

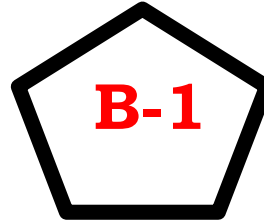
GOVERNMENT OF MAHARASHTRA

Public Works Department

PUBLIC WORKS REGION KONKAN, MUMBAI.

PUBLIC WORKS CIRCLE, SINDHUDURG.

PUBLIC WORKS DIVISION, KANKAVALI



TENDER PAPERS

e-Tendering System

FOR THE WORK OF

CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

Part- A. Civil Work	: Rs. 4,34,94,460/-
Part- B. Royalty & Testing	: <u>Rs. 7,86,613/-</u>
Amount put to Tender.	: Rs. 4,42,81,073/-
Earnest Money Deposit.	: Rs. 2,22,000/-

[https:// mahatenders.gov.in](https://mahatenders.gov.in)

**EXECUTIVE ENGINEER
PUBLIC WORKS DIVISION, KANKAVALI**

NAME OF WORK :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

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Dy.E.E.

Contractor

No. of Corrections

Executive Engineer

DISCLAIMER

1. Detailed Time Table for the various activities to be performed in e-tendering process by the Tenderer for quoting their offer is given in this Tender Document under "**Tender Schedule**", Contractor should carefully note down the cut-off" dates for the carrying out each e-tendering process / activity.
2. Every effort is being made to keep the Website up to date and running smoothly 24 x 7 by the Government and the Service Provider. However Government takes no responsibility, and will not be liable for, the website being temporarily unavailable due to any technical issue at any point of time.
3. In that event Public Works Department will not be liable or responsible for any damages or expenses arising from any difficulty, error, imperfection or inaccuracy with this Website, it includes all associated services, or due to such unavailability of the Website or any part thereof or any contents or any associated services.
4. Tenderers must follow the time table of e-tendering process and get their activities of e-tendering processes done **well in advance** so as to avoid any inconvenience due to unforeseen technical problem if any.
5. Public Works Department will not be responsible for any incomplete activity of e-tendering process of the tenderer due to technical error/ failure of website and it cannot be challenged by way of appeal, arbitration and in the Court of Law. **Contractors must get done all the e-tendering activities well in advance.**

Dy.E.E.

Contractor

No. of Corrections

Executive Engineer

INFORMATION SHEET FOR B-1 AGREEMENT

- 1) Name of Division : **P.W. DIVISION, KANKAVALL.**
- 2) Name of work : **CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.**
- 3) Head of Account :
- 4) Agreement No. :
- 5) Reference to Sanction of Tender :
- 6) Name of Contractor :
- 7) Reference of Work Order :
- 8) Amount put to Tender Part-A : **Rs. 4,34,94,460/-**
Part-B : **Rs. 7,86,613/-**
- Total For A+B= **Rs. 4,42,81,073/-**
- 9) Percentage (Above/Below) Accepted :
- 10) Amount of Accepted Tender :
- 11) Time stipulated for completion of work : **12 (Twelve) Calendar Months (from the date of written work order) which will include the monsoon period.**
- 12) Extension of time limit : 1)
2)
- 13) Compensation for delay (if any) :
- 14) Actual Date of Completion :
- 15) Information about action taken against Contractor (if any) ;
- 16) Certified that this original Agreement contains : Pages 1 to ____

DETAILS OF WORK

NAME OF WORK :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

Part-A = Rs. 4,34,94,460/-
Part- B = Rs. 7,86,613/-
 Estimated Cost put to tender = Rs. 4,42,81,073/-

Earnest Money Rs. 2,22,000/- only.

The EMD amount shall be paid via Online mode only. Exemption in EMD on basis of EMD exemption certificate is not allowed as per Govt. Maharashtra P.W.D. Department GR.No. CAT/06/2014/PC/242/Bldg.-2 Dated 24/02/2016. Total Security Deposit **1% (One percent)** Rs. 4,44,000/- (50% in form of F.D.R. / Bank Guarantee at the time of Agreement and 50% from R.A. bills). Time stipulated for completion is **12 (Twelve) Calendar Months** (from the date of written work order) which includes the monsoon period.

TENDER SCHEDULE

Cost of Tender Form	: Rs. 2,000/- + GST
Download Period of online Tender	: From Dt. 08/05/2026 at 10.00 Hrs. Upto Dt. 15/05/2026 at 18.00 hours.
Online Last date and time for raising of technical points for clarification (Pre-bid meeting)	: Dt. 12/05/2026 at 12.00 hours in the Office of the Chief Engineer (P.W.) Region Konkan, Mumbai.
Bid Preparation Last Date	From Dt. 08/05/2026 at 10.00 Hrs. Upto Dt. 15/05/2026 at 18.00 hours.
Submission of bid fee, Bid Security and Other Documents (Hard Copy) etc.	In Sealed Envelope strictly by RPAD / Postal Speed / in Person on or before 18/05/2026 Upto 11.00 Hrs. to this Office.
Place, Date and timing of opening Technical-bid and Financial bid	: In the office of the Superintending Engineer, Public Works Circle, Sindhudurg. Technical Bid – Dt. 18/05/2026 at 11.01 a.m. Financial Bid – Dt. 18/05/2026 at 11.01 a.m. (If possible)

TO BE FILLED BY THE CONTRACTOR

I/We have quoted my/our offer in percentage rate in words as well as in figures. I/We further undertake to enter into contract in regular 'B-1' form in Public Works Department.

Name and signature of contractor /

Power of Attorney holder
with complete address.

Contractor

No. of Corrections

Executive Engineer

महाराष्ट्र शासन
कार्यकारी अभियंता यांचे कार्यालय,
सार्वजनिक बांधकाम विभाग कणकवली
जिल्हा सिंधुदुर्ग ४१६६०२

E Mail- kankavali.ee@mahapwd.gov.in

Telephone No. 02367/232124 Fax No.2367/232124

ई निविदा क्रमांक ४ सन २०२६-२७

कार्यकारी अभियंता, सार्वजनिक बांधकाम विभाग कणकवली यांचे कार्यालयाकडून सा.बां. विभागाकडील नोंदणीकृत/अनोंदणीकृत कंत्राटदांकडून खालील कामांकरिता ब-१ नमुन्यातील निविदा ई निविदा प्रणालिद्वारे (ऑनलाईन) मागवित आहेत. निविदा कागदपत्रे शासनाचे संकेतस्थळावर <https://mahatenders.gov.in> येथून डाऊनलोड करण्यात यावी. तसेच निविदा स्विकारण्याचा अथवा नाकारण्याचा अधिकार कार्यकारी अभियंता, सार्वजनिक बांधकाम विभाग कणकवली यांनी राखून ठेवला आहे. अट असलेली निविदा स्विकारली जाणार नाही.

तपशिल

ई निविदा क्रमांक	कामाचे नांव	कामाची अंदाजित किंमत	सुरक्षा अनामत रक्कम	निविदेचा नमुना व किंमत	काम पूर्ण करण्याचा कालावधी	कंत्राट दाराचा वर्ग
१	२	३	४	५	६	७
१	सिंधुदुर्ग जिल्ह्यातील देवगड तालुक्यातील रा.मा. १७८ ते दाभोळे-नारिंगे-पोयरे रस्त्यापर्यंत प्रजिमा क्र. १७ रस्त्याचे सुधारणा व डांबरीकरण करणे. (कि.मी. ३/०० ते ४/१००, ५/२०० ते ६/२००, ७/१०० ते ८/१०० ते १५/३००)	७०२३६२८८/-	३५२०००/-	ब-१ रु. ३५४०/- (नापरतावा)	१२ महिने	नोंदणीकृत/ अनोंदणीकृत
२	अरुणा धरणस्थळी हेत-मौदे रस्त्यावर व्ही. आर. बी. बांधणे व अरुणा डाव्या तीरावरील पर्यायी रस्त्याचे दुरुस्तीचे काम मोरीचे बांधकाम व संरक्षक भित ई. काम करणे. ता. वैभववाडी, जि. सिंधुदुर्ग.	४३४९४४६०/-	२१८०००/-	ब-१ रु. २३६०/- (नापरतावा)	१२ महिने	नोंदणीकृत/ अनोंदणीकृत
३	सिंधुदुर्ग जिल्ह्यातील कणकवली तालुक्यातील कोल्ले सातेडी मध्यम प्रकल्प रस्ता मध्ये खडीकरण व डांबरीकरण करणे.	१००८२२१९/-	११००००/-	ब-१ रु. ११८०/- (नापरतावा)	१२ महिने	वर्ग ५ व त्यावरील

ई निविदेचे वेळापत्रक

१	निविदा ऑनलाईन डाऊनलोड करण्याचा आणि सादर करावयाचा कालावधी	दि. ०८/०५/२०२६ ते १५/०५/२०२६ (सकाळी १०.०० ते १५.००) वाजेपर्यंत.
२	निविदा मध्ये तांत्रिक मुद्दे उपस्थित करावयाचा अंतिम दिनांक व वेळ (निविद पूर्व चर्चा बैठक)	दि. १२/०५/२०२६ (१२.०० वाजता) मा. मुख्य अभियंता, सा. बां. प्रादेशिक, विभाग कोकण. यांचे कार्यालयात
३	निविदा संचाची फी, निविदा सुरक्षा अनामत व इतर दस्तावेज सादर करण्याचा शेवटचा दिनांक (हार्ड कॉपी स्वरूपात)	सिलबंद लखोटे आरपीएडी/शीघ्र डाकेने / व्यक्तीशः या कार्यालयात दिनांक १८/०५/२०२६ वेळ ११.०० वाजेपर्यन्त पोहचतील याची निविदाकारांनी नोंद घ्यावी.
४	तांत्रिक आणि आर्थिक निविदा उघडण्याचे ठिकाण, दिनांक व वेळ	दि. १८/०५/२०२६ रोजी वेळ १६.०० ते सायं. १८.१५ वाजेपर्यन्त मा. अधीक्षक अभियंता, सा. बां. मंडळ, सिंधुदुर्ग. यांचे कार्यालयात ऑनलाईन उघडण्यात येतील (शक्य झाल्यास).

खालील संकेतस्थळावरून ई निविदांची सर्व माहिती उपलब्ध आहे.

१. <https://mahapwd.com>

२. <https://mahatenders.gov.in>

(सादर निविदेसूचनेमध्ये काही बदल होत असल्यास वरील वेबसाईटवर कळविण्यात येईल.)

३. कार्यकारी अभियंता सार्वजनिक बांधकाम विभाग कणकवली कार्यालयातील सूचना फलक

टिप – १ सर्व पात्र/इच्छुक निविदाकारांनी निविदापत्रक डाऊनलोड करण्यासाठी व निविदा प्रक्रियेत भाग घेण्यासाठी ई निविदा प्रणालीच्या <https://mahatenders.gov.in> आणि **eProcurement System of Maharashtra** वर **enrolled** करणे आवश्यक आहे

२. निविदाकारांना वर नमूद केलेल्या संकेतस्थळावर ऑनलाईन निविदा सादर करणे संदर्भात व डिजिटल प्रमाणपत्र वितरीत करण्या संदर्भात काही शंका/अडचणी असल्यास त्यांनी खालील दुरध्वनी क्रमांकावर संपर्क साधावा. Toll Free Ph.No. 1800 3070 2232 Mob

No.8879002344 Vinayak Agre E Mail : eproc.maharashtra@gmail.com.

३. निविदाकारांनी निविदा संदर्भात सर्व दस्तऐवज ऑनलाईन सादर करणे अनिवार्य राहिल. ई निविदा वेळापत्रकामध्ये नमूद केलेल्या दिनांक वेळपर्यन्त सादर करणे आवश्यक आहे. अन्यथा ऑनलाईन निविदा उघडण्यात येणार नाही याची नोंद घ्यावी.

४. इतर अटी व शर्ती ई- निविदा नमुन्यामध्ये पहावयास मिळतील. सादर कामांची एक अथवा सर्व ई-निविदा कोणतेही कारण न देता रद्द करण्याचे अधिकार सक्षम अधिकारी यांनी राखून ठेवलेले आहेत. ठेकेदाराने यापूर्वी या विभागाकडील किंवा अन्य विभागाकडील कामे अपूर्ण ठेवली असल्यास, कामाची गुणवत्ता राखली नसल्यास तसेच ठेकेदारावर शिस्तभंगाची अथवा दंडात्मक कारवाई झाली असल्यास अशा निविदा स्विकारण्याचे अथवा नाकारण्याचे अधिकारी राखून ठेवलेले आहेत.

५. वरील कामाची ई-निविदा सूचना सार्वजनिक बांधकाम विभागाच्या www.mahapwd.com या इंटरनेटवरील वेबसाईटवर उपलब्ध आहे.

जा.क्र.साबांवि/कणक/लेशा/निविदा/

कार्यकारी अभियंता यांचे कार्यालय,

सार्वजनिक बांधकाम विभाग

कणकवली जिल्हा सिंधुदुर्ग - ४१६६०२

दिनांक – २९/०४/२०२६

कार्यकारी अभियंता

सार्वजनिक बांधकाम विभाग

कणकवली

**GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT
Office of the Executive Engineer,
Public Works Division Kankavali.
District Sindhudurg 416602**

E Mail- kankavali.ee@mahapwd.gov.in	Telephone No. 02367/232124 Fax No.2367/232124
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E – Tender No. 4 for 2026-27

Bid for the work detailed in the table given below are invited online (e tender) on Public Work Department Government of Maharashtra through website <https://mahatenders.gov.in> in by the Executive Engineer, Public Works Division Kankavali on the B-1 form for the following works by the Executive Engineer Public Works Division Kankavali from all the P.W.D. Registered Contractors who fulfills all the criteria required to carry out the following works. Executive Engineer Public Works Division Kankavali reserves right to accept or reject any tender without assigning any reason. The Conditional tender will not be acceptable.

Sr. No.	Name of work	Estimated cost (Rupees)	Earnest Money (Rupees)	Type of Tender & Cost of Tender fee	Time Limit in Tender (Month)	Class of Contractor
1	2	3	4	5	6	7
1	Improvement and Asphaltting Road from SH 178 to Dabhole Naringre Poyare Road MDR 178 Devgad, Tal- Devgad, Dist- Sindhudurg. (From Km 3/00 to 4/100, Km 5/200 To 6/200, Km 7/100 TO 8/100 and Km /600 To 15/300)	70236288/-	352000/-	B-1 Rs. 3540/- Refundable	12 Month (including monsoon)	Registered/ Unregistered
2	Construction of V.R.B. on Het Maude Road At Aruna Dam Left Bank Alternate Road (Including Construction of CD Work and Retaining Wall) Tal- Vaibhavwadi, Dist- Sindhudurg.	43494460/-	218000/-	B-1 Rs. 2360/- Refundable	12 Month (including monsoon)	Registered/ Unregistered
3	ST and BT to Korle Satandi Madhyam Prakalp Road, Tal- Devgad, Dist- Sindhudurg.	10082219/-	110000/-	B-1 Rs. 1180/- Refundable	12 Month (including monsoon)	Class V and Above

E-Tender Time Limit

1	Download Period of Online Tender	Dt. 08/05/2026 to Dt. 15/05/2026 at 10.00- 18.00 p.m.
2	Last date and time of online raising of technical points for clarification (Pre-bid-meeting)	Dated 12/05/2026 at 12.00 p.m. Office of the Chief Engineer Public Works Region Konkan.
3	Submission of bid fee, Bid Security and Other Documents (Hard Copy) etc.	In Sealed Envelope strictly by RPAD / Postal Speed / in Person on or before 18/05/2026 Upto 11.00 Hrs.to this Office.
4	Place, Date and timing of opening Technical bid and Financial bid.	Dt. 18/05/2026 at 11.01 a.m. to 18.15 p.m. Office of the Superintending Engineer, Public Works Circle Sindhudurg (If Possible)

Note :-

1. All eligible/interested contractors who want to participate in tendering process should compulsory get enrolled on e-tendering portal <https://mahatenders.gov.in> and further need to impaneled online on sub portal eProcurement System of Maharashtra in the appropriate category applicable to them.
2. Contractors details for difficulties in submission of online tenders if any. Toll Free Ph.No.1800 3070 2232 Mob. No. 8879002344 Vinayak Angare. E Mail:eptoc.maharashtra@gmail.com.
3. It is compulsory for all participates to submit all documents online. Failure to submit the above documents in stipulated time, Envelope No.01 and 02 will not be opened.
4. Other term and conditions displayed in online e-tender forms. Right to reject any or all online bid of work without assigning any reasons thereof is reserved. The authority reserve the right to accept or reject tenders if the contractor has previously left the work of this department or other department incomplete, if the quality of as not been maintained and if disciplinary or penal action has been taken against the contractor.
5. Above Tender Notice is displayed on www.mahapwd.com.

No. PWD/KNK/AB/TC/
Office of the Executive Engineer,
Public Works Division
Kankavali Dist.Sindhudurg
Dated :- 29/04/2026

Executive Engineer
Public Works Division
Kankavali

GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT
INVITATION FOR TENDERS

DETAILED e-TENDER NOTICE

NAME OF WORK :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

Online percentage rate tenders in 'B-1' Form are invited by the **Executive Engineer, P. W. Division, Kankavali** for the following work from Eligible or Competent Contractors in Maharashtra State. The name of work, estimated cost, earnest money, security deposit, time limit for completion etc. are as under.

Sr. No.	Name of work	Estimated Cost (Rupees)	Earnest Money (Rupees)	Security Deposit (Rupees) 1%	Time limit in Tender (Calendar Months)
1	CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.	Part-A = Rs. 4,34,94,460/- Part-B = Rs. 7,86,613/- Total Rs. 4,42,81,073/-	2,22,000/-	4,44,000/-	12 (Twelve) months including monsoon (from the date of written work order)

Tender form, conditions of contract, specifications and contract drawings can be downloaded from the **eTendering portal of Public Works Department, Government of Maharashtra i.e. [https:// mahatenders.gov.in](https://mahatenders.gov.in)** after entering the details payment of **Rs. 2,000 /- + GST (Rupees Two Thousand Only + GST) should be submitted Via SBI MOPS Online Payment Gateway Mode Only. The fees of tender document will be non refundable as per the Tender Schedule.** Further information regarding the work can be obtained from the above office.

Contractor

No. of Corrections

Executive Engineer

Bids will be opened **in the office of the Superintending Engineer P.W. Circle, Sindhudurg as per the Tender Schedule**, in the presence of such intending Tenderers or his/ their authorized representatives who may be present at that time.

TENDERING PROCEDURE.

1.1 Blank Tender Forms.

Tender Forms can be downloaded from the **eTendering portal of Public Works Department, Government of Maharashtra i.e. <https://mahatenders.gov.in>** Document **Tender Fee** and **EMD** to be paid **Via SBI MOPS Online Payment Gateway Mode Only**. And upload successful payment receipt in **ENVELOPE NO.1 TECHNICAL BID** Documents.

PRE-TENDER CONFERENCE :

1.1.2 Pre-tender conference open to all prospective tenderers who have purchased tender form before the date of Pre-tender Conference, will be held at **MUMBAI** on **/05/2026 at 12.00 Hrs. As per Online Tender Schedule Published on eTendering portal of Public Works Department Government of Maharashtra i.e. <https://maharashtra.gov.in>** in the office of the **Chief Engineer, Public Works Region Konkan, Mumbai, Bandhkam Bhavan 4th Floor, 25 Marzban Road, Mumbai 400001, Phone No. (022) 22071594/ fax No. (022) 22074700** wherein prospective Tenderers will have an opportunity to obtain clarifications regarding the work and the Tender Conditions.

1.1.3 The prospective tenderers are free to ask for any additional information or clarification either in writing or orally concerning the work, and the reply to the same will be given by the **Chief Engineer/Superintending Engineer /Executive Engineer** , and the same will be made available on **eTendering portal of Public Works Department, Government of Maharashtra i.e. [https:// mahatenders.gov.in](https://mahatenders.gov.in)** and this clarification referred to as common set of conditions/deviations (C.S.D.), shall form part of tender documents and which will also be common and applicable to all tenderers. The point/points if any, raised in writing and/or verbally by the contractor in pre-tender conference and not finding place in C.S.D. issued after the pre- bid conference, is/are deemed rejected. In such case the provision in NIT shall prevail. No individual correspondence will be made thereafter with the contractor in this regards.

- 1.1.4 The tender submitted by the tenderer shall be based on the clarification, additional facility offered (if any) by the Department, and this tender shall be unconditional. Conditional tenders will be summarily REJECTED.
- 1.1.5 All tenderers are cautioned that tenders containing any deviation from the contractual terms and conditions, specifications or other requirements and conditional tenders will be treated as non responsive. The tenderer should clearly mention in forwarding letter that his offer (in envelope No.1& 2) does not contain any condition, deviations from terms and conditions stipulated in the tender.
- 1.1.6 Tenderers should have valid **Class II / III Digital Signature Certificate (DSC)** obtained from any Certifying Authorities.
- 1.1.7 For any assistance on the use of Electronic Tendering System, the Users may call the below Toll Free Ph. No. **1800 3070 2232**

E-Mail : eproc.maharashtra@gmail.com, cphp-support@nic.in

1.2 Special Instructions to the Contractors / Bidders for the e-submission of the bids online through this tender site: <https://mahatenders.gov.in>

Bidder must register themselves on <https://mahatenders.gov.in> portal by clicking “Online Bidder Enrolment” and then map Digital Signature certificate.

- 1.2.1 Bidder then login to the site giving **User id / Password** chosen during registration.
- 1.2.2 The DSC e-token that is registered should be used by the bidder and should not be misused by others.
- 1.2.3 The Bidders can update well in advance, the documents such as certificates, purchase order details etc., under **My Documents** option and these can be selected as per tender requirements and then attached along with bid documents during bid submission.
- 1.2.4 After downloading / getting the tender schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise, the bid will be rejected.
- 1.2.5 If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account of the corrigendum published before submitting the bids online.

- 1.2.6 Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender schedule and they should be in **PDF/XLS/RAR** formats. If there is more than one document, they can be clubbed together.
- 1.2.7 Document **Tender Fee** and **EMD** to be paid via [SBI MOPS Online Payment Gateway Mode only](#). and upload successful payment receipt in **ENVELOPE NO.1 TECHNICAL BID** Documents.
- 1.2.8 The bidder reads the terms & conditions and accepts the same to proceed further to submit the bids.
- 1.2.9 The bidder has to submit the tender document online well in advance before the prescribed time to avoid any delay or problem during the submission process.
- 1.2.10 After the bid submission, the acknowledgement number, given by the e-tendering system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender.
- 1.2.11 Document **Tender Fee** and **EMD** to be paid via SBI MOPS Online Payment Gateway Mode only. And upload successful payment receipt in **ENVELOPE NO.1 TECHNICAL BID** Documents. And **BOQ** in **.xls** format file to **Uploaded in ENVELOPE NO.2 FINANCIAL BID Documents**.
- 1.2.12 The **Tender Inviting Authority (TIA)** will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders.
- 1.2.13 The bidder may submit the bid documents either by online mode through the site (<https://mahatenders.gov.in>) as indicated in the tender.
- 1.3** The tendering system will give a successful bid updating message after uploading all the bid documents submitted & then a bid summary will be shown with the bid no, date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed using the DSC e-token of the bidder and then submitted.
- The bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid. The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening date.
- 1.3.1 Bidder should log into the site well in advance for bid submission so that he submits the bid in time i.e on or before the bid submission end time. If there is any delay, due to other issues, bidder only is responsible.

- 1.3.2 The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected.
- 1.3.3 The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- 1.3.4 All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening. Overall, the submitted tender documents become readable only after the tender opening by the authorized individual.
- 1.3.5 The confidentiality of the bids is maintained since the secured Socket Layer 128 bit encryption technology is used. Data storage encryption of sensitive fields is done.
- 1.3.6 The bidders are requested to submit the bids through online eTendering System to the TIA well before the bid submission end date & time (**as per Server System Clock**).
- 1.3.7 The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) option in the browser.
- 1.3.8 The bidder should upload the **Technical Bid** in **.rar** format single file to upload in Technical cover and then **BOQ** in **.xls** format single file to **Uploaded in Envelope Financial Bid Documents**.

1.4 Manner of Submission of Tender and its Accompaniments :

ENVELOPE NO.1 : (Documents Required)

The bidder must purchase the bidding documents via online mode by filling the cost of Tender.

A) The scan copy of following original documents shall be uploaded **online in "Envelope No.1"**:

- 1.4.1 **Tender form fee and EMD** to be paid **Via SBI MOPS Online Payment Gateway Mode Only**. And **upload successful payment receipt in Envelope No.1 Technical Bid Documents**.
- 1.4.2 **Earnest money of the value of Rs. 2,22,000/- (Rupees Two Lakh Twenty two Thousand Only) to be paid via SBI MOPS Online Payment Gateway Mode Only**. Exemption in EMD on basis of EMD exemption certificate is not allowed as per Govt. Maharashtra P.W.D. Department GR.No. CAT/06/2014/PC/242/Bldg.-2 Dated 24/02/2016.
- 1.4.3 **Scan copy of a valid GST registration certificate from Maharashtra State Goods and Services Tax Department** thereof duly attested by the Gazetted Officer.
- 1.4.4 **Scan copy of Details** of list of Machinery and plants immediately available with the tenderer for use on this work and list of machinery proposed to be utilized on this work, but not immediately available and the manner in which it is proposed to be procured. (information to be given in Statement 2A, 2A1 & 2B provided in this documents)
- 1.4.5 **Scan copy of** Valid Professional Tax Registration certificate in form PT/R/ under section (I) of section 5 of Maharashtra Sales Tax on Profession, Trade, Callings and employment Act,1975, rule 3(2) from the Professional Tax Officer of the concerned District in Maharashtra.

