

प्रेषक,

अधिशाली अभियन्ता,  
इटावा प्रखण्ड, निचली गंगा नहर,  
इटावा। दूरभाष नं० 05688-250454  
ईमेल आईडी eelgcetwd@gmail.com

सेवा मे,

निदेशक सूचना एवं जन सम्पर्क निदेशालय,  
उ०प्र० विज्ञापन विभाग,  
लखनऊ।

पत्रांक: /इ०प्र०/निविदा/2018-19

दिनांक 2018

विषय- अति अल्पकालीन निविदा सूचना संख्या 01/अ०अ०/2018-19 के प्रकाशन के संबंध में।

महोदय,

इस खण्ड की निविदा सूचना संख्या 01/अ०अ०/2018-19 जो दिनांक 17.07.2018 को खोली जानी है का प्रकाशन निविदा आमंत्रण के दिनांक से पूर्व इस क्षेत्र में प्रचलित दो प्रमुख हिन्दी समाचार पत्रों में प्रकाशन कराने का कष्ट करें।

संलग्नक-

1. निविदा 06 प्रतियों मे।
2. सी डी 1 अदद।

अधिशाली अभियन्ता,  
इटावा प्रखण्ड, निचली गंगा नहर,  
इटावा

पत्रांक: /निविदा/2018-19/तदिनांक

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है :-.

1. मुख्य अभियन्ता (रामगंगा), सिंचाई विभाग, उत्तर प्रदेश, कानपुर।
2. अधीक्षण अभियन्ता, सिंचाई कार्य मण्डल, इटावा।
3. जिलाधिकारी, इटावा।
4. मुख्य विकास अधिकारी, इटावा।
5. अधीक्षण अभियन्ता, कम्प्यूटर केन्द्र सिंचाई एवं जल संसाधन विभाग उ०प्र० लखनऊ को सिंचाई विभाग की वेबसाइट पर प्रकाशित कराने हेतु निविदा की 01 प्रति एवं 01 अदद सीडी सहित।
6. अधिशाली अभियन्ता, मैनपुरी प्रखण्ड, निचली गंगा नहर, मैनपुरी/भोगनीपुर प्रखण्ड, निचली गंगा नहर, इटावा/सिंचाई खण्ड, औरैया/सिंचाई निर्माण खण्ड, फिरोजाबाद/कानपुर प्रखण्ड, निचली गंगा नहर, कानपुर/नलकूप खण्ड, इटावा।
7. समस्त सहायक अभियन्ता खण्डीय लेखाधिकारी/प्रारूपकार, इटावा प्रखण्ड, नि०गं०न०, इटावा।
8. जिला सूचना अधिकारी, इटावा।
9. नोटिस बोर्ड हेतु।

अधिशाली अभियन्ता,  
इटावा प्रखण्ड, निचली गंगा नहर,  
इटावा

**कार्यालय अधिशासी अभियन्ता  
इटावा प्रखण्ड निचली गंगा नहर, इटावा**

**अति अल्पकालीन निविदा सूचना सं० 01/अ0अ0/2018-19**

महामहिम राज्यपाल, उत्तर प्रदेश की ओर से निम्नलिखित कार्यो के सम्पादन हेतु मुहरबंद निविदाये सिंचाई विभाग मे निर्धारित श्रेणी में पंजीकृत ठेकेदारों से दिनांक 17.07.2018 को अपराह्न 2:00 बजे तक कार्यालय अधिशासी अभियन्ता, इटावा प्रखण्ड निचली गंगा नहर, इटावा में आमत्रित की जाती है जो दिनांक 17.07.2018 को अपराह्न 3:30 बजे अधोहस्ताक्षरी के कार्यालय कक्ष में निविदा समिति द्वारा खोली जायेगी। कार्यालय बन्द होने अथवा अवकाश होने की दशा मे यह निविदाये अगले कार्य दिवस मे उसी समय खोली जायेगी। निविदा प्रपत्र दिनांक 13.07.2018 एवं 16.07.2018 की सायं 5:00 बजे तक किसी भी कार्यदिवस में अधिशासी अभियन्ता, इटावा प्रखण्ड निचली गंगा नहर, इटावा, अधिशासी अभियन्ता, कानुपर प्रखण्ड निचली गंगा नहर कानपुर एवं सिंचाई खण्ड औरैया के कार्यालयों में पंजीकरण एवं उत्तर प्रदेश शासन सिंचाई विभाग-3 के शासनादेश सं० 560/07-27-सिं.-3 08टी/84 दिनांक 20.02.2007 द्वारा निर्धारित आई०डी०टी०-1, आई०डी०टी०-2 के प्रारूप पर ही जिलाधिकारी द्वारा निर्गत चरित्र प्रमाण-पत्र (I D T-1) व हैसियत प्रमाण पत्र (I D T-2) एवं स्वघोषणा प्रमाणपत्र (I D T-3) की मूल प्रतियां प्रस्तुत करके तथा I D T-1, I D T-2, I D T-3 की सत्यापित प्रतियाँ, पंजीकरण की सत्यापित प्रति तथा श्रम विभाग के पंजीकरण की सत्यापित प्रति ठेकेदार या उसके अधिकृत प्रतिनिधि द्वारा प्रपत्र का निर्धारित मूल्य जमा कर निविदा प्रपत्र क्रय किये जा सकेंगे। अधिकृत प्रतिनिधि को ठेकेदार द्वारा प्रदत्त अधिकार पत्र जिसमें प्रतिनिधि का हस्ताक्षर प्रमाणित किया हुआ हो, जमा करना होगा, तत्पश्चात् ही अधिकृत प्रतिनिधि निविदा प्रपत्र का निर्धारित मूल्य देकर निविदा प्रपत्र प्राप्त कर सकेंगे।

धरोहर धनराशि राष्ट्रीयकृत एन०एस०सी०/एफ०डी०आर० अथवा नियमानुसार अनुमन्य अन्य प्रतिभूति के रूप में जो कि अधिशासी अभियन्ता, इटावा प्रखण्ड निचली गंगा नहर, इटावा के पक्ष में बंधक होगी, स्वीकार की जायेगी। बिना धरोहर धनराशि के एवं सशर्त निविदाओं पर विचार नहीं किया जायेगा। बैंक गारन्टी धरोहर धनराशि के रूप में मान्य नहीं होगी। एक या समस्त निविदाओं को बिना कारण बताये निरस्त करने का पूर्ण अधिकार अधोहस्ताक्षरी को होगा।

**कार्य का विवरण जनपद मैनपुरी**

क्र. सं.	कार्य का विवरण	अनुमानित लागत (लाख रु०मे)	धरोहर धनराशि (लाखरु०मे)	कार्य की अवधि	निविदा का मूल्य	ठेकेदार की श्रेणी
1	2	3	4	5	6	7
1	किशनी माइनर के कि०मी० 4.500 पर वी०आर०बी० का निर्माण कार्य	3.30	0.33	तीन माह	150+GST 18%	सी या उच्च श्रेणी
2	किशनी माइनर के कि०मी० 7.400 पर वी०आर०बी० का निर्माण कार्य	3.20	0.32	तीन माह	150+GST 18%	सी या उच्च श्रेणी
3	किशनी माइनर के कि०मी० 13.00 पर वी०आर०बी० का निर्माण कार्य	3.50	0.35	तीन माह	150+GST 18%	सी या उच्च श्रेणी
4	कुरसैण्डा राजवाह के कि०मी० 7.500 पर वी०आर०बी० का निर्माण कार्य	3.50	0.35	तीन माह	150+GST 18%	सी या उच्च श्रेणी
5	कुरसैण्डा राजवाह के कि०मी० 2.000 पर वी०आर०बी० का निर्माण कार्य	3.50	0.35	तीन माह	150+GST 18%	सी या उच्च श्रेणी
6	कुरसैण्डा राजवाह के कि०मी० 9.500 पर वी०आर०बी० का निर्माण कार्य	3.50	0.35	तीन माह	150+GST 18%	सी या उच्च श्रेणी

7	किशनपुर स्केप के कि०मी० 0.500 पर वी०आर०बी० का निर्माण कार्य	9.90	0.99	छः माह	225+GST 18%	सी या उच्च श्रेणी
8	किशनपुर स्केप के कि०मी० 1.000 पर वी०आर०बी० का निर्माण कार्य	9.90	0.99	छः माह	225+GST 18%	सी या उच्च श्रेणी
9	समान माइनर के कि०मी० 3.400 पर वी०आर०बी० का निर्माण कार्य	2.00	0.20	तीन माह	150+GST 18%	सी या उच्च श्रेणी
10	चिताइन माइनर के कि०मी० 1.500 पर वी०आर०बी० का निर्माण कार्य	4.30	0.43	तीन माह	150+GST 18%	सी या उच्च श्रेणी
11	सैफई राजवाह के कि०मी० 2.300 पर वी०आर०बी० का निर्माण कार्य	5.50	0.55	तीन माह	225+GST 18%	सी या उच्च श्रेणी
12	नटावली माइनर के कि०मी० 2.500 पर वी०आर०बी० का निर्माण कार्य	3.00	0.30	तीन माह	150+GST 18%	सी या उच्च श्रेणी
13	करहल राजवाह के कि०मी० 22.300 पर वी०आर०बी० का निर्माण कार्य	3.00	0.30	तीन माह	150+GST 18%	सी या उच्च श्रेणी
14	करहल राजवाह के कि०मी० 11.200 पर वी०आर०बी० का निर्माण कार्य	7.50	0.75	तीन माह	225+GST 18%	सी या उच्च श्रेणी
15	करहल राजवाह के कि०मी० 20.00 से 20.500 तक सुरक्षात्मक दीवाल का निर्माण कार्य	9.50	0.95	छः माह	225+GST 18%	सी या उच्च श्रेणी
16	अंडनी माइनर के कि०मी० 3.200 पर वी०आर०बी० का निर्माण कार्य	3.50	0.35	तीन माह	150+GST 18%	सी या उच्च श्रेणी
17	उरथान माइनर के कि०मी० 0.500 पर वी०आर०बी० का निर्माण कार्य	3.00	0.30	तीन माह	150+GST 18%	सी या उच्च श्रेणी
18	ऊधन माइनर के कि०मी० 6.500 पर वी०आर०बी० का निर्माण कार्य	3.00	0.30	तीन माह	150+GST 18%	सी या उच्च श्रेणी
19	मानिकपुर माइनर के कि०मी० 2.000 पर वी०आर०बी० का निर्माण कार्य	3.00	0.30	तीन माह	150+GST 18%	सी या उच्च श्रेणी
20	देवकली माइनर के कि०मी० 3.800 पर वी०आर०बी० का निर्माण कार्य	3.00	0.30	तीन माह	150+GST 18%	सी या उच्च श्रेणी

निविदा व शर्त :-

- 1- यह निविदा सूचना उ०प्र० सरकार की वेबसाइट <http://upgovt.nic.in>, तथा सिंचाई विभाग की वेबसाइट <http://information.up.nic.in>, <http://irrigation.up.nic.in> पर उपलब्ध है।
- 2- रू० 100.00 के नान-जूडिशियल स्टैम्प पेपर पर एक रूपये की रसीदी टिकट लगाकर अनुबंध लिखना होगा कि दरें 90 दिवस तक मान्य होगी। इससे पहले निविदा/ऑफर वापस लेने पर धरोहर धनराशि जब्त कर ली जायेगी। नियमानुसार देय बिक्रीकर, आयकर, स्टैम्प ड्यूटी, रायल्टी देनी होगी। अनुबंध के समय नियमानुसार स्टैम्प ड्यूटी तथा जमानत की शेष 10 प्रतिशत धनराशि धरोहर धनराशि को सम्मिलित करते हुये जमा करना होगा।
- 3- निविदा/बिड की विस्तृत शर्तें निविदा/बिड प्रपत्र के साथ उपलब्ध होगी।
- 4- यह बिड सूचना, उ०प्र० सरकार की वेबसाइट (<http://upgovt.up.nic.in/fotech>) तथा सिंचाई विभाग की वेबसाइट (<http://www.idup.upgovt.in>) पर भी उपलब्ध है। कार्य के सम्बन्ध में विस्तृत विवरण या कोई अन्य जानकारी अधिशासी अभियन्ता के कार्यालय से प्राप्त की जा सकती है।
- 5- कोई भी बिडदाता जो राज्य सरकार द्वारा काली सूची में दर्ज हों, वह बिड प्रक्रिया में भाग नहीं ले सकेगा।
- 6- राज्य बार कौन्सिल में पंजीकृत कोई भी अधिवक्ता बिड प्रक्रिया में भाग नहीं ले सकेंगे। अनुबंध गठित होने के बाद भी यदि उक्त तथ्य संज्ञान में आता है तो समाधान एवं सन्तुष्टि की दशा में ऐसे अनुबंध को सक्षम अधिकारी द्वारा सकारण आदेश प्रख्यापित कर तत्काल निरस्त कर दिया जायेगा।

- 7- निविदादाता एक कार्य (लाट) की एक ही निविदा डाल सकेगा। सशर्त निविदा किसी भी दशा में स्वीकार नहीं की जायेगी।
- 8- निविदा प्रपत्र व्यक्तिगत अथवा रजिस्टर्ड डाक/मान्यता प्राप्त कोरियर सेवा द्वारा प्रेषित निर्धारित तक ही प्राप्त की जायेगी। रजिस्टर्ड डाक/मान्यता प्राप्त कोरियर सेवा में विलम्ब के कारण यदि प्रपत्र विलम्ब से प्राप्त होता है, तो स्वीकर नहीं होगा। जिसका उत्तरदायित्व विभाग का नहीं होगा।
- 9- निविदादाता को उपरोक्तानुसार निविदा/बिड के विभिन्न चरणों की तारीखों तथा समयावधि/स्थल की पूर्ण जानकारी निविदा डालने से पूर्व स्वयं प्राप्त करनी होगी। कोई भी जानकारी सम्बन्धित कार्यालय से कार्य दिवसों में प्राप्त की जा सकती है।
- 10-अपरिहार्य कारणों से या कार्य की परिस्थितियों के अनुसार अनुबन्ध गठित करने अथवा न करने का अधिकार अधोहस्ताक्षरी के पास सुरक्षित रहेगा। इसके लिये ठेकेदार/फर्म का कोई क्लेम मान्य नहीं होगा।
- 11-निविदादाता द्वारा निविदा प्रक्रिया में भाग लेने से पूर्व कार्यस्थल के बारे में भली-भाँति जानकारी कर ली जाये तथा बाद का कोई क्लेम मान्य नहीं होगा।
- 12-अनुबन्ध गठित होने के पश्चात भी यह तथ्य संज्ञान में आता है कि किसी भी प्रस्तर का उल्लंघन किया गया है तो ऐसे अनुबन्ध को सक्षम अधिकारी द्वारा सकारण आदेश प्रख्यापित कर निरस्त किया जायेगा।
- 13-यह संज्ञान में आने पर कि किसी निविदादाता द्वारा किसी अन्य संभावित निविदादाता को इस निविदा प्रक्रिया में भाग लेने एवं निविदा डालने से रोका गया हो या धमकी दी गयी हो तो ऐसे ठेकेदार के साथ यदि अनुबन्ध हो भी गया हो तो उसके साथ किया गया अनुबन्ध निरस्त किया जा सकता है।
- 14-चरित्र प्रमाण-पत्र, हैसियत प्रमाण-पत्र, पार्टनाशिप डीड, पंजीकरण प्रमाणपत्र, व स्वघोषणा प्रमाण-पत्र के फर्जी या गलत पाये जाने पर बिड निरस्त कर दी जायेगी तथा सम्बन्धित ठेकेदार का नाम इस कारण तत्काल संविदा काली सूची में दर्ज कराने की कार्यवाही प्रारम्भ कर दी जायेगी।
- 15-टेक्निकल बिड क्वालिफाइडनिविदादाता के बिड सम्बन्धित प्रपत्रों में पहले यह परीक्षण किया जायेगा कि बिडदाता I.D.T-1, I.D.T-2, I.D.T-3 Labour Registration Certificate, G.S.T. Registration, Tander Cost With GST Tax तथा निर्धारित प्रतिभूति धनराशि ठीक-ठीक उपलब्ध करायी है या नहीं। इनमें किसी प्रकार की कमी या असन्तोषजनक होने की स्थिति में बिड पर विचार नहीं किया जायेगा।
- 16-कार्यस्थल की स्थिति एवं आवश्यकतानुसार कार्य की मात्रा घटाई/बढ़ाई जा सकती है जिसके लिये ठेकेदार का कोई क्लेम मान्य नहीं होगा।
- 17-कोषागार से सत्यापित स्टाम्प प्रपत्र ही मान्य होंगे। विपरीत परिस्थिति में अनुबन्ध निरस्त कर दिया जायेगा।
- 18-निविदादाता द्वारा विभागीय लागत से कम लागत की निविदा डालने के दशा में शासनादेश संख्या 622/23-12-2012-2 ऑडिट/08टी0सी0-2 दिनांक 08.06.2012 के अनुसार 10 प्रतिशत तक न्यूनतम दरें डाले जाने पर 0.50 प्रतिशत प्रति 1.00 प्रतिशत कम दर पर तथा 10 प्रतिशत से अधिक न्यूनतम दरों पर 1.00 प्रतिशत कम दर पर सिक्वोरिटी/परफॉर्मेन्स गारंटी की अतिरिक्त धरोहर धनराशि जमा करने के उपरान्त अनुबन्ध गठित किया जायेगा। निविदादाता द्वारा उक्त धनराशि जमा न किये जाने पर उसकी धरोहर धनराशि जब्त कर ली जायेगी तथा द्वितीय न्यूनतम निविदादाता के नाम अनुबन्ध गठित करने की कार्यवाही कर दी जायेगी, जिसके लिये ठेकेदार को कोई क्लेम स्वीकार नहीं होगा।
- 19-यदि ठेकेदारों द्वारा किसी भी प्रकार कार्य प्राप्त करने के लिये कार्य की अनुमानित लागत से अत्यन्त कम दरें दी जाती है तो ऐसी स्थिति में यदि सक्षम अधिकारी को यह आशंका हो कि ठेकेदार द्वारा साभिप्राय कम दरें दी जा रही है और इस प्रकार गुणवत्ता के साथ मानकों के अनुरूप कार्य पूर्ण किया जाना संभव नहीं हो पायेगा तो सक्षम अधिकारी को ये अधिकार होगा कि वह निविदादाता से कम दरें देने का विस्तृत विवरण माँगे। यदि आशंका की पुष्टि हो जाती है कि निविदादाता द्वारा साभिप्राय ऐसा किया जा रहा है तो गुण दोष के आधार पर सक्षम अधिकारी द्वारा निविदा निरस्त कर धरोहर धनराशि जब्त कर ली जायेगी।

