	iv. Skilled mazdoor		8	nos	340.00	2720.00
	v Unskilled mazdoor		2	nos	268.00	536.00
						51602.73
	Add Overhead charge & C.P@15%					7740.41
						59343.14
						59343.14
		Say Rs			59343.10	Per M.T
(l).	T.M.T Fe -500	16 mm				
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95
(B).	i. Annealed wire		14	Kg	62.27	871.78
	ii Black smith Gr II		9	nos	321.00	2889.00
	iii. Head black smith		1	nos	361.00	361.00
	iv. Skilled mazdoor		8	nos	340.00	2720.00
	v Unskilled mazdoor		2	nos	268.00	536.00
						51602.73
	Add Overhead charge & C.P@15%					7740.41
						59343.14
						59343.14
		Say Rs			59343.10	Per M.T
(m).	T.M.T Fe -500	20 mm				
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95
(B).	i. Annealed wire		14	Kg	62.27	871.78
	ii Black smith Gr II		9	nos	321.00	2889.00
	iii. Head black smith		1	nos	361.00	361.00
	iv. Skilled mazdoor		8	nos	340.00	2720.00
	v Unskilled mazdoor		2	nos	268.00	536.00
						51602.73
	Add Overhead charge & C.P@15%					7740.41
						59343.14
						59343.14
		Say Rs			59343.10	Per M.T
(n).	T.M.T Fe -500	25 mm				
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95
(B).	i. Annealed wire		14	Kg	62.27	871.78
	ii Black smith Gr II		9	nos	321.00	2889.00
	iii. Head black smith		1	nos	361.00	361.00
	iv. Skilled mazdoor		8	nos	340.00	2720.00
	v Unskilled mazdoor		2	nos	268.00	536.00
						51602.73
	Add Overhead charge & C.P@15%					7740.41
						59343.14
						59343.14
		Say Rs			59343.10	Per M.T

(Handwritten signatures and initials)

		Say Rs		59343.10	Per M.T	59343.14
(o).	T.M.T Fe -500- 28 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	42712.00	44847.60	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					52225.38	
	Add Overhead charge & C.P@15%				7833.81	
					60059.19	
						60059.19
		Say Rs		60059.20	Per M.T	
(p).	T.M.T Fe -500 32 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	42712.00	44847.60	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					52225.38	
	Add Overhead charge & C.P@15%				7833.81	
					60059.19	
						60059.19
		Say Rs		60059.20	Per M.T	
(q).	T.M.T Fe -500 36 mm					
(A).	Providing M.S reinforcement (Tor steel)					
	(including 5 % wastage)	1.05	M.T	Input	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	
	Rate per MT	Say Rs		#VALUE!	Per M.T	#VALUE!

[Signature]
24/10/19
सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, भवन निर्माण विभाग, बिहार, पटना।

[Signature]
सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार, पटना

सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लघु जल संसाधन विभाग, बिहार, पटना

[Signature]
24-10-19
सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता (असैनिक) बिहार स्टेट पावर होल्डिंग कंपनी लि0, बिहार, पटना

[Signature]
24/10/19
सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-मुख्य अभियंता, (विद्युत) भवन निर्माण विभाग, बिहार, पटना

सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, तकनीकी परीक्षण कोषांग, निगरानी विभाग, बिहार, पटना

[Signature]
सदस्य 24/10/19

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, लोक स्वास्थ्य अभियंत्रण विभाग, बिहार, पटना

[Signature]
24/10/19
सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, मुख्यालय जल संसाधन विभाग, बिहार, पटना।

[Signature]
24-10-19
सदस्य

राज्य स्तरीय अनुसूचित दर निर्धारण समिति-सह-अभियंता प्रमुख, पथ निर्माण विभाग, बिहार, पटना।

File No.-02/Purchase -08-01/2012 Part-VI - 397

Office of the Director
Purchase, Store & Material Management Directorate
Water Resources Department, Bihar, Patna

Patna/ Dated. 01-08-2019

Corrigendum for S.O.R of W.R.D. Bihar effective from 15-07-2019
Rates of item no. 5.1.44.2 to 5.1.44.5 mentioned in column no. 20 is read as follows:-