1.4.6 USE OF SPECIALISED MACHINERY.**The required machinery is as follows.**

Sr. No.	Type of Equipment	Maximum age as on 31.03.2026 (Years)	Owned/Hired
1.	Fully Automatic Micro Processor based Programmable Logical Control (PLC) with SCADA Enabled Concrete Batch Mix Plant (Pan Mixer) of minimum 12-15 cubic meter per hour capacity of any standard Company	15	1 Number Owned
2.	Trussle	15	50 Numbers of steel trestles Owned
3.	JCB/Excavator	15	1 Number Owned/Hired
4.	Water Pump minimum 5.00 B.H.P.	15	1 Number Owned/Hired
5.	Needle Vibrator – 3 Types 80 mm, 60mm, 20 mm1 Number Each	15	Owned /Hired
6.	Truck/Tipper/Tractors	15	2 Number Owned/Hired
7.	Water Tanker (5000 litres capacity)	15	1 Number Owned/Hired
8.	Modern Asphalt Batch Mix Plant having minimum Capacity of 80 TPH Owned or Bidder shall upload the scanned copy of Original Purchase order with payment of minimum Rs.50 lakh to the manufacture/Dealler for purchase of Batch Mix Plant. OR Drum Mix / Hot Mix Plant having minimum capacity of 40 to 60 or 80 to 100 TPH with SCADA . The Plant must be within 60 km from center of work site. Shifting of plant not allowed.	15 Years	1 No. Owned
9.	Mechanical Paver Finisher with V.T.S	15 Years	1 No. Owned
10.	Mechanical Bitumen Sprayer	15 Years	1 No. Owned/Hired
11.	Vibratory Road Roller	15 Years	1 No. Owned/ Hired
12.	Static Roller 8 to 10 Tonne / Smooth Wheeled Power Roller	15 Years	1 No. Owned/Hired

For this purpose, contractor shall give adequate information in proforma of Statement No.2 'A', 2A1 & 2B (**Page 26 to 28**) enclosed. The proforma of the Statement shall not be altered by contractor in any manner/case.

- i) The life of machinery shall be considered as 15 years.
- ii) The machinery above age of 15 years is not allowed.
- iii) For machinery above age of 10 years fitness certificate of ACE (Mech.) is required for every year. After First setup of new plant and machinery as well as relocation of old plant and machinery to a new site, certificate from the ACE (Mech.) shall be mandatory.
- iv) The undertaking of the Bidder, regarding distance from the Plant to site of work, and assurance of maintaining temperature of the bituminous mix as per specifications before laying at site. **This undertaking has to be uploaded through online.** The undertaking will be verified, if necessary, at the time of opening of Tender. If the undertaking submitted by the Bidder is assessed to be incorrect, his bid shall be considered as disqualified.

- v) Hire agreement of Machineries is to be self attested by bidder on **Rs. 500/- Stamp Paper** as attached on Page No. **35** shall be used and same shall be **uploaded online** in Envelope No. 1. As well as **scanned copy of undertaking** (as per proforma given in page **No.33**) regarding availability of **owned or hired machinery through online in Envelope No.1.**
- vi) The undertaking of the Bidder, regarding distance from the Plant to site of work, and assurance of maintaining temperature of the bituminous mix as per specifications before laying at site. **This undertaking has to be uploaded through online.** The undertaking will be verified, if necessary, at the time of opening of tender. If the undertaking submitted by the Bidder is assessed to be incorrect, his bid shall be considered as disqualified.
- 1.4.7 **Scan copy of Details** of work done **during last five years** with the value of work unfinished. (Information to be given in Statement No.1 on Page No. **23 & 24.**)
- 1.4.8 **Scan copy of Abstract** of work of similar type and magnitude **during last five years** carried out by the contractor. (Information to be given in proforma of Statement No.2 on Page **25**)
- The Certificates of S.R. No.1.4.8 should be signed by the Authority with whom the contractor has executed the work.
- 1.4.9 **Scan copy of Details** of works in hand and works tendered for. (Information to be given in proforma of Statement No.3 on Page **29**)
- 1.4.10 **Scan copy of documentary proof of educational qualification** of Technical Personnel on the rolls of the tenderer. (Information to be given in proforma of Statement No.4 on Page **30**)
- 1.4.11 **Scan copy** of Registration of Partnership Deed Registered with Registrar of firms in case of a firm tendering for work and Power of Attorney shall be uploaded.
- 1.4.12 **Scan copy** of reports on the financial standing of the Bidder, such as profit and loss statements and auditor's report **for last five years**, (Chartered Accountant's certificate for balance sheet shall be considered as valid).
- 1.1.13 **Scan copy** of evidence of access to line(s) of credit and availability of other financial resources facilities (10% of contract value) Certified by the Bankers (Not more than 3 months old).

1.4.14 QUALIFYING CRITERIA

- a) To qualify for award of the contract, each tenderer in his name should have achieved **Maximum annual financial turnover** (in all classes of civil Engineering construction works only.) of **Rs. 332.00 lakhs (Rupees Three hundred thirty two lakhs only) in any one year during last Five years** at the price level of **2026-2027**. (Information to be given only in Statement No.1 enclosed on **Page – 23 & 24**.) This should be duly audited by Chartered Accountant year in which no turnover is shown would also be considered for working out the average turnover.
- b) Satisfactorily completed **three similar type works** as a prime contractor **during last five years of Bridge Construction including Road Construction of value of each work not less than 40% of construction value of work Rs. 443.00 Lakhs i.e. each work costing not less than Rs. 177.00 lakhs (Rupees One hundred seventy seven lakhs only)** at the price level of **2026-2027**.

or

Satisfactorily completed **two similar type works** as a prime contractor **during last five years of Bridge Construction including Road Construction of value of each work not less than 50% of construction value of work Rs. 443.00 Lakhs i.e. each work costing not less than Rs. 221.00 lakhs (Rupees Two hundred twenty one lakhs only)** at the price level of **2026-2027**.

or

Satisfactorily completed **at least one similar type works** as a prime contractor **during last five years of Bridge Construction including Road Construction of value of each work not less than 80% of construction value of work Rs. 443.00 Lakhs i.e. each work costing not less than Rs. 354.00 lakhs (Rupees Three hundred fifty four lakhs only)** at the price level of **2026-2027**. (Information to be given in Statement No.2 enclosed herewith on **Page – 23**)

- c) Satisfactorily executed **in any one year during last five years**, the following minimum quantities of work (Information to be given only in Statement No.6 enclosed herewith on **Page- 31**)

1.	M-25 & above PCC / RCC	131.00 Cubic metre
2.	WBM / WMM	322.00 Cubic tonne
3	M.P.M./ B.U.S.G./ B.B.M.	8941.00 Square tonne
4.	B.C./ O.G.P.C./ C.G.C./ A.C./ S.D.B.C./ Mastic asphalt	8941.00 Square metre

- (d) Details of proof of educational qualification of technical personal. **Availability of Site Engineer having minimum qualification of B.E. (Civil) degree / Dip. (Civil) and not less than Three years experience and One Site Supervisor with I.T.I. + 3 years experience on works of similar nature and other key personnel.** As rolls of tenderer with adequate experience exclusively for this works as required. (As per condition 1.4.11) Statement No.4 on **page No. 30**)

Technical Manpower Computer system has been developed for the Contractors in Public Works Department The said computer system is available on www.mahapwd.gov.in via "bidcap.emahapwd.com" Link. As per Government Resolution **dated 07.12.2023**, for all the works amounting to Rs.30.00 lakhs above, also those contractors who has taken up the 3 works amounting to Rs.30.00 Lakhs or above in one financial year, if such contractors are willing to take works in same financial year, it is obligatory while uploading the tender, contractor should upload Technical Manpower Deployment Certificate by using web based system.

As per instruction given by Government Resolution letter **dated 07.12.2023**. Contractor who has taken up the tender Rs.30.00 Lakh and above all works, it is obligatory to submit Technical Manpower Deployment Certificate through computer portal.

Contractor

No. of Corrections

Executive Engineer

While submitting tender by the contractor, it is essential to submit the details of availability of manpower provided by contractor as mentioned in Annexure 3. (Page No. 30)

If the contractor's tender is found to be the lowest, an e-mail will be sent to deposit the security deposit for the work at the end of the tender process. After depositing the security deposit by the contractor, the details of the manpower will be provided along with the work order by the Department.

To execute the works in P.W.Department, it is mandatory that, the contractor should provide experience and experience technical manpower for the work executions. Therefore contractor should provide an affidavit on a stamp paper of Rs.500/- that he will not be raised any kind of claims/ compensation for damages against department for the availability of experience of technical manpower.

QR based Technical Manpower Deployment certificate will be mandatory in the technical envelope under each tender of the Government Department.

Note (1) : Financial turnover and cost of completed works of previous year shall be given, linear weightage of **10%** per year on Rupee value to bring them at **2026-2027** price value.

Note (2) : The necessary certificate as mentioned in qualification criteria from Sr. No. (a) to (c) are required to be obtained from the officer not below the rank of **Executive Engineer**. A copy of these certificate duly attested by a Gazetted Officer with his/her name written by him/herself along with availability of equipment's for this work as mentioned in Sr. No. **1.4.5** shall be put in Envelope No.1 only. In absence of these certificates Envelope No. 2 (Financial Bid) shall not be opened.

Note (3) : Signature of the officer checking / issuing requisite certificate should bear the concerned officer.

Note (4) : Statement No. 1 to 6 on *Pages (23) to (32)*

Note (5) : The abstract of information in Statement No. 1 on *page (23 and 24)* (Statement showing work done in all classes of civil engineering construction works **during last five years**) shall be given in Statement 5 in the proforma enclosed on *page No.(31)*. The abstracted statement 5 (on *page No.31*) need to be signed by the tenderer or holder of his power of attorney.

(e) Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under :-

$$\text{Assessed Available Bid Capacity} = [(A \times N \times 2) - B]$$

where

A=Maximum Value of Civil Engineering work executed in anyone year during last five years taking into account the completed as well as ongoing work.

N= Number of years prescribed for completion of the works for which bids are invited.

B=Value of existing Commitments & ongoing works in hand (During period of work under consideration)

Contractor

No. of Corrections

Executive Engineer

a) Bid Capacity system has been developed for the Contractors in Public Works Department. The said computer system is available on www.mahapwd.gov.in via "bidcap.emahapwd.com" Link As per Government Resolution **dated 07.12.2023**, for all the works amounting to Rs.30.00 lakhs above, also those contractors who has taken up the 3 works amounting to Rs.30.00 Lakhs or above in one financial year. if such contractors are willing to take works in same financial year, it is obligatory while uploading the tender, contractor should upload Bid Capacity Certificate by using web based system.

b) As per instruction given by Government Resolution letter **dated 07.12.2023**, Contractor who has taken up the tender Rs.30.00 Lakh and above all works, it is obligatory to submit Bid Capacity Certificate through computer portal

c) Contractor has to upload Bid Capacity Certificate along with each tender by using Bid Capacity computer system. while scrutinizing the bid capacity of the contractor who has submit the tender in Department. in progress work (as detail in GST R 7), awarded work with below offer of contractor, work orders shall be available through Computer portal for inspection to Executive Engineer.

While scrutinizing the bid capacity of the contractors who have submitted tenders for the works in Department, after deducting, the works held by the contractor & the works awarded with lowest price etc, if there is sufficient bid capacity, then the further action should be initiated by the Executive Engineer in context of technical envelope.

But if the contractor does not have enough bid capacity, then contacting to the other department, such contractor is L1 Bidder then further action/decision should be taken by the Department.

d) Contractors need to submit his certified documents showing having works information, all works done certificate, annual turnover certificate certified by the Chartered Accountant and yearly tax credit statement- "Form 26 A" **CIBIL** Score etc in the prescribed format A/Along with Annexure 3F. (**Page No. 23 and 24**)

e) Option is given in the computer system for Annexure R-GST Generation on pragmatic basis as it is essential to deposit contractor wise monthly GST Annexure to goods and service tax department from all Public Works department. It is obligatory for all department to send Annexure R-GST to goods and service tax department by using this system,

f) QR based Bid Capacity certificate will be mandatory in the technical envelope under each tender of the Government Department.

Note : The statement showing the value of existing commitments and on going work as well as the stipulated period of completion remaining for each of the works listed should be signed by the officer not below the rank of the **Executive Engineer** and Bid Capacity statement of the Contractor should be got certified from the Chartered Accountant.

1.4.16 **The contractor shall submit an affidavit in original (as per format given on Page No. 34)** to the tender accepting authority on due date as per tender schedule regarding completeness, correctness and truthfulness of documents in [Envelope No.1](#).

Scanned copy of Affidavit in respect of genuineness of documents contained in the Envelope No. 1 in the prescribed proforma provided with Tender Set on Stamp Paper of **Rs. 500/-** (Proforma of Affidavit is attached with Tender).

The Affidavit is also to be submitted physically as per schedule given in tender in original and will be the part and parcel of contract agreement.

Contractor will be solely responsible and liable for action under Indian Penal Code for uploading or physical submission of any false / fraudulent document / information of envelope No. 1 and 2.

Contractor will be solely responsible and also liable for action under Indian Penal Code for submission of any false information, false bills / invoice / vouchers of purchase of material in supporting proof of purchase, proof of testing / test results and any other required documents submitted by his staff / representative or by himself or subletting company / contractor during contract period or even after completion of work till finalization of bill and completion of defect liability period.

If false information / documents are submitted as mentioned above, the contractor will be blacklisted and if contract is at initial stage then such contract will be terminated and no any compensation will be payable on any account to the contractor.

PWD Staff / PWD Officers / Divisional Accounts Officers will not be responsible for any complications due to submission of false / fraudulent documents by the contractor as mentioned above.

Separate Affidavit shall be submitted for each work in original. Affidavit not confirming to these conditions will not be accepted and Envelope No. 2 will not be opened.

- 1.4.17 **Scanned copy of** Undertaking of contractor that he had studied all tender documents, conditions and especially work methodology.
- 1.4.18 **Scanned copy of** Tentative program of work in the form of Bar Chart shall be submitted.
- 1.4.19 The tenderer must have sufficient experience in the **Bridge Construction including Road Construction work.**
- 1.4.20 **BIDS FROM JOINT VENTURES ARE NOT ACCEPTABLE.**
- 1.4.21 **Scanned copy of** All the documents from Sr. No. 1.4.1 to 1.4.19 shall be correctly and completely submitted by contractor **online**, otherwise his Envelope No.2 will not be opened.

Even though the Bidder meet the above qualifying criteria, they are subject to be disqualified if they have made.

Misleading or false representations in the Statements attachments submitted in proof of the qualification requirements.

And / or

Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

- 1.4.22 All corresponding paras pertaining to the tender related subject to Maharashtra P. W. Manual shall be applicable to this tender.
- 1.4.23 Decision regarding any issues raised by contractor regarding tender process finalized on basis of prevailing GR / Circulars / Guidelines issued by Government of Maharashtra.

1.5 ENVELOPE NO.2 TENDER (FINANCIAL BID)

The second envelope as “Envelope No.2” shall contain only the main tender. **It shall also contain the Scanned copy of the Demand Draft/F.D.R./Bank Guarantee as per Performance Security if the offer quoted is below the estimated cost put to tender, as explained in Para No.1.9 (A) under Performance Security.** A tender submitted without this would be considered as invalid.

Contractor

No. of Corrections

Executive Engineer

The Tenderer should quote his offer **only through online bidding process** in terms of percentage of estimated rates. Bidder shall quote his offer only on Work portion/Civil cost (A) in Schedule B without GST. He should not quote his offer any where directly or indirectly in Envelope No.1. The contractor shall quote for the work as per details given in the main tender. His tender shall be unconditional.

1.6 **SUBMISSION OF TENDER :-**

Refer to Section “ **Guidelines to Bidders on the operations of Electronic Tendering System of Public Works Department** “ for details.

1.6.2 **HARD COPY SUBMISSION**

Submission of Hard Copy of online submitted copy :

Tenderer must submit the HARD Copy of (online submitted copy) within 72 Hrs. from the time of submission of bid to any of the following office :-

- 1) **Office of the Chief Engineer P.W. Region, Kokan.**
 - 2) **Office of the Superintending Engineer, Sindhudurg P.W. Circle, Sindhudurg.**
 - 3) **Office of the Executive Engineer, P.W. Division, Sawantwadi.**
 - 4) **Office of the Executive Engineer, P.W. Division, Kankavali.**
- a) Document submitted online in Envelope No. 1 and 2 are put in separate Envelope as Envelope No. 1 (Technical Bid) and Envelope No. 2 (Financial Bid) respectively and sealed properly.
 - b) The above two sealed Envelopes No. 1 and 2 shall be again put together in one common cover and sealed. The name of work, online Tender Notice No. (i.e. SGN) and Name and full address of tenderer with mobile number shall be mentioned on the said common cover marked sealed Common Cover properly covers corner.
 - c) **The above Common Cover containing Envelope No. 1 and 2** must be submit to the Executive Engineer within the time and date specified in Tender Schedule Flashed on Web-site portal on working days (during office hours) only.
 - d) No delay on account of any cause will be entertained for the receipt said Hard Copy.
 - e) If problem arise during e-tendering process the hard copy in sealed envelope will be opened.

1.7 **OPENING OF TENDERS :**

On the date, specified in the Tender Schedule, following procedure will be adopted for opening of the Tender.

(A) ENVELOPE NO.1 :- (Documents)

First of all **Technical Documents submitted will be opened online** to verify its contents as per requirements. If the various documents contained in this envelope do not meet the requirements of the Department, a note will be recorded accordingly by the tender opening authority and the said tenderer's Envelope No.2 will not be considered for further action and the same will be recorded.

The decision of the tender opening authority in this regard will be final and binding on the contractors.

(B) ENVELOPE NO.2 : (Financial Bid)

- a) This Envelope shall be opened **online** immediately after opening of Envelope No.1, only if contents of Envelope No.1 are found to be acceptable to the Department. The tendered rates in Schedule 'B' or percentage **above / below** the estimated rates shall then be read out. in the presence of bidders who remain present at the time of opening of Envelope No. 2.

1.8 EARNEST MONEY :

1.8.1 The bidder shall furnished as part of his bid, a Earnest money Deposit (EMD) should submit an amount of **Rs. 2,22,000.00 (Rupees Two Lakh Twenty two Thousand Only)** via online RTGS / NEFT for this particular work, this Earnest Money Deposit (EMD) shall be in favour of employer.

1.8.2 Any bid not accompanied by an acceptable Earnest Money Deposit (EMD) shall be rejected by the Employer as non-responsive.

1.8.3 The Earnest Money Deposit (EMD) of unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified on **page no. 46**.

1.8.4 The Earnest Money Deposit (EMD) of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.

1.8.5 The Earnest Money Deposit (EMD) may be forfeited.

- a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
- b) if the Bidder does not accept the correction of the Bid Price ; or
- c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - i) sign the Agreement; or
 - ii) furnish the required Performance Security.

1.9 SECURITY DEPOSIT :

The successful tenderer shall have to pay half the security deposit in approved security form (preferably in the form of National Saving Certificate) or in the form of **Bank Guarantee** (in the form as prescribed by Government) from any Schedule Bank or Nationalized Bank and balance Security Deposit will be recoverable through the bills at the percentage as shown in item(s) of the Memorandum in printed B-1 form or as may be decided by the Executive Engineer during course of execution of the work looking to the position and circumstances that may prevail, whose orders will be final and binding on the contractor.

The security deposit for the due performance of the contract shall be as detailed in the Tender Documents elsewhere. Fifty percent of the security deposit will have to be deposited within **ten days** (including Government holidays) of the acceptance of the tender and the remaining fifty percent will be recovered from the Running Bills at the rate as specified in the tender form, on the cost of work as per C.S.R. prevailing at the time of acceptance of tender. Amount of total security deposit to be paid shall be **1%** (**One percent**) of the cost of work, worked out as per **S. S. R. 2022-2023** for the **Maharashtra State**. Initial Security Deposit may be in Bank Guarantee form in format on **Page 193 to 194** of tender document for full period of completion of work and it should be extendable upto expiry of valid extension if any, as directed by Engineer-in-charge.

Payment of Security Deposit by Bank Guarantee and Online BG verification : If the contractor wishes to deposit security deposit by Bank Guarantee after tender approval then it is mandatory for contractor to verify the Bank Guarantee by paying verification fees of Rs. 1000/- + GST through the link provided below

<https://onlinebg.emahapwd.com>

1.9 A Additional Performance Security

It is mandatory to L-1 tender that he shall submit Additional Performance Security in the form of **Bank Guarantee / Demand Draft / Fixed Deposit Receipt** of any Nationalized or Scheduled Bank **in favour of the Executive Engineer, Kankavali P. W. Division, Kankavali payable at Kankavali** within 8 days after opening of Envelope No.1 & 2 at Division Office.

The amount of the (Additional Performance Security) **Bank Guarantee / Demand Draft / Fixed Deposit Receipt** shall be calculated by the tenderer in accordance with the following manner.

1.9 A.1 If the tenderer has quoted below the estimated rates, the Additional Performance Security shall be paid additionally as mentioned below.

a) If the offer submitted is below schedule “B” rates by more than 1% but less than 10% of the estimated cost put to tender	1% of the estimated cost put to tender
b) If below by more than 10% of the estimated cost put to tender	1% of the estimated cost put to tender plus an amount equal to the percentage by which the offer is below 10% of the estimated cost put to tender. (e.g. if the offer is 14.00% below, the Performance Security will be 1% + (14% - 10%) = 5.00% of the estimated cost put to tender.
c) If offer is more than 15% below.	<p>For balance amount, submission of double amount in the form of Demand Draft/ Fixed Deposit Receipt/ Bank Guarantee is mandatory for example 19% below rate</p> <p>Upto 10% below rate = 01%</p> <p>Upto 15% below rate = 05%</p> <p>(15% - 10%)</p> <p>Upto 19% below rate = 08% } (19% - 15% = 4% x 2) } = 08%</p> <p style="text-align: right;">Total = 14%</p>

Note :- (i) For more than 10% below and up to 15% below ‘b’ is applicable.

(ii) For more than 15% below c is applicable.

1.9 A.2 The **Bank Guarantee / Demand Draft / Fixed Deposit Receipt** shall be valid **beyond one month after expiry of Defect Liability Period.**

1.9 A.3 In case it is found that the documents **Bank Guarantee / Demand Draft / Fixed Deposit Receipt** submitted by the tenderer are false or misleading, his earnest money shall be forfeited. Also the registration of the tenderer shall be suspended for the period of 1 year. Additionally legal action may be initiated against the tenderer.

1.9 A.4 The work order shall be given to the concerned tenderer after the clearance of the **Bank Guarantee / Demand Draft / Fixed Deposit Receipt** submitted by him.
Refund of Additional Performance Security.

1.9 A.5 The amount of the Additional performance security shall be refunded immediately upon satisfactory completion of work; the certificate of which shall be issued by the Executive Engineer before releasing the additional performance security.

1.9 A.6 Non submission of Additional performance security deposit and performance security or submission of less amount of the Additional Performance Security deposit shall be liable to summarily rejection of his tender.

1.10 ISSUE OF FORMS:

Information regarding contract as well as blank tender forms can be downloaded from the eTendering website upon providing the details of the payment of cost as detailed in the N.I.T.

1.11 TIME LIMIT :

The work is to be completed within time limit as specified in the N.I.T. which shall be reckoned from the date of written order for commencing the work and shall be inclusive of monsoon period.

1.12 TENDER RATE :

No alteration in the form of tender and the schedule of tender and no additions in the scope of special stipulation will be permitted. Rates quoted for the tender shall be taken as applicable for all leads and lifts.

1.13 TENDER UNITS :

The tenderers should particularly note the units mentioned in the Schedule “B” on which the rates are based. No change in the units shall be allowed. In the case of difference between the rates written in figures and in words, the correct rate will be the one, which is lower of the two.

1.14 CORRECTION :

No corrections shall be made in the tender documents. Any corrections that are to be made, shall be made by crossing the incorrect portion and writing the correct portions above with the initials of tenderer.

1.15 TENDERACCEPTANCE:

Acceptance of tender will rest with the Chief Engineer, P.W. Region, Konkan Mumbai who reserves the right to reject any or all tenders without assigning any reason therefore. The tenderer whose tender is accepted will have to enter in to a regular B-1 agreement within 10 days of being notified to do so. In case of failure on the part of Tenderer to sign the agreement within the stipulated time, the earnest money paid by him shall stand forfeited to the Government and the offer of the tenderer shall be considered as withdrawn by him.

1.16 CONDITIONAL TENDER :

The tenders which do not fulfill the condition of the notification and the general rules and directions for the guidance of contractor in the agreement form or are incomplete in any respect are likely to be rejected without assigning any reason therefore.

- 1.17(a)** The Tenderers shall be presumed to have carefully examined the drawings, conditions and specifications of the work and have fully acquainted themselves with all details of the site, the conditions of rock and its joints, pattern, river, weather characteristics, labour conditions and in general with all the necessary information and data pertaining to the work, prior to tendering for the work.
- 1.17(b)** The data whatsoever supplied by the Department along with the tender documents are meant to serve only as guide for the tenderers while tendering and the Department accepts no responsibility whatsoever either for the accuracy of data or for their comprehensiveness.
- 1.17(c)** The quarries for extraction of metal, murum etc. provided in the sanctioned estimate are as per survey conducted by the Department. The Contractor should however examine these quarries and see whether full quantity of materials required for execution of the work strictly as per specification are available in these sources before quoting the rates. In case the materials are not available due to reasons whatsoever, the contractor will have to bring the materials from any other sources with no extra cost to Government. The rates quoted, should therefore be for all leads and lifts from wherever the materials are brought at site of work and inclusive of royalty to be paid to the Revenue Department by the Contractor.