- 20-निविदा से सम्बन्धित विस्तृत एवं अन्य जानकारी अधिशासी अभियन्ता इटावा प्रखण्ड निचली गंगा नहर, इटावा- 206001 से सम्पर्क कर (Phone: 05688-254947 e-mail: eelgcetwd@gmail.com) प्राप्त की जा सकती है।
- 21-निविदादाता की ज्वॉइन्ट बैन्चर की निविदा किसी भी दशा में स्वीकार नहीं होगी।
- 22-सम्पूर्ण निविदा प्रक्रिया सिंचाई विभाग उत्तर प्रदेश के समय-समय पर प्रचलित नियमों व शासनादेशों के अनुरूप की जायेगी।
- 23-अनुबन्ध के समय ठेकेदार से इस आशय का घोषणा पत्र लिया जायेगा कि उनके द्वारा अनुबन्ध को सबलेट नहीं किया जायेगा अन्यथा की स्थिति में अनुबन्ध निरस्त कर धरोहर धनराशि जब्त कर ली जायेगी तथा ठेकेदार का कोई क्लेम स्वीकार नहीं होगा।
- 24-अनुबन्धकर्ता ठेकेदार के बीजकों से नियमानुसार आयकर, लेबर सेस, जी0एस0टी0 कर एवं तत्समय अन्य प्रचलित दरों की कटौती की जायेगी।
- 25-उपरोक्त निविदायें धनावंटन की प्रत्याशा में आमंत्रित की गई है। धनावंटन न होने अथवा पर्याप्त धनावंटन न होने की स्थिति में यदि कार्य सम्पादित नहीं कराये जाते हैं तो सम्बन्धित ठेकेदार का कोई क्लेम स्वीकार नहीं होगा।
- 26-उपरोक्त कार्यों की निविदा हेतु निविदादाता को पिछले दो वर्षों में उसी प्रकृति के कम से कम निविदित्त कार्य की दोगुनी लागत के बराबर के कार्य कराने का अनुभव प्रमाण-पत्र सक्षम स्तर से प्राप्त कर स्कैण्ड कॉपी अन्य अभिलेखों के साथ संलग्न करना अनिवार्य होगा।
- 27-निविदादाता का जी0एस0टी0 में पंजीकरण होना अनिवार्य है।
- 28-पैन नम्बर, आधार नम्बर एवं जी0एस0टी0 नम्बर की प्रति संलग्न करना अनिवार्य होगा।

**विशेष शर्तें:-**

- 1- ठेकेदार को कार्य के दौरान/उपरान्त निर्माण सामग्री, आदि की आपूर्ति से सम्बन्धित वैध अभिवहन प्रपत्र (प्रपत्र एम0एम0-11) जमा करना होगा अन्यथा की स्थिति में शासनादेश संख्या 3385/86-2015-292/2015 भूतत्व एवं खनिकर्म अनुभाग, दिनांक 15.10.2015 के अनुसार रॉयल्टी के साथ-साथ खनिज मूल्य (सामान्यतया रॉयल्टी का पाँच गुणा) की कटौती ठेकेदार के बीजक से की जायेगी। जिसके लिये ठेकेदार को कोई क्लेम मान्य नहीं होगा।
- 2- लीज की दरें निविदा प्रपत्र के मूल्य एवं कार्यों पर वसूल की जायेगी।
- 3- निविदा खोले जाने के समय केवल न्यूनतम वर्गीकृत श्रेणी में पंजीकृत निविदादाता अथवा उनके अधिकृत प्रतिनिधि को ही कार्यालय परिसर में प्रवेश का अधिकार होगा।
- 4- ठेकेदार द्वारा कार्य पूर्ण करने के पश्चात सक्षम स्तर से जाँच आख्या संतोषजनक पाये जाने पर ही भुगतान की कार्यवाही की जायेगी।
- 5- वैध पंजीयन की प्रति।
- 6- पिछले तीन साल का आयकर चुकता प्रमाण पत्र।
- 7- पिछले चार वर्ष की बैलेन्स शीट।
- 8- वर्तमान में चल रहे कार्यों की सूची।
- 9- संस्था के प्रकरण में पार्टनरशीप डीड के अनुबन्ध की अभिप्रमाणित प्रति।
- 10- ठेकेदार के पास निविदा प्रपत्र में दिये गये प्रपत्र पर टी0 एण्ड पी0 का विवरण।
- 11- अनुभव प्रमाण पत्र (दोगुनी लागत का)।
- 12- ठेकेदार के पास कम से कम एक सिविल डिप्लोमाधारी होना आवश्यक है।

**Additional Conditions to be made part of the General Conditions of contract.**

1. If any person whosoever is found actively associated with Mafia & unsocial elements or engaged in organized crime or is a Mafia Mafioso is disqualified from bidding.

2. Even if it comes to knowledge after award of a contract that the contractor is associated with Mafia and unsocial elements or engaged in organized crime or is a Mafia of Mafioso, the contract will be cancelled after serving a show cause notice & if the contractor is found repeating the same, then the proceeding of black listing him shall also be initiated.
3. If it is found that contractor or bidder has threatened the other bidder or prevented them from bidding the tender / contract will be cancelled.
4. Any advocate registered in state bar council will not be authorised for bidding, if it comes in knowledge that contractor is a state or bar council registered advocate, the contract will be cancelled after having been satisfied of this fact.

**अधिशाली अभियन्ता,  
इटावा प्रखण्ड, निचली गंगा नहर,  
इटावा**

# IRRIGATION DEPARTMENT

GOVERNMENT OF UTTAR PRADESH

## Tender

for

V.R.B./D.R.B./SYPON/REGULATIONS/AQUEDUCT/

..... NO GULXING

At. Km.....

.....

Division.....

# INDEX

<b>SI.No.</b>	<b>PARTICULARS</b>	<b>Page No.</b>
<b>1</b>	Credentials of Tenderer	
<b>2</b>	Certificate of Relationship	
<b>3</b>	Details of Machinery & Equipment	
<b>4</b>	Tender Notice	
<b>5</b>	I.D. Form No. 112 & Schedule 'B' Bill of Quantity	
<b>6</b>	I.D. Form No. 111 Conditions of Contract	
<b>7</b>	Special Conditions of Contract	
<b>8</b>	Technical Specifications General	
<b>9</b>	Schedule of Consumption of Materials	
<b>10</b>	Materials to be supplied by the Department	
<b>11</b>	Plant, Equipment and Construction Powers	
<b>12</b>	Agreement with Stamp	
<b>13</b>	Declaration	
<b>14</b>	Drawing Plan	
<b>15</b>	Stamp Duty	



## AGREEMENT

Tender invited.....

Tender Notice No. & Date.....

Name of Tenderer.....

In Consideration of the Government of Uttar Pradesh having treated the Tenderer to be an eligible person whose tender may be considered the tenderer hereby agrees to the condition that the proposal in response to the above invitation shall not be withdrawn with in three months from the date of opening the tender. Also to the conditions that if thereafter the tenderer does with draw his proposal with in the said period the earnest money jeposited by him may be forefeited to Government of Uttar Pradesh in the discretion of the later. And the tenderer hereby agrees that if subsequent of the submission of his tender the tenderer amends, alters or modifies the contents of his tender which for the purpose of the aforesaid condition will be deemed to have withdrawn his proposal.

Signed this.....day to

Singed by Tenderer.....

The individuals, who are proprietors of a firm should furnish the description of the party as under.

Shri.....S/p Shri.....

R.o.....

Carring on business under the firm name of M.S.....

Where there is no patnership but.....where there are more than one propriectors their respective names should appear in the same manner as given above.

In case of a patnership firm the description of the party should be as under:

M/s.....

a firm within the meaning of the Indian Patnership Act and having their office at.....

are consisting of the following partners.

1. Shri.....S/o.....Ro.....

2. Shri.....S/o.....Ro.....

3. Shri.....S/o.....Ro.....

**DECLARATION**

We.....

.....

.....hereby declare that no work shall be taken in hand by me or my authorised agent unless a proper work order or written order is issued to me by Executive Engineer/S.D.O. in case of default on my part. I fully understand that my security deposits will be forfeited and our name will be removed from the list of approved contractor.

Dated.....

.....

Contractor's Signature

Full Address.....

.....

.....

# CREDENTIALS OF TENDERERS

(To be filled by the Tenderers)

- 1 Name of Tenderer
  
- 2 Permanent Address
  
- 3 Present Postal Address
  
- 4 State if you are Contractor of the C.P.W.D. State Irrigation Department, Railway and/or M.E.S. and if so copy of class certification No. should be attached.
  
- 5 Particulars of Previous Contract successfully executed should be entered in the form below:-

Sl. No.	Name of Department	Name of Descriptions of work	Value Rs.	Period of execution	
				From	to
1	2	3	4	5	6

- 6 Reference Certificate from your Bankers about your financial position should be attached.

7 List of machinery and equipment which you intend to use on this work to be given in proforma.

8. In Case Tenderer is a firm enclose photostate/attested copy of partnership deed & certificate of registration of firm.

9. Certificate

(a) I/We am/are not debarred from tendering for contracts of Central/State Govt. Departments.

(b) I/We hereby certify that the information given above is correct. If at any stage, it is found to be incorrect I/We understand that the contract will be liable to be terminated/rescinded action could be taken against me/us by the department.

Signature of Tenderer

To,

The Executive Engineer

.....

.....

Sir,

It is hereby certificate that except the persons noted below, none of my relative is employed in irrigation Department, Uttar Pradesh.

Name	Designation	Place of Posting
------	-------------	------------------

.....

Contractor.....

Full Address.....

.....

.....

N.B – The following come under the defination of relations:

1. Father, Mother, Sister, Brother-in law, Daughter, Father-in-law, Mother-in-law, First cousin of self of wife. The list is illustrative and exhaustive.

Contractor




SIGNATURE OF TENDERER

PUBLIC WORKERS DEPARTMENT UTTAR PRADESH

.....Division.....Sub Division

ITEM OF PERCENT AGE RATE TENDER

OF CONTRACTORS

Name of work.....

Name of Contractor.....

GENERAL RULES AND DIRECTIONS FOR THE GUIDANCE

OF CONTRACTORS

1. All work proposed for execution by contract will be notified in a form of invitation to tender pasted on a board hund up in the office of and signed.

*Sub-Divisional Officer*

by the.....

*Executive Engineer*

1. This form will state the work to be carried out, as well as the date for submitting and opening Tenders and the time allowed for carrying out the work also the amount of earnest money to be deposited with the tender and amount of the security deposit to be deposited by the successful tender and the percentages if any to be deducted from bills. This set of contract documents consisting of copies of drawing and details of the proposed work specifications schedule of quantities of various items of works and a form of the printed conditions of contract together with the form of tender to be used signed for the purpose of identification by the Sub- Divisional Officer.

.....approved by the authorised /by the competent officer to

*Executive Engineer*

make the contract shall be available for public inspection at the office to

*Sub-Divisional Officer*

.....during the office hours.

*Executive Engineer*

2. In the event of the tender being submitted by a firm it must be signed separately by each member thereof or in the event of the absence of any partner it must be signed on his behalf by a person holding a power of attorney authorizing him to do so.

3. Blank tender documents can be obtained from the office of the Engineer.....

.....during office hours on any working day between 11.00 to 16.00 hours on payment of their cost which shall not be refundable. The sale



of tender, documents comprising of Notice in Invitation of tender, alongwith corrigendum issued if any. General rules and directions for the guidance of contractors for submitting tender for work terms and conditions of contract special condition of contract, technical specifications and general arrangement drawing shall be stopped at 13.00 hours on the date of opening of tenders.

4. The Tender will be opened publically on.....at.....hrs. in the presence of those tenderers or their authourised representative who may choose to be present. The tender shall be opened by the Executive Engineer or his authorised representative in the office of the Executive Engineer.....

..... tender recieved after the specified time as mentioned above shall not be entertained.

Tender must be accompaied with earnest money of Rs.....

in the form of Postal Saving pass book N.S.C.N.P.C or deposit receipts of any scheduled bank duly pledged to the Executive Engineer .....

Earned money in cash or by cheque shall not be accepted. Tenders without earnest money shall not be considered and shall not be included in the comparative statement.

5. Each tenderer should carefully examine the conditions of contract drawing and specifications visit the side of works and fully satisfy and acquaint himself about the nature and location of the work configuration of the ground spring level sub-surface conditions character and quantity of material to be encountered the character of equiment and facilities needed preliminary to and during the execution of work leads and lifts involved and general and local conditions with may in anyway effect the work or the cost thereof.

6. Tenders documents duly signed by the contractor shall be submitted in a sealed cover. The name of the work and name of tender with full address shall be written on the outside left corner of the envelopes.

7. The tenders are hereby informed that they have to tender rates for each and every item contained in the schedule of quantities and bids as per conditions of this otherwise their will not be considered.

8. Tendered rates shall be legibly written in ink in English or in Hindi and in Indian Currency both in figure and words. In case of any discrepancy the rates in words shall govern. Erasures and delete overwriting are strictly prohibited. All corrections must be initialled and dated by the tenderers.

9. In consideration of Govt. having treated the tenderer to be an eligible person whose tender may be considered the tenderer shall agree to the condition that the proposal in response to the invitation shall not be withdrawn by the tenderer within four months from the date of opening the tender and also to the condition that if thereafter the tenderer does withdraw his proposal within the said period the earnest money deposited by him may be forfeited to the Governor of U.P. in the discretion of the later.

Note-

10. If subsequent to the submission of the tender any tenderer amends alters or modifies the contents of his tender which are not acceptable by the department for the purpose of these conditions the tender shall be deemed to have withdrawn bid.

If a tenderer who is exempted from furnishing earnest money withdraws his proposal within the said period he may in the discretion of the Govt. of U.P. be debarred from tendering for a period of one year reckoned from the date of opening of the tender.

The tenderer has to submit an agreement on a stamp paper amounting to Rs. Five only with a revenue stamp alongwith his tender in accordance with the proforma available at annexure.

Conditional tenders are likely to be rejected.

11. The accepting authority shall have the right to reject any or all tenders without assigning any reasons.
12. Tenders shall clearly specify in the tender whether or not any of their relative are employed in the U.P. irrigation Department. The name designation and place of posting of such relative would render the earnest money /security deposit of the tender liable to be forfeited and the contract if executed liable to be rescinded.
13. In taking a decision of the tender due consideration shall be given to tenderer's previous experience in having handled works of similar nature and magnitude his organisational know-how the equipment and machinery available with the tenderer his financial capacity as well as the existing commitments of tenderer which he shall furnish in the performa enclosed in tender documents at Annexure II-III.
14. The person or the persons whose tender is accepted (here in after called the contractor) shall within one week after his or their tender has been accepted deposit with Government of U.P (hereinafter called the Government) such sum as will with the earnest money deposited with the tender amount of Rs. 2% of the cost of tender.
15. Unless the person whose tender is accepted deposits the security money and signs the agreement within seven days as per para 14 above when he is required to do so the earnest money deposited by him shall be forfeited and acceptance of tender of tender withdrawn unless the period is extended by mutual agreement.
16. The earnest money received with other tenders shall be refunded to tender's only after the tender has been finally decided.
17. The amount of the earnest money should ordinarily be
 

(a)	When the amount of the tender does not exceed	Rs. 2,000	
(b)	When exceeding Rs. 2,000 and not exceeding	Rs. 5,000	100
(c)	When exceeding Rs. 5,000 and not exceeding	Rs. 10,000	200
(d)	For each additional Rs. 5,000 or portion of	Rs. 5,000	
	further sum of		100

Such earnest money shall be deposited by the contractor in Government treasury as laid down in paragraph 340 (b) (l) 344 and 346 (b) of the financial Hand book Volume V part I Account rules and the receipted treasury challan attached to the tender.

*Note- The officer calling for tender may in special cases where it would be inconvenient for tenderers to deposit money in to Government treasury relax the rule and permit contractors to deposit earnest money with him in cash or currency notes up to a limit of Rs. 100 instead of in to a treasury. Such deposits should be treated as "Public Works Department deposit".*

CLAUSE I- The person or persons whose tender is accepted (hereinafter called the contractor) shall within one week after his or her tender has been accepted deposit with the Government of Uttar Pradesh (hereinafter called the Government) either in cash or in securities as provided in paragraphs 614 and 615 of the Financial Hand Book, Volume VI such sum as will with the earnest money deposited with the tender amount of Rupees ..... and where any security so deposited is not payable to bearer the contractor shall endorse or transfer it to the said Government in such a manner that the sum represented by it can be realised without the consent or assistance of the contractor. The contractor shall also permit Government at the time of making any payment to him for work done under the contract to deduct 10% (Ten Percent) of all moneys so payable on account of Security Deposit until such deductions along with the sum already deposited as earnest money to be adjusted in the last deductions bill amount to 10% of agreement amount .

If the security is furnished in the form of guarantee bonds the contractor undertakes to renew or to furnish fresh guarantee to cover the period of time extension if any failure on his part to do so shall be construed as a breach of this contract and without prejudice to any other remedy provided in these conditions the Engineer-in-charge shall have the right to withhold payment and deduct the entire security amount any money becoming payable to the contractor. The amount of security money shall if not withheld on account of breach of contract be refunded after six months of the date of the completion of the work of the first rainy season comprising of months of June, July, August and September is not fully covered within the period of six months mentioned above the amount of security money if not withheld on account of breach of contract be refunded after the expiry of the first rainy season comprising of the months mentioned above or after the payment of the final bill whichever is later.

Provided that in case the payment of the final bill is not made within six months of the completion of the work 75% of the amount of the security money can be refunded with the prior approval of the authority next higher to the person accepting the contract on behalf of the Government.

All compensation or other sums money payable by the contractor to Government under the terms of his contract may be deducted from or realised by the sale of a sufficient part of his security deposit or from the interest arising therefrom from any sums which may be due or may become due to the contractor by Government or on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid the contractor shall within ten days thereafter made good in cash or Government securities encashed as aforesaid any sums which may have been deducted from or raised by sale of his security deposit or any part thereof.

**EXPLANATION**

For the purpose of this clause if the work under this contract includes construction, reduction or repair of any structure having roof over it the whole work will be closed as building work.

Clause 2-A- Time is the essence of the contract. The contractor shall commence and shall complete the work covered by the tender on the dates fixed by the Executive Engineer for the commencement and completion of such work and shall in the interval between those dates keep the work up to the schedule of quantities and dates shown in e Progress Statement to be signed by the contractor and attached to the tender. If the work fall in arrears of the Progress Statement either in quantity or in time then for every day that the work is so in arrears the contractor shall be liable to pay as compensation an amount equal to one percent or such small amount as the .....Engineer (whose decision in writing shall be find) may decide on the estimate cost of the whole work. Provided always that the entire amount of the compensation to be paid under the provisions of this clause shall not exceed ten percent of the estimated cost of the work as shown in the tender.