5.1.44	Earth work by tractor (Rajasthani) with bucket (Doli) with spreader (Tractor leveler or Tractor Dozer) in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients, desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit in banks or eankments, unloading, spreading, clod-breaking and laying in layers and construction & removal of dhalas properly with lead of meter (lead will be considered as perpendicular distance from C.G. of Pit to C.G. of banks or embankment) and with all lifts all complete as per specifications and direction of E/I. (mode of measurement-sectional measurement of compacted earth)(Lead should be taken C.G to C.G perpendicular to the bank Maximum Lead Up to -150 mtr. Note:- Track Path may not be taken as lead)										
	(A) Analysis (Page no. 89)										
	Rate Published in S.O.R column no.-17 to 20										
		17	18	19	20	17	18	19	20	Corrected Revised Rate (Column no.-17 to 20)	
	5.1.44.2	2.89	89.69	13.45	103.10	2.68	89.48	13.42	102.90	19	20
5.1.44.3	3.61	101.49	15.22	116.70	2.68	100.56	15.08	115.60	15.08	115.60	
5.1.44.4	3.21	110.01	16.50	126.50	2.68	109.48	16.42	125.90	16.42	125.90	
5.1.44.5	3.41	115.86	17.38	133.20	2.68	115.13	17.27	132.40	17.27	132.40	
(B) Abstract (Page no. 77)											
	Lead		Rate	Unit							
5.1.44.2	For C.G To C.G Lead 30M		102.90	per M ³							
5.1.44.3	For C.G To C.G Lead 55M		115.60	per M ³							
5.1.44.4	For C.G To C.G Lead 80M		125.90	per M ³							
5.1.44.5	For C.G To C.G Lead 100M		132.40	per M ³							

Other matters in S.O.R will remain unchanged.


(Sujit Kumar)
Director

Purchase, Store & Material Management Directorate
Water Resources Department, Bihar, Patna

File No.-02/Purchase-08-01/2012 Part-VI - 540

Office of the Director

Purchase, Store & Material Management Directorate

Water Resources Department, Bihar, Panta

Panta/ Dated... 18/10/2019

Corrigendum of SOR of WRD, Bihar Effective from 15.07.2019

In analysis of rate of Item no.- 5.2.23, 5.3.21 & 5.3.22 the value of skilled labour has been printed Rs. 415.00 per day in place of Rs. 340.00 per day. After putting the value of skilled labour as Rs. 340.00 per day, the corrected Analysis of rate and Abstract of item no.- 5.2.23, 5.3.21 & 5.3.22 are as follow:-

5.2.23	Providing and laying LDPE film of 250 micron or kg/sqm in the bed of canal and side slope as per specification and direction of E/I					
	(Analysis Page No.- 100)					
	Unit- per Sqm					
	Taking output =10 Sqm					
	Materials					
	250 micron LDPE film @ 230 gm/sqm(including 5%v for overlap and wastage)	2.415	kg	141.42	341.53	
	Adhesive and cello Tape		LS		20.00	
	Labour					
	Mate	0.02	nos	289.00	5.78	
	Unskilled labour	0.30	nos	268.00	80.40	
	skilled labour	0.1	nos	340.00	34.00	
					481.71	
	Add Overhead charge & C.P@15%				72.26	
					553.97	
	Rate per sqm			say, Rs		
5.3.21	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.					
	(Analysis Page No.- 113 & 114)					
	Unit :-Per M.T					
	Assumng 1.00M.T					
	(a).Dia of bar 6mm					
(A).	Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	45903.00	48198.15	A
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
					7377.78	B
	Total of A+B				55575.93	
	Add Overhead charge & C.P@15%				8336.39	
					63912.32	
						63912.30
	Rate per MT		Say Rs			Per M.T
	(b)Dia. of bar above 6 mm to 12 mm					
(A).	Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	45903.00	48198.15	A
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	