1.18 POWER OF ATTORNEY :

If the tenderers are a firm or company, they should in their forwarding letter mention the names of all the partners together with the name of the person who holds the power of Attorney, authorizing him to conduct all transactions on behalf of the body, alongwith the tender **as per scanned copy uploaded in Envelope No.1.**

- 1.19** The tenderer may, in the forwarding letter, mention any points he may wish to make clear but the right is reserved to reject the same or the whole of the tenders if the same become conditional tender thereby.
- 1.20** The contractor or the firms tendering for the work shall inform the Department if they appoint their authorized Agent on the work.
- 1.21** No foreign exchange will be released by the Department for the purchase of plants and machinery for the work by the Contractor.
- 1.22** Any dues arising out of contract will be recovered from the contractor as arrears of Land Revenue, if not paid amicably. Moreover, recovery of Government dues from the Contractors will be effected from the payment due to the Contractor from any other Government works under execution with them.
- 1.23** All **scanned pages** of tender documents, conditions, specifications, correction slips etc. shall be initialed by the tenderer. The tender should bear full signature of the tenderer, or his authorized power of Attorney holder in case of a firm.
- 1.24** The Income Tax at **prevailing rate** including surcharge or percentage in force from time to time or at the rate as intimated by the competent Income Tax authority shall be deducted from bill amount whether measured bill, advance payment or secured advance.

1.25 The successful tenderer will be required to produce to the satisfaction of the specified concerned authority a valid concurrent license issued in his favour under the provisions of the Contract Labour (Regulation and Abolition) Act 1970 for starting the work. On failure to do so, the acceptance of the tender shall be liable to be withdrawn and also liable for forfeiture of the earnest money.

1.26 The tenderer shall submit the list of apprentices engaged by the Contractor under Apprentices Act.

1.27. TAX

- 1.27.1 a) Bidder shall quote his rate considering the provisions counted under GST Act. – 2017.
- b) Provisional amount of GST 2% i.e. CGST 1% + SGST 1% will be deducted at source (T.D.S.) after the enforcement of section 51 of Maharashtra Goods and Service Act-2017.
- c) Bidder shall quote his rate excluding GST.
- d) GST shall be paid on the amount of bill of the work done as per prevailing guidelines rate of GST during the period of work done as applicable.
- e) The rates quoted by the contractor shall be deemed to be inclusive of the labour welfare cess and other taxes (other than GST) that the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to deduction of such taxes at sources as per applicable law.
- f) **Bidder shall quote his offer only on Work portion/Civil cost (A) in Schedule B without GST.** However testing charges will be paid as per test result submitted by bidder. Also the Royalty will be paid after producing the royalty challans to the department.

1.28 VALIDITY PERIOD :

The offer shall remain open for acceptance **for minimum period of 90 days** from the Date of opening of Envelope No.2 (Financial Bid) and thereafter until it is withdrawn by the contractor by notice in writing duly addressed to the authority opening the tender and sent by Registered Post Acknowledgment due. (ref. to memorandum **on Page 46** of B-1 Form Chapter)

1.29 Contractor shall submit a certificate to the effect that ‘All the payments to the labour / staff are made in the bank account of staff link to Unique Identification Number (AADHAR CARD)’. The certificate shall be submitted by the contractor within 60 days from the commencement of contract if the time period of contract is less than 60 days then such certificates shall be submitted within 15 days from the date of commencement of contract. (Vide Marathi G.R. No. Tender-2016/C.R.20/Shikana/Blgd-2. Dated 9/12/2016)

1.30 महाराष्ट्र शासन महसुल व वनविभाग शासन राजपत्र दि. १४.१०.२०२४ अन्वयेप्राप्त झालेल्या आदेशान्वये मुद्रांक अधिनियमाच्या प्रचलित तरतुदीनुसार या कार्यकंत्राटाबाबत मुद्रांक शुल्क आकारणी करावयाची असल्याने आपण या कार्यवाहीसंबंधीत आवश्यक असलेले मुद्रांक शुल्क सह. जिल्हा निबंधक (वर्ग-१) तथा / किंवा मुद्रांक जिल्हाधिकारी यांचेकडे परस्पर भरून त्याप्रित्यर्थ प्राप्त होणारी मुद्रांक शुल्क भरणा पावती / पोहोच काम सुरु करण्यापुर्वी या कार्यालयाकडे तात्काळ जमा करावी.

1.30 INTEGRITY PACT

The successful tenderer shall submit the INTEGRITY PACT (format is given on **page no. 253 to 260**) before the work order.

STATEMENT NO. 1

Annexure अ

**STATEMENT SHOWING WORK DONE IN ALL CLASSES OF CIVIL
ENGINEERING CONSTRUCTION WORKS DURING LAST FIVE YEARS.****NAME OF THE CONTRACTOR :****Ref. Page 11 Clause 1.4.7**

Sr. No.	Dept. Name	Name of the Work	Date of Work Order	Time Period of Work	Cost of Work	Update yearwise Expenditure / Work Done (Rs. in Lakhs)					Balance Cost to be executed 2026-2027. (Rs. In lakhs)	Upload Work Order
						2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11	12	13
SAMPLE FORM												

Grand Total :-**Out ward No. and date of certificate issuing authority:**

Executive Engineer

Note : Bidder shall upload work done certificate of Engineer-in-charge in support.

This is only a standard form. Details are to be furnished in this format in the form of type written statements, which shall be uploaded online in Envelope No.1.

Contractor

No. of Corrections

Executive Engineer

STATEMENT NO. 1

Annexure अ

Turnover Details as per Chartered Accountant Certificate (Last 5 Years)**NAME OF THE CONTRACTOR :**Ref. Page 11 Clause 1.4.7

Sr. No	Year	Turn Over	Updated Turn Over with Factor	Remark
1	2	3	4	5
1.	2021-2022			
2.	2022-2023			
3.	2023-2024	SAMPLE FORM		
4.	2024-2025			
5.	2025-2026			

Note : Bidder shall upload C. A. certificate regarding Annual Turn Over.

This is only a standard form. Details are to be furnished in this format in the form of type written statements, which shall be uploaded online in Envelope No.1.

STATEMENT NO. 2**DETAILS OF WORKS OF SIMILAR TYPE AND MAGNITUDE DURING LAST FIVE YEARS CARRIED OUT BY THE CONTRACTOR.****NAME OF THE CONTRACTOR :****Ref. Page 11 Clause 1.4.8**

Sr. No.	Name of the work	Name and address of the organization for whom the work was done.	Place and country	Agreement No.	Date of commencement	Tendered cost. (Rs. In lakhs)	Total Cost of work done. (Rs. In lakhs)	Actual date of completion	(Principal features in brief.)
1	2	3	4	5	6	7	8	9	10
			SAMPLE FORM						

Note : This is only a standard form; details are to be furnished in this format in the form of type written statements which shall be [uploaded online](#) in Envelope No.1.

STATEMENT NO. 2 'A'
(TO BE INCLUDED IN ENVELOPE NO.1)

Proforma for information regarding availability of machinery required for this work. (Ref 1.4.6 Page 10) is given below :

- I) Documentary evidence regarding **ownership or hire** of following machineries required.
II) Contractor should produce documentary proof regarding **ownership or hire** of following machinery.

The required machinery is as follows.

Sr. No.	Type of Equipment	Maximum age as on 31.03.2026 (Years)	Owned/Hired
1.	Fully Automatic Micro Processor based Programmable Logical Control (PLC) with SCADA Enabled Concrete Batch Mix Plant (Pan Mixer) of minimum 12-15 cubic meter per hour capacity of any standard Company	15 Years	1 Number Owned
2.	Trussle	15 Years	50 Numbers of steel trestles Owned
3.	JCB/Excavator	15 Years	1 Number Owned/Hired
4.	Water Pump minimum 5.00 B.H.P.	15 Years	1 Number Owned/Hired
5.	Needle Vibrator – 3 Types 80 mm, 60mm, 20 mm 1 Number Each	15 Years	1 Number Each Owned /Hired
6.	Truck/Tipper/Tractors	15 Years	2 Number Owned/Hired
7.	Water Tanker (5000 litres capacity)	15 Years	1 Number Owned/Hired
8.	Modern Asphalt Batch Mix Plant having minimum Capacity of 80 TPH or Bidder shall upload the scanned copy of Original Purchase order with payment of minimum Rs.50 lakh to the manufacture/Dealer for purchase of Batch Mix Plant. OR Drum Mix / Hot Mix Plant having minimum capacity of 40 to 60 or 80 to 100 TPH with SCADA . The Plant must be within 60 km from center of work site. Shifting of plant not allowed.	15 Years	1 No. Owned
9.	Mechanical Paver Finisher with V.T.S	15 Years	1 No. Owned
10.	Mechanical Bitumen Sprayer	15 Years	1 No. Owned/Hired
11.	Vibratory Road Roller	15 Years	1 No. Owned/ Hired
12.	Static Roller 8 to 10 Tonne / Smooth Wheeled Power Roller	15 Years	1 No. Owned/Hired

Note:-

Documentary evidence regarding ownership or hire of above machineries shall be produced.

- 1) The life of machinery shall be considered as 15 years.
- 2) The machinery above age of 15 years is not allowed.
- 3) For machinery above age of 10 years fitness certificate of ACE (Mech.) is required for every year. After First setup of new plant and machinery as well as relocation of old plant and machinery to a new site, certificate from the ACE (Mech.) shall be mandatory.
- 4) Machinery having more than 15 years age, registered with Regional Transport Office will be valid subject to the submission of fitness certificate from **Regional Transport Officer**.
- 5) Hire agreement of Machineries is to be self attested by bidder on **Rs. 500/- Stamp Paper** as attached on Page No. **35** shall be used and same shall be **uploaded online** in Envelope No. 1.

The undertaking of the Bidder, regarding distance from the Plant to site of work, and assurance of maintaining temperature of the bituminous mix as per specifications before laying at site. **This undertaking has to be uploaded through online.** The undertaking will be verified, if necessary, at the time of opening of Tender. If the undertaking submitted by the Bidder is assessed to be incorrect, his bid shall be considered as disqualified.

Contractor

No. of Corrections

Executive Engineer

STATEMENT NO. 2 'A' 1

(TO BE INCLUDED IN ENVELOPE NO.1)

Proforma for information regarding availability of machinery required for this work. (Ref 1.4.6 Page 10 is given below :

- I) Documentary evidence regarding **ownership or hire as specified on Page No. 26** of following machineries required.
- II) Contractor should produce documentary proof regarding **ownership or hire as specified on Page No. 26** of following machinery.

List of Plants & Equipment's

Sr. No.	Type of Equipment	Maximum age as on 31.03.2025 (Years)	Owned/Hired
1.	Fully Automatic Micro Processor based Programmable Logical Control (PLC) with SCADA Enabled Concrete Batch Mix Plant (Pan Mixer) of minimum 12-15 cubic meter per hour capacity of any standard Company	15 Years	1 Number Owned
2.	Trussle	15 Years	50 Numbers of steel trestles Owned
3.	JCB/Excavator	15 Years	1 Number Owned/Hired
4.	Water Pump minimum 5.00 B.H.P.	15 Years	1 Number Owned/Hired
5.	Needle Vibrator – 3 Types 80 mm, 60mm, 20 mm1 Number Each	15 Years	Owned /Hired
6.	Truck/Tipper/Tractors	15 Years	2 Number Owned/Hired
7.	Water Tanker (5000 litres capacity)	15 Years	1 Number Owned/Hired
8.	Modern Asphalt Batch Mix Plant having minimum Capacity of 80 TPH or Bidder shall upload the scanned copy of Original Purchase order with payment of minimum Rs.50 lakh to the manufacture/Dealer for purchase of Batch Mix Plant. OR Drum Mix / Hot Mix Plant having minimum capacity of 40 to 60 or 80 to 100 TPH with SCADA . The Plant must be within 60 km from center of work site. Shifting of plant not allowed.	15 Years	1 No. Owned
9.	Mechanical Paver Finisher with V.T.S	15 Years	1 No. Owned
10.	Mechanical Bitumen Sprayer	15 Years	1 No. Owned/Hired
11.	Vibratory Road Roller	15 Years	1 No. Owned/ Hired
12.	Static Roller 8 to 10 Tonne / Smooth Wheeled Power Roller	15 Years	1 No. Owned/Hired

The complete information in above proforma shall be submitted **online** by Contractor in Envelope No.1. This information is a **“MUST”**

In case the contractor proposes to hire stated above agreement proforma given on Page No. **35** shall be used and same shall be **uploaded online** in Envelope No.1

Contractor

No. of Corrections

Executive Engineer

(TO BE INCLUDED IN ENVELOPE NO.1)

**STATEMENT NO.2 “B” SHOWING DETAILS OF ASPHALT BATCH MIX PLANT
OR DRUM MIX PLANT REQUIRED FOR THIS WORK**

Details of SCADA enabled **Asphalt Batch Mix Plant or Drum Mix Plant** available with the tenderer for this work.

1. **Asphalt Batch Mix Plant or Drum Mix Plants Capacity :**
- a. Name of Manufacturer :
- b. Date of Purchase. :
- c. Present location :
- d. Name of work on which deployed :
- e. Name and address of Engineer - in - charge. :
- f. Anticipated date of completion of Work on which deployed. :

**STATEMENT SHOWING DETAILS OF MECHANICAL PAVER FINISHER
REQUIRED FOR THIS WORK**

Details of VTS enabled Mechanical Paver Finisher available with the tenderer for this work.

1. Mechanical Paver Finisher :
- a. Name of Manufacturer :
- b. Date of Purchase. :
- c. Present location :
- d. Name of work on which deployed :
- e. Name and address of Engineer - in - charge. :
- f. Anticipated date of completion of Work on which deployed. :

**STATEMENT SHOWING DETAILS OF VIBRATORY ROLLER AND STATIC
ROLLER AVAILABLE WITH THE TENDERER REQUIRED FOR THIS WORK**

Details of VTS enabled Vibratory Roller and Static Roller available with the tenderer for this work.

1. Vibratory and Static Roller (Static weight) :
- a. Name of Manufacturer :
- b. Date of Purchase. :
- c. Present location :
- d. Name of work on which deployed :
- e. Name and address of Engineer - in - charge. :
- f. Anticipated date of completion of Work on which deployed. :

STATEMENT NO.3**DETAILS OF WORKS IN HAND AND WORKS TENDERED**

FOR AS ON _____

NAME OF THE CONTRACTOR :

(I) WORKS IN HAND

Ref. page 11 Clause 1.4.9

Sr. No.	Name of the work	Agreement No.	Tendered Amount. (Rs. in lakhs)	Date of commencement.	Stipulated date of completion.	Value of work already done. (Rs. In lakhs)	Value of Balance work to be executed (Rs. In lakhs)	Probable date of completion.	Remarks
1	2	3	4	5	6	7	8	9	10
SAMPLE FORM									

(II) WORKS TENDERED FOR

Sr. No.	Name of the work	Name and Address of Client.	Tendered Amount. (Rs. In lakhs)	Time limit	Probable date when decision is expected	Other relevant details, if any.
1	2	3	4	5	6	7
SAMPLE FORM						

Note : 1) This is only a standard form. Details are to be furnished in this format in the form of type written statements which shall be [uploaded online](#) in Envelope No.1.

STATEMENT NO. 4

Annexure ब

**STATEMENT SHOWING TECHNICAL PERSONNEL AVAILABLE WITH
CONTRACTOR WHICH CAN BE SPARED EXCLUSIVELY FOR THIS WORK.**

NAME OF THE CONTRACTOR :

Ref. page 11 Clause 1.4.10

Sr. No.	Personnel	Qualification	
1	2	3	4
1.			
2.			
3.			
4.			
5.			

Note : Bidder shall submit the name and C.V.s of above personnel with all details in field given software.

STATEMENT NO.5

**STATEMENT SHOWING WORK DONE IN ALL CLASSES OF CIVIL
ENGINEERING CONSTRUCTION WORKS DURING LAST FIVE YEARS
(ABSTRACT OF STATEMENT NO. 1).**

NAME OF THE CONTRACTOR :

Ref. Page NO. 12 Clause 1.4.15(a)

Sr. No	Name of Division	Amount put to Tender / Tendere d cost. (Rs. In lakhs)	Total No. of Agree ments No.	Amount of work done during each of last five years (Rs. In lakhs)					Total Amount of work still remaining to be executed (2026-2027) (Rs. In lakhs)	Remarks
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
				SAMPLE FORM						

Checked and found correct

Signature

Name _____
Executive Engineer

Contractor

No. of Corrections

Executive Engineer

STATEMENT NO.6**STATEMENT SHOWING QUANTITIES OF WORK EXECUTED IN ANY ONE YEAR
DURING LAST FIVE YEARS.**

NAME OF THE TENDERER :- _____

Ref. Page No.12, Clause No. 1.4.14 (c)

Year	Quantity of Item of work performed				Remarks (Indicate Contract Reference
	M-25 & above PCC / RCC (in cubic metre)	W. B. M. / W. M.M. (in cubic metre)	M.P.M./ B.B.M./ B.U.S.G. (in square metre	B.C./ O.G.P.C./ C.G.C./ A.C./ S.D.B.C./ Mastic asphalt (in square metre)	
2021- 2022					
2022- 2023					
2023- 2024					
2024- 2025					
2025- 2026					

Note : This is only a standard form. Details are to be furnished in this format in the form of type written statements, which shall be [uploaded online](#) in Envelope No.1.

UNDERTAKING

मी ----- वय वर्षे ----- राहणार -----
 ----- या सत्यप्रतिज्ञा लेखाद्वारे लिहून देतो
 की, मी ----- या फर्मचा/ कंपनीचा
 प्रोप्रायटर/ मुखत्यार असून ----- या कामासाठी निविदा सादर केली आहे. सदर काम
 करणेकरीता आवश्यक यंत्रसामुग्री सर्व प्रकारची आवश्यक यंत्रसामुग्री (Machinery) ही माझ्या स्वतःच्या
 मालकीची/ भाड्याची असून संबंधीत कार्यकारी अभियंता व संबंधित उप अभियंता हे सूचना देतील त्यावेळी तसेच
 ती मी काम सुरु करण्यापूर्वी कामाच्या ठिकाणी निविदा शर्तीनुसार उपलब्ध करून देण्याचे मी प्रतिज्ञापत्राद्वारे
 शपथपूर्वक मान्य करीत आहे.

सदर काम करणेकरीता आवश्यक यंत्रसामुग्री उपलब्ध करून देण्यात माझ्याकडून कसूर झाल्यास
 संबंधित क्षेत्रिय अधिकारी (Engineer in Charge) सदर कामाच्या निविदेबाबत जी कार्यवाही करतील ती मला
 मान्य असून, याबाबत निविदेमधील अटी/ शर्तीनुसार मी कायदेशीर कार्यवाहीस पात्र आहे व राहीन.

येणेप्रमाणे प्रतिज्ञालेख दिनांक

कंत्राटदाराची सही

नमुना सत्यप्रतिज्ञापत्र (रु.५००/-च्या स्टॅम्प पेपरवर)

सत्यप्रतिज्ञा लेख (Affidavit)

मी ----- वय वर्षे ----- राहणार -----

----- या सत्यप्रतिज्ञा पत्राद्वारे लिहून देतो की, मी -----

----- या फर्मचा/ कंपनीचा मालक असून ----- या कामासाठी निविदा सादर करीत आहे. त्या निविदेच्या लिफाफा क्र.१ मध्ये जी कागदपत्रे सादर केली आहेत ती खरी, बरोबर व पूर्ण आहेत. त्यामध्ये कोणत्याही त्रुटी, चुका नाहीत, याची मी खात्री केलेली असून असे शपथपूर्वक खालील अटी व शर्तीसह मान्य करीत आहे. या कागदपत्रांमध्ये काही चुकीची, दिशाभूल करणारी, खोटी व तसेच अपूर्ण माहिती आढळल्यास मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.

१. जर कंत्राट कालावधीदरम्यान, मी माझ्या कार्यालयाने किंवा कर्मच्या-यांनी सार्वजनिक बांधकाम विभागाला कोणतीही खोटी माहिती किंवा देयकासमवेत तसेच पत्रव्यवहारात खोटी/बनावट साहित्य खरेदीची कागदपत्रे सादर केली असल्यास, मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.

२. जर कंत्राट कालावधीदरम्यान आणि काम समाप्ती नंतर, अंतिम देयक देण्याच्या तारखेपर्यंत सादर केलेले कोणतेही कागदपत्रे खोटी/बनावट किंवा फसवी आढळल्यास मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.

३. जर काम समाप्तीनंतर, दोष दायित्व कालावधी दरम्यान किंवा त्यानंतर कोणत्याही वेळी, कोणतीही माहिती किंवा कागदपत्रे खोटी /बनावट, फसवी किंवा दिशाभूल करणारी आढळल्यास मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.

४.बांधकामाच्या कार्यान्वयनाकरीता अनुभवी तांत्रिक मनुष्यबळ उपलब्ध करण्याबाबत विभागाविरुद्ध कुठल्याही स्वरूपाचे दावे/नुकसान भरपाई मागणार नाही

कंत्राटदाराची सही

Rs.500/- Stamp Paper**MACHINERY HIRED AGREEMENT**

This Agreement made on _____ / _____ /20__ at between M/s having its office at (herein referred to party of the first part) and M/s having its office at (herein referred to party of the second part)

Where as the party of the second part desires to carry out in the work of "**CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50. "** through contract with Public Works Department. Government of Maharashtra and the party of the first part is having plant and machinery as follows required for the said work as prescribed in the contract agreement.

First part of the party and second part of the party hereby undertake to have Mutual agreement that in the event of any work required to be carried out in the work of "**CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50. "** by the second part of the party, the first part of the party shall make their following machinery.

- 1) JCB/Excavator
- 2) Water Pump minimum 5.00 B.H.P.
- 3) Water Tanker minimum 5000 litre capacity
- 4) Trucks/Tippers/Tractors
- 5) Needle Vibrator – 3 Types 80 mm, 60mm, 20 mm 1 Number Each
- 6) Mechanical Bitumen Sprayer.
- 7) Vibratory Roller with VTS
- 8) Static Roller

available for second party for all proposed to execute the work entrusted to the second part of the party as per the specification and conditions laid down in the said contract agreement.

The Agreement is valid for the actual period of physical completion of the said work for which this Contract Agreement is made.

In witness whereof, the first parties have executed this Agreement.

WITNESS 1),
2), Signature of First Party

WITNESS 1),
2), Signature of Second Party

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NAME OF WORK :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

SCOPE OF WORK

The proposed work of Construction of V. R. B. on Het Maunde Road at Aruna Dam and Improvement & B.T.to Aruna Dam Left Bank Alternate Road (Including Construction of CD Work and Retaining Wall) Tal. Vaibhavwadi, Dist. Sindhudurg (Proposed Work Portion of Road Length is 7.50.The construction of Bridge and its approach shall having following provisions, based on Standard Specifications wherever specified in the Schedule 'B'.

1. Line out for bridge and approach and diversion road **Diversions, temporary platforms, sheds in river bed, constructed during construction of bridge shall be demolished by the contractor at his own cost and flow of river water should be free from any such obstacles during floods.**
2. Dismantling existing structure, Excavation for foundation in soft strata, hard murum and bouldres, soft rock and hard rock and fixing steel anchor dowel in hard rock.
3. Dewatering on BHP basis by using water pump for Abutment and piers.
4. Providing and laying Cement concrete in M-15 for leveling course.
5. Providing and laying plain in situ / ready mix M-25 cement concrete of trap crushed stone metal mechanically mixed, placed in foundation for abutment, piers and box return etc.
6. Providing annular space around footing in rock for both abutments and pier.
7. Providing and laying cement concrete M-25 piers, abutments, returns etc. and M-25 for Solid Piers, R.C.C. M-30 for caps.
8. Providing RCC M-30 for deck slab.
9. Providing RCC M-20 for ballast walls, kerbs and Box returns.
10. Providing TMT Fe-500 Steel bar reinforcement for various RCC items.
11. cement concrete wearing coat M-200 grade on Bridge portion.
12. Other miscellaneous items such as Providing and fixing Tar paper bearing, expansion joint, Providing and laying of filter media , water spout, weep holes, metal mat , Mild steel railing, Fixing Granite plate, Providing & Supplying corrosion inhibiting admixture in concrete to protect steel bars, Providing and applying Elastomeric, Anti carbonation, Anti corrosive, UV resistant, Solvent based Pure Aliphatic Acrylate System- MONOPOL 456 on the exterior faces etc

For Diversion & Approach Road work

- 1) Providing earthwork in embankment
- 2) Providing WBM of Grading I & II materials.
- 4) Providing 50 mm thick MPM on BT surface with tack coat of VG-30 grade asphalt.
- 5) Providing and laying 20 mm thick Open Graded Premix Carpet with VG-30 grade asphalt over B.T. surface with seal coat.
- 7) Spreading and compacting Soft/hard murum with Vibratory/power roller for side shoulder.
- 8) Misc. Items such as fixing various sign boards, fixing metal beam crash barrier, cat eyes and applying thermoplastic paint etc.

For C. D. Work / Retaining Wall / Builtup Gutter

- 1) Excavation for Foundation in soft strata and hard rock.
- 2) Providing and laying Cement Concrete M-10 for foundation.
- 3) Providing and laying in cement concrete M-25 of trap metal for head wall and Retaining wall with NP-3 class of 900 millimeter diameter pipe etc.
- 4) Misc. items such as selected hard murum filling

. Any other item not included above but included in Schedule 'B'.