	[Clause 2-B- To be used instead of 2-A when the latter is from the nature of the work impracticable.]
Compensation for delay	[Clause 2-B- To be used instead of 2-A when the latter is failed to complete the work with in the period specified in the tender. Such period shall reckoned from the date on which the order to commence work is given to the contractor. The contractor shall at all times during such period proceed with the work with.....diligence and he shall pay as compensation an amount equal to one percent or such smaller amount as the .....Engineer (whose dicision in writing shall be final) may dicide on the amount of the estimated cost of the whole work as shown in the tender for every day that the work remains uncommenced or unfinished after the proper dates. In further in order to insure good progress during the execution of the work the contractor shall be bound in all cases in which the time allowed of any work exceeds one month to complete on fourth of the value of quantity (as the Engineer.....may determined) of the whole of the work before one-fourth of the whole time allowed under the contract

<p>Action by which whole of security deposit in forfeited</p>	<p>elapsed one half of the value or quantity (as the .....Engineer may determined) of this work before three-fourth of such time has liable to pay as compensation an amount equal to one percent of such smaller amount as the .....Engineer (whose in writing shall be final) may decide on the said estimated cost of the whole work for every day that the quantity of work remains incomplete. Provided always that the entire amount of compensation to be paid under the provision of this clause shall not exceed ten percent on the estimated cost of work as shown in the tender.</p> <p>Clause3-(i) In any case in which under any clause or clauses of his contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (whether paid in one sum or deducted by instalments) the .....Engineer shall have power to adopt such of the following courses as he may deem best:</p> <p>(a) He may rescind the contract by giving the contractor notice of rescission signed by the Executive Engineer and may then take the whole of the contractors security deposite for the use of Government as compensation for the loss caused by the contractor's default.</p> <p>He may after giving the contractor.....day's notice in writing of his intention to do so mesaure up the work done by the contractor and then employ and pay labourers and supply or procure materials and carry out all or any part of the work himself on behalf of Government debiting the contractor with the actual cost and..... him at the contract rates with the value of the work so done and may postpone till completion of the work so done and may postpone till completion of the work so taken over assessment of the compensation to be paid by the contractor. If any work is so taken over by the Engineer the certificate in writing of the Executive Engineer or of the Sub-Divisional officer as to its cost and value shall be final and conclusive against the contractors.</p> <p>(c) He may after giving the contractor..... day's</p>
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notice in writing of his intention to do so measure up the work done by the contractor take the work out of his hands and given a contract for its completion to another contractor and may postpone till the completion of the work the assessment of the compensation to be paid by the original contractor. If the .....Engineer elects to give the completion of the work to another contractor the original contractor shall pay any expenses which may be incurred in excess of the sum which would have been paid to him if the whole work had been carried out by him and a certificate in writing of the Executive Engineer or of the Sub-Divisional officer shall be final & conclusive as against the original contractor as to the amount of the any such expenses.

(ii) If the .....Engineer does not desire to do so the work the contractor shall not be entitled to compensation for any loss sustain by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account of or with a view to the execution of the work or the performance of the contract and shall not be entitled to recover or be paid or be given credit for any sum for any work there for actually performed by him under this contract unless and until the Executive Engineer or the Sub-Divisional officer acting under his order shall have certified in writing the performance of such work and the value there of the contractor shall only be entitled to be paid the value as so certified.

(iii) If upon any occasion the.....Engineer abstains from exercising the powers given on him by this clause such abstention shall not prevent him from exercising such powers upon a subsequent occasion if the contractor from liability from compensation for any default which he may have made.

Clause 4-If the.....Engineer exercise any of the powers given to him by clause 3 he may if he so desires take possession of all or any tools plant materials and stores in or upon the work or the side thereof and belonging to the contractor or produced by him and intended to be used for the execution of the work or any part thereof



and pay of allow the contractor for the same at the contract rate or in the case of these note being applicable at current market rates to be certified by the Executive Engineer whose certificate thereof shall be final and if the .....

Engineer does not desire to do so the Executive Engineer may by notice in writing to the contractor or his clerk or the work's foreman or other authorized agent required him to remove such tools plant materials or stores from the premises (within a time to be specified in such notice) and if the contractor fails to comply with any such requisition the Executive Engineer may remove them at the contractor's expense and at his risk in all respects by auction or private sale and the certificate of the Executive Engineer as to expenses of any such be final and conclusive against the contractor.

Clause 5- If the contractor desires an extension of the time for completion of the work on the ground of any unavoidable hinderance to its execution having arisen he shall apply in writing to the Engineer with in 30 days the existence of such hinderance first becomes known to him and the.....Engineer shall if in his opinion (which shall be final) reasonable grounds be shown therefore authorize such extension of time as may in his opinion be necessary of proper.

Clause 6- On completion of the work the contractor shall send a registered notice to the Sub-Divisional Officer (there in after called Engineer in charge) giving the date of completion and shall also send a copy of such notice to the Executive Engineer and shall request the Engineer in charge to give him a certificate of completion .No such certificate will be given nor shall the work be considered to be complete until the contractor has removed from the premises on which the work has been executed all scaffolding, surplus materials and rubbish, and cleaned all wood-work, door, windows walls floor or other part of any building in, upon or about which the work has been executed or of which he may have had possession for the purpose of the execution thereof, and, if the contractor fails to do so on or before the date fixed for completion of work the Engineer-in-charge may do so, and may sell

<p>Contractor remains liable to pay compensation if action not taken under clause 3</p>	<p>such scaffoldings and materials as have not been removed by the contractor and the contractor shall forth with pay all expenses so incurred and shall have no claim in respect of any such scaffoldings, surplus materials as aforesaid except for any sum actually realized by the sale there of. On completion the work shall be measured by the Engineer-in-charge, whose measurements shall be binding and conclusive against the contractor.</p>
<p>Powers to take possession of or require removal of or sell contractor's plot.</p>	<p>Clause 7- In the case of work estimated to cost more than rupees one thousand, the contractor shall, on submitting the bill thereof be entitled to receive a monthly payment proportionate to the part thereof then approved for such purpose by the Engineer-in-charge, whose certificate of approval and passing of the sum so payable shall be final and conclusive against the contractor. But any such payments will only be made as advances to be credited to Government in the final settlement of accounts, with the contractor and not as payment for work completed and passed, and the making of any such payment shall not either preclude the Executive Engineer or Sub-Divisional Officer from requiring the contractor to remove or reconstruct or reerect any any work on the ground that such work is bad, unsound, imperfect or unskilled or prevent Government from enforcing any claim against the contractor on account of any default by him or conclude, determine or affect in any of them as to the final settlement and adjustment of the accounts of otherwise or in any other way very or effect the contractor. The Engineer-in-charge's certificate of the measurement and of the total amount payable for the work shall be final and binding on all parties.</p>
<p>Extension of time.</p>	

Final certificates.

<p>Payment on intermediate certificate to be regarded as advances.</p>	
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<p>Inability to complete the work</p>	<p>Clause 8-If the contractor abandons, or is unable to complete the work, the Engineer may certify in writing the value of the work done by the contractor to words the completion of the contract such a certificate shall be final and conclusive against the contractor and he will not be paid more than the value of such work as so certified irrespective of the contract rates.</p>
<p>Lump sum estimates</p>	<p>Clause 9-When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of</p>

	<p>the items of work involved, or the part of the work in question at the same rates as are payable under this contract for other such items of work, unless the part of the work in question is not in the opinion of the Engineer-in-charge may pay such lump sum as he may determine to be the value thereof, and the certificate in writing of the Engineer-in-charge shall be final and conclusive against contractor as to the basis upon which payment is to be made in such cases and as the amount to be paid.</p>
<p>Bill to be submitted monthly.</p>	<p>Clause 10-Every month on or before a date to be fixed by the Engineer-in-charge the contractor shall if so required, submit a bill for all works executed by him during the previous month and the Engineer-in-charge shall take or cause to be taken all measurements necessary for checking the contractor's bill and adjusting his claim as speedily as possible. If the contractor's bill is not submitted within the contractor's notice in writing measure or depute some one to contractor whose signature on the list of measurements shall be sufficient authority to the Engineer-in-charge to draw up, a bill based on such measurements and any bill so drawn up shall be binding on the contractor. If the contractor fails to attend when such measurements shall be binding on him, and if he attends but refuses to sign the list of measurements the matter shall be referred to the immediate superior of the Engineer-in-charge whose decision shall be binding on the contractor.</p>
<p>Bill on forms  Stores supplied by Government.</p>	<p>Clause 11- The contractor shall submit all bills on the printed form which will be supplied to him at the office of the Engineer-in-charge and all items in such bills shall be charged at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender, at the rates hereinafter provided for such work.</p> <p>Clause 12-If the specification or estimate of the work provides for the use of any special description of material to be supplied from the Engineer-in-charge's store, or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge (such materials and stores and the prices to be charged therefore as hereinafter mentioned being so far as practicable and for the convenience of the contractor specified in the schedule hereto annexed but not so as in any way to control the meaning or effect of this contract), the contractor shall be supplied with such materials and stores as may from time to time be required by him for the purposes of the contract but only for such purposes and he shall pay for the same at the rates specified in the said schedule or if no rates are so specified at cost price as defined in clause 13</p>

	<p>thereof.</p> <p>All materials so supplied to the contractor will become the property of the contractor, but shall not on any account be removed from the site of the work until the whole work is certified to be completed by the Executive Engineer, except with the written permission of the Executive Engineer, and shall at all times be open to inspection by the Engineer-in-charge. The Executive Engineer shall, however, have the opinion to take over any such materials, if unused at the time of the completion or termination of the contract at the specified issue rate or the current market rate, whichever is less.</p>
	<p>Clause 13-All articles required by the contractor for the construction of the work and which are the contractor is to supply which the Director of Industries had made arrangements and if for the supply of any articles no such arrangements have been made, any such articles supplied by the contractor shall conform to such specification and/or tests, if any, as may be prescribed by the Director of Industries in consultation with the consuming department.</p>
<p>Stores Imported from Europe to be obtained from Government</p>	<p>Clause 14-The contractor shall obtain from the stores of the Engineer-in-charge, all such imported stores or materials as may be required in any considerable quantity for the work or any part thereof or for making up articles required for the work or any part thereof or for making up articles therefor or in connexion therewith. The value of such stores and articles as may be supplied to the contractor by the Engineer-in-charge and articles as may be supplied to the contractor by the Engineer-in-charge will be debited to contractor and if they are not entered in the Schedule they will be debited at the cost price, which for the purposes of this contract shall include the cost of carriage and all other expenses whatever which shall have been incurred in obtaining delivery of the same at the stores aforesaid. The Executive Engineer may issue materials to a contractor from existing stock if he asked for any excess of those entered in the Schedule. In such cases the price charge will be the stock rate or the market rate whichever is greater.</p>
<p>Work to be executed in accordance with special specifications drawings or orders. etc.</p>	<p>Clause 15- The contractor shall execute the whole and very part of the work in the most substantial and workman like manner and in every respect in strict accordance with the specification both as regards materials and otherwise. The contractor shall also conform exactly, fully and faithfully to the designs drawing and instructions in writing relating to the work signed by the Engineer in charge and lodged in his office and the</p>

	<p>contractor shall be entitled to inspection the same during office and of all and may at his own expense have copies of the specifications and of all such designs drawing and instructions as aforesaid made for his own use.</p>
<p>Alterations specification and designs</p> <p>Do not invalidate contract</p> <p>Extension in time in consequence of alterations</p> <p>No Compensation or alteration in or restriction of work to be carried out</p>	<p>Clause16- The Engineer in charge shall have power to make such alteration on in additions to the original specification drawing designs and instructions as may appear to him to be necessary or advisable during the progress of the work and the contractor.</p> <p>Shall be bound to carry out the work in accordance with any in structions which may be given to him writing signed by the Engineer in charge and such alternations shall not invalidate the contract and any additional work which the contractor may be so directed to do shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work and at the same rates as are specified in the tender for main work. The time for the completion of the work bears to the extended in the proportion that the additional work shall be extended in the proportion theat the additional work bears to the original contract work and the certificate of the Engineer in charge shall be conclusive as to such proportions. If the additional work includes any item for which no rate is specified hereunder then the contractor shall carry out the work at the rate entered in the schedule of Rates of the Districe by if the schedule does not contain any rate for such work then the contractor shall not begin such work until a rate in respect of such work has been settled by mutual agreement between him and the Engineer in charge with the approval of the officer accepting the contractor and if they are unable to agree upon a rate within two weeks from the date when the contractor received the order the Engineer in charge may by a notice in writing cancel the order for such work and carry it out in such manner as he may think best. In the event of a dispute the decision of the Superintending Engineer shall be final and binding on the contractor.</p>
<p>Action &amp; compensation payable in case of hard work</p>	<p>Clause-17- The Executive Engineer acting on the written orders of his immediate superior may at any time by notice in writing to the contractor either stop the work altogether or reduce or cut it down. If the work is stopped at together the contractor</p>

	<p>will only be paid for work done and expenses legitimately incurred by him on or preparation for by him. Such expenses shall be assessed by the Executive Engineer whose decision shall be final and binding on the contractor. If the work as so cut down but in neither case will he be paid any compensation whatever for the loss of profit which he might have made if he had been allowed to complete all the work included in the tender.</p>
<p>Action &amp; compensation payable in case of hard work</p>	<p>Clause 18- If the Engineer in charge is satisfied that the construction of any part of the work is faulty or that materials used in the same are inferior to those for which the specification provides or that any materials or articles provided by the contractor are not in accordance with the contract he may not with standing that such work materials or articles may have been passed certified or paid for serve the contractor with notice in writing specifying the work materials or articles of which he complaints and requiring the contractor to remedy such defects or to replace such materials or articles or articles with in a specified period of time.</p> <p>If the contractor fails to comply in all respects with the requirements of any such notice within ten days after the expiration of the period specified in that notice the Engineer in charge may himself remedy such defects or as the case maybe replace such materials or articles and contractor shall pay all expenses incurred by the Engineer in charge in so doing and the certificate in writing of the Engineer in charge as to the amount of any such expense shall be final and binding upon the contractor.</p>
<p>Works to be open to inspection</p>	<p>Clause 19- All works under or in course of execution or executed in pursuance of the contract shall at all times be open for inspection and supervision by the Engineer in charge and his subordinates and the contractor shall at all times during the usual working hours and on any other occasion of which he shall have had reasonable notice either himself be present to receive orders and instructions or have responsible agent duly accredited in writing present for that purpose. Orders given to any such agent have the same effect as order given to the contractor himself.</p>
	<p>Clause 19-A- No. labourer below the age of 18 years shall be employed on the work.</p>
	<p>Clause 19-B- The contractor shall pay to his labourers a fair wage.</p>
	<p>Clause 19-C- The contractor before he commences work shall (a) post in conspicuous place on the work a notice giving the rates of wages have been certified as fair by the</p>



	Executive Engineer and (b) send a copy of the notice to the Executive Engineer.
	<p>Clause 19-D- The contractor shall be bound and shall be responsible to comply with the provisions of the labour laws in force in the state of Uttar Pradesh including the Minimum Wages Act or any enactment in supersession extension or modification thereof which may be passed at any time or from time to time by a competent legislative body and may have effect in the State of Uttar Pradesh and the Rules and Regulations made there under or any amendments or modifications thereof for the time being in force. All expenses in connection with the compliance of such laws and rules shall be borne by the contractor and the contractor shall neither demand nor claim nor shall be entitled to any such expenses in his tender or that any subsequent amendments in such laws or rules have changed the basis on which he worked out such expense while submitting his tender.</p> <p>In every case in which by virtue of the provisions of the labour laws in force in the State of Uttar Pradesh and the rules and regulations made there under the Government is obliged to pay any sum in the execution of the work Government will recover from the contractor the amount so paid and without prejudice to the other rights of the Government shall be at liberty to recover such amount or any part thereof by deducting it either from the security money deposit by the contractor or to his credit under clause 1 of these conditions or from any other sum due by Government to the contractor whether under this contract or otherwise.</p>
	Clause-19-E- The contractor shall engage labour for the work through nearest Employment Exchange.
	Clause-19-F- The contractor will request the Employment Exchange to provide him labour on wages to be maintained by him which shall not be less than the fair wages for the locality of the work fixed by the .....Engineer consultation with the District magistrate concerned. He will also specify the period of the supply of labour which shall not be less than a week from the date of contractor's request for labour of the Employment Exchange. If the Employment Exchange fails to supply labour within the specified period the contractor will have the option to engage labour from other sources.
	Clause-19-G- The labour employed through Exchange will be kept at par with and shall have no preference over the labour engaged by the contractor privately as regards

	<p>their transport wages accommodations working hours and amenities. The contractor will have the option to despress with the labour without any reference to the Employment Exchange when such labour is not required for the work or when he is not satisfied with it but he will give due information of the discharge of labour to the Exchange.</p>
<p>Contractor or responsible agent to be present</p>	<p>Clause-20- In order that the work may be measured and the correct dimensions there on taken the contractor shall not cover up any part of the same of otherwise place it beyond reach of measurement until he has either obtained the consent in writing of the Engineer in charge of his subordinate in charge of the work or until he has given to the Engineer in charge or to such subordinate five day's notice in writing that the work is ready for measurement. If the contractor covers up any work or places it beyond reach of the measurement without such consent and before the expiration of the period of such notice the contractor shall either as he may elect strip such work at his own expense in order that it may be measured or shall forfeit the price of such work and of the materials used in its construction.</p>
<p>Notice to be given before work is cover</p>	<p>Clause-21- All work to be executed under the contract shall be executed under the direction and subject to the approval in all respect of the Engineer in charge for the time being who shall be entitled to direct at whar point or points and in what manner they are to be commended and from time to time carried on.</p>
<p>Direction of work</p>	<p>Clause-22- Except where otherwise specified in the contract the decision of the Superintending Engineer for the time being shall be final conclusive and binding on all parties to the contract up on all questions relating to the meeting of the specification disigns drawings and instructions here in before mentioned. The decision of such Engineer as to the quality of workmanship or materials used on the work or as to any other question claim right matter of thing what so ever in any way arising out of relating to the contractor design drawing specifications, estimates, instructions, order of these conditions or otherwise concerning the works or the execution of failure to execute the same whether arising during the progress of the work or after the completion or abandonment of the contract by the contractor shall also be final conclusive and binding on the contractor.</p>
<p>Decision of Engineer to be float contractor liable for deamages done and for imperfection for the</p>	<p>Clause-23- If the contractor or his work people of servants shall break deface ijure or destroy any part of a building in which they may be working or any building road fence enclosure or grass land or .....ground continuous to the premises on which the work or work any part of it is being executed or if any damage shall happen</p>