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Sanjay
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	Total of A+B				7377.78	B
	Add Overhead charge & C.P@15%				55575.93	
					8336.39	
					63912.32	
	Rate per MT	Say Rs			Per M.T	63912.30
	(c)Dia of bar above 14 mm to 50 mm					
(A).	Providing M.S reinforcement Plain (including 5 % wastage)	1.05	M.T	45903.00	48198.15	A
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Total of A+B				7377.78	B
	Add Overhead charge & C.P@15%				55575.93	
					8336.39	
					63912.32	
	Rate per MT	Say Rs			Per M.T	63912.32
5.3.22	Providing M.S reinforcement (TOR Steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.					
	(Analysis Page No.- 114 & 117)					
	Unit :-Per M.T					
	Assuming 1.00 M.T					
(a).	T.M.T Fe-415 8 mm					
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	
					#VALUE!	
		Say Rs		#VALUE!	Per M.T	#VALUE!
(b).	T.M.T Fe-415 10 mm					
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	input	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	
					#VALUE!	
		Say Rs		#VALUE!	Per M.T	#VALUE!
(c).	T.M.T Fe-415 12 mm					
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	
					#VALUE!	
		Say Rs		#VALUE!	Per M.T	#VALUE!

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(d).	T.M.T Fe -415 16 mm	Say Rs			Per M.T	
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
(e).	T.M.T Fe -415- 20 mm	Say Rs			Per M.T	
(A).	Providing M.S reinforcement (TOR Steel) (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
(f).	T.M.T Fe -415- 25 mm	Say Rs			Per M.T	
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
(g).	T.M.T Fe-415 28 mm	Say Rs			Per M.T	
(A).	Providing M.S reinforcement (TOR Steel) (including 5% wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
(h).	T.M.T Fe -415 32 mm	Say Rs			Per M.T	
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	#VALUE!	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	#VALUE!
		Say Rs			Per M.T	

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(i).	T.M.T Fe -500	8 mm					
(A).	Providing M.S reinforcement (TOR Steel)						
	(including 5 % wastage)		1.05	M.T	43644.00	45826.20	
(B).	i. Annealed wire		14	Kg	62.27	871.78	
	ii Black smith Gr II		9	nos	321.00	2889.00	
	iii. Head black smith		1	nos	361.00	361.00	
	iv. Skilled mazdoor		8	nos	340.00	2720.00	
	v Unskilled mazdoor		2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%					53203.98	
						7980.60	
						61184.58	
							61184.58
			Say Rs				Per M.T
(j).	T.M.T Fe -500	10 mm					
(A).	Providing M.S reinforcement (TOR Steel)						
	(including 5 % wastage)		1.05	M.T	42712.00	44847.60	
(B).	i. Annealed wire		14	Kg	62.27	871.78	
	ii Black smith Gr II		9	nos	321.00	2889.00	
	iii. Head black smith		1	nos	361.00	361.00	
	iv. Skilled mazdoor		8	nos	340.00	2720.00	
	v Unskilled mazdoor		2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%					52225.38	
						7833.81	
						60059.19	
							60059.19
			Say Rs				Per M.T
(k).	T.M.T Fe -500	12 mm					
(A).	Providing M.S reinforcement (TOR Steel)						
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95	
(B).	i. Annealed wire		14	Kg	62.27	871.78	
	ii Black smith Gr II		9	nos	321.00	2889.00	
	iii. Head black smith		1	nos	361.00	361.00	
	iv. Skilled mazdoor		8	nos	340.00	2720.00	
	v Unskilled mazdoor		2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%					51602.73	
						7740.41	
						59343.14	
							59343.14
			Say Rs				Per M.T
(l).	T.M.T Fe -500	16 mm					
(A).	Providing M.S reinforcement (TOR Steel)						
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95	
(B).	i. Annealed wire		14	Kg	62.27	871.78	
	ii Black smith Gr II		9	nos	321.00	2889.00	
	iii. Head black smith		1	nos	361.00	361.00	
	iv. Skilled mazdoor		8	nos	340.00	2720.00	
	v Unskilled mazdoor		2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%					51602.73	
						7740.41	
						59343.14	
							59343.14
			Say Rs				Per M.T
(m).	T.M.T Fe -500	20 mm					
(A).	Providing M.S reinforcement (TOR Steel)						
	(including 5 % wastage)		1.05	M.T	42119.00	44224.95	
(B).	i. Annealed wire		14	Kg	62.27	871.78	
	ii Black smith Gr II		9	nos	321.00	2889.00	
	iii. Head black smith		1	nos	361.00	361.00	
	iv. Skilled mazdoor		8	nos	340.00	2720.00	
	v Unskilled mazdoor		2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%					51602.73	
						7740.41	
						59343.14	
							59343.14
			Say Rs				Per M.T
(n).	T.M.T Fe -500	25 mm					