.The work will have to be carried out in night time also taking permission of competent authority with all safety measures. The traffic & work safety is sole responsibility of contractor the department will not be responsible for any accident or damages of any type property and persons.

The proposed work site is approachable by road in normal condition. The average rainfall ranges from 3500 mm to 4000 mm. The normal temperature in general condition is about 15⁰ C to 35⁰ C.

AVAILABILITY OF MATERIALS :-

The materials required for this work except bitumen are generally available in the vicinity of site of work in normal condition. Necessary leads for steel and cement and bitumen is considered. Bitumen is to be procured from refinery at Mumbai.

METHOD OF EXECUTION
(GENERAL GUIDLINES)

- I On award of contract, the contractor shall construct temporary site office and take levels jointly with Engineer's representative for existing cross section of the river. The centerline of bridge shall marked on site. This shall include erection of marking center line, pillars fixing pegs, setting up temporary bench mark at site. The line out bridge and approach shall be done with the help of Engineer in charge representative.
- II The necessary arrangement for dewatering shall be done like providing cofferdam, bunds, diversion of river and pumping of water.
- III The work of Diversion road shall be done. **Diversions, temporary platforms, sheds in river bed, constructed during construction of bridge shall be demolished by the contractor at his own cost and flow of river water should be free from any such obstacles during floods.**
- IV The work of excavation for foundation in Soft strata, hard murum and boulders and soft rock, hard rock & construction of PCC bedding and M-25 cement concrete of trap crushed stone metal mechanically mixed, placed in foundation for abutment, piers etc. shall be done.
- V The work of PCC M-25 piers, abutments, Returns etc. and RCC M-25 for Piers shall be completed after completion of foundation. The R.C.C. M-30 caps over abutment and piers shall be casted. The work of RCC M-30 slab and RCC M-20 for ballast walls, kerbs and Box returns shall be executed.
- VI Miscellaneous items such as Providing and fixing Tar paper bearing, expansion joint, Providing and laying of filter media , water spout, weep holes, metal mat , Mild steel railing, Fixing Granite plate etc. shall be done later on.
- VII The Works of Slab drain and retaining wall shall be executed as per directions of engineer in charge.
- VIII For approach road Earthwork in embankment, WBM road construction & bituminous work including 50 mm thick M.P.M. 20 mm thick O.G.P.C. shall be taken up as soon as abutment & returns is completed.
- IX While doing B.T. work hot mix plant operation at plant site shall start at 8.00 A.M. in the morning in presence of Engineer in charge or his assigned representative, (at plant) and laying shall be stopped before 5.30 P.M. The work of laying hot mix material shall invariably be stopped at 5.30 P.M. in the evening.
- X Traffic plying at design speed shall not feel hump or jerk on any stretches. Contractor shall plan for all such location well before taking up work in such stretches and difficulties in doing so, if any, be brought to the notice of the Engineer and only after his permission work proceeded further.

- XI Barricading for excavated portion if required shall be provided by the contractor at his own cost as directed by Engineer-in-charge.

The Work and traffic safety is sole responsibility of contractor the department will not be responsible for any accident or damages of any type property and persons.

1) **ADDITIONAL GENERAL SPECIFICATION FOR ORDINARY AND HIGH GRADE CONCRETE :-**

- a) The test specimen should be formed by representative of the contractor in presence of a responsible officer of the rank of not lower than an Assistant Engineer / Deputy Engineer.
- b) The test specimen should be formed carefully and no claim shall be entertained later on the ground that the result of the test specimen did not give correct indication of the actual quality of concrete.
- c) The cement content shall be as per actual requirement of mix design.
- d) **Payment :-** a) The payment of such concrete work will not be made till the strength are ascertained.
- e) The payment of reinforcement of such affected items will not be made till the strengths of the concrete are ascertained.

2. **FORMWORK AND STAGING FOR BRIDGE STRUCTURES :-**

- (a) For bridge structure, forms for concrete shall be constructed of mild steel plates or marine plywood and be of substantial and rigid construction true to shape and dimensions shown on the drawings. Where metal forms are used, all bolts and rivets shall be counter sunk and well ground to provide in smooth plane surface.
- (b) Forms shall be mortar tight and shall be sufficiently rigid by the use of ties and bracing to prevent any displacement or sagging between supports. They shall be strong enough to withstand all pressure, ramming, and vibration, without deflection from the prescribed lines occurring during and after placing the concrete and shall be tight enough to prevent any appreciable loss of concrete during vibration. Screw jacks or hard wood wedges where required shall be provided to make up any settlement in the formwork before or during the placing of concrete.
- (c) Scheduled camber shall be provided in horizontal members of structures, specially in long spans to counteract the effects of any deflection. The formwork shall be so fixed as to provide for such camber, if required.
- (d) Forms shall be so constructed as to be removed in sections in the desired sequence, without damaging the surface of concrete or disturbing other sections.

FORM B-1**PERCENTAGE RATE TENDER & CONTRACT FOR WORKS**

DEPARTMENT : PUBLIC WORKS DEPARTMENT.

REGION : PUBLIC WORKS REGION KONKAN, MUMBAI.

CIRCLE : PUBLIC WORKS CIRCLE, SINDHUDURG.

DIVISION : PUBLIC WORKS DIVISION, KANKAVALI.

NAME OF WORK : CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

General Rules and Directions for the Guidance of Contractors

11. All works proposed to be executed by contract shall be notified in a form of invitation to tender **Online e-Tendering System** also pasted on a board hung up in the office of the **Executive Engineer** and signed by the **Executive Engineer, Public Works Division, Kankavali.**

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 the amount of the security deposit to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and estimated rates, schedule rates and any other documents required in connection with the work shall be signed by the Executive Engineer for the purpose of identification and shall also be open for inspection to contractors at the office of Executive Engineer during office hours.

Where the works are proposed to be executed according to the specifications recommended to a contractor and approved by a competent authority on behalf of the Governor of Maharashtra, such specifications with designs and drawings shall form part of the accepted tender.

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

2.(A)I The contractor shall pay alongwith the tender the sum of **Rs. 2,22,000/- (Rupees Two Lakh Twenty two Thousand Only.)** as and by way of earnest money. **Earnest money shall be paid Via SBI MOPS Online Payment Gateway Mode Only.** The said amount of earnest money shall not carry any interest whatsoever.

* Strike out which is not required.

- II)** In the event of his tender being accepted, subject to the provisions of sub-clause(iii) below, the said amount of earnest money shall be appropriated towards the amount of security deposit payable by him under conditions of General Conditions of contract.
- III)** If, after submitting the tender, the contractor withdraws his offer or modifies the same, or if, after the acceptance of his tender the contractor fails or neglects to furnish the balance of security deposit, within 10 days from receipt of acceptance letter without prejudice to any other rights and powers of the Government, hereunder, or in law, Government shall be entitled to forfeit the full amount of the earnest money deposited by him.
- IV)** In the event of this tender not being accepted, the amount of earnest money deposited by the contractor shall, unless it is prior thereto forfeited under the provisions of sub-clause (iii) above, be refunded to him **online**.
- 3.** Receipts for payments made on account of any work, when executed by a firm, should also be signed by all the partners except where the contractors are described in their tender as a firm, in which case the receipt shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts for the firm.
- 4.** Any person who submits a tender shall fill up the usual printed form starting at what percentage above or below the rates specified in Schedule B (Memorandum showing items of work to be carried out) he is willing to undertake the work. Only one rate or such percentage on all the Estimated rates/Schedule rates shall be named Tenders, which propose any alteration in the works specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions will be liable for rejection. No printed form of tender shall include a tender for more than one work but if contractor wishes to tender for two or more works, shall submit a separate tender for each. Tender shall have the name and number of the work to which they refer written outside the envelope.
- 5.** The **Superintending Engineer/Executive Engineer** or his duly authorized Assistant shall open tenders in the presence of contractors who have submitted tenders or their representatives who may be present at the time, and he will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall for the purpose of identification, sign copies of the specifications and other documents mentioned in Rule 1. **In the event of a tender being rejected, the Divisional Officer shall refund the amount of earnest money deposited by the contractor online.**
- 6.** The officer competent to dispose of the tenders shall have the right of rejecting all or any of the tenders.

7. No receipt for any payment, alleged to have been made by a contractor in regard to any matter relating to this tender or the contract, shall be valid and binding on Government unless it is signed by the Executive Engineer.
8. The memorandum of work to be tendered for and the schedule of materials to be supplied by the Public Works Department and their rates shall be filled in and complete by the office of the Executive Engineer before the tender form is issued. If a form issued to an intending tenderer has not been so filled in and completed, he shall request the said office to have this done before he completes and delivers his tender.
9. All work shall be measured net by standard measure and according to the Rules and customs of the Public Works Department and their rates shall be without references to any local custom.
10. Under no circumstances shall any contractor be entitled to claim enhanced rates for any item in this contract.
11. All corrections and additions or pasted slips should be initialed.
12. The measurements of work will be taken according to the usual methods in use in the Public Works Department and no proposals to adopt alternative methods will be accepted. The Executive Engineer's decision as to what is "the usual method in use in the Public Works Department" will be final.
13. The tendering Contractor shall furnish a declaration alongwith the tender showing all works for which he has already entered into contract and the value of the work that remain to be executed in each case on the date of submitting the tender.
14. In view of the difficult position regarding the availability of foreign exchange, no foreign exchange would be released by the Department for the purchase of plant and machinery required for the execution of the work contracted for.
(GCD/PWD/CFM/1058/62517 OF 26.5.1959)

15. The contractor will have to construct shed for storing controlled and valuable materials issued to him under Schedule 'A' of the agreement, at work site having double locking arrangement. The materials will then be taken for use in the presence of the Departmental person. No material will be allowed to be removed from the site of works.
16. The contractors shall also give a list of machinery in their own/hire and which they propose to use on the work.
17. Successful tenderer shall have to produce to the satisfaction of the accepting authority a valid and current license issued in his favour under the provisions of Contract Labour (Regulation and Abolition) Act, 1973 before starting the work. Failing which, acceptance of the tender shall be liable for withdrawal and earnest money shall be forfeited to the Government (refere Government of Maharashtra, Irrigation and Power Department's letter No. Lab 1076h181/(666E-17), dated 8/9/1976.)
18. The contractor shall comply with the provisions of Apprentices Act,1961 and the rules and orders issued thereunder from time to time. If he fails to do so, his failure shall be breach of the contract and the Chief Engineer Superintending Engineer, may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

TENDER FOR WORKS

I/We hereby tender for the execution, for the Governor of Maharashtra (here-in-before and here-in-after referred to as “ Government”) of the work specified in the under written memorandum within the time specified in such memorandum at * _____ percent **Below/above** the estimated rates entered in only Schedule ‘B’ **Cost of civil work (A)** only. (Memorandum showing items of work to be carried out) and in accordance in all respects with the specifications, designs, drawings, and instructions in writing referred to in Rule 1 hereof and in Clause 12 of the annexed conditions of contract and agree that when materials for the work are provided by the Government, such materials and the rate to be paid for them shall be as provided in Schedule ‘A’ hereto.

* *The Tenderer shall quote his offer through online bidding process only.*

MEMORANDUM

(a) **NAME OF WORK** :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

A) If several sub works are included they should be detailed in a separate list.

C) The amount of earnest money to be deposited shall be in accordance with the provisions of paras 206 & 207 of the M.P.W. manual.

D) This deposit shall be in accordance with paras 213 & 214 of the M.P.W. Manual.

E) This percentage where necessary deposit is taken will vary from 5 percent to 10 percent according to the requirements of the case. Where security deposit is taken see note 1 to clause 1 of conditions of contract.

F) Give schedule where necessary showing dates by which the various items are to be completed.

Part –I : Rs. 4,34,94,460/-
Part –II : Rs. 7,86,613/-
B) **Total Estimated Cost** : **Rs. 4,42,81,073/-**

C) Earnest Money. : Rs. 2,22,000/-

D) **Security Deposit** :
i) F.D.R./Bank Guarantee : Rs. 2,22,000/-
(1% P.W.D. G.R. Dated 27-09-2018)

ii) To be deducted from : Rs. 2,22,000/-
current bills.

Total Rs. 4,44,000/-

E) Percentage, if any to be deducted from bills so as to make up the total amount required as security deposit by the time, half the work as measured by the costs is done

ONE PERCENT

F) Time allowed for the work from the date of written order to commence.

12 Calendar months
(**Twelve months**)
(including monsoon)
from the date of work order)

Contractor

No. of Corrections

Executive Engineer

2. I/We agree that the offer shall remain open for acceptance for a **minimum period of 90 days** from the date fixed for opening of envelope No.2 (Financial Bid) and thereafter until it is withdrawn by me/ us by notice in writing duly addressed to the authority opening the tenders and sent by registered post A.D. or otherwise delivered at the office of such authority. The sum of **Rs. 2,22,000/- (Rupees Two Lakh Twenty two Thousand Only)** representing the earnest money is herewith forwarded. The amount of earnest money shall not bear interest and shall be liable to be forfeited to the Government, should I/We fail to (I) abide by the stipulation to keep the offer open for the period mentioned above or (II) Sign and complete the contract documents as required by the Engineer and furnish the security deposit as specified in item (d) of the memorandum contained in paragraph (1) above within the time limit laid down in clause (1) of the annexed General Conditions of contract. The amount of earnest money may be adjusted towards the security deposit or refunded to me/us if so, desired by me/ us in writing, unless the same or any part thereof has been forfeited as aforesaid.

4. Should this tender be accepted I/We hereby agree to abide by and fulfill all the terms, and provisions of the conditions of contract annexed hereto so far as applicable, and in default thereof to forfeit and pay to Government the sums of money mentioned in the said conditions.

Contractor : Signature of Contractor before submission of the tender

Address :

Dated _____ The _____ day of _____ 20__

(Witness) \$ _____ \$ Signature of witness to contractor's signature

Address _____

(Occupation) _____

The above tender is hereby accepted by me for and on behalf of the Governor of Maharashtra.

Dated _____ day of _____ 20__ * Executive Engineer * Signature of the officer by whom accepted.

CONDITIONS OF CONTRACT*Security deposit**PWD. Resolution**No.CAT/1087/**CR-94 Bldg 2**dt. 14-6-89.*

Clause 1 - The person/persons whose tender may be accepted (hereinafter called the Contractor, which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators, and assigns) shall (A) within 10 days (which may be extended by Superintending Engineer concerned up to 15 days if Superintending Engineer thinks fit to do so) of the receipt by him of the notification of the acceptance of his tender deposit with the Executive Engineer in cash or Government securities endorsed to the Executive Engineer (if deposited for more than 12 months) of the sum sufficient which will made up the full security deposit specified in the tender or (B) (Permit Government at the time of making any payment to him for work done under the contract to deduct such as will amount to * **ONE** percent of all moneys so payable such deductions to be held by Government by way of security deposit.) Provided always that in the event of the Contractor depositing a lump sum by way of security deposit as contemplated at above, then and in such case, if the sum so deposited shall not amount to **ONE** percent of the total estimated cost of the work, it shall be lawful for Government at the time of making any payment to the Contractor for work done under the contract to make up the full amount of **ONE** percent by deducting sufficient sum from every such payment as last aforesaid until the full amount of the security deposit is made up. All compensation or other sums of money payable by the Contractor to Government under the terms of his contract may be deducted from or paid by the sale of sufficient part of his security deposit or from the interest arising there form , or from any sums which may be due or may become due by Government to the Contractor under any other contract or transaction of any nature 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, make good in cash or Government securities endorsed as aforesaid any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit referred to, when paid in cash may, at the cost of the depositor, be converted into interest bearing securities provided that the depositor has expressly desired this in writing.

Contractor

No. of Corrections

Executive Engineer

The security deposit will not be accepted in forms of insurance company bonds as per Government orders contained in No. CCM/PWD/4250 DATED 27/12/1956.

Payment of Security Deposit by Bank Guarantee and Online BG verification : If the contractor wishes to deposit security deposit by Bank Guarantee after tender approval then it is mandatory for contractor to verify the Bank Guarantee by paying verification fees of Rs. 1000/- + GST through the link provided below
<https://onlinebg.emahapwd.com>

Note : This will be the same percentage as that in the tender at (e) on Page No.**45**.

If the amount of the security deposit be paid in a lump sum within the period specified at (A) above is not paid the tender/contract already accepted shall be considered as cancelled and legal steps taken against the Contractor for recovery of the amounts. The amount of the security deposit lodged by a Contractor shall be refunded alongwith the payment of the final bill, if the date up to which the Contractor has agreed to maintain the work in good order is over. **After date of 36 months of completion of work 90% amount of security deposit shall be refunded and balance 10% amount in the form of D.D./F.D.R./B.G. will be refunded in the period of one month after completion of D.L.P.** (as per P.W.D. ressouation No. CAT-2017/CR-8/Bldg-2 Dt. 29/01/2019. The amount of security deposit retained by the Government shall be released after expiry of period up to which the Contractor has agreed to maintain the work in good order is over. In the event of the Contractor failing or neglecting to complete rectification work within the period up to which the Contractor has agreed to maintain the work in good order, then subject to provision of Clauses 17 and 20 hereof the amount of Security Deposit retained by Government shall be adjusted towards the excess cost incurred by the Department on rectification work.

Compensation for delay

Clause 2 - "The time allowed for carrying out the work as entered in the tender shall be strictly observed by the Contractor and shall be reckoned from the date on which the order to commence the work is given to the Contractor. The work shall through the stipulated period of the contract be proceeded with, with all due diligence (time being deemed to be the essence of the contract on the part of the Contractor) and Contractor shall pay as compensation an amount equal to one percent or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide , of the amount of the estimated cost of the whole work as shown by the tender for every day that the work remains uncommenced , or unfinished after the proposed dates . And further to ensure good progress during execution of the work , the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete.

25 %	of the work in	**	1/4 of the time	} As indicated in bar chart on Page 205 .
50 %	do		1/2 of the time	
100 %	do		12 Months	

Full work to be completed in **12 (Twelve)** Months including monsoon.

In the event of the contractor failing to comply with this condition he shall be liable to pay as compensation an amount equal to one percent or such smaller amount as Superintending Engineer (whose decision in writing shall be final) may decide of the said estimated cost of the whole work for every day that due quantity , of work remains incomplete. Provided always that the total amount of compensation to be paid under the provisions of this clause shall not exceed 10 per cent of the estimated cost of the work as shown in the tender. Superintending Engineer shall be the final authority in this respect, irrespective of the fact that the tender is accepted by Chief Engineer/ Superintending Engineer/Executive Engineer.

Action when
whole of security
deposit is
forfeited.

Clause 3 :- In any case in which under any clause of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit (whether paid in one sum or deducted by installments) or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the **Engineer**, on behalf of the Governor of Maharashtra, shall have power to adopt any of the following courses, as he may deem best suited to the interest of Government :-

(A) To rescind the contract (for which rescission notice in writing to the contractor under the hand of **Executive Engineer** shall be conclusive evidence) and in that case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of Government.

(B) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work-charged establishment employed for getting unexecuted part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the **Executive Engineer** as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.

(C) To order that the work of the contractor be measured up to and take such part thereof as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work-charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and at the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the **Executive Engineer** as to all the cost of the work and other expenses incurred as aforesaid for or in getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under clause (a) above the Contractor shall not be entitled to recover or be paid, any sum for any work therefore actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in clause (b) or (c) being adopted and the cost of work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the Contractors, the amount of excess shall be deducted from any money due to the Contractor, by Government under the contract or otherwise howsoever or from his security deposit or the sale proceeds thereof provided, however that the Contractor shall have no claim against Government even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a) , (b) or (c) is adopted by the Executive Engineer, the Contractor shall have no claim to compensation for any loss sustained 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.

Action when the progress of any particular portion of the work is unsatisfactory.

Clause 4 - If the progress of any particular portion of the work is unsatisfactory, the Executive Engineer shall notwithstanding that the general progress of the work is in accordance with the conditions mentioned in clause 2, be entitled to take action under clause 3(b) after giving the Contractor 10 days notice in writing. The Contractor will have no claim for compensation, for any loss sustained by him owing to such action.

Contractor remains liable to pay compensation if action not taken under Clause 3 & 4.

Power to take possession of or require removal of or sell contractor's plant.

Extension of time.

Clause 5 :- In any case in which any of the powers conferred upon the **Executive Engineer** by clause 3 and 4 hereof shall have become exercisable and the same shall not have been exercised, the non exercise thereof shall not constitute a waiving of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor for which under any clause hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the **Executive Engineer** taking action under sub - clause (a) or (c) of clause 3, he may, if he so desires, take possession of all or any tools, plant, materials and stores, in or upon the works or the site thereof or belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof, paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates, to be certified by the **Executive Engineer** whose certificate thereof shall be final. In the alternative, the **Executive Engineer** may, after giving notice in writing to the contractor or his clerk of the work, foreman or other authorized agent require him to remove such tools and plants, materials, or stores from the premises within a time to be specified in such notice, and in the event of the contractor failing to comply with any such requisition, the **Executive Engineer** may remove them at the contractor's expenses or sell them by auction or private sale on account of the contractor and at his risk in all respects, and the certificate of the **Executive Engineer** as to the expenses of any such removal and the amount of the proceeds and expense of any such sale shall be final and conclusive against the Contractor.

Clause 6 :- If the Contractor shall desire an extension of the time for completion of work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the **Executive Engineer** before the expiry of the period stipulated in the tender or before the expiration of 30 days from the date on which he was hindered as aforesaid or on which the cause for asking for extension occurred, whichever is earlier and the **Executive Engineer/Superintending Engineer (as the case may be)** may if in his opinion, there were reasonable grounds for granting an extension, grant such extension as he thinks necessary or proper. The decision of the **Executive Engineer/Superintending Engineer (as the case may be)** in this matter shall be final.

Final Certificate

Clause - 7 :- On the completion of the work the Contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer-in-charge) of such completion, but no such certificate shall be given nor shall the work be considered to be completed until the Contractor shall have remove from the premises on which the work shall have been executed, all scaffolding, surplus materials and rubbish and shall have cleaned off the dirt from all woodwork, doors, windows, walls, floor or other parts of any building in or upon which the work has been executed, or of which he may have had possession for the purpose of executing the wok nor until the work shall have been measured by the Engineer-in-charge or where the measurements have been taken by his subordinates until they have received approval of the Engineer-in-charge, the said measurements being binding and conclusive against the contractor. If the Contractor shall fail to comply with the requirements of this clause as to the removal of scaffolding, surplus materials and rubbish and the cleaning of dirt on or before the date fixed for the completion of the work the Engineer-in-charge may at the expense of the Contractor, remove such scaffolding, surplus materials and rubbish, and dispose off the same as he thinks fit and clean off such dirt as aforesaid and the Contractor shall forthwith pay the amount of all expenses so incurred, but shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

Payment on
intermediate
certificate to be
regarded as
advances.

Clause 8 :- No payment shall be made for any work, estimated to cost less than Rupees One Thousand till after the whole of work shall have been completed and a certificate of completion given. But in the case of works estimated to cost more than Rupees One Thousand, the Contractor shall on submitting a monthly bill therefore, be entitled to receive payment proportionate to the part of the work then approved and passed by the Engineer - in- charge, whose certificate if such approval and passing of the sum so payable shall be final and conclusive against the Contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actually done and completed, and shall not preclude the Engineer-in-charge from requiring any bad, unsound, imperfect or unskillful work to be removed or taken away and reconstructed or re-erected nor shall any such payment be considered as an admission of the due performance of the Contract or any part thereof in any respect or the occurring of any claim, nor shall it conclude, determine or affect in any other way the powers of the Engineer- in-charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the Contract. The final bill shall be submitted by the Contractor within one month of the date fixed for the completion of the work. otherwise the Engineer-in-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

Contractor

No. of Corrections

Executive Engineer

Payment at reduced rates on account of items of work not accepted as completed to be at the desecration of the Engineer in charge.

Clause 9 :-The rates for several items of works estimated to cost more than Rs.1000/- agreed to within shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of work are not accepted as so completed, the Engineer-in-charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on-account bills.

Bill to be submitted monthly.

Clause 10 :- A bill shall be submitted by the Contractor in each month on or before date fixed by the Engineer-in-charge for all works executed in the previous month, and the Engineer-in-charge shall take or cause to be taken the requisites measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted , if possible, within ten days from the presentation of the bill. If the Contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the Contractor or his duly authorized agent whose countersignature to the measurement list shall be sufficient warrant, and the Engineer-in-charge may prepare a bill from such list which shall be binding on the Contractor in all respect.

Bills to be on printed form.

Clause 11 - The Contractor shall submit all bills on the printed forms to be had on application at the office of the Engineer-in-charge. The charges to be made in the bills shall always be entered 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.

Stores supplied
by Government.

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 stores of the Public Works Department store or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge (such material and stores and the prices to be charged therefore as hereinafter mentioned being so far as practicable for the convenience of the contractor but not so as in any way to control the meaning or effect of this contract specified in the schedule or memorandum hereto annexed) the contractor shall be supplied with such materials and stores as may be required from time to time to be used by him for the purpose of the contract only, and the value of the full quantity of the materials and stores so supplied shall be set off or deducted from any sums then due or thereafter to become due to the contractor under the contract, or otherwise, or from the security deposit, or the proceeds of the sale thereof, if the security deposit is held in Government securities, the same or a sufficient portion thereof shall in that case be sold for the purpose. All materials supplied to the contractor shall remain the absolute property of Government and shall on no account be removed from the site of the work, and shall at all times be open to inspection by the Engineer-in-charge. Any such materials unused and in perfectly good condition at the time of completion or determination of the contract shall be returned to the Public Works Departmental store, if the Engineer-in-charge so requires by a notice in writing given under his hand, but the contractor shall not be entitled to return any such materials except with consent of the Engineer-in-charge and he shall have no claim for compensation on account of any such material supplied to him as aforesaid but remaining unused by him or for any wastage or damage to any such materials.