<p>months for certificate</p>	<p>to the work while in progress from any cause due to negligence of responsibility ( the decision of the Executive Engineer shall be final) the contractor shall at his own expense make good such damage on in default the Engineer in charge may cause the same to be made good and the contractor shall pay any expense so incurred and the certificated of the Engineer in charge as to the amount of such expense shall be final and binding on the contractor.</p>
<p>And liable for damages</p>	<p>Clause-24- The contractor shall supply at his own cost all materials (except such special materials if any as may in accordance with the contractor be supplied from the Engineer in charge's stores) plant, tools, appliances, implements ladders cordage trackle scaffolding and temporary works requisite or proper for the proper execution of the work whether original altered or substituted and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer in charge as to any matter as to which under these conditions he is entitled to be satisfied or which he is entitled to require and shall pay for the carriage of all such things to and from the work . The contractor shall also supply with out charge workmen with the means and materials necessary for the purpose of setting out works and for counting weighting and assisting in the measurement of examination of the work or provided by the Engineer in charge and the contractor shall pay the cost of the same as certified by the Engineer in charge whose certificate shall be final. The contractor shall also provided all necessary fencing and lights required to protect the public from accident and shall bear the may be expenses of defence of every suit action or other proceeding at law that may be brought by any person for injury sustained owing to neglect of the above precautions and shall also pay any damages and costs which may be awarded in any such suit action or proceeding to any such person or which may with the consent of the contractor be paid to compromise any claim by any such person.</p>

arising from no prevision of light fencing etc.	
Female labour not be employed.	Clause-25- The contractor shall not employ female labour in the execution of the work of any part thereof within the limits of a cantonment.
Work not to sub let.	Clause-26- The contractor shall not assign or sub let the contract without the written approval of .....Engineer and if the contractor does or attempts so do or becomes insolvent or commences any insolvency proceeding or makes attempts to make any composition with his creditors or if he or any of his servants or agents either directly or indirectly gives offers or promises any bribe gratuity gift loan perquisite reward or advantage pecuniary or otherwise to any public officer or person in the employ of Government in any way relating to his office or employment or if any such officer or shall become in any way directly or indirectly interested in the contract without having first obtained the permission in writing of the Government the.
Contract may be rescinded and security deposit forfeited for aubletting bribing of if contractor becomes insolvent.	Engineer may thereupon by notice in writing rescind the contract and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Government and the same consequences shall ensure as if the contract had been rescinded under clause 3 hereof and in addition the contractor shall not be entitled to recover or be paid for any work hereof actually performed under the contractor.
Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss.	Clause-27- Any sum payable by the contractor as compensation under any of these conditions shall be deemed to be reasonable compensation for the act or default in respect of which the same becomes payable without proof of the actual amount of damage or loss sustained.
Changes in consitution of firm	Clause-28- In the case of a tender by partners the contractor shall state the name of the members of the firm and shall notify to the Engineer in charge any change in the constitution of the firm as soon as such change occurs,
Action where no specifiacation	Clause-29- In the case of any class of work for which there is no such specification as is mentioned in rule I such work shall be carried out in accordance with the district specification and if there is no district specification the work shall be carried out in all

	respects in accordance with instructions and requirements of the Engineer in charge.
Definition of work	Clause-30- In these conditions unless there is something in the subject of context repugnant to such an interpretation the expression works or work mean the work to be done or executed under the contract whether such work is permanent or temporary and whether it is original altered substituted or additional.
Contractor's percentage whether applied to net gross amount of bills (Strikeout this clause in the case of an item rate contract)	Clause-31-The additions and deductions on account of the percentage referred to at page 3 of the accepted tender will be calculated on the gross and not the amounts of the bills for the work done.
	Clause-32-(1) In every case in which by virtue of the provisions of section 12 sub section (1) of the workmen's Compensation Act 1932 Government is obliged to pay compensation to a workman employed by the contractor or by any sub contractor from him in the execution of the work Government will recover from the contractor the amount of the compensation so paid and with out prejudice to the rights of the Government under section 12 sub section (2) of the said act Government shall be at liberty to recover such amount or any part thereof by deducting it either form the security money deposited by the contractor or to his credit under clause I of these conditions or from any other sum due by Government to the contractor whether under his contractor or otherwise.
	(2) Government shall not be bound to contest any claim made against it under section 12 sub section (1) of the said Act except on the written request of the contractor and upon his giving to Government full security for all costs for which Government might become liable in consequence of contesting the claim.
	Clause-33- Not with standing anything stipulated in the aforesaid clauses, Government shall have power to retain any sum due to the contractor(s) and set off all claims against him (them) whether arising out of the particular contract or out of any other transaction or contract held by him(them) alone or in partnership with others.
	Clause-34- All disputes in respect of this contract arising between contractor and the department shall be referred to next higher departmental authority to the officer

	entering it to the contract.
	Clause-35- The tendered rate of each item of work shall be complete in itself and independent of other items and no loss or profit will be claimed in the event of exclusion of any item each item of work shall be executed independently. Any time can vary to any extent. The contractor shall not be entitled to any claim or compensation on this account.
	Clause-36- Contractor shall himself make proper living accomodation water and sanitary arrangements etc. For labour which should ordinarily be arranged through employment exchange and shall give preference to ex-servicemen. He will have remove undersirable labour if ordered by the department.
	Clause-37- No extra payment shall be made to the contractor for making profiles and 'NAMUNAS' in connection with the execution of work as per G.O. No. 355/ID/66 X XIII-IBIT 66 dated 22—2-66. The amount of security so deposited by and deducted from the contractor shall not be refundable to him till at least six months after the completion of the work without the express sanction of the head of the department as provided in the para 23 of appendix XIX of F.H.B Vol. V part-I
	Clause-38- In case of Voilation of condition of contract by the contract or the contract can be rescided by the officer entering into the contact without entitling the contractor to any claim whatsoever.
	Clause-39- All money found recoverable from the contractor in connection with contract may with out prejudice to any other remedy provided by law be recovered as arrears of land revenue.
	Clause-40- The contract shall supply every labour employed by him with wages card in which the rates of wages the attendance of the payment will be entered.
	Clause-41- During the course of construction if any emergency for putting forward any claim arises the contractor shall send a registered notice to the Executive Engineer in charge with in a for night of the claim if he fails to do so or if he postpone submission of such claim till completion of work he will be entitled to not compensation.
	Clause-42- The contractor shall not influence or divert labour borne on the muster roll of any other contractor by paying higher wages of providing extra facilities without the permission of the Executive Engineer and if the does so contrary to the above he will be

	responsible for the loss or damage caused or claimed by the other and the decision of the Executive Engineer as of the amount of damage shall be final and binding on both parties.
	Clause-43- The agreement is subject to the standard specification. The clearance of site shall be done by the contractor at his own expense.
	Clause-44- The sum of money due and payable to the contractor including security deposits returnable to him under this contract may be appropriate by the purchaser or Government on any other persons contracting through the secretary and set of against any claims of the purchaser on Govt. or such other persons for the payment of a sum of money arising out of or under any other Govt. or such other person or persons.
	Clause-45- Income Tax on all payment or on the gross value or work done (including cost of materials) or at a rate in force as per rules at the time of payment shall be deducted at source of the payment in terms of Income –Tax Act.

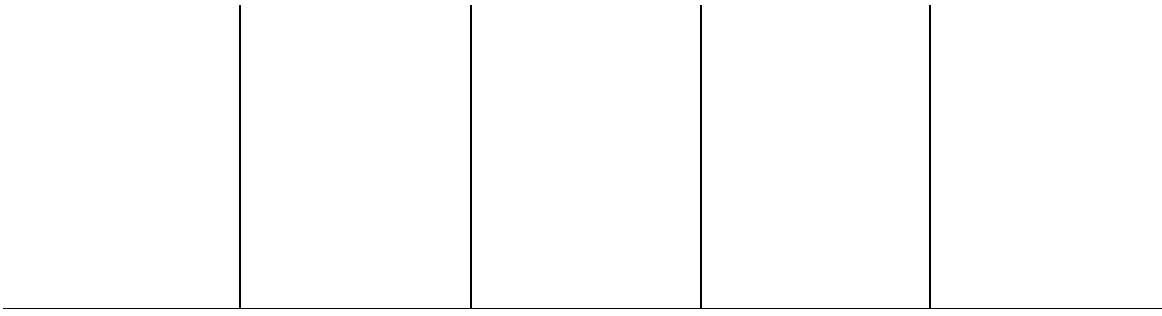
**TRADE-TAX**

The rate quoted by the contractor shall be deemed to be inclusive of the Trade-Tax if any on the constructional plant material and supplies (both department temporary and consumable) acquired for the purpose of the contract and on the services performed under the contract. Nothing in the contract shall relieve the contractor from the responsibility to pay any Trade-Tax that may be levied under the U.P Trade Tax Act 1948 as amended from time to time in performance of this contract. During pursuance of the contract the Engineer in charge or any other persons responsible for making the payment to the contractor shall at the time of making such payment to the contractor either in cash or in any other manner deduct an amount equal to that specified in Section 3-D of the aforesaid act a in force for the time being towards part or as the case may be full satisfaction of the tax payable under the said Act on account of this contract the amount presently specified in the said Section in 4 (four) percentage of the amount payable to the contractor.

Schedule showing (approximate) materials to be supplied from public works stores for works contracted to be executed and the rates at which they are to be charged for vide clause 12 of conditions.

Particulars	Rate at which the material will be charged to the contractor			Price of Delivery
Contractor	Unit	Rs.	P.	E.E.





## DEFINITIONS :

For the purpose of these specifications comprising of conditions of control technical provisions and annexure there to and including list of corrections and amendments the following words shall have the meaning herein assigned to them:

- (a) The "Government" shall mean the Government of Uttar Pradesh.
- (b) The "Government" shall mean the administrative head of the State of Uttar Pradesh.
- (c) The "Engineer-in-charge" shall be the Assistant Engineer in charge of works. The Engineer in charge may delegate any of his power to his authorised representative. Where ever the word "Engineer in charge" occurs in the list of the contract it would be taken to imply the Engineer in charge as aforesaid or his authorised representative or representative as the case may be.
- (d) The "Contractor shall mean..... and shall include his legal representative successors and assignees.
- (e) The words "work" or works where ever used in this contract shall be held to comprise not only works of construction but also all accessories there to and all matters and things pertaining to the works executed or to be carried out under the contract whether such works are permanent or temporary original or altered substituted or additional including clearance of site on the completion of construction.
- (f) The words "Specification" shall mean collective all terms and stipulations contained in the "conditions" of contract technical provisions and annexures corrections and amendments to the specification.
- (g) The word "Drawing" shall mean collectively all accompanying general drawings as well as detailed drawing which may be issued by the Engineer in charge from time to time during the period of construction.
- (h) "Rate" or "Tendered rates" shall mean the rates as entered in the "Schedule of quantities of bids" by the contractor and as accepted by the Government or its authorised representative.
- (i) "Department" shall means Irrigation Department Uttar Pradesh.
- (j) "Department" shall means Irrigation Department Uttar Pradesh.
- (k) The word "Work Sites" or "Sites" shall means the site of proposed works as detailed in the specifications or any other place where works are to be executed under the contract and such land in the vicinity of works as may be notified by the Executive in charge at the work site.

(l) The work used in the contract in singular number shall be interpreted to include plural number & vice versa.

**GENERAL**

No claim shall be entertained for damage to works or materials of the loss suffered by the contractor owing to floods rain fluctuations in market rate of labour and materials or any other reason occurring prior to the final measurement and taking over of the work or part thereof by the Engineer-in-charge.

**SITE INVESTIGATION AND EXPLORATION:**

It shall be understood that the contractor has satisfied himself as to the nature and location of work the general and local conditions including those bearing upon transportation disposal hauling and storage of materials availability of labour water etc. or similar physical conditions or ground the character quality and quantity of the surface and the sub surface materials to be encountered the ground the character or equipment and facilities needed before and during execution of the work all other matters which can in any way effect the work or the cost thereof under this contract. Any default or failure by the contractor to acquaint.

He shall neither use any material for the construction work nor shall adopt producer of construction which has not been approved by the Engineer in charge.

**CONTRACTS PRICE:**

The contract price includes all taxes including royalty etc. no claim shall be entertained on account of any types of tax paid by the contractor.

**INCOME-TAX:**

Income Tax if applicable shall be deducted from every bill under section 194C of Income tax Act and credited to the Government. The contractor shall however he provided on demand a certificate of such deductions by the Engineer-in-charge.

**SURVEY WORKS:**

Survey marks such as bench marks pillars alignment and boundary pillars of stone shall be protected against damage by the contractor. All work around such marks shall be done in a manner approved by the Engineer in charge to ensure their safety and accuracy. The contractor shall be responsible to pay for all damage done to these marks on his men and/or machine.

**ROADS:**

The department shall maintain an inspection road along the work. The road shall not be used by heavy vehicles of the contractor. If any damage is caused to it what so ever by the contractor his men or machine he shall have to put it in order at his cost failing which this will be done departmentally and cost thereof recovered from the contractor's bills.

Contractor shall make and have his own arrangements for maintenance of approach roads to the site of work. No claim on account of this item shall be entertained. In case of several contractors using the approach road the action as deemed fit shall be taken by the Engineer in charge.

Executive Engineer

## **TECHNICAL SPECIFICATION**

### **CHAPTER I**

#### **GENERAL**

All work shall be carried out in accordance with the detailed specifications hereinafter described. In case specifications of any work are not given the same shall be carried out in accordance with "Uttar Pradesh Irrigation Department Detailed Specifications" published under the orders of the Chief Engineer Irrigation Dept. Uttar Pradesh by the Superintendent Printing and Stationery Allahabad U.P. in 1954. In case the specification of any work are not given in either the Uttar Pradesh. I.D. specifications or here in after the work shall be carried out in accordance with instructions and directions of the Engineer-in-charge.

The following works shall be executed in the presence of the Assistant Engineer in charge of the work.

- I. Layout of works.
- II. Foundation concrete
- III. Laying of well curbs
- IV. Laying of bottom and top plugs and well caps.
- V. All concrete work in piers and abutments.
- VI. All R.C.C. work in whatever position.
- VII. Any other work ordered by the Engineer in charge. Any delay on account of this provision shall not entitle the contractor for any claim for compensation.

### **CHAPTER II**

#### **DRAWING**

The Drawing attach with the tender in tentative. All work shall be executed in accordance with the detailed drawing furnished by the Engineer-in-charge from time to time. The contractor shall not be entitled to any compensation due to delay in supply of detailed drawing or change or modification in drawing already supplied.

The contractor shall prepare the centering and shuttering drawing which he proposes to adopt for a particular work and get these approved by the Engineer in charge.

### **CHAPTER III**

#### **SITE CLEARANCE OF WORK AREA AND LAYOUT ETC. :**

The area to be occupied by the work shall be cleared of all trees bushes roots etc and other objectionable materials as per direction of Engineer in charge before starting any work. The land shall be maintained free from any growth and vegetation during the progress of construction by the contractor at his own expenses.

All roots bushes etc. and other objectionable materials within the area required to be cleared shall be burnt or otherwise completely removed from the site to the satisfaction of Engineer in charge. Disposal in the canal will not be permitted and no materials shall be piled at such a place where in the opinion of the Engineer in charge these are liable to be floated away floods. All such materials shall be the property of the Government.

No extra payment shall be made for all these operations involved and shall be deemed to be covered in the unit rate of various items of works.

The Contractor shall construction layout pillars in brick work in 1:6 cement moriar as and where required in accordance with the directions of the Engineer in charge. These pillars shall be maintained in fact by the contractor during the execution of the work. Measurement of these pillars shall be entered in measurement books in order to work out the bonafide consumption of cement. No payment shall be made for construction and maintenance of these pillars.

No. payment shall for be made for the following items of works carried out by the contractor for the execution of the main work for which tenders have been called. The expenditure on these items shall be deemed to be covered in the unit rate of various items of the work.

- (1) Setting out work profile etc.
- (2) Construction and maintenance of layout pillars.
- (3) Benching of execution
- (4) Forming tatties in excavation area and borrow pits and their removal after measurements.
- (5) Forming steps inside of excavation and borrow pits and their removal after measurements.
- (6) Removing slips and falls in excavation.
- (7) Dressing or trimming sides of excavation.
- (8) Cost of all tools and plants housing and sanitary arrangement as required under laws.
- (9) Cost of maintenance of works and their protection against damages by drains floods winds etc.
- (10) Compensation to labours and other liabilities under labour act.
- (11) Taxes or livies of Union or State Government. or local bodies.

## **CHAPTER VI**

#### **400. EARTH WORK IN FOUNDATION**

**401.** This work shall be carried out in accordance with the drawings and as per instructions of the Engineer in charge. This item shall comprise of excavation of foundations and disposal of excavated materials within 200M. of Center line of the canal including all leads & lifts. The excavated material shall be disposed off in the most useful and economical manner such as in raps, platforms or back filling behind the abutment and wing walls and in planking banks and shall be completed in layer of 25 cm with manual compaction. The Earth required for filling behind abutments and with walls and in making banks shall be so stacked that it can be utilized later on for this work. The earth surplus to the above requirements shall be disposed off as per directions of the Engineer in charge.

**402.** The earthwork to be excavated shall generally consist of earth mixed with sand clay kankar, bajri in dry and wet and slush conditions. Excavation shall however include digging out whatsoever substance is encountered in the foundation for which no extra payment shall be made per approved schedule of rates after deducting 15% for voids. The block kankar basic above 300 mm. shall be cleaned and stacked outside of the canal banks within 200 meters.

**403.** The excavation upto the bottom levels of foundation. Any excessive excavation done due to contractor's negligence shall not be paid of such extra excavation done shall have to be filled up with lean concrete by the contractor at his own expenses as per direction to the Engineer in charge.

**404.** The excavation up to the bottom level of foundation shall be carried out in such a manner that the side slopes are stable and safe for workmen. The contractor shall be responsible for any loss or damage to work or injury to workmen due to sloughing or slipping or the sides of any excavation or embankment etc. the contractor may obtain approval of the Engineer in charge in reference to such slopes as he may propose to adopt for digging but his approval shall in no way absolve the contractor from his responsibility mentioned in this para.

**405.** With reference to a bench mark fixed by the department detailed cross sections of the site of excavation shall be taken at every 5 M interval prior to commencement of work under the contract and grades and lines shall be fixed for excavation. The maximum slope for excavation above foundation level whichever is higher shall be 1:5:1 and below spring level 2:1. The decision of Engineer in charge about the slopes to be kept for excavation shall be final and binding on the contractor. Similar cross sections of finally excavation pit shall be taken on completion and excavation and superimposed on the sections previously taken. All measurement for excavations will be based on these cross section subject to the condition that excavation in excess of lines and grades

marked for the excavation as mentioned above not shall be measured or paid for where as for excavation done to sleeper slopes than the grades approved by the Engineer in charge the measurement shall be based on excavation actually done. However running payment may be done on the basis of pit measurements as per instruction of the Engineer in charge. The pit measurement shall have no bearing on final measurements.

406. The rendered rate for this item shall include excavation and disposal of all type of earth work encountered in the foundation including loads upto 200M and all lifts and shall include all the operations given in the above specifications.