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(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	42119.00	44224.95	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				51602.73	
					7740.41	
					59343.14	
						59343.14
		Say Rs				Per M.T
(o).	T.M.T Fe -500- 28 mm					
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	42712.00	44847.60	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				52225.38	
					7833.81	
					60059.19	
						60059.19
		Say Rs				Per M.T
(p).	T.M.T Fe -500 32 mm					
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	42712.00	44847.60	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				52225.38	
					7833.81	
					60059.19	
						60059.19
		Say Rs				Per M.T
(q).	T.M.T Fe -500 36 mm					
(A).	Providing M.S reinforcement (TOR Steel) (including 5 % wastage)	1.05	M.T	Input	#VALUE!	
(B).	i. Annealed wire	14	Kg	62.27	871.78	
	ii Black smith Gr II	9	nos	321.00	2889.00	
	iii. Head black smith	1	nos	361.00	361.00	
	iv. Skilled mazdoor	8	nos	340.00	2720.00	
	v Unskilled mazdoor	2	nos	268.00	536.00	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
					#VALUE!	
	Rate per MT	Say Rs				#VALUE!
						Per M.T

Abstract

(S.O.R Page No.-93, 103 & 104)

5.2.23	Providing and laying LDPE film of 250 micron or kg/sqm in the bed of canal and side slope as per specification and direction of E/I	55.40	Per M ²
5.3.21	Providing M.S reinforcement(Plain steel) as per approved design		
	(a).Dia of bar 6 mm	63912.30	Per M.T
	(B).Dia of bar above 6 mm to 12 mm	63912.30	Per M.T
	(B).Dia of bar above 14 mm to 50 mm	63912.30	Per M.T

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5.3.22	Providing M.S reinforcement (Tor steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
(a)	T.M.T.GRADE Fe-415- 8 mm	#VALUE!	Per M.T
(b)	T.M.T.GRADE Fe-415- 10 mm	#VALUE!	Per M.T
(c)	T.M.T.GRADE Fe-415- 12 mm	#VALUE!	Per M.T
(d)	T.M.T.GRADE Fe-415- 16 mm	#VALUE!	Per M.T
(e)	T.M.T.GRADE Fe-415- 20 mm	#VALUE!	Per M.T
(f)	T.M.T.GRADE Fe-415- 25 mm	#VALUE!	Per M.T
(g)	T.M.T.GRADE Fe-415- 28 mm	#VALUE!	Per M.T
(h)	T.M.T.GRADE Fe-415- 32 mm	#VALUE!	Per M.T
(i)	T.M.T.GRADE Fe-500- 8 mm	61184.60	Per M.T
(j)	T.M.T.GRADE Fe-500- 10 mm	60059.20	Per M.T
(k)	T.M.T.GRADE Fe-500- 12 mm	59343.10	Per M.T
(l)	T.M.T.GRADE Fe-500- 16 mm	59343.10	Per M.T
(m)	T.M.T.GRADE Fe-500- 20 mm	59343.10	Per M.T
(n)	T.M.T.GRADE Fe-500- 25 mm	59343.10	Per M.T
(o)	T.M.T.GRADE Fe-500- 28 mm	60059.20	Per M.T
(p)	T.M.T.GRADE Fe-500- 32 mm	60059.20	Per M.T
(q)	T.M.T.GRADE Fe-500- 36 mm	#VALUE!	Per M.T

Other matters in S.O.R will remain unchanged.

(Sujit Kumar)
Director

Purchase, Store & material management Directorate
Water Resources Department, Bihar, Patna

Letter No.....540.....

Date.....18/10/2019.....

Copy To.- Engineer in Chief, Head Quarter/Irrigation Creation/ Flood Control & Drainage, Water Resources Department, Bihar, Patna/ All Chief Engineer WRD, Bihar for Information and necessary action.

(Sujit Kumar)
Director