Clause 12 (A) :- All stores of controlled materials such as cement, steel etc., to be supplied by Government to the contractor should be kept by the contractor under lock and key and will be accessible for inspection by the **Executive Engineer** or his agent at all the times.

Works to be
executed in
accordance with
specifications
drawings,
orders, etc.

Clause 13 :- The contractor, shall execute the whole and every part of the work in the most substantial and workman like manner, and both as regards materials and every other respect in strict accordance with specifications. The contractors shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site of the work during office hours. The contractor will be entitled to receive three sets of contract drawings and working drawings as well as one certified copy of the accepted tender along with the work order free of cost. Further copies of the contract drawings and working drawings if required by him, shall be supplied at the rate of Rs.300/- per set of contract drawings and Rs.150/- per working drawing except where otherwise specified.

Contractor

No. of Corrections

Executive Engineer

Alterations in specifications in designs not to invalidate contracts.

Rates for works not entered in estimate, or schedule of rates of the contract.

Extensions of time in consequence of additions or alterations.

Clause 14 :- The Engineer-in-charge shall have power to make any alterations in or additions to the original specifications, drawings, designs, and instructions that may appear to him to be necessary or advisable during the progress of the work, and the Contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract, and any additional work which the Contractor may be directed to do in the manner above specified as part of the work 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 the main work. And if the additional and altered work includes any class of work for which no rates is specified in this contract, then such class of work shall be carried out at the rates entered in the Schedule of Rates of the Division prevailing at the time when the extra items crop up or at the rates mutually agreed upon between the Engineer-in-charge and the contractor whichever are lower. If the additional or altered work for which no rate is entered in the Schedule of Rates of the Division, is ordered to be carried out before the rates are agreed upon then the Contractor shall within seven days of the date of receipt by him of the order to carry out the work inform the Engineer-in-charge of the rate which it is his intention to charge for such class of work, and if the Engineer-in-charge does not agree to this rate, he shall by notice in writing be at liberty to cancel his order to carry out such class of work, and arrange to carry it out in such manner as he may consider advisable provided always that the Contractor shall commence work or incur any expenditure in regard thereto before the rates shall have been determined as lastly here in before mentioned, then in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rates as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of a dispute, the decision of the Superintending Engineer of the Circle will be final.

Where, however, the work is to be executed according to the designs, drawings and specifications recommended by the contractor and accepted by the competent authority the alterations above referred to shall be within the scope of such designs, drawings and specifications appended to the tender.

The time limit for the completion of the work shall be extended in the proportion that the increase in its cost occasioned by alterations or additions bears to the cost of the original contract work, and the certificate of the Engineer-in-charge as to such proportion shall be conclusive.

No claim to any payment or compensation for alteration in or restriction of work.

CAT-1268/59382-Q
DT.14-3-74.

Clause 15 :- (1) If at any time after the execution of the contract documents, the Engineer shall for any reason what-so-ever (other than default on the part of the Contractor for which the Government is entitled to rescind the contract) desires that the whole or any part of the work specified in the tender should be suspended for any period or that the whole or part of the work should not be carried out at all, he shall give to the Contractor a notice in writing of such desire and upon the receipt of such notice the Contractor shall forthwith suspend or stop the work wholly or in part as required, after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury to the work already done or endanger the safety thereof provided that the decision of the Engineer as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the Contractor. The Contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.

(2) Where the total suspension of work ordered as aforesaid continued for a continuous period exceeding 90 days the Contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer, within 30 days of the expiry of the said period of 90 days, of such intention and requiring the Engineer to record the final measurements of the work already done and to pay final bill. Upon giving such notice the Contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the Contractor within a period of 90 days from the receipt of such notice in respect of the work already done by the Contractor. Such payment shall not in any manner prejudice the right of the Contractor to any further compensation under the remaining provisions of this clause.

(3) Where the Engineer requires the Contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate the Contractor shall be entitled to apply to the Engineer within 30 days of the resumption of work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery rendered idle on the site or on account of his having had to pay the salary or wages of labour engaged by him during the said period of suspension, provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect of any suspension whatsoever occasioned by unsatisfactory work or any other default on his part. The decision of the Engineer in this regard shall be final and conclusive against the Contractor.

CAT-1268/59382
Dsk-II dt.22-2-78.

4. In the event of -

- i) Any total stoppage of work on notice from the Engineer under clause (1) in that behalf.
- ii) Withdrawal by the Contractor from the contractual obligations to complete the remaining unexecuted work under sub-clause (2) on account of continued suspension of work for a period exceeding 90 days.

OR

- iii) Curtailment in the quantity of item or items originally tendered on account of any alteration, omission or substitutions in the specifications drawing, designs, or instructions under clause 14(1) where such curtailment exceeds 25% in quantity and the value of the quantity curtailed beyond 25 percent at the rates for the item specified in the tender is more than Rs. 5,000/-.

It shall be open to the Contractor, within 90 days from the service of (i) the notice of stoppage of work or (ii) the notice of withdrawal from the contractual obligations under the contract on account of the continued suspension of work or (iii) notice under clause 15(1) resulting in such curtailment, to produce to the Engineer satisfactory documentary evidence that he had purchased for agreed to purchase material for use in the contract work, before receipt by him of the notice of stoppage, suspension or curtailment and require the Government to take over on payment such material at the rates determined by the Engineer, provided, however such rates shall in no case exceeds the rates at which the same were acquired by the Contractor. The Government shall thereafter take over the material so offered, provided the quantities offered, are not in excess of the requirements of the unexecuted work as specified in the accepted tender and are of quality and specifications approved by the Engineer.

No claim to any payment or compensation for alteration in or restriction of work.

Clause 15 (A) - The Contractor shall not be entitled to claim any compensation from Government for the loss suffered by him on account of delay by Government in the supply of materials entered in Schedule A where such delay in caused by -

- i) Difficulties relating to the supply of railway wagons.
- ii) Force majeure.
- iii) Act of God.
- iv) Act of enemies of the State or any other reasonable cause beyond the control of Government.

In the case of such delay in the supply of materials, Government shall grant such extension of time for the completion of the works as shall appear to the Executive Engineer to be reasonable in accordance with the circumstances of the case. The decision of the Executive Engineer as to the extension of time shall be accepted as final by the Contractor.

Time limit for unforeseen claims.

Clause 16 :- Under no circumstances whatever shall the Contractor be entitled to any compensation from Government on any account unless the Contractor shall have submitted claim in writing to the Engineer-in-charge within one month of the case of such claim occurring.

Action and compensation payable in case of bad work.

Clause 17 :- If at any time before the security deposit or any part thereof is refunded to the Contractor it shall appear to the Engineer-in-charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to the that Contracted for, or are otherwise not in accordance with the Contract, it shall be lawful for the Engineer-in-charge to intimate this fact in writing to the Contractor and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the Contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part, as the case may be require or if so required shall remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding 10 days during which the failure so continuous and in the case of any such failure the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained of, as the case may be at the risk and expense in all respects of the Contractor. Should the Engineer-in-charge consider that any such inferior work or materials as described above may be accepted or made use of it shall be within his discretion to accept the same at the such reduce rates as he may fix therefor.

P.W.D. Resolution No. CAT-1087/CR-94/Bldg.2 dt.14-6-89.

Work's to be opened to inspection.

Clause 18 :- All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-charge and his subordinates, and the Contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge and his subordinates to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions , or have a responsible agent duly accredited in writing present for that purpose. Orders given to the Contractors duly authorized agent shall be considered to have the same force and effect as if they had been given to the Contractor himself.

Contractor or responsible agent to be present.

Notice to be given before work is covered up.

Clause 19 :- The Contractor shall give not less than five days notice in writing to the Engineer-in-charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimension thereof taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work, and if any work shall be covered up or placed beyond the reach of measurement, without such notice having been given or consent obtained the same shall be uncovered at the Contractors expense, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

Contractor liable for damage done, and for imperfections.

P.W.D. Resolution No.CAT-1087/CR-94/Bldg.2.dt.14-6-89.

Clause 20 :- If during the period of **20 (Twenty) Years for Bridge construction & 24 (Twenty Four) Months for Road Construction** from the date of completion as certified by the Engineer-in-charge pursuant to clause 7 of the contract, and if in the opinion of the Executive Engineer the said work is defective in any manner whatsoever, the Contractor shall forthwith on receipt of notice in that behalf from the Executive Engineer, duly commence execution and completely carry out at his cost in every respect all the work that may be necessary for rectifying and setting right the defects specified therein including dismantling and reconstruction of unsafe portions strictly in accordance with and in the manner prescribed and under the supervision of the Executive Engineer. In the event of the Contractor failing or neglecting to commence execution of the said rectification work within the period prescribed therefore in the said notice and /or to complete the same as aforesaid as required by the said notice, the Executive Engineer may get the same executed and carried out departmentally or by any other agency at the risk, on account and at the cost of the Contractor. The Contractor shall forthwith on demand pay to the Government the amount of such cost, charges and expenses sustained or incurred by the Government of which the certificate of the Executive Engineer shall be final and binding on the Contractor. Such costs, charges and expenses shall be deemed to be arrears of land revenue and in the event of the Contractor failing or neglecting to pay the same on demand as aforesaid without prejudice to any other rights and remedies of the Government, the same may be recovered from the contractor as arrears of land revenue. The Government shall also be entitled to deduct the same from any amount which may then be payable or which may thereafter become payable by the Government to the contractor either in respect of the said work or any other work whatsoever or from the amount of security deposit retained by Government.

Contractor to supply plant, ladders scaffoldings, etc.

And is liable for damages arising from non provisions of lights, fencing etc.

Clause 21 :- The Contractor shall supply at his own cost all material (except such special materials, if any as may, in accordance with the contract, be supplied from the P.W. Departmental stores), plant, tools appliances, implements, ladders, cordage, tackles, scaffolding and temporary works requisite or proper for the proper execution of the work, whether in the original, altered or substituted form, and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not and 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 together with the carriage therefore to and from the work. The Contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or the materials, failing which the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the Contractor under the contract or from his security deposit or the proceeds of sale thereof, or of sufficient portion thereof. The Contractor shall provide all necessary fencing and lights required to protect the public from accident, and shall also be bound to bear the expenses of defence of every suit, action or other legal proceeding, that may be brought by any person for injury sustained owing to neglect of the above precautions, and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person, or which may with the consent of the Contractor be paid for compromising any claim by any such person.

Clause 21 (A) :- The Contractor shall provide suitable scaffolds and working platforms, gangways and stairways and shall comply with the following regulations in connection therewith -

- a) Suitable scaffolds shall be provided for workmen for all works that cannot be safely done from a ladder or by other means.
- b) A scaffold shall not be constructed, taken down or substantially altered except.
 - i) under the supervision of a competent and responsible person; and
 - ii) as far as possible by competent workers possessing adequate experience in this kind of work.
- c) All scaffolds and appliances connected therewith and all ladders shall -
 - i) be of sound material.
 - ii) be of adequate strength having regard to the loads and strains to which they will be subjected, and
 - iii) be maintained in proper condition.

- d) Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use.
- e) Scaffold shall not be over-loaded and so far as practicable the load shall be evenly distributed.
- f) Before installing lifting gear on scaffolds special precautions shall be taken to ensure the strength and stability of the scaffolds.
- g) Scaffolds shall be periodically inspected by a competent person.
- h) Before allowing a scaffold to be used by his workmen the Contractor shall whether the scaffold has been erected by his workmen or not, take steps to ensure that it complies fully with the regulations herein specified.
- i) Working platform, gangway, stairways shall -
 - i) be so constructed that no part thereof can sag unduly on unequally.
 - ii) be so constructed and maintained, having regard to the prevailing conditions as to reduce as far as practicable risks of persons tripping or slipping and
 - iii) be kept free from any unnecessary obstruction
- j) In the case of working platform, gangways, working places and stairways at a height exceeding 3.00 meters,
 - i) every working platform and every gangway shall be closely boarded unless other adequate measures are taken to ensure safety,
 - ii) every working platform and gangway shall have adequate width; and
 - iii) every working platform and gangway, working place and stairway shall be suitable fenced.
- k) Every opening in the floor of a building or in a working platform shall expect for the time and to the extent require to allow the excess of persons or the transport or shifting of material be provided by suitable means to prevent the fall of persons or material.

- l)** When persons are employed on a roof where there is a danger of falling from a height exceeding 3.00 meters (to be specified) suitable precautions shall be taken to prevent the fall of persons or materials.
- m)** Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffolds or other working places.
- n)** Safe means of access shall be provided to all working platforms and other working places.
- o)** The Contractor/(s) will have to make payments to labourers as per Minimum Wages Act.

Clause 21 (B) :- The Contractor shall comply with the following regulations as regards the Hoisting Appliances to be used by him :-

- a)** Hoisting machines and tackles, including their attachments, anchorages and supports shall.
 - i) be of good mechanical construction, sound material and adequate strength and free from patent defect;
 - and**
 - ii) be kept in good repair and in good working order.
- b)** Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.
- c)** Hoisting machines and tackles shall be examine and adequately tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by the Government .
- d)** Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.
- e)** Every crane driver or hoisting appliance operator shall be properly qualified.
- f)** No person who is below the age of 18 years shall be in control of any hoisting machine, including any scaffold, or give signals to the operator.
- g)** In case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means.

- h)** Every hoisting machine and all gear referred to in preceding regulation shall be plainly marked with the safe working load.
- i)** In the case of a hoisting machine having a variable safe working load each safe working load and the conditions under which it is applicable shall be clearly indicated.
- j)** No part of any hoisting machine or any gear referred to in regulation (h) above shall be loaded beyond the safe working load except for the purpose of testing.
- k)** Motors, gearing transmissions, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards.
- l)** Hoisting appliances shall be provided with such means as will reduce to a minimum the risk of the accidental descent of the load.
- m)** Adequate precaution shall be taken to reduce to a minimum the risk of any part of a suspended load becoming accidentally displaced.

Measure for prevention of fire.

Clause 22 :- The Contractor shall not set fire to any standing jungle, trees, brushwood or grass without a written permit from the Executive Engineer. When such permit is given, and also in all cases when destroying, cut or dug up trees, brushwood, grass etc. by fire, the Contractor shall take necessary measures to prevent such fire spreading to or otherwise damaging surrounding property.

The Contractor shall make his own arrangements for drinking water for the labour employed by him and provide sanitary and other arrangements.

Liability of contractor for any damage done in or outside work area.

Clause 23 :- Compensation for all damages done intentionally or unintentionally by Contractors labour whether in or beyond the limits of the Government property including any damage caused by the spreading of fire mentioned in Clause 22 shall be estimated by the Engineer-in-charge subject to the decision of the Superintending Engineer on appeal shall be final and the Contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the Contractor as damage in the manner prescribed in Clause 1 or deducted by the Engineer-in-charge from any sums that may be due or become due from Government to Contractor under this contract or otherwise.

The Contractor shall bear the expenses of defending any action or other legal proceedings that may be brought by any person for injury the spread sustained by him owing to neglect of precautions to prevent the spread of fire and he shall pay any damages and cost that may be awarded by the court in consequence.

Employment of female labour

Clause 24 :- The employment of female labours on works in neighborhood of soldiers barracks should be avoided as far as possible. The contractor shall employ the labours from the nearest Employment Exchange.

Work on Sunday

Clause 25 :- No work shall be done on a Sunday without the sanction in writing of the Engineer-in-charge.

Work not to be sublet

Clause 26 :- The contract shall not be assigned or sublet without the written approval of the Engineer-in-charge. And if the Contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any proceedings to get himself adjudicated and insolvent or make any composition with his creditors, or attempt so to do or if bribe, gratuity, gift loan, perquisite, reward or advantage, pecuniary or otherwise shall either directly or indirectly be given, promised or offered by the Contractor or any of his servants or agents 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 person shall become in any way directly or indirectly interested in the contract, the Engineer-in-charge 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 ensue as if the contract had been rescinded under Clause 3 thereof and in addition the Contractor shall not be entitled to recover or be paid for any work therefor actually performed under the contract.

Contract may be rescinded and security deposit forfeited for subletting it without approval or for bribing a public officer or if contractor becomes insolvent.Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss.

Clause 27 :- All sums payable by a Contractor by way of compensation under any of these conditions shall be considered as a reasonable compensation to be applied to the use of Government without reference to the actual loss or damages sustained, and whether any damage has or has not been sustained.

Change in the constitution of firm to be notified.

Clause 28 :- In the case of tender by partners, any change in the constitution of a firm shall be forthwith notified by the Contractor to the Engineer-in-charge for his information.

Direction and control of the Superintending Engineer.

Clause 29 :- All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the Circle, for the time being, who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

Direction and control of the Superintending Engineer.

Clause 30 (1) :- Except where otherwise specified in the contract and subject to the powers delegated to him by Government under the code, rules then in the force, the decision of the Superintending Engineer of the Circle for the time being shall be final, conclusive and binding on all parties of the contract upon all questions relating to the meaning of the specifications, designs, drawings and instruction hereinbefore mentioned and as to the quality of workmanship or materials used on the work, or as to any other question, claim right, matter or things whatsoever, if any way arising out of, or relating to the contract, designs, drawings, specifications, estimates, instructions, orders, or other conditions, or otherwise concerning the works, or the execution, or failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof.

Clause 30 (2) :- The Contractor may within thirty days of receipt by him of any order passed by the Superintending Engineer of the Circle as aforesaid appeal against it to the Chief Engineer, concerned with the contract work or project provided that -

- (a) The accepted value of the contract exceeds Rs. 10 lakhs (Rupees Ten lakhs)
- (b) Amount of claim is not less than Rs. 1.00 Lakh (Rupees One Lakh).

Clause 30 (3) :- If the Contractor is not satisfied with the order passed by the Chief Engineer as aforesaid, the Contractor may, within thirty days of receipt by him of any such order appeal against it to the concerned Secretary, Public Works Department/Irrigation Department who, if convinced that Prima-facie the Contractors claim rejected by Superintending Engineer/Chief Engineer is not frivolous and that there is some substance in the claim of the Contractor as would merit a detailed examination and decision by the Standing Committee, shall put up to the Standing Committee at Government level for suitable decision
(vide PW Circular No. CAT-1086-CR-110/Bldg.2 Dated 7.5.1986).

Stores of European or American manufacture to be obtained from Government

Clause 31 :- The Contractor shall obtain from the P.W. Departmental stores all stores and articles of European or American manufacture which may be required for the work, or any part thereof or in making up any articles required thereof in connection therewith unless he has obtained permission in writing from the Engineer-in-charge to obtain such stores and articles elsewhere. The value of such stores and articles as may be supplied to the Contractor by the Engineer-in-charge will be debited to the Contractor in his account at the rate shown in the said schedule in from 'A' attached to the Contract and if they are not entered in the schedule, they shall be debited to him at cost price which for the purpose of this Contract shall include the cost of carriage and all other expenses whatsoever, which shall have been incurred in obtaining delivery of the same at the stores aforesaid.

Contractor

No. of Corrections

Executive Engineer

Lump-sum in estimates.

Clause 32 :- When the estimate on which a tender is made includes lump sums in respect of part of the work, the Contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as payable under this Contract for each items, or if the parts of the work in question is not in the opinion of the Engineer-in-charge capable of measurement, the Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the Contractor with regard to any sum or sums payable to him under the provisions of this clause.

Action where no specifications.

Clause 33 :- In the case of any class of work for which there is no such specification as is mentioned in Rule 1 of Form B-1 such work shall be carried out in accordance with the Divisional specifications, and in the event of there being no Divisional specification, then in such case the work shall be carried out in all respects in accordance with all instructions and requirements of the Engineer-in-charge .

Definition of work.

Clause 34 :- The expression "Work" or "Works" where used in these conditions, shall unless there be something in the subject or context repugnant to such construction, be constructed to mean the work or works contracted to be executed under or in virtue of the contract, whether temporary or permanent and whether original, altered, substituted or additional.

Contractor's percentage whether applied to net or gross amount of bill.

Clause 35 :- The percentage referred to in the tender shall be deducted from/added to the gross amount of the bill before deducting the value of any stock issued.

Quarry fees and royalties.

Clause 36 :- All quarry fees, royalties, octroi dues and ground rent for stacking materials, if any, should be paid by the contractor. Royalty charges including surcharge on all minor minerals shall be reimbursed separately on production of proof to that effect.

Compensation under workmen's Compensation Act.

Clause 37 :- The Contractor shall be responsible for and shall pay any compensation to his workmen payable under the Workmen's Compensation Act.1923 (VIII of 1923), (hereinafter call the said Act) for injuries caused to the workmen. If such compensation is payable/paid by the Government as principal under sub-section (1) of Section 12 of the said Act on behalf of the Contractor, it shall be recoverable by the Government from the Contractor under sub-section (2) of the said section. Such Compensation shall be recovered in the manner laid down in Clause 1 above.

Clause 37 (A) :- The Contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by Government the same shall be recoverable from the Contractor forthwith and be deducted without prejudice to any other remedy of the Government from any amount due or that may become due to the Contractor .

Clause 37 (B) :- The Contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the persons employed on the site and shall maintain the same in condition suitable for immediate use at any time and shall comply with the following regulations in connection therewith :-

a) The workers shall be required to use the equipments so provided by the Contractor and the Contractor shall take adequate steps to ensure proper use of the equipment by those concerned.

b) When work is carried on in proximity to any place where there is a risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.

c) Adequate provision shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

Clause 37 (C) :- The Contractor shall duly comply with the provisions of "The Apprentices Act, 1961" (III of 1961) the rules made thereunder and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subjected to all the liabilities and penalties provided by the said Act and said Rules.

(Govt. Circular No. CAT-6076/3336/(400)/Bldg.2 dt. 16-8-1985.)

Claim for quantities of work entered in the tender or estimates.

Clause 38 :- (1) Quantities shown in the tender are approximate and no claim shall be entertained for quantities of work executed being either more or less than those entered in the tender or estimate.

(2) Quantities in respect of the several items shown in the tender are approximate and no revision in the tendered rates shall be permitted in respect of any of the items so long as, subject to any special provision contained in the specifications prescribing a different percentage of permissible variation in the quantity of the item does not exceed the tender quantity by more than 25 percent and so long as the value of the excess quantity beyond this limit at the rate of the items specified in the tender, is not more than Rs.5,000/-

(3) The contractor shall if ordered in writing by the **Engineer** so to do, also carry out any quantities in excess of the limit mentioned in sub-clause (i) hereof on the same conditions as and in accordance with the specifications in the tender and at the rates (i) derived from the rates entered in the current schedule of rates and in the absence of such rates (ii) at the rates prevailing in the market. The said rates increased or decreased as the case may be, by the percentage which the total tendered amount bears to the estimated cost of the work as put to tender based upon the schedule of rates applicable to the year in which the tenders were accepted **(For the purpose of operation of this clause, this cost shall be as worked out from S.S.R. prevailing at the time of acceptance of tender.)**

(4) Claims arising out of reduction in the tendered quantity of any item beyond 25 percent will be governed by the provision of clause 15 only when the amount of such reduction beyond 25 percent at the rate of the item specified in the tender is more than Rs.5,000/- (The clause is not applicable to extra items.)

Employment of
famine labour
etc.

Clause 39 - The Contractor shall employ any famine, convict or other labour of a particular kind or class if ordered in writing to do so by the Engineer-in-charge.

Claim for
compensation for
delay in starting
of work.

Clause 40 - No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or, in the case of clearance works, on account of any delay in according sanction to estimates.

Claim for
compensation for
delay in
execution of
work.

Clause 41 - No compensation shall be allowed for any delay in the execution of the work on account of water, standing in borrow pits or compartments. The rates are inclusive for hard or cracked soil, excavation in mud, sub-soil water or water standing in borrow pits and no claim for an extra rate shall be entertained unless otherwise expressly specified.

Entering upon or
commencing any
portion of work.

Clause 42 - The Contractor shall not enter upon or commence any portion of work except with written authority and instructions of the Engineer-in-charge or his subordinate in charge of the work. Failing such authority the Contractor shall have no claim to ask for measurements of the payment for work.

Minimum age of
persons
employed, the
employment of
donkeys and / or
other animals
and the payment
of fair wages.

Clause 43 (i) :- No contractor shall employ any person who is under the age of 18 years.

(ii) No contractor shall employ donkeys or other animals with breaching of string or thin ropes. The breaching must be at least three inches wide and should be of tape (Nawar).

(iii) No animal suffering from sores, lameness or emaciation or which is immature shall be employed on the work.

(iv) The Engineer-in-charge or his Agent is authorized to remove from the work, any person or animal found working which does not satisfy these conditions and no responsibility shall be accepted by Government for any delay caused in the completion of the work by such removal.

(v) The contractor shall pay fair and reasonable wages to the workmen employed by him, in the contract undertaken by him. In the event of any dispute arising between the contractor and his workmen on the grounds that the wages paid are not fair and reasonable, the dispute shall be referred without delay to the Executive Engineer shall be conclusive and binding on the contractor but such decision shall not in any way affect the conditions in the contract regarding the payment to be made by Government at the sanctioned tender rates.

(vi) Contractor shall provide drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.

(vii) All facilities provided in the contract labour (Regulation and Abolition Act 1971), The Maharashtra Contract Labour Regulation and Abolition Rule 1971 should be provided.

Method of payment.

Clause 44 :- Payment to contractors shall be made by cheque drawn on any treasury within the division convenient to them, provided the amount exceeds Rs.10. Amounts not exceeding Rs.10 will be paid in cash.

Acceptance of conditions compulsory before tendering for work.