#### **CHAPTER V**

##### **500. EARTH WORKS IN BACK FILLING**

501. Earth for back filling can be held either direct from excation or from the deposits of earth made from excavation of foundations. If any farther additional earth in required. It shall be borrowed from the area specified by the Engineer in charge.
502. For back filling behind wing walls abutments or at any other place specified by the Engineer in charge the contractor shall first utilise the earth available direct from excavation of foundation.
503. Earth in the back filling shall be in layers not exceeding 25cm and properly manually compacted. special precautions should be taken to compact near the structures.
504. If considered necessary the earth in filling shall have to be placed in zones with central core of good earth as available from excavation as per direction of Engineer in charge. No extra payment on this account shall be made to the contractor.
505. Measurement shall be based on initial and final cross section of the back fill area and deduction for settlement will be made at the rate of 10%.
506. The tendered rate shall be inclusive of labour all leads and lifts for all types of earth and all time T&P required for the work.
507. No payment shall be made for earth work in filling which has been done from earth direct from excavation of foundation.

#### **CHAPTER VI**

##### **6.0 SHEET PILE DRIVING :**

601. Sheet piles in undamaged sections shall be issued by the Engineer in charge as per schedule of materials and shall be driven in location as shown on the drawing or as directly by the Engineer in charge. The piles shall be driven to depths shown in the drawing with the top of each pile at time elevation shown on the drawings where



required the top of the piles shall be cut off to the required elevation. The piles shall be driven in a straight line along the alignment shown in the plans. The method of driving will be subject to the approval of the Engineer in charge.

602. The sheet piles shall be driven vertical. In case of appreciable deviation from the vertical tapered piles fabricated by the contractor at his own cost shall be used to make the driving vertical. The contractor shall provide a cast steel driving head for driving the sheet piles, in the alternative he may have to reinforce or suitable adopt the piles head to suit the method of driving . Piles required or other wise damaged deducted or banded in driving shall pulled out and new piles driven should any abstraction he encountered the contractor shall make every effort to drive the pile to the required depth either by driving through the obstruction or by passing it or as per direction of Engineer in charge.
603. Sheet piles shall be issued to the contractor at departmental stores as given in schedule of materials.
604. Measurement for payment of sheet piling will be made on the basis of their weight in Metric Tonne.
605. The tendered rate for the sheet piling shall be inclusive of the cost of sheet piles handing transportation cutting to size making shoe if required suitably cleaning and painting the sheet piles drilling holes providing caps ,making taper and 1-piles and their welding driving to specified depths and pulling out of damaged sheet piles. The contractor shall arrange for and operate at his own cost the plant and machinery required for all the above operation including pile driving and extration. The quality of the item payable to the contractor shall be assesed on the basis of the measurements of sheet piles driven in position as per plans. The quantity of sheet piles payable of sheet piles payable to the contractor shall be worked out from the liner measurements of the sheet piles driven in position below the given top level in drawings or the linear length as per drawing which ever in less and multiplying the same with the standard unit weight as specified by the manufacturers.
606. Cut picces of sheet piles shall be taken back by the Government at issue rates. The contractor shall transport such picces at his own cost to the stores from where the sheet piles where issued. Damaged picces of sheet piles shall not be paid and shall not be taken back and its cost shall be recovered from the contractor at issue rates.
607. The specification for planting of sheet pile prior to driving shall be as per direction of Engineer in charge .

608. The cost of difference in the total quantity of sheet pile used on the work as approved by the Engineer in charge and the quantity as per measurement done under para 6.05 shall not be recovered from the contractor. The cost of damaged pile shall however be recovered from the contractor.

**700. CHAPTER VII**

**(A) DEPARTMENTAL DEWATERING**

701. Dewatering whenever required shall be done departmentally. The decision of the Engineer in charge regarding the requirement of dewatering and its extent shall be final and binding on the contractor.

702. No claim shall be admissible to the contractor due to delay in dewatering or breakdown of pumping equipment power failure or any other reason whatsoever. Any slips occurring in the pit due to failure of dewatering equipment shall be cleared by the contractor without any extra cost. Connecting drains inside the pit if required for dewatering shall be constructed by the contractor at his own cost in accordance with the instruction of the Engineer in charge. In case of failure by the contractor and their cost recovered from the bill of the contractor, The decision of the Engineer in charge in this respect shall be final and binding on the contractor. The contractor shall also not be entitled to any claim of compensation. If any work done is submerged and or damaged due to sudden breakdown of power or pumping equipment. However suitable extension of time may be granted to the contractor for this cause.

703. The contractor shall have to submit before hand 4 programme for the works to be executed below the spring level at the work site so that necessary arrangement for dewatering by the department.

704. No dewatering shall be done during the nonsoon (16<sup>th</sup> June to 15<sup>th</sup> October) and the contractor shall plan his work accordingly. If considered necessary the dewatering can be stopped by the Engineer in charge before 15<sup>th</sup> June. This shall not entitle the contractor for any claim for compensation. Circumstances permitting the dewatering may be extended beyond 15<sup>th</sup> June by the Engineer in charge in this regard be final and binding on the contractor.

**7.(b) DEWATERING BY CONTRACTOR**

**7.05 GENERAL**

This item of work covers all operations necessary for all the time to keep the spring water level adequately low to ensure the proper execution of works and also to ensure safety of

works already constructed. It will inter alia include installation operation maintenance of pumping sets of suitable type capacity and adequate in number for drawal of water from the area of construction erection and maintenance of electric lines and all other ancilliary works shall also be included in this item work.

**MAGNITUDE OF DEWATERING :**

Nothing can be said about the magnitude of pumping and the type and devices needed for drawal of water. The quantities of item of dewatering as given in schedule of bids are approximate and may vary and any extent on lower side for which the contractor will not be entitled for any claims.

**SCHEME FOR DEWATERING**

The contractor shall prepare and submit to Engineer in charge detailed scheme for dewatering indicating the number (including Stand by) type and capacity of pumping sets (or any other device) of their installation mode of disposal of pumped water and all other details necessary for giving complete idea of the operation proposed to be implemented only after obtaining approval of the Engineer in charge and shall be implemented by the contractor for which contractor will not be entitled to any claims.

**7.08. SEEPAGE PRESSURES :**

This item shall also include pumping to control seepage pressures under the substructures which are in the process of construction. Adequate pumping shall be sub structure develops requisite dimensions as well as strength to with stand seepage pressure.

**709. INFRACTUOUS PUMPING TO BE AVOIDED**

(a) To avoid infructuous pumping dewatering operation are to be carried with the prior approval of the Engineer in charge and only when there is adequate and reasonable construction activity to warrent dewatering of the work area. In this respect the decision of the Engineer in charge shall be final and binding on the contractor.

(b) The Contractor will limit the pumping of sub water to the minimum commensurate with the working with conditions required for the execution of work. Similarity to have maximum efficiency the horse power of the pumping sets should be commensurate with the discharge being lifted. If at any stage or time the contractor is found resorting to over pumping or using pumping sets of Horse Power greater than actually required for proper working the cost of pumping efforts in excess of requirement as determined by the Engineer in charge will be disallowed to the contractor by suitable

reducing the measurements the decision of the Engineer in charge in this regard will be final and binding on the contractor and no claims what so ever on this account will be entertained.

**7.10 STAND BY DIESEL PUMPING SETS:**

The contractor shall procure install and always keep in readiness stand by diesel pumping sets of suitable capacity adequate in number and at suitable locations to be used during power failures/shut downs so that the work is not materially dislocated or effected or affected and to avoid damage to work equipment and other installation and material etc.

**7.11 MEASUREMENT AND PAYMENT:**

The payment of dewatering of foundations shall be made on the basis of the bonafide consumption of electric power for pumping and the unit rate will be Kilo Watt hour (KWH) for metering the electric power consumed on dewatering foundation the contractor shall at his own cost instal electric meters at suitable locations approved by the Engineer in charge the meter shall be got tested by the agency acceptable to the Engineer in charge. The meters installed as above shall be sealed by the Engineer in charge and it would be the responsibility of the contractor to protect and guard the meters against damage and tempering. In case any meter is found tempered with no payment shall be made for the consumption recorded by such meter after the reading was last read and recorded and till it is again tested sealed and reading recorded. The meter reading shall be read and recorded by the authorised representative of the Engineer in charge on or about 1st and 16<sup>th</sup> of every month in the presence of the authorised representative of the contractor.

(.B) In case the contractor employs diesel pumping sets for dewatering due to non available of electric power and the dewatering is done to the satisfaction of Engineer in charge, The Unit of KWH for payment shall be worked out as below:

- (i) One H.P. hour of diesel be taken as equivalent to 0.75 KWH of electric consumption.
- (c) For running the diesel pumping sets the contractor shall himself arrange for all P.O.L at his own cost. He shall maintain proper books in such details as the Engineer in charge may require for running of diesel pumping sets for each shift of working and these shall be got verified by the authorised representative of the Engineer in charge . Copies of log book entries make as specified here in before shall be submitted to the Engineer in charge on or about 1st and 16<sup>th</sup> of every month showing verified entries

recorded upto the last of day of the previous month and 15<sup>th</sup> day of the current month respectively no payment shall be made for the unverified entries in the log book.

(d) The contractor shall have to complete all the works speedily which need dewatering operation. In case the dewatering is carried out beyond the genuine requirement it will be disallowed and will not be paid for the contractor.

(e) The contractor that also be bound to carryout additional dewatering at his own cost which has to carried out due to the negligence on the part of the contractor.

(f) In case for the completion of the work dewatering is to be carried over and above the number of K.W.H. provided in schedule of bids the contractor shall be paid @ 0.60 K.W.H. only instead of agreement rates.

## **CHAPTER VIII**

### **8.0 CEMENT CONCRETE WORK**

The work covered by this section consists of furnishing all labour materials and equipment with the exception of those to be provided by Government in accordance with the provisions of the conditions of contract and performing all work for the manufacture transporting placing finishing and curing of concrete in the structures included in these specifications. All structure shall be built in a workman like manner to the lines grades and dimensions shwon on the drawings or as prescribed by the Engineer in charge, The location of all construction joints shall be subject to the approval of the Engineer in charge. The dimensions of each structure shown on the drawing will be subject to such change as may be found necessary by the Engineer in charge to adopt the structure to the conditions met with after the excavation. The cost of supplying aggregates shall be included in the unit rates tendered in the shedule of bids for the item of work in which the aggregates are used. Unit rates shall also include all expense in screening washing classifying blending storing handling hauling and other necessary operation on the aggregates. The contractor shall be entitled to no additional compensation for material wasted as fines or materials discarded by reasons of being above maximum sizes specified for use of inferior quality.

#### **8.01 COMPOSITION**

Concrete shall be composed of cement water fine and coarse aggregates and if considered necessary by the Engineer in charge an air entraining admixture and pozzolanic admixture. The design of each concrete mix will be based on the water cement ration necessary to secure a plastic workable mix suitable for the specific condition of placement and when properly cured shall give a product having durability and strength in accordance with requirement of the structure covered by those specification. The Engineer in charge will specify the 28 days field

strength of various items of cement concrete. The mix design will be communication to the contractor before the work is taken up.

#### **8.02 QUALITY:**

Sampling for aggregates and cement concrete shall be carried out in accordance with relevant specifications of I.S.I. Samples for testing concrete as mixed will be taken by the Engineer in charge for all classes of mixes when being placed in the forms and tested in accordance with the relevant specifications of I.S.I. The contractor shall provide such facilities as the Engineer in charge may consider necessary for the ready procurement of representative test samples.

#### **8.03 CEMENT**

Cement in gunny bags will be supplied by the department in accordance with the provision of the condition of the contract.

#### **ADMIXTURES**

The air entraining admixture and/ or waterproofing compound, if required will be furnished to the contractor free of cost at departmental store and will consist of an approved compound which will produce entrained air in the instructions of the Engineer in charge to which no additional payment shall be made to him.

#### **8.04 FINE AGGREGATE :**

#### **GENERAL**

(a) Sand to be used in Superstructure viz T-beams and decking slabs etc. shall have a fineness modulus of not less than 2.0 while in case of all other concrete work in F.M. shall not be less than 1.5 If the fineness modulus of sand obtained by the contractor is less than specified F.M. its use may be permitted by Engineer in charge on the condition that extra cement consumed on this account will be at contractor's cost at the rate of 1% extra cement consumption for the reduction of the figure of fineness modulus by every 0.1 (Recovery on account of this extra cement to be done at issue rates). The contractor shall seek permission in writing for the use of such sand from the Engineer in charge. The fine aggregate shall be clean free from excess mica silt particles organic and chemical impurities and shall consist of hard and tough material. Before use the fine aggregate shall be approved by the Engineer in charge the maximum deleterious substance in the sand shall not exceed 5%.

#### **GRADING**

(b) The fine aggregate as delivered to mixers or as incorporated in the mixed concrete shall conform to I.S Specification pertaining of fine aggregate.

#### **8.05 COARES AGGREGATES**

##### **(a) GENERAL**

The coarse aggregate shall consists of broken Delhi quartzite grit or natural shingle. It shall be sound and free from flaws injurious view crystals weathered particles organic matter sand clay trash etc. and shall be washed before use. The maximum deteriorous substance in coarse aggregate shall not exceed 5%.

##### **(b) GRADING**

Coarse aggregate shall comprise of materials between 5 mm and 40 mm. The coarse aggregate will be unigrade or multigrade depending on the mix design for different location of the works multigrade aggregate shall comprise of 40mm 20mm and 5mm size aggregates. The mix design may have any or all of these grades of aggregates. The different constituents shall be mixed in the proportion specified in the mix design which shall be intimated to the contractor by the Engineer in charge.

##### **(.C) SAMPLING**

All sampling and testing shall be in accordance with the applicable provisions of I.S. 383-1952 and subsequent amendments. The contractor shall provide such facilities as the Engineer in charge may consider necessary for the ready procurement of representative test samples from aggregates processing screening plant storage piles and batching and mixing plant or mixers.

#### **8.06 WATER**

Water for mixing concrete shall be clear and free from injurious oils, acids, alkaalies, organic matter salts or other impurities. Water shall be periodically checked for organic impurities. The contractor shall make his own arrangement for water required for washing aggregates mixing in concrete etc. If required he will have to construct storage tanks at his own cost for construction work.

#### **8.07 PROPORTIONING OF CONCRETE**

(a) The proportion of all materials entering in to the concrete shall be as directed by the Engineer in charge. The Contractor shall provide all necessary equipment and plant to determine and control the actual amount of material entering into each batch. The

proportions will be changed whenever in the opinion of the Engineer in charge such change is necessary.

(b) The coarse and fine aggregates water and cement entering in to the concrete mixers shall be batched and measured by weight or by volume as specified in clause 4.09 to 4.10. As specified air entraining agent or waterproofing compound shall be batched or added separately to the mixer as directed by the Engineer in charge.

#### **8.08 PLACABILITY**

(c) The concrete mixes which have been designed and tested by the Engineer in charge will be adjusted in the field from time to time to meet the varying conditions encountered during the construction as directed by the engineer in charge.

#### **8.09 BATCHING AND MIXING CONCRETE BY WEIGHT**

(a) The plant should be able to handle all the grades of coarse aggregate fine aggregate water and cement. Air entraining agent and water proofing compound can be batched by weight separately and added direct to concrete mixer. The weight batcher should be capable of weighting controlling and determining accurately the prescribed amount of various materials for each batch. Facility should be available to obtain sample of each ingredient entering the mixing. The contractor shall maintain a record of the number of batches mixed and all other details required for checking the correctness of the mix as per directions of the Engineer in charge.

(b) Suitable mixers preferable tilting type so as to mix uniformly the various ingredients and discharging the mix without segregation should be used. No hand mixing shall be allowed.

(c) The water measuring device shall be such that no leakage may occur when the valves are closed and water is discharged quickly by the mixer without any spillage.

(d) The time for obtaining uniform mix for a particular type of job shall be initially prescribed by the Engineer in charge and same type shall thereafter be adhered to for mixing all subsequent batches of that type of concrete unless revised by the Engineer in charge. The adequacy of mixing shall be determined in accordance with I.S.I. 190-1159.

#### **8.10 BATCHING AND MIXING CONCRETE BY VOLUME CEMENT**

(a) Cement will not be gauged by volume but the size of the concrete batch would be such as to require the whole bag or bags of cement. For the purpose of computation the volume of each bag of



50kg shall be taken as 1.20 cft.0.034 cu. M. if however a big is to be issued in batch of mix the bag will be divided by weight.

### **AGGREGATES**

(b) The coars and fine aggregates shall be guard by wooden "farmas" or measure of approved size suitable to measure quantity of aggregate for the require mix correctly. When filling "Farams" the materials shall be poured loosely and struck of level No. compaction shall be allowed.

(c) Bulking test for stand shall be made just prior to the start of concerting . The volume of sand to be mixed shall be adjusted by the contractor in accordance with the test results as approved by the Engineer in charge. the variation in the consumption or sand shall not entitle the contractor to any claim for compensation.

### **WATER**

(d) Exact quantity of water to be added for the precribed be specified by the Engineer in charge in terms of liters of water per 50 kg. or one bag of cement used in the mix. All containers used for measuring water shall be calibrated in liters. Altematively mechanical device may be used but contractor shall be responsible to ensure that correct amount of mixing water is added to the concrete. Adjustment in the missing water for moisture content in aggregates shall be made on the result of test conducted at site from time and as per directions of the Engineer in charge.

### **8.11 MIXING**

Concrete shall be conveyed from the mixers to forms as practicable by methods which shall prevent segregation or loss of ingredients. The shall be no vertical drop greater than 1.5 m except where suitable device is provided to prevent segregation and where specifically authorised by the Engineer in charge. Belt conveyors chutes or other similar equipment in which the concrete is delivered to the structure in thin continuously exposed flow will not be permitted except for very limited or isolated sections of the work and only in approved by the Engineer in charge. Such equipment shall be suitably modified by the contractor at his own cost to prevent segregation.

### **8.13 PLACING**

#### **GENERAL**

(a) Concrete shall be worked in to the concrete and angles of the forms and around all reinforcement and embedded items without permitting the materials in segregate. Concrete shall be deposited as close as possible to its final position in the form so that movement of concrete with in the form and consequent segregation are reduced to a minimum. The placing of concrete shall be controlled so that the concrete may be effectively compacted into horizontal layers not exceeding

500 min, In thickness with a minimum of lateral movement and accompanying tendency for segregation. Free water collected in depression in the form shall be removed by billing prior to placing of fresh concrete. The method shall be subject to the approval of the Engineer in charge. Where the concrete is to be laid in layers the contractor shall make suitable arrangement to scrub the surface to the previous pour. This scrubbing and green cutting shall be required to be done soon after the placement of the concrete. The next layer shall not be allowed to be laid unless proper cleaning of the surface of the previous pour has been done. To lay further concrete the old concrete shall be cleaned and raked by chipping and /or sand blasting as directed by the Engineer in charge. So as make it suitable for receiving fresh layer or concrete. No. extra charges shall be payable to the contractor of this work,

#### **TIME INTERVAL BETWEEN MIXING AND PLACING**

(b) Concrete shall be placed before initial set has occurred authorised by the Engineer in charge with in thirty minutes of release from mixers.