Clause 45 :- Any contractor who does not accept these conditions shall not be allowed to tender for works.

Employment of scarcity labour.

Clause 46 :- If Government declares a state of scarcity of famine to exist in any village situated within 10 miles of the work the Contractor shall employ upon such parts of the work, as are suitable for unskilled labour, any person certified to him by the Executive Engineer, or by any person to whom the Executive Engineer may have delegated this duty in writing to be in need of relief and shall be bound to pay to such person wages not below the minimum which Government may have fixed in this behalf. Any disputes which may arise in connection with the implementation of this clause shall be decided by the Executive Engineer whose decision shall be final and binding on the Contractor .

Clause 47 :- The price quoted by the Contractor shall not in any case exceed the control price, if any, fixed by Government or reasonable price which it is permissible for him to charge a private purchaser for the same class and description of goods under the provision of Hoarding and Profiteering Prevention Ordinance, 1948 as amended from time to time. If the price quoted exceeds the controlled price or the price permissible under Hoarding and Profiteering Prevention Ordinance the Contractor will specifically mention this fact in his tender alongwith the reasons for quoting such higher prices. The purchaser at his discretion will in such case exercise the right of revising the price at any stage so as to conform with the controlled price on the permissible under the Hoarding and Profiteering Prevention Ordinance. This discretion will be exercised without prejudice to any other action that may be taken against the Contractor.

Clause 47 (A) :- a) Bidder shall quote his rate considering the provisions counted under GST Act. – 2017.

b) Provisional amount of GST 2% i.e. CGST 1% + SGST 1% will be deducted at source (T.D.S.) after the enforcement of section 51 of Maharashtra Goods and Service Act-2017.

c) Bidder shall quote his rate excluding GST.

d) GST shall be paid on the amount of bill of the work done as per prevailing guidelines rate of GST during the period of work done as applicable.

e) The rates quoted by the contractor shall be deemed to be inclusive of the labour welfare cess and other taxes (other than GST) that the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to deduction of such taxes at sources as per applicable law.

f) Bidder shall quote his offer only on Work portion/Civil cost (A) in Schedule B without GST. However testing charges will be paid as per test result submitted by bidder. Also the Royalty will be paid after producing the royalty challans to the department.

Clause 48 :- The rates quoted by the Contractor must be inclusive of all other relevant taxes except GST. No extra payment of this account will be made to the Contractor.

Clause 49 :- In case of materials that may remain surplus with the Contractor from those issued for the work contracted for, the date of ascertainment of the materials being surplus will be taken as the date of sale for the purpose of sales tax and the sales tax will be recovered on such sale.

Clause 50 :- The Contractor shall employ the unskilled labour to be employed by him on the said work only from locally available labour and shall give preference to those persons enrolled under Maharashtra Government Employment and Self Employment Department's Scheme.

Provided, however, that if the required unskilled labours are not available locally, the Contractor shall in the first instance employ such number of persons as is available and thereafter may with previous permission, in writing of the Executive Engineer-in-charge of the said work, obtain the rest of requirement of unskilled the labour from outside the above scheme.

Clause 51 :- The contractor shall pay the labourers (skilled and unskilled) according to the wages prescribed by the Minimum Wages Act of 1948 applicable to the area in which the work of the contract is located. The contractor shall comply with the provision of the Apprentices Act, 1961, and the rules and orders issued thereunder from time to time, if he fails to do so his failure will be a breach of the contract and the Superintending Engineer, may in his discretion may cancel the contract. The Contractor shall also be liable, for any precautionary liability, arising on account of any violation by him of the provision of Act.

The contractor shall pay labourers skilled and unskilled according to the wages prescribed by the Minimum Wages Act, of 1948 applicable to the area in which work lies.

The contractor to take precautions against accidents which take place on account of labour using loose garments while working machinery.

Clause 52 :- All amounts whatsoever which the contractor is liable to pay to the Government in connection with the execution of the work including the amount payable in respect of (i) materials and / or stores supplied/ issued hereunder by the Government to the contractor. (ii) hire charges in respect of heavy plant, machinery and equipment given on hire, by the Government to the contractor for execution by him of the work and/or on which advances have been given by the Government to the contractor shall be deemed to be arrears of Land Revenue and the Government may without prejudice to any other rights and remedies of the Government recover the same from the contractor as arrears of land revenue.

(CAT-1274/40364/Desk-2 dt. 7-12-76)

Government
Circular No. CAT-
1284/(120)/Bldg.2
dt. 14.8.85.

Clause 53 :- The Contractor shall duly comply with all the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 (37 of 1970) and the Maharashtra Contract Labour (Regulation and Abolition) Rules, 1971 as amended from time to time and all other relevant statutes and statutory provisions concerning payment of wages particularly to workmen employed by the Contractor and working on the site of the work. In particular the Contractor shall pay wages to each worker employed by him on the site of the work at the rates prescribed under the Maharashtra Contract Labour (Regulation and Abolition) Rules, 1971. If the Contractor fails or neglects to pay wages at the said rates or makes short payment and the Government makes such payment of wages in full or part thereof less paid by the Contractor as the case may be the amount so paid by the Government to such workers shall be deemed to be an arrears of land revenue and the Government shall be entitled to recover the same as such from the contractor or deduct the same from the amount payable by the Government to the Contractor hereunder or from any other amount/s payable to him by the Government.

Clause 54 :- The contractor shall engage apprentice such as brick layer, carpenter, wiremen, plumber, as well as blacksmith by recommended by the State Apprenticeship Advisor Director of Technical Education, Dhobi Talaw, Mumbai :400 001. In the construction work (as per Government of Maharashtra, Education Government No.TSA/5170/T5689, dated 7.7.1972).

Conditions for
malaria
eradication anti
malaria and
other health
measures

Clause 55 :- (Government of Maharashtra P.W.D. Resolution No. CAT/1086/CR-243/K/Bldg.32 Dt. 11.8.1987)

- A. The anti malaria and other health measures shall be as directed by the joint Director (Malaria and Filariasis) of Health Service, Pune.
- B. Contractor shall see that mosquitoegenic conditions are not created so as to keep vector population to minimum level.
- C. Contractor shall carry out anti-malaria measures in the area as per guidelines prescribed under National Malaria Eradication Program and as directed by the Joint Director (M & F) of Health Services, Pune.
- D. In case of default in carrying out prescribed anti-malaria measures resulting in increase in malaria incidence, contractor shall be liable to pay to Corporation the amount spent by Government on anti malaria measures to control the situation in addition to fine.

E. RELATIONS WITH PUBLIC AUTHORITIES

The Contractor shall make sufficient arrangements for draining away the sewage water as well as water coming from the bathing and washing places and shall dispose off this water in such a way as not to cause any nuisance. He shall also keep the premises clean by employing sufficient number of sweepers. The Contractor shall comply with all rules, regulations, by-laws and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charges which are livable on him without any extra cost of Government.

(Government of Maharashtra P.W.D. Resolution No.CAT-1086/CR-243/D-Bldg.2 dated 11.9.1987.)

Clause 56 :- MANDATORY TESTING OF MATERIAL AND PENALTY CLAUSE

It is mandatory on the part of contractor to carry out all the required tests of various construction materials on the basis of testing frequency and as per charges fixed by VQCC circle. Applicable testing charges will be paid on reimbursement basis to the contractor on production of valid proof of tests carried out. If the contractor fails to submit required test results of the various construction materials as mentioned in the items of Schedule b, he will be liable to deposit the amount at penal rate of five times of the amount of particular test which he has not carried out. Contractor will be informed to deposit the penal amount by the Engineer in charge through letter. On receipt of the letter, contractor will have to either deposit the said amount or to carry out the required tests within ten days of receipt of the letter. If he again fails to carry out the required tests in stipulated time limit, the said tests will be carried out by the department and total expenditure incurred on the testing charges plus five times amount of testing charges will be recovered from the contractor's bill.

As this recovery is only due to the negligence on the part of contractor to carry out the testing of various construction materials as per Tender conditions and Executive Engineer's decision will be final and binding on the contractor and it cannot be challenged by the contractor by way of Appeal, Arbitration or in the court of law.

Additional instructions for use of crushed sand.

1. VSI Crushed Sand / Artificially manufactured sand / fine aggregates hereinafter referred for as "Crushed Sand" shall be as defined under Cl. 3.1.2 of IS 383-2016.
2. The properties of "Crushed Sand" shall confirm to the provisions of IS 383-2016.
3. The "Crushed Sand" shall be free of dust and other deleterious material.
4. The "Crushed Sand" shall be manufactured using "Automatic Vertical Shaft Impactor" type Crusher only.
5. The quantity of micro fines (Particles below 75 microns) in "Crushed Sand" shall not be more than 7%.
6. The contractor shall intimate the Engineer in charge regarding the source of supply of Crushed Sand. The source of supply of "Crushed Sand" shall be got approved by the Executive Engineer (Engineer in charge) prior to the start of work.
7. Each load of crushed sand whenever brought on site shall be tested for "Fineness modules". Fineness modules shall be within permissible limits. If it doesn't fall within acceptable limits, it shall be rejected.

8. The test of Compressive strength of concrete / mortar using “Crushed Sand” shall be carried out in presence of Department’s Engineer as given below.
 - a) 100% Cube testing in presence of Junior / Assistant / Sectional Engineer.
 - b) 25% Cube testing in the presence of Sub Divisional Engineer.
 - c) 5% Cube testing in the presence of Executive Engineer (Engineer in charge)
9. The Flakiness Index and Elongation Index tests shall be within permissible limits.
10. The Concrete Mix Design for each grade of concrete using “Crushed Sand” shall be carried out only in Government Quality Control laboratory and the same Mix Design shall be adopted.
11. As far as possible freshly produced “Crushed Sand” shall be used. Stored “Crushed Sand” shall not be used.
12. For plastering purpose, if the use of “Crushed sand” is proposed it shall be used with addition of super plasticisers at the rate of 100 ml. / Bag of Cement without extra cost to Government. Separate permission shall be taken for use in plastering from concerned Executive Engineer.
13. The following tests shall be carried out for the use of “Crushed Sand”.
 - a) Sieve Analysis
 - b) Specific Gravity
 - c) Water Absorption
 - d) Bulk Density
 - e) Alkali Aggregate Reaction
 - f) Soundness
 - g) Deleterious Material
 - h) Organic Impurities
 - i) Micro Fines Content
 - j) Test for Silt and Clay
 - k) Fineness Modulus Test
14. Necessary Bond regarding the use of “Crushed Sand” shall be submitted by the contractor clearly stating that, if any defects are observed during execution and defect liability period, the same shall be rectified at his own risk and cost.
15. Grading zone II mention under Clause 6.3 table 9 of fine aggregates of IS 383:2016 shall only be used for concreting.
16. Reversible Drum Type / Batch Mix Plant (Pan Type) concrete mixer shall be used for concrete.
Crushed Sand shall not be used for prestressed concrete works.

ADDITIONAL INSTRUCTIONS TO TENDERERS

1. COMPETANCY OF TENDER :

The work will be awarded only to those contractors who are considered to be substantially responsive bidders, capable of performing the class of work to be completed. Before passing the final award any or all bidders may have to show that he has the necessary experience, facilities, ability and financial resources to execute the work in satisfactory manner and also within the stipulated time.

2. PAYMENTS :

The tenderers must understand clearly that the rates quoted are for completed work and include all costs due to labour, all leads and lifts involved and if further necessitated, scaffolding plant, supervision, service works, power, royalties, octroi, taxes etc. and to include all to cover the cost of lighting on night work if any and round the clock work as and when required and no claim for additional payment beyond the prices or rates quoted will be entertained and the tenderers will not be entitled subsequently to make any claim on the ground of any representation or on any promise by any person (whether member in the employment of any Public Works Department or not) or on the ground of any failure on his part to obtain all necessary information for the purpose of making his tender and fixing the several prices and rates therein relieve him from any risks or liabilities arising out of the tender.

a) RUNNING BILLS :

Two payments in a month will be granted by the Engineer-in-charge if the progress is satisfactory. Contractor should submit bills to the Engineer-in charge in appropriate forms.

b) FINAL BILL :

The contractor should submit final bill within one month after completion of the work and the bill will be paid within 5 months if it is in order. Disputed item and claims if any shall be executed from the final bill and settled separately later on.

c) ADDITIONAL CONDITION ABOUT AVAILABILITY OF FUNDS

“The payment of bills will be made as per the availability of funds. No claims will be entertained for delayed payments”

“ if situation arises, the work will be stopped at safe stage and will be withdrawn under Clause 15 for which no compensation will be allowed.”

3. ERASER :

Persons tendering are informed that no erasers of any alterations by them in the text of the documents set herewith will be allowed and any such eraser or an alteration will be disregarded. If there is any error in writing, no overwriting should be done but the wrong words or figures should be struck out and the correct one written above or near it in an unambiguous way. Such correction should be initialed and dated.

4. ACCEPTANCE :

Intimation of acceptance of tender will be given by a telegram or a letter sent by Registered Post to the address given below the signature of the tenderer in the tenders. The tenders which do not fulfill any of the above conditions or those in the form and which are incomplete in any respect shall be liable for rejection.

5. PRECAUTIONS TO BE TAKEN BY THE CONTRACTOR TO PREVENT ACCIDENT :

- i) No live electric lines should be allowed to run along the ground in blasting zone and they should be at least about 10 ft. above ground if not more.
- ii) The wiring cable should not be taken near the live electric line and it should be preferably shot firing cable as supplied by the supplier of explosives. If such a cable is not available a substitute cable recommended by the explosive suppliers should only be used. Under no circumstances should cable made up of several pieces jointed and tapped be used.
- iii) The blasting shed from where the exploder is to finally operated should be at least 150 metre away from the area to be blasted. It should have a strong roof which can withstand the impact of flying stones at this range.
- iv) Only trained hands should be allowed to handle explosives, cable detonators etc.

6.1 CONTRACTOR TO INFORM HIMSELF FULLY :

The contractors shall be deemed to have carefully examined the work and site conditions including labour, the general and special conditions, the specifications, schedules and drawings and shall be deemed to have visited the site of the work and to have fully informed himself regarding the local conditions and carried out his own investigations to arrive at the rates quoted in the tender. In this regard, he will be given necessary information to the best of the knowledge of Department but without any guarantee about it.

If he shall have any doubt as to the meaning of any portion of these general conditions or the special condition, to the scope of working of the specifications and drawings or any other matter concerning the contract, he shall in good time, before submitting his tender, set forth the particulars thereof and submit them to the Engineer in writing in order that such doubts may be clarified authoritatively before tendering. Once a tender is submitted, the matter will be decided in accordance with tender conditions in the absence of such authentic pre-clarification.

6.2 ERROR, OMISSIONS AND DISCREPANCIES :

(A) In case of errors, omissions and /or disagreement between written and scaled dimensions in the drawing or between the drawings and specifications etc., The following order of preference shall apply.

(I) Between actual scaled and written dimensions or descriptions on a drawing, the later shall be adopted.

(II) Between the written or shown description of dimensions in the drawing and corresponding one in the specifications, the latter shall apply.

(III) Between the quantities shown in schedule of quantities and those arrived at from the drawings, the later shall be preferred.

(B) In all cases of omission and / or doubts of discrepancies in the dimensions or description of any item or specifications, a reference shall be made to the Engineer, whose elucidation, elaboration or decision shall be considered as authentic. The contractor shall be held responsible for any errors that may occur in the work through lack of such reference and precaution.

6.3 WORKING METHODS AND PROGRESS SCHEDULES :

- (a) The Contractor shall submit within the time stipulated by the Engineer-in-charge in writing the details of actual methods that would be adopted by the Contractor for the execution of any item as required by Engineer at each of the location, supported by necessary detailed drawing and sketches including those of the plant and machinery that would be used their locations arrangement for conveying and handling materials etc. and obtain prior approval of the Engineer-in-charge well in advance of starting of such item of work. The Engineer-in-charge reserves the right to suggest modifications or make corrections in the method proposed by the contractor whether accepted previously or not at any stage of the work to obtain the desired accuracy, quality and progress which shall be binding on the contractor. No claim on account of such change in method of execution will be entertained by Government so long as specification of the item remain unaltered. The full responsibility for the safety and adequacy of the methods adopted by the contractor shall however, rest on the contractor, irrespective of any approved given by the Engineer.

PROGRESS SCHEDULE

- (b) The Contractor shall furnish within the period stipulated in writing by the Engineer-in-charge of the order to start the work, progress schedule in quadruplicate indicating the date of actual start, the monthly progress expected to be achieved and anticipated completion date of each major item of work to be done by him, also indicating and setting up materials, plants and machinery.
- (c) The Contractor shall employ sufficient plant, equipment and labour as may be necessary to maintain the progress schedule. The working and shift hours restricted to one shift a day for operations to be done under the Government supervision shall be such as may be approved by the Engineer-in-charge . They shall not be varied without the prior approval of the Engineer. Night work requiring supervision shall not be permitted expect when specifically allowed by Engineer on each item, if requested by Contractor. The Contractor shall provide necessary lighting arrangements etc. for night work as directed by Engineer without extra cost to Government.

CONSTRUCTION EQUIPMENT AND LOCATION :

- I) The Contractor shall be required to give a trial run of the equipment's for establishing, their capability to achieve the laid down specifications and tolerance to the satisfaction of the Engineer before commencement of the work. All equipment provided shall be of proven efficiency and shall be operated and maintained at all times, in a manner acceptable to the Engineer and no equipment or personnel will be removed from site without permission of the Engineer .
- II) The undertaking of the Bidder, regarding distance from the Plant to site of work, and assurance of maintaining temperature of the bituminous mix as per specifications before laying at site. **This undertaking has to be uploaded through online.** The undertaking will be verified, if necessary, at the time of opening of Tender. If the undertaking submitted by the Bidder is assessed to be incorrect, his bid shall be considered as disqualified.

6.4 TREASURE TROVE :

In the event of discovery by the Contractor or his employees, during the progress of the works of any treasure, fossils, minerals or any other articles or value of interest, the Contractor shall give immediate intimation thereof to the Engineer such treasure of things which shall be the property of the Government.

6.5 QUARRIES :

- 6.5.1 The Contractor (s) shall have to arrange himself / themselves to procure the quarry. However necessary assistance without any extra cost to Government will be rendered by the Department for procuring the quarries if required by the Contractor.
- 6.5.2 The quarrying operation shall be carried out by the Contractor with proper equipment such as compressor, jack-hammers, drill bits, explosives etc. and sufficient numbers of workmen shall be employed so as to get the required out-turn.
- 6.5.3 The Contractor shall carry out the works in the quarries in conformity with all the rules and regulations already laid down or that may be laid down from time to time by the Government . Any cost incurred by the Government due to noncompliance of any rules or regulations or due to damages by the Contractor shall be the responsibility of the Contractor. The Engineer-in-charge or his representative shall be given full facility by the Contractor for inspection at all times of the working of the quarry, records maintained, the stocks of the explosives and detonators etc. So as to enable him to check that the working records and storage are all in accordance with the relevant rules. The Engineer-in-charge or his representative shall at any times be allowed to inspect the work, building and equipment at the quarters.

6.5.4 The Contractor shall maintain at his own cost the books, registers etc. required to be maintained under the relevant rules and regulations and as directed by the Engineer-in-charge . These books shall be open for inspection at all times by the Engineer-in-charge or his representative and the Contractor shall furnish the copies or extract of books or registers as and when required.

6.5.5 All quarrying operations shall be carried out by the Contractor in organized and expeditious manner, systematically and with proper planning. The Contractor shall engage licensed blasters and adopt electric blasting and / or any other approved method which would ensure complete safety to all the men engaged in the quarry and its surroundings. The Contractor shall himself provide suitable magazines and arrange to procure and store explosives etc. as required under the rules at his own cost. The designs and the location of the magazine shall be got approved in advance from the Chief inspector of Explosives and the Rules and Regulations in this connection as laid down by the Chief Inspector of Explosives from time to time shall be strictly adhered to by the Contractor . It is generally experienced that it takes time to obtain the necessary license for blasting and license for storage of materials from the concerned authorities. The Contractor must therefore, take timely advance action for procuring all such licenses so that the work progress may not be hampered.

6.5.6 The approaches to the quarrying place from the existing public roads shall have to be arranged by the Contractor at his own cost and the approaches shall be maintained by the Contractor at his own cost till the work is over.

6.5.7 The Quarrying operations shall be carried out by the Contractor to the entire satisfaction of the Engineer-in-charge and the development of the quarry shall be made efficiently so as to avoid wastage of stones. Only such stones as are of the required quality shall be used on the work. Any stone which is in the opinion of the Engineer-in-charge , not in accordance with the specifications or of required quality will be rejected at any time, at the quarry or at the site of work. The rejected stones shall not be used on the work and such rejected materials shall be removed to the place shown at the Contractor's cost.

6.5.8 Since all stones quarried from Government quarry (if made available) by the Contractor including the excavated over burden are the property of the Government , no stones or earth shall be supplied by Contractor to any other agencies or works and are not allowed to be taken away for any other works. All such surplus quarried materials not required for work under this contract shall be the property of the Government and shall be handed over by the Contractor to the Government free of cost at the quarry site duly heaped at the spots indicated by the Engineer-in-charge .

6.5.9 Quarrying permission will have to be directly obtained by the Contractor from the Collector of the District concerned for which purpose the Department will render necessary assistance. All quarry fees, royalty charges, Octroi duties, ground rent for staking material etc. if any to be paid, shall be paid directly by the contractor as per prevailing rules in force.

6.5.10 The Contractor will be permitted to erect at his own risk and cost at the quarry site, if suitable vacant space in Government area is available of the purpose, his own structures for stores, offices etc. at places approved by the Engineer-in-charge . On completion of the work the Contractor shall remove all the structures erected by him and restore the site to its original condition.

6.5.11 The Contractor shall not use any land in the quarry for cultivation or for any other purpose except that required for breaking or stacking or transporting stones.

6.6 **COLLECTION OF MATERIALS :-**

(I) Where suitable and approved P.W. Department's quarries exist the Contractor or piece worker will be allowed if otherwise there is no objection to obtain the materials to the extent required for the work from the quarry. He will be, however, liable to pay compensation, if any damage caused to the quarry either deliberately or through negligence or for wastage of materials by

himself or his staff or labour. The Contractor shall pay necessary royalty in advance and claim refund according to rules, if admissible and shall submit detailed accounts of materials quarried as directed.

- (II) Where no suitable P.W. Department's quarries exist or when the quantity of the material required cannot be obtained from a P.W. Department quarry, the Contractor or piece worker shall make his own arrangements to obtain the material from existing or a new quarry in Government waste land, private land or land belonging to other States or Talukas etc. After opening the quarry but before starting collection, the quarry shall be got approved from the Engineer-in-charge or his representatives. The Contractor or piece worker shall pay all royally charges, compensation etc. No claims or responsibility on account of any of obstructions caused to execution of the work by difficulties arising out of private owners of the land will be entertained.
- (III) The rates in the tender, include all incidental charges such as opening of a new quarry, opening out a new portion in an existing quarry, removing top soil and the unsuitable material, dewatering, quarry, cost of blasting powder and fuse, lift and lead, repairs to existing cart tracks, making new cart tracks, control charges, Central/State Government or Municipal Taxes, etc.
- (IV) The rates in the tender are for the delivery of the approved material on road side, properly stacked at the places specified by the Engineer-in-charge and are inclusive of conveyance charges in respect of the leads and lifts. No claims on account of changes in lead will be entertained.

- (V) No material shall be removed from the land within the road boundary or from the land touching it without the written permission of the Engineer-in-charge or his authorised agent. If any material is unauthorisely obtained from such places, the Contractor or piece worker shall have to make good the damages and pay such compensation, in addition as may be decided by the Executive Engineer and will have to stop further collection.
- (VI) Any material that falls on any P.W.D. Road from the cart etc. during conveyance shall be immediately picked up and removed by the Contractor or piece worker, failing which it will be got removed departmentally at his cost. No heap shall be left prior to stacking even temporarily on the road surface or in any way so as to cause any obstruction or danger to the traffic. The Contractor or the piece worker shall be liable to pay for any claims of compensation etc. arising out of any accident, etc. Any such materials causing obstruction or danger etc. will be got removed departmentally at his cost and no claim for any loss or damage to the material, thus removed will be entertained. The Contractor shall also be responsible for the damage or accident etc. arising out of any material that falls on the road or track, not in charge of the Department and shall attend to any complaints which may be received.
- (VII) The materials shall not be stacked in place where it is liable to be damaged or lost due to traffic passing over it, to be washed away by rain or floods, to be buried under the land slides etc. or the slip down an embankment or hill side etc. No claims for any loss due to these and similar causes will be entertained.
- (VIII) Before stacking, the materials shall be free from all earth, rubbish, vegetable matter and other extraneous substance and in the case of metal, screened to gauge if so directed when ready. It shall be stacked entirely clear of the road way on ground which has been cleaned of vegetation and levelled. On high banks, ghat roads etc. where it may not be practicable to stack it entirely clear of the roadway, it may be stacked with the permission of the Engineer-in-charge on terms in such a way as to cause minimum danger and obstruction to the traffic or as may be directed by him.

- (IX) The size of the stack of the materials other than rubble shall be 3 x 1.5 x 0.60 metre or such other size as may be directed by the Engineer-in-charge and all but one stack in 200 metres shall be of the same uniform size and shall be uniformly distributed over whole lengths. One stack (at the end) in each 200 metres may be of length different from the rest in order to adjust total quantity to be required but its width and height will be the same as those of the rest.
- (X) The Sub Divisional Officer shall supply the Contractor with statement showing 200 metres wise quantities that will be required and the order in which the collection is to be done. No materials in excess of requirements in that 200 metres shall be stacked. Any excess quantity shall be removed at the expense of the Contractor or piece worker to where it is required before the material in that 200 metres is finally measured.
- (XI) In stacking materials the deposition shall commence at the end of the Kilometer farthest from the quarry and be carried continuously to the other end (unless otherwise directed by the Executive Engineer). Stacking in one 200 metres shall be completed before it is started in another unless directed otherwise in writing by the Executive Engineer . Measurements of the materials stacked in a 200 metres will not be recorded until the full quantity required has been stacked unless otherwise authorised by Engineer in writing. Collection and spreading; shall not be carried out at the same time in one and the same Kilometer or in two adjoining Kilometer except with the written permission of the Executive Engineer.
- (XII) Unless otherwise directed, the materials shall be collected in the following order according to availability of space. (1) Rubble (if included in tender) (2) Metal (3) Soft murum and (4) Hard murum. Hard murum shall be stacked on the side opposite to that on which soft murum has been stacked. Similarly, metal collected for petty repairs shall be stacked on the side opposite to metal for new layer. Where metal for two layers has to be stacked, as in the case of new roads, the metal for each layer shall be stacked on the opposite sides of the road.

- (XIII) All road material shall be examined and measured before it is spread. The labour for measurements (and check measurements wherever carried out) shall be supplied by the Contractor or piece worker. Immediately after the measurements are recorded, the stacks shall be marked by the contractor or piece worker by white wash or otherwise as may be directed by the Executive Engineer to prevent from any possibility of the same material being measured and recorded over again and to prevent any unauthorized tampering with the stacks. If the contractor or the piece worker fails to attend the measurements of materials after receiving the notice from the Sub Divisional Officer or his subordinate stating date and time of the intention to measure the work, the same shall be measured nevertheless and no complaint in this respect will be entertained later-on. If the contractor or piece worker fails to supply sufficient labour or the materials required at the time measurements or check measurements, after due notice has been given to him, the expenses incurred on account of employing departmental labour or material etc. shall be charged against his account.
- (XIV) No deduction will be made for voids.

6.7 **AGENT AND WORK ORDER BOOKS** :-

The contractor shall himself engaged an authorised all time agent on the work capable of managing and guiding the work and understand the specifications and contract condition. A qualified and experienced, Engineer shall be provided by the contractor as his agent for technical matters in case the Engineer-in-charge considers this as essential for the work and so directs contractors. He will take orders as will be given by the Executive Engineer or his representative and shall be responsible for carrying them out.

This agent shall not be changed without prior intimation to the Executive Engineer and his representative on the work site. The Engineer-in-charge have the unquestionable right to ask for change in the quality and strength of contractor's supervisory staff and to order removal from work of any of such staff. The contractor shall comply with such orders and effect replacements to the satisfaction of the Engineer-in-charge.

A work order book shall be maintained on site and it shall be the property of the Government and the contractor shall promptly sign orders given therein by the Executive Engineer or his representative and his superior officers and comply with them.

Contractor

No. of Corrections

Executive Engineer

The compliance shall be reported by the Contractor to the Engineer in good time so that it can be checked. The blank work order with machine numbered pages will be provided by the Department free of charge for this purpose. The contractor will be allowed to copy out instructions therein from time to time. The order issued by the Government in P.W. Department from time to time regarding Construction procedure shall be binding on the contractor in addition to the specifications contained in P.W.D. hand book Volume I and II and book of standard specification of P.W. Department and the specifications enumerated above.

6.8 INITIAL MEASUREMENTS FOR RECORD:-

Where for proper measurement of work, it is necessary to have initial set of levels or other measurements taken, the same as recorded in the authorised field book or measurement book of Government by the Engineer or his authorised representative will be signed by the Contractor who will be entitled to have a true copy of the same made at his cost. Any failure on the part of the Contractor to get such levels etc. recorded before starting the work will render him liable to accept the decision of the Engineer as to the basis of taking measurements. Like-wise the Contractor will not cover any work which will render its subsequent measurements difficult or impossible without first getting the same jointly measured by himself and the authorised representative of the Executive Engineer . The record of such measurements on the Government side will be signed by the Contractor and he will be entitled to have a true copy of the same made at his cost.

6.9 HANDING OVER OF WORK :-

All the works and materials before finally taken over by Government it will be the entire liability of the Contractor to guard, maintain and make good any damage of any magnitude. Interim payments made for such work will not alter this position. The handing over by the Contractor and taking over by the Executive Engineer or his authorised representative will be always in writing copies of which will go to the Executive Engineer or his authorised representative and the Contractor. It is however, understood that before taking over such work, Government will not put it into regular use as distinct from casual or incidental one, except as specifically mentioned elsewhere in this contract, or as mutually agreed to.

6.10 ASSISTANCE IN PROCURING PRIORITIES, PERMITS ETC :

The Engineer on a written request by Contractor will, if in his opinion the request is reasonable and in the interest of work and its progress, assist the Contractor in securing, the priorities for deliveries, transport, permits for controlled materials etc. where such are needed. The Department will not however be responsible for the non-availability of such facilities or delays on this behalf and no claims on account of such failure of delays shall be allowed by the Department.

The Contractor shall have to make his own arrangement for machinery required for the work. However if the same is conveniently available with the Department it may be spared as per the rules in force on recovery of necessary Security Deposit and rent at the rate approved from time to time by the independent agreement to this contract and the supply or non supply of machinery shall not form a ground for any claim or extension of time for this work.

7. SAMPLES AND TESTING OF MATERIALS :

- I)** All materials to be used on work, such as cement, lime, aggregates, stone, asphalt, etc. shall be got approved in advance from the Engineer-in-charge and shall pass the tests and analysis required by him, which will be :
- a) as specified in the specifications of the items concerned and / or
 - b) Red book
 - c) as specified by the Indian Road Congress Standard Specification and code of practice for Road and Bridges or
 - d) I.S.I. Specifications (whichever and wherever applicable) or
 - e) As per M.O.R.T. & H specifications for Roads and Bridges III edition Section 900 quality control for road work.
 - f) Such recognized specifications acceptable to the Engineer-in-charge as equivalent there to or in the absence of such authorised specifications
 - g) Such requirements test and/or analysis as may be specified by the Engineer-in-charge in the order of procedure given above.
- II)** The Contractor shall at his risk and cost make all arrangement and/or shall provide for all such facilities as the Engineer-in-charge may require for collecting, preparing required number of samples for test or analysis at such time and to such places as may be directed by Engineer and bear all such charges, such samples shall also be deposited with Engineer-in-charge .

- (III) The Contractor shall as and when required submit at his cost the samples of materials to be tested or analyzed and if, so directed, shall not make use of or incorporate in the work any material represented by the samples until the required test or analysis have been made and after the test of the materials, finally accepted by the Engineer-in-charge

7.1 QUALITY CONTROL ON WORKS AND MATERIALS :

The Contractor shall be responsible for the quality of the work in the entire construction work within the contract. He shall, therefore, have his own independent and adequate set up for ensuring the same. This shall include establishing field laboratory for testing required for W.B.M. AND B.T. works and Building works. The plant laboratory shall be equipped with the equipment's and apparatus required for the testing. The list of various equipment's/apparatus is enclosed at Page 123 for information and guidance of the Contractor . These equipment's shall be in working condition. The engineer in charge of the work will verify these equipment's in the laboratory at plant site. The work shall not be started (particularly the hot mix B.T. work) unless and until the laboratory is equipped with equipment's. (Ref. Page 123). Asphalt testing laboratory shall be established by the contractor at his cost preferably at his plant site and all asphalt consignments shall be tested in his laboratory before putting it to use in the presence of representative of Engineer in charge.

7.2 CO-ORDINATION :

When several agencies for different sub-works of the project are to work simultaneously on the project site, there must be full coordination between the contractors to ensure timely completion of the whole project smoothly. The scheduled dates for completion specified in each contract shall therefore, be strictly adhered to. Each contractor may make his independent arrangements for water, power, housing etc. if they so desire. On the other hand the Contractor are at liberty to come to mutual agreement in this behalf and make joint arrangements with the approval of the Engineer . No Contractor shall take or cause to be taken any steps or action that may cause, disruption, discontent, or disturbance of work, labour or arrangement etc. of the contractor in the project localities. Any action by any Contractor which the Engineer in his unquestioned discretion may consider as infringement of the above code, would be considered as a breach of the contract conditions and shall be dealt-with accordingly.

In case of any dispute of disagreement between the Contractors, the Engineer's decision regarding the coordination, co-operation and facilities to be provided by any of the Contractor shall be final and binding on the contractors concerned and such a decision shall not vitiate any contract nor absolve the Contractor of his obligations under the contract nor consider from the grounds for any claim or compensation.

7.3 TEMPORARY QUARTER

The Contractor shall at his own expense maintain sufficient experienced supervisory staff etc. required for the work and shall make his own arrangements for housing such staff with all necessary amenities. General layout plan for such structures shall be got approved from the Engineer-in-charge . It will be the responsibility of the Contractor to get his lay out plan of temporary structure approved from the local competent authority.

7.4 PAYMENTS :

The Contractor must understand clearly that the rates quoted are for completed work and include all costs due to labour, scaffolding, plant machinery, power, royalties, octroi, taxes etc. and should also include all expenses to cover the cost of lighting, night work if and when required and no claim for additional payment beyond the rates quoted will be entertained.

7.5 PATENTED DEVICES, MATERIALS AND PROCESSES :

When the Contractor desires to use any designed device, materials or process covered by letter of patent or copy right, the right for such use should be secured by suitable legal arrangement and agreement with patent owner and a copy of their agreement shall be filed with the Engineer-in-charge if so desired by the latter.

7.6 WATER SUPPLY :

Availability of adequate water for works and sources thereof shall be confirmed by the Contractor before submitting the tender.

The Contractor shall make his own arrangements at his own cost for entering into contract with concerned authorities for obtaining the connection and carry the water upto the work site as required by him. The location of the pipe line with respect to the road shall be decided by Engineer-in-charge and shall be binding on the Contractor .

The Contractor is advised to provide water storage tank of adequate capacity to take care of possible shutdown of water supply system.

The Contractor shall have to supply water required by the Department for its establishment at work site. The water consumed by the Department will be metered. For providing the meter permission, if necessary will be arranged by the Department. Charges for the water consumed by the Department will be paid to the Contractor at the rates of 125% of the recurring costs or actually charged to him by concerned authorities and no other charges would be payable by the Department.

7.7 ELECTRICITY :

The Contractor will have to make his own arrangement at his own cost for obtaining or providing electric supply at work site.

Electrical supply for the Departments use at work site shall be provided by the contractor . No charges would be payable by the Department.

8. SAFETY MEASURES AND AMENITIES :**8.1 SAFETY MEASURES :**

The Contractor shall take all necessary precautions for the safety of the workers and preserving their health while working on such job as require special protection and precautions wherever required. The following are some of the requirements listed, through not exhaustive. The contractor shall also comply with the directions issued by the Engineer in this behalf from time to time and at all times.

- 1) Providing protective foot-wear to workers, in situations like mixing and placing of mortar or concrete, in quarries and place where the work is to be done under too much wet conditions as also for movements over surfaces infected with oyster growth etc.
- 2) Providing protective head wear to workers, working in quarries etc. to protect them against accidental fall of materials from above.
- 3) Taking such normal precautions like providing hand rails to the edges of the floating platform or barges, not allowing nails or metal parts or useless timber to spread around etc.

8.2 AMENITIES :

- 1) Supporting workmen with proper belts, ropes etc. when working on any masts, cranes, grabs, hoist, dredger etc.
- 2) Taking necessary steps towards training the workers concerned of the use of machinery before they are allowed to handle it independently and taking all necessary precautions in and around the areas where machines, hoists and similar units are working.
- 3) Providing adequate number of boats (if at all required for plying in water) to prevent overloading and over-crowding.
- 4) Providing life belts to all men working at such situations from where they may accidentally fall into water. Equipping the boats with adequate number of life boats etc.
- 5) Avoiding bare live-wires etc. as would electrocute workers.
- 6) Making all platforms, stagings and temporary structures sufficiently strong and not causing the workmen and supervisory staff to take undue risks.
- 7) Providing sufficient first aid trained staff and equipment to be available quickly at the work site to render immediate first aid treatment in case of accidents due to suffocation, drowning and other injuries.
- 8) Take all necessary precautions with regard to use of divers.
- 9) Providing full length gum boots, leather hand gloves, leather jackets with fireproof aprons to cover the chest and black reaching upto knees plain goggles for the eyes to the labour working with hot asphalt handling vibrators in cement concrete and also where use of any or all these items is, essential in the interest of health and well being of the labourers in the opinion of the Engineer.

8.3 EXPLOSIVE :

The Contractor shall at his own expense construct and maintain proper magazines, if such are required for the storage of explosives for use in connection with the work and such magazines, being situated constructed and maintained in accordance with the Government Rules applicable in that behalf. The Contractor shall at his own expenses obtain such license or licenses as may be necessary for storing and using explosives. Notwithstanding that the location etc. or storage of explosives are approved by the Engineer, the Government, shall not bear any responsibility whatsoever in connection with the storage and use of explosives on the site or any accident or occurrence what-so-ever in connection, therewith, all operations of the Contractor in or for which explosives employed being at the risk of contractor and upon his sole responsibility and the Contractor hereby gives to Government an absolute indemnity in respect thereof.

8.4 DAMAGE BY FLOODS OR ACCIDENTS :-

The contractor shall take all precautions against damage by floods or from accident etc. No compensation will be allowed to the Contractor on this account or for correcting and repairing any such damage to the work during construction. The Contractor shall be liable to make good at his cost any plant or materials belonging to the Government lost or damaged by floods or from any other cause while is in his charge.

8.5 RELATION WITH PUBLIC AUTHORITIES:

The Contractor shall comply with all rules, regulations, bye-laws and directions given from time to time by any local or public authority in connection with this work and shall himself pay all charges which are leviable on him without any extra cost to the Government .

POLICE PROTECTION:

For the Special Protection of camp of the Contractor's works, the Department will help the Contractor as far as possible to arrange for such protection with the concerned authorities. The cost shall be borne by the Contractor .

8.6 INDEMNITY:

The Contractor shall indemnify the Government against all actions, suits, claims and demands brought or made against it in respect of anything done or committed to be done by the contractor in execution of or in connection with the work of this contract and against any loss or damage to the Government in consequence to any action or suit being brought against the Contractor for anything done or committed to be done during the execution of this contract.

The Government may at its discretion and entirely at the cost of the contractor defend such suit, either jointly with the Contractor or single in case the latter chooses not to defend the case.

8.7 MEDICAL & SANITARY ARRANGEMENTS TO BE PROVIDED FOR LABOUR EMPLOYED IN THE CONSTRUCTION BY THE CONTRACTOR:

- a) The Contractor shall provide an adequate supply of pure and wholesome water for the use of labourers on work and in camps.
- b) The Contractor shall construct trench or semipermanent latrines for the use of the Labours. Separate latrines shall be provided for men and women.
- c) The Contractor shall build sufficient number of huts on a suitable plot of land for use of the labourers according to the following specifications :-
 1. Huts with Bamboo's and Grass may be constructed.
 2. A good site not liable to submergence shall be selected on high ground remote from jungle but well provided with tress, shall be chosen wherever it is available. The neighborhood of tank, jungle, trees or wood should be particularly avoided, Camps should not be established close to large cutting of earth work.
 3. The lines of huts shall have open space of atleast ten metres between rows. When a good natural site cannot be procured, particular attention should be given to the drainage.
 4. There should be no over crowding. Floor space at the rate of 3 Sq. metre per head shall be provided. Care should be taken to see that the huts are kept clean and in good order.
 5. The Contractor must find his own land and if he wants Government land, he should apply for it. Assessment for it, if demanded will be payable by Contractor . However the Department does not bind itself for making available the required land.
 - a) The Contractor shall construct a sufficient number of bathing places, Washing places should also be provided for the purpose of washing cloths.
 - b) The Contractor shall engage a Medical Officer with a travelling dispensary for a Camp containing 500 or more persons if there is no Government or other private dispensary situated with 8 Kms. from the camp. In case of emergency the Contractor shall arrange a this cost of transport for quick medical help to his sick worker.
 - c) The Contractor shall provide the necessary staff for effecting satisfactory conservancy and cleanliness of the camp to the satisfaction of the Engineer-in-charge . Atleast one sweeper per 200 persons should be engaged.

- d) The Assistant Director of Public Health shall be consulted before opening a labour camp and his instruction on matters such as water supply, sanitary conveniences, the camp site accommodation and food supply shall be followed by the Contractor .
- e) The Contractor shall make arrangements for all antimalarial measures to provided for the labours employed on the work. The antimalarial measures shall be provided as directed by the Assistant Director of Public Health.
- f) The antimalaria and other health measures shall be as directed by the Joint-Director (Malaria and Filariasis) Health Services, Pune.
- g) Contractor shall see that mosquitogenic condition are not created so as to keep vector populations to minimum level.
- h) Contractor shall carry out antimalaria measures in the area as per guidelines prescribed under National Malaria Eradication Programme and as directed by the Joint Director, (M & F) of Health Services Pune.
- i) In case of default in carrying out prescribed antimalaria measures resulting in increase in Malaria incidence, contractor shall be liable to pay to Government the amount spent by Government on anti malaria measure to control the situation in addition to fine.
- j) The Contractor shall make sufficient arrangements for draining away the surface and sullage water as well as water coming from the bathing and washing places and shall dispose off this waste water in such way as not to cause any nuisance. He shall also keep the premise clean by employing sufficient number of sweepers.
- k) The Contractor shall comply with all rules, regulation bye-law and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charges which are leviable on him without any extra cost to Government .
- l) In addition to above all provisions of the relevant labour act pertaining to basic amenities to be provided to the labourer shall be applicable which will be arranged by the Contractor .

9. MISCELLANEOUS :

- 9.1** For providing electric wiring or water lines etc. recesses shall be provided if necessary through walls, slabs, beams etc. and later on refilled it with bricks or stones, chipping cement mortar without any extra cost.

- 9.2 In case it becomes necessary for the due fulfillment of contract for the Contractor to occupy land outside the Department limits, the Contractor will have to make his own arrangements with the land owners and pay such rents, if any, are payable as mutually agreed between them.
- 9.3 The Contractor shall duly comply with the provision of the Apprentices Act 1961 (iii of 1961) and the rules and orders made thereunder from time to time under the said Rules and on his failure or neglect to do so he shall be subject to all the liabilities and penalties provided by the said Act and Rules.
- 9.4 It is presumed that the Contractor has gone carefully through the M.O.R.T. & H specifications (edition 2001) and Schedule of Rate of the division, and studied the site conditions before arriving at rates quoted by him. The special provisions and detailed specification of wording of any item shall gain precedence over the corresponding contrary provisions (if any) in the standard specification given without reproducing the details in contract. Decision of Engineer-in-charge shall be final in case of interpretation of specification.
- 9.5 If the standard specifications fall short for the items quoted in the schedule of this contract reference shall be made to the latest Indian Standard specifications, I.R.C. codes. If any of items of this contract do not fall in reference quoted above, the decision and specifications as directed by the Engineer-in-charge shall be final.
- 9.6 The stacking and storage of building materials at site shall be in such a manner as to prevent deterioration or inclusion of foreign materials and to ensure the preservation of the quantity, properties and fitness of the work. Suitable precautions shall be taken by Contractor to protect the materials against atmospheric action fire and other hazards. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likelihood of subsidence of soil, heavy materials shall be stored on paved platforms. Suitable separating barricades and enclosure as directed shall be provided to separate materials brought by contractor and from different sources of supply.
- 10 **INSTRUCTION REGARDING EXECUTION OF WORKS HAVING VERY HIGH RATE AND VERY LOW RATES:**
- In case of high rates quoted by the Contractor for a particular item, the payment for that item shall be made at part rate based on C.S.R. rate initially. Full rate shall be released only after entire work is satisfactorily completed.

11. DEFINITIONS :

- a) Unless excluding by or repugnant to the context :-
- a) The expression "Government " as used in the tender documents shall mean the Public Works Department of the Government of Maharashtra.
- b) The expression "The Chief Engineer " as used anywhere in the tender papers shall mean officer for the time being of the Government of Maharashtra who is designated as such.
- c) The expression "Superintending Engineer " as used in the tender papers shall mean the officer of Superintending Engineer rank (by whatever designation he may be known) under whose control the work lies for the time being.
- d) The expression "Engineer" or "Engineer-In-Charge" as used in the tender papers shall mean the Executive Engineer-in-charge of the work.
- e) The expression "Contractor " as used in the tender papers shall mean the successful tenderer that is the tenderer whose tender has been accepted, and who has been authorised to proceed with the work.
- f) The expression "Contract" as used in the tender papers shall mean the deed of contract together with or its original accompaniment and those later incorporated in it by mutual consent.
- g) The expression "Plant" as used in the tender papers shall mean very temporary and necessary means necessary or considered necessary by the Engineer to execute, construct, complete and maintain the works and used in altered, modified, substituted and additional works ordered in the time and in the manner herein provided and all temporary materials and special and other articles of appliances of every sort, kind and description whatsoever intended or used therefor.
- h) The expression "Department" as used in the tender papers shall means Public Works Department of Government of Maharashtra.
- i) The "Accepting authority" shall mean the officer competent to accept the tender.
- j) The "Site" shall mean the land and/or other places where the work is to be executed under the contract including any other land or places which may be allotted by the Government or use for the purpose of contract.

12 TESTING ETC. :

The Contractor shall be responsible for the quality of the work in the entire construction work within the contract. He shall, therefore, have his own independent and adequate setup for ensuring the same. This shall include establishing field laboratory for testing required for WBM and B.T. works.

13. AUTHORITIES OF THE ENGINEER IN CHARGE :

Save in so far as it is legally or physically impossible the Contractor shall execute, complete and maintain the works in strict accordance with the contract under the directions and to the entire satisfaction of the Engineer in charge and shall comply with and adhere strictly to the Engineer-in-charge's instructions and directions on any matter (Whether mentioned in the contract or not) pertaining to this works.

The Engineer in charge shall decide all questions which may arise as to quality and acceptability of materials furnished and work executed, manner of execution, rate of progress of the works, interpretation of the plans and specifications and acceptability of fulfillment of the contract on the part of the Contractor . He shall determine the amount and quantity of work performed and materials furnished and his decision shall be final. In all such matters, and in any technical questions which may arise touching the contract, his decision shall be binding on the Contractor .

The Engineer in charge shall have the power to enforce such decisions and orders if the Contractor fails to carry them out promptly. If the Contractor fails to execute the work ordered by the Engineer-in-charge . The Engineer in charge may give notice to Contractor specifying a reasonable period therein and on the expiry of that period proceed to execute such work as may be deemed necessary and recover the cost there of from the Contractor .

13.1 AUTHORITIES OF THE ENGINEER-IN-CHARGE'S REPRESENTATIVE

The duties of the representative of the Engineer-in-charge are to watch and supervise the work and to test and examine any material to be used for workmanship employed in connection with the works.

13.2 The Engineer-in-charge may from time to time, in writing delegate to his representative any of the powers and authorities vested in the Engineer-in-charge and shall furnish to the Contractor a copy of all such delegations of powers and authorities. Any written instruction or approval given by the representative of the Engineer-in-charge to the Contractor within the terms of such delegations (but not otherwise) shall bind the Contractor and the Department as though it had been given by the Engineer-in-charge , provided always as follows.

- A) Failure of the representative of the Engineer-in-charge to disapprove any work or material shall not prejudice the power of the Engineer-in-charge there after to disapprove such work or materials and to order to pulling down, removal or breaking up thereof.
- B) If the Contractor is dissatisfied with any decision of the Representative of the Engineer-in-charge he shall be entitle to refer the matter to the Engineer-in-charge, who shall there upon confirm/reverse or vary such decision.

14. LAY OUT OF WORK :

14.1 Layout of the work will be done by the Contractor in consultation with the Executive Engineer of the Department or his representative, some permanent marks should however be established to indicate the demarcation of the structure or any component there of made to this permanent marks in measurement books and drawing signed by the contractor and the departmental officer, Responsibility regarding layout will be joint.

14.2 SETTING OUT :-**I) ROAD WORKS :-**

- a) The contractor shall establish working bench marks in the area soon after taking possession of the site. The working bench marks shall be at the rate of four per Km. and also at or near all drainage structures, over bridges and underpasses. The working bench marks shall be got approved from the **Engineer**. Checks must be made on these bench marks once every month and adjustments if any got agreed with the **Engineer** and recorded. An up to date record of all bench marks including approved adjustment, if any shall be maintained by the contractor and also a copy supplied to the **Engineer** for his record.
- b) The lines and levels of formation, side slopes, drainage, carriageways and shoulders shall be carefully set and frequently checked, care being taken to ensure that correct gradients and cross sections are every where obtained.
- c) In order to facilitate the setting out of the works, the center line of the carriageway or highway must be accurately established by the contractor and approved by the **Engineer**. It must then be accurately referenced in a manner satisfactory to the **Engineer**, every 50 m. intervals in plain and rolling terrain and 20 m. intervals in hilly terrain and in all curve points as directed by the **Engineer**, with marker pegs and change boards set in or near the fence line, and a schedule of reference dimensions shall be prepared and supplied by the contractor to the **Engineer**. These markers shall be maintained until the works reach finished formation level and are accepted by the **Engineer**.
- d) On construction, reaching the formation level stage, the center line shall again be set out by the contractor and when approved by the **Engineer**, shall be accurately referenced in a manner satisfactory to the **Engineer** by marker pegs set at the outer limits of the formation.