#### **CONCRETE ON EARTH FOUNDATION**

(c) Unless otherwise authorised all concrete shall be placed upon clean damp surface free from sanding or running water and never upon soft and mud dried porous earth or upon falls that have not been subjected to approved rolling and tamping to get the desired compaction.

(d) The permissible depth of concrete placed in one lift or course will be determined by the Engineer in charge for each structure. All concrete shall be deposited in approximately horizontal layers not exceeding 0.5 meter in thickness unless otherwise specifically authorised or directed by the Engineer in charge. The placement shall be carried out at such a rate that all concrete surface not yet to grade shall not have reached their initial set before additional concrete is placed thereon. Dowels of M.S. bars if required by the Engineer in charge shall be provided by the contractor. These dowels shall be measured and paid for under reinforcement. Slabs shall generally be placed in one course unless the depth is so great that this produce objectionable results.

#### **VIBRATION OF CONCRETE**

(a) Concrete shall be placed with the aid of mechanical equipment and supplemented by manual layout for hand spreading and tamping. In no case shall vibrator be used to insert concrete inside the forms. The vibrating equipment shall be of the internal type and shall at all time be adequate in number of units and in power or each unit to properly consolidate the concrete from vibration shall not be used unless specifically approved by the Engineer in charge. Internal vibrators shall maintain vibrations of not less than 7000 impulses per minute when in operation which submerged in the concrete the amplitude of vibrations shall be limited to the necessary to produce adequate compaction without causing objectionable segregation. While compaction each layer of

concrete the vibrating head shall touch the concrete in the upper portion of the underlying layer in the same lift. Subsequent layers of concrete shall not be placed until the layer previously placed have been worked throughly as specified. The disturbance of reinforcement embeded in concrete beginning to set or already to set or already set shall be avoided.

#### **FINSHING OF CONCRETE LIFT SURFACE**

(f) The Top surface of each lift shall be finished level by adequate vibration to produce not only the degree of consolidation desired in the surface layer of concrete but also a surface with the desired degree of roughness for bond with the next lift. Surface vibration or excessive surface working including secreting of any king will not be permitted in placing concrete. Coarse gravel portruding from the surface of the lift shall be worked down into the mass during the initial compacting or vibrating operations. All top surfaces not covered by forms and which are not to be covered by additional concrete or back fill shall be carried out slightly above grades as directed by the Engineer in charge and struck of by board finish.

(g) After the top surface of the lifts is finally compacted it shall immediately and carefully be protected from pedestrain frame running water heavy rain or any activity upon the surface which may in any manner affect the setting of the concrete.

#### **PLACING CONCRETE THROUGH REINFORCEMENT**

(h) In dropping concrete through reinforcement care shall be taken that no segregation of the coarse aggregate occurs.

#### **8.14 CONCRETE DEPOSITED IN WATER**

(i) When specifically authorized concrete may be deposited in water. In no case the concrete shall be placed in running water. The method and equipment used shall be subject to the approval of the Engineer-in-charge. When deposited by tramic method, the tramic shall be water right and sumcrently large to permit a free flow of concrete. The shaft shall be kept full of concrete to a point well above the water surface. When the bottom dump bucket method is used, the bucket shall not be dumped until after is has come to rest on the surface upon which the concrete is to be deposited. The bucket shall be provided with suitable cover and bottom doors which when required shall open freely. The bucket shall be completely filled and slowly lowered in order to avoid backwash and when tripped it shall be withdrawn slowly until the entirely free of the concrete with either method, placement shall proceed without interruption until the top of the concrete has been brought to the required level.

#### **8.15 CONSTRUCTION JOINTS**

(a) Concrete surface upon or against which concrete is to be placed and to which new concrete is to adhere, that has become so rigid that the new concrete cannot be incorporated integrally with it, shall be defined as construction joint. All such surface shall be given treatment detailed below before the subsequent pour of concrete

(b) All horizontal construction joints in the work shall be sloped enough to provide free drainage of clean up water. All horizontal joints in exposed faces shall be sharp, level and in straight line. Each joint shall be prepared to receive the succeeding lifts having all laitance and loose or defective concrete, coating and foreign materials removed by means of air water jet before the concrete has taken its final set. If the surface of a lift is congested with reinforcement steel is relatively in accessible, or if for any other reason it is considered undesirable to disturb the surface of the lift before final set has taken place, surface cutting by means of air water jet will not be permitted. In such a case use of wet sand blasting will not be required after set. Where it is not practicable to clean the joints after forms are fixed, the joints shall be cleaned by air water jet or wet sand blasting and washed at the last opportunity prior to fixing or the forms. The surface of such lift shall again be washed with air water may have accumulated since the first clean up.

(c) The method used in disposing of waste employed in cutting, washing and reining of concrete surface shall be such that the water waster shall not subject to the approval of the Engineer-in-charge.

(c) Concrete shall be carefully placed against the faces of the vertical construction joints so as not to disturb the water seal etc, that the concrete has taken its final set the working face joints shall be cleaned and shall receive a coat of cement slurry of the same cement sand proportions as in concrete before placing fresh concrete, suitable shear keys shall be provided in construction joints as per direction of the Engineer-in-charge.

#### 8.16 CURING AND PROTECTION

Concrete shall be suitably protected from injury until final acceptance, giving particular case to all permanently exposed corners and edges. All horizontal surfaces shall be continuously kept wet till time of next pouring. The surfaces for all construction joints and all other exposed concrete surfaces shall ordinarily be kept moist continuous for at least two weeks after placing. When pozzolana is used in the concrete the curing period shall be at least 3 week and the method may be of any approved device. The concrete shall be kept wet for a further period of one week sprinkling water on its surface. All water used in curing shall be free from excessive amount of silt, coloring matter and other impurities which may stain the finished work. No fire or excessive heat shall be permitted near or in indirect contact with the concrete any time. Curing is an important factor in the

strength of the concrete and omission in the regard cannot be rectified later on. There fore if the contractor fails to employ proper means for curing the structure the Engineer-in-charge may supplement contractors resources shall be recovered from the contractor's bills and the decision of the Engineer-in-charge regarding the amount of recovery shall be final and binding on the contractor.

#### 8.18 FINISHING OF CONCRETE SURFACE

Finishing of concrete surface which are prominently exposed to view shall be performed only by skilled workman according to the direction of Engineer-in-charge. The finished concrete shall have form finish as possible without any rendering.

#### 8.19 STRENGTH ON CONCRETE

Cement concrete cubes and/or cylinders shall be tested for 28 years compressive strength. The average strength of all concrete samples on open or any other structure shall not be less than 85% of the specified strength. Also in one span lift or any other structure test 85% of the field test samples shall produce strength than the specified strength referred in the para. If the average strength of a particular mix a open lift or any structure is less that the specified strength of that particular mix it may be accepted at the discretion of the Engineer-in-charge but payment shall be made at reduced rates in proportion of actual strength to the specified strength.

#### 8.20 CEMENT USED IN CONSTRUCTION AND LEFT JOINTS

The cement consumed in slurry of cement mortar in construction and lift joints will be considered as bonafide use on the work. The contractor will maintain proper account for the same as director by the Engineer-in-charge. The proportion of this cement and sand in the slurry of cement will be the same as for corresponding concrete. For purpose of measurements of concrete, payable to the contractor the slurry or cement mortar in construction joints shall be treated as part of cement concrete.

#### 8.21 PLUM CONCRETE

(a) If directed, the contractor shall stone plums in the concrete to the extent specified by the Engineer-in-charge. Stone for plums shall be plus 150 mm. size and minus 225 mm. Stone Shall be of good for aggregate. Plums shall be placed over freshly laid concrete and thereafter concrete shall be vibrated so that plums get embedded in concrete.

(b) For plums concrete, the consumption of cement shall be computed by reducing the quantity of cement prescribed for the mix by the quantum (percentage) of plums directed to be placed.

#### 8.22 CONSTRUCTION JOINTS

Construction joints of designs approved by the Engineer-in-charge have to be provided. The contractor will suitable from the concrete work as per detailed plums for construction joints to be subsequently furnished by the Engineer-in-charge. Nothing extra shall be payable to the contractor for construction joint except for rubber and metal strips which for payment shall be made at the rate of the schedule of bids. Any embedment of G.P. sheet or skipping will be supplied by the Govt. free of cost. If directed by Engineer-in-charge the construction joints shall be thickly coated by max phalt 80/100 for which no extra payment shall be made to the contractor.

#### 8.23 FIXING OF OBSERVATION INSTRUMENTS

(a) Observation instruments and grout pipe may be installed and located as per instruction of the Engineer-in-charge. Observation instruments and grout pipe will be supplied by the Govt. free cost will be placed in position by the contractor. He will also ensure that these are not damaged during construction.

(b) Nothing extra shall be paid for this work.

#### 8.24 MESUREMENT AND PAYMENT

(a) General measurement of concrete for payment will be made only to the neat lines of the structures as indicated on the drawing or as established by the Engineer-in-charge. In measuring concrete for payment the volume of all recesses openings, cavities and depressing will be deducted. No deductions will be made for reinforcement bars, pipe and miscellaneous metal works etc. In the event of the excavation having been executed beyond limits prescribed in the drawings or by directions the contractor shall fill the same with similar grade of concrete as in the structure and no extra payment shall be made on this account.

(b) If reinforcement steel less then 0.5% by volume of concrete has been used, it will be regarded as plain cement concrete for payment purpose.

(c) Variation in Cement Content.

(i) The rates tendered by the contractor are per cubic meter of concrete laid and are based on the consumption of cement specified for the various items in the schedule of quantities and bids. If the Engineer-in-charge prescribes higher or lower cement content on the basis of design of mix, the

contractor will comply with it and unit price of concrete so laid shall be increased or decreased as the case may be at the rate of issue rate plus one rupee per bag of cement prescribed more or less than that specified in the schedule of quantities and bids.

(ii) In case aggregate of slightly higher gradation other prescribed is used by the contractor for his convenience after obtaining approval of the Engineer-in-charge the cost of the extra quantity of cement, if required to be used to make up for the loss of strength, shall be born the contractor.

(d) The unit rate of concrete work excludes the cost of reinforcement which shall be paid for separately according to provisions in appropriate clauses of the specification, however the cost of shuttering and centering work is included in the unit rate of plain concrete and reinforced cement concrete.

## CHAPTER IX

### 9.00 CENTERING AND SHUTTERING

#### 9.01 GENERAL

Forms for placing the concrete shall be provided by the contractor and shall be of mild steel or other approved material. The type, shape, size quality and strength of the material of which the forms are made shall be subject to the approval of Engineer-in-charge. Forms shall be used, wherever necessary. To confine the concrete and shape it to the required lines or to ensure against contaminating of the concrete by materials caving in or sloughing in from adjacent surface left by excavation. Forms shall have sufficient strength of withstand the pressure resulting from placement and vibration of the concrete and shall be maintained rigidly in correct position. Forms shall be substantial and unyielding to that concrete placed in them conforms to the designed dimension and colures. Forms shall be sufficiently tight to prevent loss or mortar form the concrete. Additional form ties shall be used as and when necessary. The cost of all labour and material for foms and for any necessary treatment or coating of forms shall be included in the unit rate tendered in the schedules of quantities and bids for items for which can ering and shuttering is required.

After the forms are erected and before any concrete is placed the forms shall be inspected for line, leave and grade with respect to the structure adequacy, freedom from dirt, fixtures, keyways, openings etc.

#### 9.02 FORM SHEATHING AND LINING

Wood sheathing or lining shall be of such kind and quality or shall be so treated with the approval of the Engineer-in-charge that there will be no chemical deterioration or discoloration of

the formed concrete surface. The type and condition of form sheathing and lining, the ability of forms to with stand distortions caused by the placement and vibration of the concrete and the workmanship used in form construction shall be such that formed surface, after being finished, will conform to the applicable requirements of the specifications pertaining to finished formed surface.

#### 9.03 FORM TIES

Embedded metal rods used for holding forms shall remain in position and shall terminate not less than 38 mm. in the concrete clear of the formed surface where the maximum size of aggregate in the concrete is 58 mm. or less. Embedded fasteners on the ends of rods shall be such that their removal will leave holes of regular shape. Ties rods shall be cut off flush with the surface of the concrete after the forms are removed.

#### 9.04 CLEANING AND OILING OF FORMS

At the time the concrete is placed in the forms the surface of the forms shall be free encrustations of mortar, grout or other foreign materials that would contaminate the concrete or interfere with the fulfillment of the specification requirement relative to the form surface. Before concrete is placed, the surface of the forms shall be oiled with a commercial form oil or treated with other form coating material which will effectively prevent sticking and will not stain the concrete. For wood forms, form oil shall consist of straight, refined plain paraffin mineral oil or other form coating material satisfactory to the Engineer-in-charge. For steel forms oil shall consist of refined mineral oil suitably compounded with one or more ingredients which are appropriate for the purpose or other form coating material.

#### 9.05 REMOVAL OF FORMS

Forms shall be left in place until removal is authorized and shall be removed with care so as to avoid injury to the concrete. Form removal shall be authorized and forms shall be removed as soon as practicable in order to avoid delay in the water curing also to enable earliest practicable repair of surface and imperfections as may be ordered by the Engineer-in-charge for each job separately and the repair of surface and imperfections as may be ordered by the Engineer-in-charge for each job separately and the contractor shall not remove any form earlier than the time so specified by the Engineer-in-charge. The form shall be removed with care without shock or vibration and without consequent injury to concrete.



#### 9.06 SCAFFOLDING FOR CENTERING AND SHUTTERING

Suitable scaffolding for centering and shuttering shall be provided by the contractor whenever necessary. He shall alter or strengthen the scaffolding if required by the Engineer-in-charge but the contractor shall always remain responsible for the safety of workman and workman and works as well as for the payment of compensation for any damage or injury which may be caused by the failure of scaffolding. Nothing extra shall be paid on this account.

#### 9.07 EMBEDMENT ETC

The contractor shall give all facility of erection and embedment's of accessories which do not form a part of this contract. In case any of the embedment passes through the form work the latter shall be suitably cut and adjusted. If so required by the Engineer-in-charge the contractor shall provide for blackouts for embedment's as per plans furnished by the Engineer-in-charge and no payment and no payment shall be made for this job.

9.08 (a) Steel Scaffolding and Steel shuttering plates, if available, may be supplied by the department at the divisional stores on hire @ 1% of cost per month. The scaffolding and the shuttering plates shall be returned by the contractor to the Divisional Stores in good condition.

(b) Damaged scaffolding of shuttering plates shall not be taken back and their cost shall be recovered from the contractor's bills. The decision of the Engineer-in-charge regarding their cost be final and legally binding on the contractor.

9.09 No Payment shall be made to the contractor on account of centering and shuttering as the unit price of cement concrete/reinforced cement concrete is inclusive of the expenditure on account of centering and shuttering.

### CHAPTER X

#### 10.00 STEEL REINFORCEMENT

##### 10.01 GENERAL

The contractor shall cut, bend and place all steel reinforcement including deformed bars as indicated on the drawing or otherwise required or as directed. The steel for reinforcement will be provided by the Government as per conditions of the contract. The item will include cost of steel handing carriage of all materials, shaping, cutting, bending, binding, welding and placing in position of reinforcement steel with the help of spacer blocks and metal chairs including cost of binding wire

and cost of welding. The contractor shall quote his rate per metric tonne including cost of steel. Steel required for stays, chairs and supports which are permanently embedded in concrete shall also be measured. Payment for it shall be made at the issue rate and no labour charges for cutting, bending and placing shall be payable. The requirement of stays, chair and supports shall be subject to approval of the Engineer-in-charge.

#### 10.02 QUALITY OF REINFORCEMENT

All steel used for reinforcement shall be free from oil, grease, dust, metal scales, kinks, rust, shop scale or any rolling defect or bend other than those required as per drawing. All bars shall be bent cold to shapes and dimensions as per drawing and as directed by the Engineer-in-charge.

#### 10.03 PLACING OF REINFORCEMENT

(a) Before placing the reinforcement bars in position all bars shall be thoroughly cleaned. All bars shall be of the size and length as per design and no substitution shall be made, unless approved by the Engineer-in-charge. All reinforcement shall be placed in position in accordance with detailed drawing well in advance of concreting to permit inspection, checking and measurement and secured in position such that it will not be disturbed during placing and vibration of concrete. Reinforcement bars shall have to be placed in position by binding wire of suitable gauge at all intersection or by tack welding. Spliced bars shall provide sufficient overlap to transfer stresses by binding or welding.

(b) Vertical shear stirrups and spacers shall be securely fastened to the longitudinal bars by means of binding wire or tack welding, as approved by the Engineer-in-charge. Whenever possible, the contractor shall remove the spacer blocks provided their removal does not disturb the concrete. Exposed reinforcement intended for bonding or dowelling between two placements of concrete shall be protected from being disturbed and shall be thoroughly cleaned prior to subsequent concreting.

#### 10.04 JOINT IN REINFORCEMENT BARS

(a) The position of joints in reinforcement bars shall be subject to the approval of the Engineer-in-charge. These shall be suitably placed to avoid the concentration of joints at any one section.

(b) The reinforcement bars shall be jointed by simple overlap, welding, or as directed by the Engineer-in-charge. The approximate bar diameter for which different type of joints may be adopted are as below:

(i) Bars upto 25 mm. diameter overlap joints.

(ii) Bars above 25 mm. diameter-welded joints. The range is subject to the modification at the discretion of the Engineer-in-charge.

(c) OVERLAP JOINT

The length of overlap joints shall be 45 times the dia of the bars for round bars and 54 mm. dia for Tar bars or as specified by the Engineer-in-charge and the bars will be securely tied down by 16 S. W. G. I. wire or by tack welding.

(d) WELDED JOINTS

Reinforcement bars above 25 mm. diameter may at the discretion of the Engineer-in-charge be provided with welded shall be provided by placing the bars on end in position splicing by an angle iron of equivalent area or alternatively 6 D overlap welded joint shall be provided . The length and thickness of weld of the bar shall be such that the strength of the joint shall not be less than that of the bar. The welding shall conform to I.S. 816 (1656) 'Code of Metal Arce Welding for General Construction in Mild Dteel'. The joints shall be staggered such that there are not more than 33% splices in one line. The rate of steel and reinforcement shall include welding of joint also.

#### 10.05 MEASUREMENT AND PAYMENT

(a) Measurement of steel reinforce will be made for the length of steel required to be placed according to the drawing or as per directions of the Engineer in charge including standard hooks and over laps and bend stays chairs and supports which are permanently embedded in concrete and also the weight of angle used in making welded joints. No payment for binding wire and welding shall be made. The additional length of bars placed by the contractor with the direction of the Engineer in charges shall be treated as bonafide use as per clause 8.01 of the contract and its cost shall be recovered at the normal rates as per provided in schedule of materials.

(b) The weight as specified by the manufacture's list of catalogues shall be taken as standard for purpose of computing the total weight of steel used as reinforcement.

#### **11.00 WELL FOUNDATIONS :**

##### **11.01 GENERAL**

This work shall consist of construction of well taking it down to the indicated levels by open dredging of the soil and other materials plugging the bottom and top filling the inside and

lying the well cap in accordance with the details shown on the drawings or as approved by the Engineer in charge.

The well curb and well cap shall be in reinforced cement concrete the bottom and top plug in plain cement concrete and the well steining in plain or reinforced cement concrete or in brick masonry laid in cement mortar as indicated on the drawings or in schedule of bids.

#### 11.02 CURB

The dimension and shape of the curb including cutting edge shall be strictly in conformity to drawing. The cutting edge shall be fabricated from M.S. Angle Iron. Flat plate as specified in the drawings by continuous welding and shall be firmly fixed to curb and steining by bond bars. If the structural steel of required size as shown in drawing are not available the contractor will use alternates section as directed by the Engineer in charge.

The cutting edge and the well curb shall be placed at the correct location and shall be initially levelled it may be precast or cast insitu.

For laying the cutting edge of the curb the excavation shall be carried out up to 0.30 meter above the sub soil water level.

All reinforcement work and steel cutting edge shall be inclosing of cost fabrication erection of cutting edge. cutting bending welding carriage handing labour T&P and other incidental charges required for completion of work and shall be measured in the item of reinforcement given in schedule of bids.

All concreting in the well curb shall be done in one continuous operation.

#### 11.03 STEINING.

The dimensions and shape of the well shall strictly conform to those shown on the drawings.

The steining of the well shall be built in one straight line from bottom to top and in no case there shall be any kinds in the steining the work being checked carefully with the aid of straight edge of length approved by the Engineer in charge. In no case plumb bob or spirit level shall be used to build the steining.

Steining built in the first stage not be more than 2 meters and in subsequent stages it shall not exceed the diameter of the well of the depth of well sunk below the adjoining bed level at a time. The height of steining built at any time shall be such that the well does not loose

stability. As far as possible stages of work shall not be kept at the location of joints in the vertical steining bars.

The height of steining shall be calibrated by making at least 4 gauges distributed equally on the outer periphery of the well each in the form of a 10cm wide strip painted horizontally on the well every meter mark shown in paint. The gauges shall start with zero at the bottom of the well curb concrete. Making of the gauges shall be done carefully with a steel tape.

After sinking of a stage is complete all damaged portions of steining at top of the previous stage shall be properly repaired before construction of the next stage.

All necessary precautions shall be taken against any possible damage to the foundations of existing structures in the vicinity of the wells prior to commencement of dredging from inside the well.

The dredged material shall not be allowed to accumulate over or near the well. It shall be dumped as far away from the well as possible and then continuously removed.

In case the river stream flows along one edge of the well being sunk the dredged material shall not be dumped on the dry side to the bank but on the side on which the river current flows.

Very deep sump shall not be made below the well curb as it entails risk of jumping (sudden sinking) of the well normally the depth of sump shall not exceed 3.00 meters below the level or the cutting edge unless otherwise specifically permitted by the Engineer in charge.

In case a well sinks suddenly and with a jerk the steining of the well shall be examined to the satisfaction of the Engineer in charge to see that no damage has occurred to it.

The sinking operation should be carried on with greatest caution whenever cutting edge approaches the junction of different type of strata.

In pneumatic sinking the well shall not at any time be dropped to a depth greater than 60cm. by method of removing the air pressure there in.

#### **11.04.6 Tilt and Shifts:**

Tilt and shift of each well shall be measured regularly during the entire sinking operation with the help of gauge marked on well or by another suitable method. Observations to this effect shall be taken at each stage of the steining simultaneously as the sinking proceeds necessary measures taken to contain the tilts and shifts within the permissible limits. This

may be done by putting eccentric kentledge by regulation of grabbing or by pulling or by pushing the well or by other means.

Unless otherwise specified the tilt of any well shall not exceed 1 to 8 and the shift shall be more than 5% outside the diameter of the circular well subject to a maximum of 150mm.

The tilts and shift shall be measured at both axes of the well. If the permissible limits of tilts and shifts specified above are exceeded in any finally sunk well the contractor shall suitable position the superstructure including extra sinking of well to eliminate the effect of tilt and shift at his own cost after taking approval of Engineer in charge.

#### **11.04. 7 SAND BLOWING**

During the sinking and blowing shall be controlled. It can be controlled by keeping sufficient weight on the well restricting the dewatering and by putting grass pools around the periphery of the well on outside. In case of sand blowing further sinking of the well shall be done after sand blowing has stopped.

#### **11.04.7 MEASUREMENT AND PAYMENT**

- (a) All methods of sinking including employment of divers and other equipment except pneumatic sinking are included in the rate and shall be deemed to come under the definition of normal methods. No claim shall be entertained in respect of difficulties met during sinking of wells.
- (b) Rate of sinking shall cover sinking through all kinds of strata including sand silt clay kankar shingle and boulder etc.
- (c) Rate of sinking of wells shall be payable from spring level to the bottom of well curb irrespective of actual level at which the contractor might lay the curb. For particular well any excavation required to place the curb a lower level than the existing ground level only quantity of earth required to be excavation required to place the curb a lower level than the existing ground level only quantity of earth required to be excavation to attain the desired level shall be payable under earthwork in excavation.
- (d) The tendered rate for well sinking (except for pneumatic sinking) shall include cost of all materials labour & P handling cartage to site including all taxes including cost of kentledge loading etc. For completing this item work. The shape sizes number and depth of well can be modified by Engineer in charge. The rate quoted by contractor shall be modified in proportion to the increase or decrease in the outer sectional area.

#### **11.05 BOTTAM PLUGGING**

Before bottom plugging is resorted to it shall be ensured by test boring that the soil properties of the foundation strata encountered are identical to those adopted in the design and the strata extends for a sufficient depth below the foundation level to not less than twice the diameter or twice the least dimension of the well. In case the soil encountered is inferior to that adopted in design the well shall be redesigned adopting the soil properties actually encountered and the founding level of the well duly revised.

Each well after being sunk to its final position and ensuring that the steining has not developed cracks for its length it shall be suitably plugged at its bottom

The plugging shall be done only after obtaining approval from the Engineer in charge. The concrete for the bottom plug shall not be leaner than M-150 unless otherwise specified. The quantity of cement shall be increased by 10% for laying concrete under water.

The water level inside the well shall not be lower than the spring level while making the sump or removing the loose material from the bottom of the well when the well is founded on cohesive soil it shall be ensured that no material is sticking to the well curb. The depth of bulb in case of sandy strata shall not be less than 60 cm.

Before commencing plugging all the loose material from the bottom of the well shall be removed and the depth of the bulb so formed more than  $\frac{1}{6}$  the diameter of the well shall be filled up with sand and then with concrete.

Concrete for the plug shall be laid by Tremie pipe method by skip boxes or by any other method and shall be laid evenly inside the well.

Least disturbance shall be caused to the water inside the well while laying concrete in the bottom plug. Concrete shall be done in one continuous operation till dredge hole is filled up to the required height & there after sounding shall be taken to ensure that the concrete has been laid to the required height. There should be no flow of water through concrete till it is set.

Concrete is laid shall not be disturbed in any way for at least 14 days.

In order to check any rise in the level of the bottom plug sounding should be taken at the close of concreting and for 3 days there after once every day.

## MEASUREMENTS

The measurement of the concrete in bottom plug shall be taken on the basis of the actual quantity of cement used for which a consumption register shall be maintained showing the batch wise consumption of cement.

#### **PAYMENT**

The rate of concrete in bottom plugging shall include cost of all materials carriage mixing placement labour charges mix shall be as indicated on the drawing. The concrete should not be deposited under water.

#### **TOP PLUG**

After filling the sand upto the required height top plug shall be laid over it. Thickness of the plug and the cement concrete mix shall be as indicated on the drawing. The concrete should not be deposited under water.

#### **SAND FILLING**

A minimum of 3 days after the bottom plug has been laid shall elapse before the well is filled with sand before filling with sand the height of the bottom plug shall be verified.



## CHAPTER XII

### 12.00 CEMENT POINTING

**12.01** This item shall be performed on the face of brick work of abutment, pier toe walls and wing walls or in any of the portion of structure as directed by the Engineer-in-charge.

**12.02** The mortar shall be one part of cement and 2 parts of sand by volume of fineness modulus not less than 1.2.

**12.03** Sand for pointing shall conform to I.D. Specification No. 8 except its fineness modulus may be low but not less than 1.2.

**12.04** After racking of joints the surface shall be thoroughly cleaned and kept wet for at least 14 hours before pointing. The joints shall be filled in with means of trowel and finished strick. The edge groove on either side of the joints shall clearly defined in two straight lines. In no case shall the mortar be allowed to spill over the edge or spread over the inner surface of the bricks. The vertical grooves shall extend to the centre of the horizontal grooves. The pointed surfaces shall be kept wet for at least 10 days at contractors cost.

**12.05** The tendered rate shall be for complete work including cost and carriage of all labour T. & P. and curing required for complete work.

## CHAPTER XIII

### 13.00 1ST CLASS BRICK WORK

**13.01** The work shall be carried out as per I.D. Specification No. 37.

**13.02** Generally the 1st class bricks shall conform to I.D. Specification No. 19 but bricks as available in the market of near vicinity and subject to the approval of the Engineer-in-charge may be accepted. The bricks shall be supplied by the contractor. Before the carriage of bricks to site, they shall be got approved at the kiln site by the Assistant Engineer-in-charge of the work. Any substandard brick carried to site shall be rejected and the contractor shall have to remove the rejected bricks at his own cost within 24 hours of their rejection.

**13.03** All brick shall be soaked in clean water tanks for a period of at least three hours before use and the contractor shall provide tanks of sufficient capacity to admit simultaneous immersion of one days use of bricks.

**13.04** Sand to be used for mortar shall conform to I.D. Specification No. 8 except that its fineness modulus shall be 1.02 which shall be arrived at by mixing local Ganga sand with Badarpur sand or Haldwani sand in the appropriate ratio.

**13.05** The mortar shall be mixed by concrete mixer. No hand mixing shall be allowed unless otherwise permitted by the Engineer in charge in specific cases. The mortar on mixing shall be consumed, preferably, within 30 minutes and in no case after the initial setting has begun. Retempored, partially set or lumpy mortar shall not be allowed to be used. Shall be rejected and removed from the site by the contractor at his own cost.

**13.06** Control shall be exercised on water content and it shall be ensured that slump is kept between 4 cm. or 5 cm. The quantity of water to be added shall not exceed 46 liter per bag of cement for 1:4 cement mortar.

**13.07** Brick work shall be done in horizontal courses. Care being taken that the joints are straight and the thickness of joints shall be normally 1.25 cm but in order to suit the variation of size of bricks joints of 1.0 cm to 1.5 cm shall also be accepted. Mason cord shall always be spread while laying masonry in courses. Wooden templates shall be used to check the straightness of masonry faces. Nothing extra shall be paid to the contractor for curvature, splays cutwaters or champhering.

**13.08** All brick work shall be strictly in accordance with detailed drawing supplied to the contractor, true to dimensions and in proper bond. If the brick work does not conform to the prescribed size, shape and quality the contractor shall have to dismantle it at his own cost.

**13.09** All joint shall be raked to a depth of 10 mm. while the mortar is still green at the end of each day's work on faces receiving cement pointing or plaster. On faces where pointing or plaster is not to be done, such as back of abutments and wingwalls the joints shall be trowelled smooth & flush with the face as is done in flush pointing for which nothing extra shall be paid to the contractor.

**13.10** During construction the brick work shall be protected from the effects of sun, frost and rain by the provision of suitable covering and shall be kept moist for period of at least 14 days after laying. At the end of each day's work the top of the walls shall be flooded with 3 cms. of water, small mortar edging being made for the purpose. In case the Engineer-in-charge is not satisfied with the curing being done by contractor he may employ extra labour for the work without giving any notice to the contractor. The cost of such extra labour shall be recovered from the contractor, and the decision of the Engineer-in-charge regarding the extra cost shall be made final and legally binding on the contractor.

**13.11** If any steel is placed as reinforcement in the brick work, payment for it shall be made separately under the item of steel reinforcement. No extra payment shall be made under brick work.

**13.12** The rate for brick work in cement mortar shall include layout, scaffoldings, profiles, templates, tools and plant required for the work and curing cost of all materials, handling carriage and labour etc. No extra payment shall be made for face work, mitres, splays, mouldings or for cutting and rubbing to shape.

## **CHAPTER XIV**

### **14.00 COPPER WATER STOPS**

**14.01** The copper sealing strips conform to the size and shape provided in the construction drawing to be issued by the Engineer-in-charge. They shall be cut to proper shape and size, carefully brazed at bends and properly fixed with shuttering. The sealing strips shall be of good malleable quality of 22 gauge 320 mm wide soft (Annealed) to relevant I.S.I. specification. Overlaps in brazing shall be 25 mm. or as per direction of the Engineer-in-charge. The sealing strip shall be properly embedded in concrete of minimum thickness of 115 mm on either face. While concreting, care shall be taken that coarse aggregate does not surround and damage that seal. Care shall also be taken to prevent to "U" of sealing strips, from getting filled up with concrete or any other materials which may restrict its functioning. Adequate provision shall be made to support and to protect the sealing/strips during the progress of the work.

### **14.02 MEASUREMENT AND PAYMENT**

The rate shall include supply of copper sealing strip, its handling, cutting, forming, brazing, fixing and maintaining them in position. The overlaps shall not be paid extra. The rate shall also include the cost and labour for coating of the scales by approved materials thick coating of concrete function by mixphalt 80/100 and cost of joint fillings and its placing

## **CHAPTER XV**

### **15.00 RUBBER WATER STOPS**

**15.01** The water stops shall be of central bulb type, anked 225 mm. wide. The two end solid bulbs shall be off 25 mm. diameter and the central hollow bulbs shall be to 38 mm. diameter and 22 mm. inner dia. The thickness of flat portion shall be 10 mm.

**15.02** The water stops shall be cut to proper length, vulcanized at bends and joints and properly fixed with the shuttering. The water stop shall satisfactorily embedded in concrete of

minimum thickness of 115 mm. on either face to the water stop. The vulcanizing shall be such as to form continuous water tight diaphragms in the joints. White concreting care shall be taken that coarse aggregate does not surround and damaged the water stop. Adequate provision shall be made to support and protect the water stop till it embedded and also subsequently till the completion of the work.

### **15.03 RATE AND MEASUREMENT**

The rate shall include the cost of all materials, moulding water stop, their installation, field splicing, vulcanizing all tools, equipment and all balour etc. Overlap shall not be measured extra. The rate shall also include cost of joint filling and its placing and thick coating of mexphalt in concrete junction.

## **CHAPTER XVI**

### **16.00 DECORATIVE CEMENT PLASTER ON BRICK WORK**

**16.01** The total thickness of the decorative plaster shall be laid in 2 layers. The thickness of 1st layer shall be 12 mm and it shall be in 1:4 cement mortat. The thickness of the 2nd layer shall be 8 mm and it shall be laid 1:3 cement mortar.

**16.02** The joints of the brick work shall be raked to a depth of 12 mm. and the surface to be plastered shall be thoroughly washed and all cement mortar or loose materials removed. The surface shall then be kept wet for 2 day before plastering.

**16.03** To ensue fairly even thickness and truly plane surface (Vertical in the case of well etc) patches of plaster about 150x150 mm. or narrow strip of plaster about 150 mm. wide shall be first applied about 3 M apart to act a gauges.

The plaster shall then be applied and brought to a true smooth surface. It shall be floated with wooden trowels to produce a sandy granular surface Steel or Iron trowels shall not be used on this layer. After a laps of about 24 hour the surface shall be roughened with iron wire brushed to provide proper joint with the top layer.

The second layer shall be laid after a laps of about 48 hours. It shall be finished smooth with steel trowels an gutkas Grooves shall then be cut according to the pattern approved by the Engineer-in-charge. The grooves shall have very straight lines and fine edge.

**16.04** All molding shall be worked true to drawing with a properly constructed template and drawn neat clean and straight. All angles and junctions shall be carefully finished and the former. If so

specified or shown in drawings, shall be rounded with properly constructed template made to the correct surface measurement.

**16.05** The plaster shall be protected from sun, rain and at the contractor's expense and by such means as the Engineer-in-charge may approve. Ordinarily to protect the plaster from sun, the whole surface shall be covered with wet bags. The contractor shall keep the plaster continually wetted for a period of 10 days after application. Any in the plaster or any part which sounds hollow when tapped or are found to be soft or otherwise defective shall be and replasterd at the contractor's expense.

**16.06** The sand used in cement plaster shall conform to I.D. Specification No. 8 except that its F.M. shall not be less than 1.2 which shall be obtained by mixing coarse sand with Ganga sand.

**16.07** The rate shall cover the cost and carriage of all materials and the T. & P. required for the completion of work including scaffolding.

## **CHAPTER XVII**

### **17.00 DRAINAGE SPOUTS**

**17.01** To check longitudinal flow along the decking of the bridge and to drain out water form the decking slab drainage spouts shall be provide ob both sides. The spout consist of 5 mm. dia G.I. Pipe 4 nos. per span and their length shall be such that they shall project of 25 mm. beyond the bottom of the decking slab. The upper end of the pipe shall be provided with iron grating of 25 mm. square mesh fabricated from 8 mm. M.S. bars and welded securedly to the pipe top. The spouts shall be fixed vertically along the inner edge of the curb, keeping their top flush with the decking slab. The spouts shall be supplied by the contractor and the tendered rate shall included the cost and carriage of the G.I. pipe and its labour charges for fixing including provision of grating on top.

## **CHAPTER XVIII**

### **18.00 EXPENSION JOINTS IN DECKING SLAB**

**18.01** Expansion joints shall be provided at each end of the slab for every span. The joints shall be fabricated according to the drawing or the instruction of the Engineer-in-charge. All the structural steel required for the fabrication of the joints shall be supplied by the department. The joints shall be fixed in position only after the approval by the Engineer-in-charge.

**18.02** The tendered rate shall include the cost and carriage off all the materials required for the fabrication of the joints and labour required for its fabrication and fixation at site, including the cost of joints filler. The rate should be tendered per meter length of the expansion joints at site, including

the cost of expansion joints filler. The rate should be tendered per meter length of the expansion joint for the finished item at site. The payable length of the joints shall be measured between the kerbs.

## **CHAPTER XIX**

### **19.00 PLATE BEARING/ROCKER & ROLLER BEARING**

**19.01** The bearing shall be supplied by the department free of cost..... and the contractor shall cart them to site at site own cost. If any bearing is lost or damaged by the contractor it shall be replaced by the department but its cost shall be recovered from the contractor at one half times its actual cost. Bolts and nuts for fixing shall be supplied by the department free of cost along with the bearing. The rate shall be tendered for a set of two one on each end of beam and shall include all the operation mentioned above including labour required for fixing the bearing in exact position.

## **CHAPTER XX**

### **20.00 GRADED FILTER IN APRONS**

#### **20.01 GENERAL**

Graded filter shall consist of layers of coarse sand, pea gravel, stone 25 to 75 mm. or as per drawings or instructions of the Engineer-in-charge shall be provided underneath the concrete blocks. The thickness of layers and size of various grades of materials shall be as directed by the Engineer-in-charge. All material shall be arranged by the contractor at his own cost. The tendered rate shall be for complete work including preparation of sub grade collection cost and carriage of all materials, clearing, placing and packing in layers. Labour and T. & P. and other incidental charges required for all completion of the job as per specifications.

#### **20.02 LAYING**

Before starting of graded filter the subgrade shall be. Leveled thoroughly at the required elevations. The filler material shall be cleaned thoroughly if necessary. To remove any earth clay and other organic impurities. The sand and shingle or stone ballast shall be well graded. Materials shall be got approved by the Engineer-in-charge before use.

**20.03** The filter material shall be laid in layers of thickness and directed by the Engineer-in-charge. It shall be well packed and graded. Special Care shall have to be taken by the contractor to ensure that there is on mixing of any two layers of filter material. Care should be taken by the contractor

after laying of filter to protect it from entry of un-desirable material by covering with gunny bags. etc. till the concrete blocks are laid.

## **CHAPTER XXI**

### **CEMENT CONCRETE BLOCK APRONS:**

#### **21.00 GENERAL**

Cement concrete block of size as indicated in the drawings or as directed by the Engineer-in-charge with gaps 7.5 or 5m in between or as directed by the Engineer-in-charge shall be laid. They shall be laid in U/s over the layer of loose stone or block kankar and in D/S over the graded filter. The specification of material and laying of concrete shall be the same as per section VIII except that plumps shall be used. The tendered rates shall be for complete work including cost and carriage of all materials shuttering concreting and all other charges required for completion of work.

#### **21.01 LAYING**

The blocks shall be laid over the graded filter or on kankar apron the surface of which shall be thoroughly levelled before the blocks are cast. The blocks shall be cast at site and shall be regular in size with all corners at right angle to each other. Stone boulder of size 150 mm and above but minimum 125 mm sound free from flaws, injurious veins, crystals and weathered practical shall be used as plumps in concrete. These shall be cleaned and washed and shall be free from all trash and organic matter. After mixing the concrete shall be transported and placed in forms plumps will then be placed on the so laid concrete and the concrete vibrated so that the plumps get embedded in the concrete.

In no circumstances laying of concrete shall be allowed over prepacked plumps in the forms as this may lead to voids and cavities. The curing shall be done for 2 weeks after laying. All other specification of form work and concrete shall also apply.

#### **21.02 FILLING JHRIS OF FILTER BLOCKS**

**21.02.1** Filling and packing with well graded shingle or stone ballast shall be done in the intervening spaces of cement concrete block shingle or stone-ballast of size specific by the Engineer-in-charge shall be arranged by the contractor at the own cost.

**21.02.2** Before filling the jhris these shall be cleared of all undesirable materials and washed. They shall then be filled and well packed flush with the top of concrete blocks.

**21.02.3** The rate shall include cleaning jhiris and then filling with above material including cost of all material and labour charges complete which shall be measured in cubic meters.

## **CHAPTER XXII**

### **22.00 BROKEN STONE PITCHING**

The broken stone shall be hard clean non-porous and composed of rough and non laminated stone material. The stone may be quarried either from Delhi or Fatehpur Sikri and the quality shall be got approved by the Engineer-in-charge size of stones shall not be less than 255

mm in any one direction.

**22.01** Pitching consisting of specified thickness of broken stone. The material shall be arranged by the contractor at his own cost. The tender rate shall be for completed work including collection cost carriage of materials handling and packing in layers labour and T&Pay and other incidental charges required for the completion of the job satisfactory as per specification.

**22.02.1** The broken stone shall be hand picked and laid systematically and finally to the grade of specified thickness. Top of stone shall conform to the final profile. The packing of the stone shall be perfectly tight. The space of joints between the adjacent stone edges shall have to be dressed so as to fit well with the edges with the stone already in position leaving minimum voids. The stone shall be so tightly packed so that no stone shall be removed by hand.

**22.02.2** The pitching shall be laid over graded filter material on sides slopes and will be in single layer of 225 mm thick. In case the depth is more than the desired depth the measurement shall be taken of the depth as indicated in drawing. The pitching of the reduced depth up to 10% in patches shall be accepted and actual measurement of depth shall be paid. No void deduction shall be made.

### **22.03 STONE APRON**

Stone apron shall be laid in two layers of about 225mm thick each or of thickness as specified by Engineer-in-charge. It shall be laid as per detailed specification of stone pitching. The minimum size of stone in any direction shall not be less than 150mm. The contractor shall lay the II<sup>nd</sup> layer only after the inspection of I<sup>st</sup> by the Engineer in charge.

## **CHAPTER XXIII**



### 1- CLASS DRY BRICK PITCHING

Only first class bricks as available in near vicinity shall be used as approved by the Engineer-in-charge. The pitching shall be done as shown in the drawing conforming to the lines and grades as shown in the drawing or as ordered by the Engineer-in-charge.

The rate shall include all cost of material carriage to site including all labour T&P involved.

### MEASUREMENT AND PAYMENT

The work of dry brick pitching shall be measured in sq.m. to the extent as shown in the drawing.

SI.No.	Item of work	Unit	Quantity of cement to be issued	
			Crushed Aggregates	Natural Aggregates
1	Cement Concrete	Cu. M.	7.90	7.56
	1:1.5:3 (M-200)	Cu. M.	6.10	5.76
	1:2:4 (M-150)	Cu. M.	4.30	4.15
	1:3:6 (M-100)	Cu. M.	3.40	3.25
1:4	1:4:8 (M-80)	Cu. M.		
2	1st class B.W. in Cement Mortar			
	1:3	Cu. M.	2.60	
	1:4	Cu. M.	2.00	
3	Decorative plaster (20mm. thick)			
	(12mm. thick 1:4)	Sq.M.	0.20	
	(8mm. thick 1:3)			
4	Cement plaster		0.14	
	(12mm. thick 1:3)		0.11	

(12mm. thick 1:4)

5

Cement Pointing

1:2

0.055

EXECUTIVE ENGINEER

## MATERIALS

### 1.0 MATEIALS TO BE SUPPLIED BY THE DEPARTMENT

**1.01** The following materials will be supplied by the department at the rates and stores specified against each item.

SI.No.	Material	Site of Issue	Unit	Issue Rate
1.	Cement	M.S./For Steel bars	Bag	Rs.
2.			Metric Ton	Rs.
3.	Sheet piles		do	Rs.
4.	M.S. Angles and M.S. pleates channel& girders		do	Rs.
5.	Bearing Plates-do		Nos.	free of cost
6.	Maxphalt 80/100		per drum	
7.	R.C.C. pipe 300 was of NP-2 and colours for cost at Escape complex 93.00M.G.C.			

**102.** Any other materials if available may be supplied to the contractor with written permission of the Engineer-in-charge at departmental stores at prevailing issue plus 100% supervision charges.

**103.** All material so supplied by the Deptt. to the contractor will become the preparty of the contractor but shall not no any account be removed form the site of the work until the work is certified as complete by the Engineer-in-charge and shall at all times be open to inspection and checking. The balance of the Government materials after completion of work shall be returned back by the contractor to the departmental store from which it was issued. If returned back at different site the carriage charges to the specified stored shall be recovered from the contractor or payable to the contractor as the case may be.

**104.** In case the materials are issued to the contractor from stores other than mentioned in para 1.01 the difference in carriage charges involved from the site of actual issue above those from the sites specified in clause 1.01 shall be determined by the Engineer-in-charge which shall be final and legally binding on the contractor.

**105.** The labour for weightment and counting at the time of taking delivery of the materials or their return back to stores shall e supplied by contractor.

- 106.** The use of cement for making bench marks, layout pillars, curing tanks etc. shall be tanks as bonafide use of cemet and the cost of these purposes shall be recovered at the rate specified in Co. 5 Para. 1.01 above.
- 107.** The contractor shall not be entitled for any claim for compensation from the department for any loss suffered by him on account of any supply of materials to be supplied by the department. In case of succd delay in the supply of materials, the contractor may be granted extension of time for the work as considered reasonable by the competent authority of the department. This extension of time shall be accepted as filter by the contractor.(Material)
- 108.** The department will furnish all entraining agents and admixtures of the contractor at the Central stores of the division free of cost. the use of such admixtures and agents shall be made as per instructions of the Engineer-in-charge. The cost of cartage, storing, handling, batching and mixing them shall be borne by the contractor and shall be included by him in unit price tendered for concrete.
- 109.** No material which may be issued by the Govt. to the contractor for use on works shall be utilized or otherwise off by him for purpose other than those pertaining to the works under this contract.
- 110.** The contractor shall bear all incidental charges for cartage, storage and safe custody of all the materials at site whether supplied by him or taken by him from Government godowns.
- 111.** The Engineer-in-charge or his representative shall maintam a register showing daily transactions. The register shall be signed by the contractor or his representative in taken of acceptance of each transact on. If the contractor has any objection by any transaction. He shall record the same in the register and also intimate the Engineer-in-charge about the same in writing within 15 days of occurrence of such objection.
- 112.** Cement shall be issued to the contractor in bags as received from the factory. The department shall in no way. Be responsible if the weight of cement bags is less than 50 Kg as such there should be no dispute regarding their quantity and quality and the contractor will accept them as such without any claim for any variation. The contractor shall provide suitable means of protection during haulage and storage and shall take all necessary steps to the full satisfaction of Engineer-in-charge to safeguard the cement against deterioration and/or losses and/or pilferage in transit.
- 113.** The cement bags shall be suitably marked As approved by the Engineer-in- charge & by the contractor at his own cost so as to facility detection on any pilferage or unauthorized removal from the site. If such cement bags are found being taken in an unauthorized manner away from the work site. Recovery for the same shall be made at three times the issue rate of cement besides any other legal action.

- 114.** The cost of cement specified in Para 1.01 above does not include the cost of empty cement bags which shall be returned by the contractor. All the empty cement bags shall be returned by the contractor in good condition or are not accepted by the Engineer-in-charge and those consumed at site by the contractor shall be recovered from the contractor's bills at Rs.2.00 (Rs.two only) per beg.
- 115.** The contractor's cement stock is likely to be checked without notice at any time by the Engineer-in-charge or his authorized representative and the contractor shall make it possible. If some discrepancies are found in stock account the contractor shall be penalized as per Para 2.02.

### **3.00 STEEL BARS/ANGLE IRON/PLATES/SHEETS PILES**

**3.01** In case of steel bars angle iron/plates, lengths as available in Govt. godowns shall be issued to the contractor and cost thereof recovered accordingly. Cut pieces from full length shall not be taken back by the department from the contractor. However, the contractor will use steel bars judiciously in such a manner that the quantity of cut pieces and wastage shall not exceed two per cent of the total steel bars consumed in the works. It shall be the responsibility of the contractor to get this quantity verified by the Engineer-in-charge. The cut pieces shall not be removed by the contractor from the site without the written permission of the Engineer-in-charge.

### **MATERIAL**

**3.02** In case of cut piece of sheet piles. Para 6.05 of the specifications under. Chapter VI of "sheet pile Driving" shall be applicable.

### **4.00 EXCESS AND SHORT CONSUMPTION OF MATERIALS**

**4.01** At the end of each working season and after completion of the work, the consumption of cement will be checked on the basis of schedule of completion incorporated in contract document. If on completion of the work the quantity of cement issued to the contractor is in excess of the computed completion and the balance is not available in the contractor's stores and is not returned to the Govt. godowns, the cost of such balance or difference shall be recoverable from the contractor at double of stock issue rate per bag without prejudice to other clauses of this contract. However, if excess completion is bonafide and is actually consumed on works. Variation upto two Allowed with the written sanction of the superintending Engineer.

**4.02** If on completion of the work the actual quantity of cement used on the work is less than that computed on the basis of schedule of consumption recovery on account of the quantity of cement used short shall be made at the rates in para 1.01 and shall be the responsibility of the contractor to return such cement to Govt. stores. If the contractor fails to return such cement the cost shall further be recovered at double of stock issue rate per bag.

**.4.03** After the completion of the work the consumption of reinforcement steel/angle iron/M.S. plate will be checked on the basis of the measurements taken for the item of reinforcement steel payable as per item under schedule of bids. If the quantity of steel issued to the contractor is in excess of the computed consumption plus as allowance upto two percent for cut pieces and wastages and the balance is not returned in full lengths to the Govt. godown the cost of such balance or difference shall be recoverable from the contractor at double of stock issue rate per tonne with out prejudices to other clause of this contract.

**4.04** The consumption of materials shall be issued to the contractor free cost as per conditions of the contract shall be checked on the basis of actual consumption and if the quantity beyond two percent shall be recovered at 1.5 times the prevalent stock issue rate of the division for the item.

## **5.0 CONTRACTOR'S GODOWNS**

**5.01** The materials will be issued to the contractor only according to the requirement of work for one week at a time or as decided by the Engineer in charge. The contractor shall be responsible for the safe storage and custody of material for which nothing extra will be paid to him.

**5.02** The contractor shall maintain suitable godowns at the site of work at his own cost which should be sufficient for storing his requirement of cement and shall be stored in separate damp proof godowns. The contractor shall provided all facilities to the Engineer in charge to inspect the cement stored in contractor's godowns and to take samples as and when necessary free of cost. Such inspection shall not however absolve the contractor of the responsibility of safe storage and maintenance of materials in good condition. If material are spoiled or damaged on any account. What so ever during the custody of contractor the cost of such damaged materials shall be recovered at twice the issue rates of para 1.01.

**5.03** At every godown of the contractor a bound register shall be maintained in which daily receipt and consumption of materials shall be recorded. The contractor shall be made available for check on demand by the Engineer in charge or his representative. The contractor shall maintain proper watch and ward of the godowns at his own expense.

## **6.0 MATERIALS TO BE SUPPLIED BY THE CONTRACTOR**

**6.01** Apart the materials specified under para 1.01 all other materials required for the execution of the works under the contract shall be furnished by the contractor.

**6.02** Materials arranged by the contractor shall be got approved by the Engineer in charge before use on the work. The materials are rejected by the Engineer in charge shall be removed by the contractor at his own cost in case the contractor fails to remove the rejected materials within one week of such rejection they shall be got removed by the Engineer in charge and the cost of realised from the contractor's bill.

EXECUTIVE ENGINEER

**PLANT EQUIPMENT AND CONSTRUCTION POWER**

**1.0 GENERAL**

1. The contractor shall arrange his own construction equipment required for execution of the works under the contract.

No item of plant and equipment required for the construction of the work and brought to site for purpose shall be removed by the contractor with out the written permission of the Engineer in charge. Should the contract be terminated for any reason the Govt. reserves the right to be exercised with in 90 days of such termination to purchase the interests of the contractor in the construction plant by payment of expense incurred by the contractor iin the delivery

**2.00 CONDITION FOR THE HIRE OF GOVERNMENT EQUIPMENT:**

2.01 Government equipment if available may be supplied to the contractor from Government godowns on conditions and hire charges described here in after. Arrangements for the carriage from Government godown to the site of work and back after use shall be made by the contractor at his own cost.

2.02 The rent of the equipment shall be charged at the following rates. The rent shall become chargeable from the date on which the equipment is issued to the contractor to the date on which it is returned back to the godowns by the contractor.

S.No.	Name of equipment	Hire charges per month or part thereof	Place of issue.
1.	Diesel/Electric 10/7		Central godowns of the division at.....
2.	Petrol/Electric Vibration		-do-
3.	Diesel/Electric Plumps	Per H.P.	-do-
4.	Welding set diesel		-do-
5.	Welding set Electric		-do-

The contractor shall make arrangement for proper operation maintenance protection repair and preservation of equipment issued to him at his own cost. All fuel lubricant or any other preservation of equipment issued to him at his own cost . All fuel lubricant or any other materials required to run the machices and the operating staff such as operations and machines etc, shall be arranged by the contractor at his own cost.



No claim for compensation shall be entered on account of failure or delay in supply of the equipment required by the contractor.

The contractor shall not use equipment taken by him on hire from the department on any works other than those covered by this agreement. In case the contractor misuses the equipment the rent shall be recovered at double the specified rates and the equipment shall be withdraw.

The rent shall be calculated for each calender month or part thereof at the monthly rates prescribed above. If the equipment is returned before 30 days by the contractor the minimum rent of one month shall be recovered from the contractor. The rental charges shall be deducted from the first bill or subsequent bills of the contractor which may be due to him for payment after hire of the equipment. The rent will not be kept pending for recovery form the final bill.

The equipment shall be returned by the contractor to the Division's Central stores in running conditions at his own cost. If the equipment is not returned in running condition the necessary repairs shall be carried out by the dept and the cost of such repairs shall be recovered from the contractor. The decision of the Engineer in charge to the cost of such repairs shall be final.

In case an equipment issued to the contractor on hire is damaged beyond repairs or is lost its cost shall be recovered from the contractor at rate decided by the Engineer in charge which shall be final and legally binding or the contractor.

Any other equipment or machine if available with the department may be issued to the contractor. The rates and terms of hire of such equipment shall be fixed by the Engineer in charge.

#### SUPPLY OF POWER

Power if available near the site of work may be supplied to the contractor at about 440 volts 3 phase 50 cycles as supplied by U.P. State Electricity Board. The contractor shall erect and maintenance his own distribution system. The supply shall be metered an charged at the rates given below.

(a) Power from U.P. State Electricity Board Lines Paise per K.W.H

(b) Power from generating set if available (to be Paise per K.W.H

operated by the Deptt.)

All the installations and equipment in connection with power supply shall conform to the conditions and specification acceptable to the Engineer in charge and Electrical Inspector to Government in U.P. The contractor shall make his arrangement bearing in mind that the power supply may not be continuous and there may be inter ruptions of short and long durations. The failure of power shall not entitle the contractor for any compensation or claims.

The contractor shall take all precautions and make necessary arrangements for the safety of all his equipment and machines against all fluctuations in the supply of power form U.P. State Electricity

Board or departmental generators. Any such damage shall not entitle the contractor to any claim for compensation.