II — BUILDING WORKS :-

~~The Engineer in charge shall furnish the contractor with only the four corners of the works site and a level bench mark and the contractor shall set out the works and shall provide an efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.~~

~~The contractor shall provide, fix and be responsible for the maintenance of all stacks, templates, level marks, profile and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance, should the same take place and for their efficient and timely reinstatement. The contractor shall also be responsible for the maintenance of all existing survey marks, boundary marks distance marks and center line marks, either existing or supplied and fixed by the contractor. The work shall be set out to the satisfaction of the Engineer in charge. The approval thereof or joining with the contractor by the Engineer in charge in setting out the work, shall not relieve the contractor of any of his responsibilities.~~

~~Before beginning the work, the contractor shall at his own cost provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme for bearing marks acceptable to the Engineer in charge. The center, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the center to enable the theodolite to be set over it. No work shall be started until all these points are checked and approved by the Engineer in charge in writing but such approval shall not relieve the contractor of any of his responsibilities. The contractor shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.~~

~~———— Pillars bearing geodetic marks located at the sites of units of works under construction should be protected and fenced by the contractor.~~

~~———— On completion of works, the contractor must submit the geodetic documents according to which the work was carried out.~~

15. STACKING AND STORAGE AND GUARDING OF MATERIALS :

- 15.1 The stacking and storage of material at site shall be in such a manner as to prevent deterioration or intrusion of foreign matter and to ensure the preservation of their quality, properties and fitness for the work. Suitable precautions shall be taken by the Contractor to protect the materials against atmospheric action, fire and other hazards. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likely hood of subsidence of soil, heavy materials shall be stored on paved platforms.

Suitable separating barricades and enclosures as directed shall be provided to separate materials brought by Contractor and materials issued by Government to Contractor under Schedule "A" Same applies for the material obtained from different sources of supply.

- 15.2 The Contractor shall at his own expense engage watchman for guarding the materials and plant and machinery and the work during day and night against any pilferage or damage and also for prohibiting trespassers.
- 15.3 No materials brought to the site shall be removed from the site without the prior approval of the Engineer-in-charge .

16. INSPECTION OF WORKS

- 16.1 The Contractor shall inform the Engineer-in-charge in writing when any portion of the work is ready for inspection giving him sufficient notice to enable him to inspect the same without affecting the further progress of the work.
- 16.2 The Contractor shall provide at his cost necessary ladders and such arrangements as are considered safe by the Engineer-in-charge for proper inspection of all parts of the work.
- 16.3 Contractor shall extend his full co-operation and make all necessary arrangements when needed for carrying out inspection of the work or any part of the work by the local representatives, M.L.As, M.Ps and officers and dignitaries / delegates of various Government departments, local bodies, private sectors etc. No compensation shall be paid to the contractor on this account.
- 16.4 The work shall be carried out by the Contractor without causing damage to the existing Government property and / or private property. If any such damage are caused, the Contractor shall pay for restoration of the property to the original conditions, and any other consequent damages.

- 16.5 In the event of the occurrence of an accident involving serious injuries or death of any person, at site of work or quarry or at any place in connection with the work the same shall be reported in writing within twenty four hours of the occurrence to the Engineer-in-charge and Commissioner of Workmen's compensation.
- 16.6 The Contractor after completion of work shall clean the site of all debris and remove all unused materials other than those supplied by the department and all plant and machinery, equipment, tools etc. belonging to him within one month from the date of completion of the work, or otherwise the same will be removed by the department at his cost or disposed off as per departmental procedure. In case the material is disposed off by the department, the sale proceeds will be credited to the Contractor's account after deducting the cost of sale incurred. However, no claim of Contractor regarding the price or amount credited will entertained afterwards.
- 16.7 All constructional plant, provided by the Contractor shall when brought on to the site be deemed to be exclusively intended for the construction and the contractor shall not remove the same or any part thereof (save for the purpose of moving it from one part of the site to another) without the consent in writing of the Engineer-in-charge who shall record the reasons for withholding the consent.

17. RESTRICTIONS BECAUSE OF LOCAL TRAFFIC:

As there is local traffic by the side of construction during construction for the bridge, the Contractor will have to take proper precautions such as proper barricading, fencing, lighting, information and cautionary boards for safe and smooth flow of traffic, and keeping the concerned authorities informed about the work in progress.

18. COMPLETION CERTIFICATE :

- 18.1 The work shall not be considered to have been completed in accordance with the terms of the contract until the Engineer-in-charge shall have certified in writing to that effect. No approval of material or workmanship or approval of part of work during the progress of execution shall bind the Engineer-in-charge or in any way prevent him from even rejecting the work which is claimed to be complete and to suspend the issue of his certificate of completion until such alteration and modifications or reconstruction have been effected at the cost of the Contractor as shall enable him to certify that the work has been completed to his satisfaction.
- 18.2 After the work is completed the Contractor shall give notice of such completion to the Engineer-in-charge and within 30 days of receipt of such a notice the Engineer-in-charge shall inspect the work and if there is no defect in the work shall furnish the Contractor with a certificate indicating the date of completion. However, if there are any defects which in the opinion of the Engineer-in-charge are rectifiable he shall inform the Contractor the defects noticed. The Contractor after rectification of such defects shall then inform the Engineer-in-charge and Engineer-in-charge on his part shall inspect the work and issue the necessary completion certificate within 30 days if , the defects are rectified to his satisfaction, and if not, he shall inform the Contractor indicating defects yet to be rectified. The time cycle as above, shall continue.

- 18.3 In case defects noticed by the Engineer-in-charge which in his opinion are not rectifiable but otherwise work is acceptable at reduced payment, work shall be treated as completed. In such cases completion certificate shall be issued by the Engineer-in-charge within 30 days indicating the un-rectifiable defects for which reduction in payment is being made by him.
- 18.4 The issued of completion certificate shall not be linked up with the site clearance on completion of the work.
- 18.5 Should regular public traffic be allowed on the bridge at any stage prior to its being taken over then the maintenance period shall be deemed to commence from the date of such traffic passing over the bridge and shall be upto 30 days after the date of issue of completion certificate, by Engineer-in-charge but not more than 12 months after opening to traffic.

19. ANCILLARY WORK :

The Contractor shall submit to Engineer-in-charge in writing the details of all ancillary works including layout and specifications to be followed for its construction. Ancillary work shall not be taken up in hand unless approved by Engineer-in-charge . The Engineer-in-charge reserves the right to suggest modifications or make complete changes in the layout and specifications proposed by the Contractor at any stage to ensure the safety on the work site. The Contractor shall carry out all such modifications to the ancillary works at his own expenses as ordered by Engineer-in-charge .

20 SPECIAL CONDITIONS:

- 20.1 The Contractor should ensure that all safety precautions are observed by their laboures, working closed to the State Highway and while closing the State Highway precautions are taken including insurance etc., for their labour at the cost of the contractor and the contractor will bear all the expenses, compensation etc. if any accident occurs to the labour etc. No claim in this regard on whatsoever account shall be entertained and this decision of the Department will be final and conclusive.
- 20.2 The Contractor shall observe the rules and regulation imposed by traffic police for smooth flow of traffic on the diversion road and shall not be entitled for claims any compensation arising thereof.
- 20.3 In case of delay in handing over the land required for the work, due to unforeseen cause, the Contractor shall not be entitled for any compensation what-so-ever form the Government on ground that the machinery or labour was idle for certain period. Contractor may, however apply for extension of time limit which may be granted on the merit of the case.

21. FOLLOWING ARE THE MODIFICATIONS/AMENDMENTS/ADDITIONS TO THE SPECIFICATIONS FOR ROAD AND BRIDGE WORKS:

- 1) Cement to be used for works, shall be any of the following with the prior approval of engineer.
 - a) Ordinary Portland cement confirming to IS : 269.
 - b) High strength ordinary Portland cement confirming to IS : 8112.

As far as possible, cement used in the manufacture of exposed surface of concrete of any element of a structure shall be from the same factory.

Independent testing of cement used shall be done by the Contractor at site and in the laboratory approved by the Engineer before use. Any cement with lower quality than those shown in manufacture's certificate shall be debarred from use.

In case of finely ground cement or imported cement, the Engineer may direct the Contractor to satisfy him as to the acceptability of such cement, especially with regard to creep and shrinkage effect.

Any consignment or part of a consignment of cement which has deteriorated in any way, or specification shall not be used in the works and shall be removed from the site by the Contractor without charge to the Employer.

Cement shall be transported, handled and stored on the site in such a manner as to avoid deterioration contamination. Each consignment shall be stored separately so that it may be readily identified and inspected and cement shall be used in the sequence in which it is delivered at site.

The Contractor shall prepare and maintain proper records on site in respect of the delivery, handling, storage and use of cement and these records shall be available for inspection by the Engineer at all times.

22. REJECTION OF MATERIALS NOT CONFORMING TO SPECIFICATIONS:

Any stock or batch of material(s) of which sample(s) does not conform to the prescribed test and quality, shall be rejected by the Engineer or his representative and such materials shall be removed from site by the Contractor at his own cost. Such rejected materials shall not be made acceptable by any modifications.

Materials not corresponding in character and Quality with approved samples will be rejected by the Engineer or his representative and shall be removed from site at the Contractor's own cost.

23. HOT MIXED AND HOT LAID BITUMINOUS CONSTRUCTION:

- a) Job mix formula satisfying specification requirement should be worked out based on laboratory test and got approved by the Engineer . Engineer will have independent test made before appearing the job mix formula.
- b) The plant should be checked for capability to produce mix conforming to the specification. If necessary, trial stretches should be laid and checked approximately.

- c) Control should be exercised on temperature of binder in the boiler, aggregate in the dryer and mix at the time of laying and rolling.
- d) The mix collected from the discharge point of the plant, extraction test for binder content and aggregate gradation should be performed to check the quality of mix discharged from the plant.
- e) Thickness and density of the compacted mix should be checked by taking core samples.

23.1 Each Truck/Tipper load of bituminous load shall be weighed on a standard weigh bridge.

Weigh Bridge of 20 tonnes capacity or more shall be provided at plant site by the Contractor at his own cost and it should be checked for the calibration by the Engineer-in-charge and weights and measures authorities in the district.

The record of weight of bituminous load thus obtained shall be kept in measurement book. The weightment of the bituminous load shall be done by the Contractor at his expense in the presence of authorised representative of the Executive Engineer . The quantity of mix (weight basis) physically arrived at site shall be tallied with the quantity arrived at by volumetric measurement.

The register showing dispatch of bituminous load from plant, vehicle No. time of dispatch, temperature at the time of dispatch etc. shall be kept in prescribed form (Ref. ***Page No.122***) at hot mix plant site. Similarly the register showing vehicle number, time of arrival of vehicle at site, weight of vehicle with bituminous load, temperature of the mix at site etc. shall be kept by the Department, in the presence of Contractor or his authorised representative (if he or his authorised representative is present at the site at that time) Both the registers shall be filled daily and Contractor shall sign the register every day in token of acceptance of the contents in register the record maintained in the form of the register. The record maintain in the form of the register shall ensure quantity of the materials only. The maintenance of these registers does not absolve the Contractor of his contractual obligation towards quality of the work.

23.2 Contractor and Engineer-in-charge shall maintain the details of mix in the prescribed proforma on ***Page No. 122***.

23.3 The undertaking of the Bidder, regarding distance from the Plant to site of work, and assurance of maintaining temperature of the bituminous mix as per specifications before laying at site. **This undertaking has to be uploaded through online**. The undertaking will be verified, if necessary, at the time of opening of Tender. If the undertaking submitted by the Bidder is assessed to be incorrect, his bid shall be considered as disqualified.

23.4 Failure to satisfy the condition 23.3 shall disqualify the contractor and further action as deem fit shall be taken by the Department.

24. INSPECTION OF OPERATIONS :

The Engineer and any person authorised by him shall at all times have access to the works and to all workshops and places (including required documents) where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the Contractor shall afford every facility for & every assistance in or in obtaining the right to such access.

25. FIELD LABORATORY :

The Contractor shall arrange to provide a well furnished and fully equipped field laboratory which shall be manned by adequately qualified technical staff. The laboratory shall preferably be located adjacent to the plant site and shall be provided with amenities like water supply, electric supply, toilet block etc. The laboratory equipment shall conform to clause 121.3 of M.O.R.T. & H Specifications of roads and bridges. The list of equipment is enclosed on Page **123** This shall be considered as incidental to work and no separate payment whatsoever will be made for the same.

26. SUPPLY OF COLOURED RECORD PHOTOGRAPHS AND ALBUMS BEFOR AND AFTER COMPLETION OF WORK:

The Contractor shall arrange to take dated post card size coloured photographs at the rate of 10 photographs per kilometers at various stages/facts of the work including interesting and novel features of the work as desired by the Engineer-in-charge and supply them in five copies each in separate albums of appropriate size. He shall also arrange for the Video Filming of important activities of the work during the currency of the contract and edit it to a video film of 60 to 180 minutes playing time.

It shall contain narration of the various activities in English/Marathi by a competent narrator. The cassette shall be of acceptable quality and the film shall be capable of producing color pictures. This shall be considered as incidental to the work and no additional payment whatsoever will be made for the same.

27. SUPPLY OF SAFETY JACKETS TO LABOURERS/SUPERVISORS/ENGINEER

As a safety measure during the execution of work all labours, construction and supervisory staff shall be provided with an orange colour jacket in flouroscent blue so as to make them starkly visible from a distance even during evening hours.

28. APPROVAL OF CONSTRUCTION MATERIALS AND CONSTRUCTION ACTIVITIES:

Approval of all materials for the work shall be obtained in writing from Engineer-in-charge or his representative before its use in the Project.

Before taking up of any construction activity the construction work done earlier shall be got approved in writing. Any failure on this account may result in the work for which the Contractor will be solely responsible.

Materials and job mix, etc. shall be got approved in writing atleast 15 days in advance of the corresponding activity. The testing charges shall be borne by the Contractor .

Besides the prescribed tests and frequencies any other test of tests over the prescribed frequency shall also be carried out by the Contractor at his own cost if so directed by Engineer-in-charge or his authorised representative.

29. Contractor shall conduct roughness index test as specified and without any cost to Government before starting of bituminous work and after completion of Bituminous work as a measure to check the improvement in riding quality of the road.

30. The Contractor at his own cost shall provide and fix inforatory Boards (Total 2 Nos.) at either end of project each on the left side of the traffic direction and facing the traffic without causing any hindrance to traffic. Details of the board shall be as directed by the Engineer in charge. The board shall be size 1.80 metre vertical x 1.6 metre horizontal. The back ground of the board will be in traffic yellow colour with lettering in black colour. The information should be displayed in Marathi, Hindi and English languages. The lettering should be proportionate. The board shall be maintained properly at the cost of contractor till expiry of defect liability period of the work.

31. The contractor carryout independently necessary tests as per clause 903, Table 900-4 of M.O.R.T. & H specifications for road and bridge works fourth revision 2001 to ensure that modified bitumen used meets requirements laid down in I.R.C. SP.53-2002 at his own cost.

32. **Quality Control Tests** :- The contractor shall be at his own cost set up laboratory at site of work to carryout the routine test of materials which are to be used on the work. The site laboratory shall be approved and certified by the Engineer-in-charge. The quality control tests of material to be carried out are mentioned in Annexure-A page No.**147 to 148**. The frequency of testing of construction materials is mentioned in Annexure-B on page No.**149 to 150** out of the test materials Annexure-A 70% tests shall be carried out in the site laboratory and 30% tests shall be carried out in Vigilance and Quality Control Laboratory of Department at the cost of contractor. At least 50% tests materials shall be carried out in Vigilance and Quality Control Laboratory of department which are not included in Annexure 'A', at the cost of contractor.

33. **SETTING OUT :-**

SETTING OUT FOR BRIDGE WORK :-

33.1 Immediately on receipt on receipt of the work order, the contractor shall at his own expense clean the site and take up a provisional and final setting out and lining out of the work under the supervision of his responsible representative and shall provide necessary material, labour, tools, instruments etc. required for the same.

One tentative abutment location will be indicated by Engineer in charge and the center line of the bridge shall be defined by him. The contractor will then have to fix up the location of the other abutment. The abutment location will then be verified by the Department and shall be adjusted if necessary. Once the final location of the abutments is so finalized, it will be the contractor's responsibility to line out and locate the remaining foundations of piers.

The contractor shall be responsible for true and proper setting out of the works and for the correctness of the positions, level dimensions and arrangements of all parts of works and for providing all necessary instruments appliances and labour in connection therewith at his own cost officers may assist the contractor in proper setting out. Government instruments may be allowed to be used for setting out of work for which no cost shall be recovered from the contractor .

If at any time during the progress of work, any errors arise in regard to levels or dimensions or alignment of any part of work, rectification thereof, on being required to do so, will be carried out by the contractor at his own cost, unless such errors are based on incorrect data, supplied in writing, by the Engineer or his authorized representative in which case the expenses of the rectification shall be refunded by Government.

33.2 RESPONSIBILITIES FOR LEVEL AND ALIGNMENT :-

The contractor shall be entirely and exclusively responsible for the horizontal and vertical alignment the levels and correctness of every part of the work and shall rectify effectually any errors or imperfections therein, such rectifications shall be carried out by the contractor, at his own cost, when instructions are issued to that effect by the Engineer in charge.

34 LEVELING INSTRUMENTS :-

If measurements of items of the work are based on volumetric measurements calculated from levels taken before and after the construction of the item, a large number of leveling staves, tapes etc. will have to kept available by the contractor at the site of the work for this purpose. Lack of the such leveling staves, tapes etc. in required numbers may case delay in measurements and the work. The contractor will have therefore to keep sufficient numbers of these instruments readily available at site and in good working condition.

35. CHANGE IN CEMENT CONTENTS ETC. :-

The tendered rates are including to the necessary cement content required for the achievements of desired strength and no extra claim can be made on account of increase in cement content over the specification. Likewise if any additives, compounds water proofing materials etc. are ordered by the **Engineer** to be added to the mortar or concrete, no extra rates shall be payable for this change which will be carried out as per directions of the **Engineer in charge**.

36. CEMENT CONCRETE :-

(a) The contractor shall carry out all preliminary tests to work out grading and proportioning aggregates in order to obtain and maintain uniform quality of work. The contractor shall supply all materials, labour and testing cost for preparing and testing samples as required by the Engineer. Unless otherwise specified in the detailed item wise specifications 6 cubes 15 cms. in size will be tested for every 15 cubic metre of ordinary grade concrete or minimum 6 cubes per day whichever is higher. The contractor shall make field arrangements for slump test, density and bulgage testing and also prepare concrete cube 15 cms. in size for testing compressive strength at his own cost. The cubes shall be got tested at approved laboratory and the test results shall not fall below those prescribed in P.W.D. Hand Book. (table CVP.412) or as laid down in the specifications. The cost of such concrete for cubes shall be entirely borne by the contractor.

(b) All concrete shall be controlled concrete and machine mixed, unless otherwise directed by the **Engineer in charge**. For controlled or High grade concrete, the grading of aggregates shall be got approved from the **Engineer, by weight**.

The correct proportion and the total amount of water for the mix will be determined by means of preliminary tests and shall be got approved by the **Engineer**. However, such approval does not relieve the contractor from his responsibility regarding the minimum works strength requirements work test shall be taken in accordance with relevant codes and specifications. The proportioning of aggregates shall be done by weight if so ordered by the **Engineer in charge**.

(c) All mixing shall be done by mechanical means in approved mixers. The **Engineer** may at his discretion allow in writing hand mixing of concrete for minor items where small quantities are involved but in that case the contractor shall increase the cement content of the mixture by 10% without any extra cost.

(d) The form work used shall be made preferable of steel or with lining of steel. Wooden shutters may be allowed at the discretion of the **Engineer** e.g. lintels, small slabs and beams, coping etc.

(e) The concrete shall be mechanically vibrated for proper compaction by the method approved by the **Engineer in charge**.

(f) The concrete shall be cured only by a sweet potable water as directed by the **Engineer in charge**.

37. **REINFORCED CONCRETE WORK :-**

A) The work included in this contract shall be carried out in addition to this specification detailed herein, in accordance with specifications and regulations as laid down in the following standard specifications.

1. **Standard specifications published by Government of Maharashtra 1979 Edition.**

2. I.S. 8112 :- 2000 Specifications for 43 grade ordinary Portland cement.
(Reaffirmed)
3. I.S. 12269 :- 2004 Specifications for 53 grade ordinary Portland cement.
(Reaffirmed)
4. I.S. 12330 :- 2000 Specifications for Sulphate Resistant Portland cement.
(Reaffirmed)

5. I.S. 383 :- 2002 (Reaffirmed) Specifications for coarse and fine aggregate from natural sources for concrete.
6. I.S. 1786 :- 1985 (Reaffirmed in 2000) Specifications for H.Y.S.D. bars.
7. I.S. 432 Part I :- 1982 (Reaffirmed in 2000) Specification for mild steel and medium steel bars.
8. I.S. 456 :- 2000 Code of practice for plain and reinforced concrete.
9. M.O.R.T. & H :- Specification of Road and Bridge works (4th Revision) 2001

If the standard specifications quoted above fall short for items quoted in these schedule of this contract reference shall be made to the latest British Standard Specifications. If any of the items of contract do not fall in reference quoted above, the decision and specifications of the Engineer shall be final.

38. ADDITIONAL GENERAL SPECIFICATION FOR ORDINARY AND HIGH GRADE CONCRETE :-

- i) The test specimen should be formed by representative of the contractor in presence of a responsible officer of the rank of not lower than an Assistant Engineer / Deputy Engineer.
- ii) The test specimen should be formed carefully and no claim shall be entertained later on the ground that the result of the test specimen did not give correct indication of the actual quality of concrete.
- iii) The cement content shall be as per actual requirement of mix design.
- iv) **Payment :- a)** The payment of such concrete work will not be made till the strength is ascertained.
- v) The payment of reinforcement of such affected items will not be made till the strengths of the concrete are ascertained.

39. FORMWORK AND STAGING FOR BRIDGE STRUCTURES :-

(a) For bridge structure, forms for concrete shall be constructed of mild steel plates or marine plywood and be of substantial and rigid construction true to shape and dimensions shown on the drawings. Where metal forms are used, all bolts and rivets shall be counter sunk and well ground to provide in smooth plane surface.

(b) Forms shall be mortar tight and shall be sufficiently rigid by the use of ties and bracing to prevent any displacement or sagging between supports. They shall be strong enough to withstand all pressure, ramming, and vibration, without deflection from the prescribed lines occurring during and after placing the concrete and shall be tight enough to prevent any appreciable loss of concrete during vibration. Screw jacks or hard wood wedges where required shall be provided to make up any settlement in the formwork before or during the placing of concrete.

(c) Scheduled camber shall be provided in horizontal members of structures, specially in long spans to counteract the effects of any deflection. The formwork shall be so fixed as to provide for such camber, if required.

(d) Forms shall be so constructed as to be removed in sections in the desired sequence, without damaging the surface of concrete or disturbing other sections.

(e) **Number of sets of Staging and Shuttering equipments (details attached)**

(FOR BRIDGE WORK ONLY)

In order to ensure completion of bridge within the stipulated period the contractor shall have to arrange a minimum number of sets of staging and shuttering as well as equipments the required size for different components as stipulated hereunder.

i) For foundation	(a) Staging and Shuttering _____2_____ sets.
	(b) Equipment _____2_____ sets.
ii) For sub structure & other items.	(a) Staging and Shuttering _____2_____ sets.
	(b) Equipment _____2_____ sets.
iii) For superstructure	(a) Staging and Shuttering _____2_____ sets.
	(b) Equipment _____2_____ sets.

(f) Forms shall be constructed so as to be removable in sections in the desired sequence without damaging the surface of concrete or disturbing other sections.

(g) The contractor shall submit the design for centering well before in advance for concrete work. No work of centering shall be done without approval of the competent authority.

The contractor shall execute the formwork / shuttering as per sanctioned design. The shuttering shall be approved by the competent authority before starting of concrete work.

39. R.C.C. Pipes :- The contractor shall purchase the R.C.C. pipes of required categories from MSSIDC/ small industries and necessary documentary evidence for purchase of pipes shall be produced to the Engineer-in-charge during the execution of work.

40. CONDITION RELATING TO INSURANCE OF CONTRACT WORK.

Contractor shall take out necessary Insurance Policy/ (viz. Contractors All Risks Insurance Policy, Erection All Risks Insurance Policy etc. as decided by the Directorate of Insurance) so as to provide adequate insurance cover for execution of the awarded contract work for total contract value and complete contract period compulsorily from the “Directorate of Insurance, Maharashtra State, Mumbai only its postal address for Correspondence is “264, MHADA, First Floor, Opp. Kalanagar, Bandra (East) Mumbai – 400051” (Telephone Nos. 26590403/26590690 and Fax No. 26592461/26590403) Similarly, all workmen’s appointed to complete the contract work are required to insure under workmen’s compensation insurance policy. Insurance policy/policies taken out from any other Company will not be accepted. If any contractor has effected Insurance with any insurance company the same will not be accepted and the amount of premium calculated by the Government Insurance Fund will be paid by the contractor and same will be reimbursed on providing receipt of Insurance (recovered directly from the amount payable to the Contractor for the executed contract work and paid to the Directorate of Insurance Fund, Maharashtra State, Mumbai.) The Director of Insurance reserves the right to distribute the risks of insurance among the other insurers.

40.1. Insurance

40.1.1 The contractor shall provide Contractor's All Risk Insurance (CAR), in the joint names of the Employer and the contract Insurance cover from the Start Date to the end of the Defects Liability Period in the amounts as deductible stated in the Contract Data for the following events which are due to the Contractor risk.

(a) Loss of or damage of the Works, Plant and Materials;

(b) Loss of or damage of Equipment;

(c) Loss or damage of property (except the Works, Plant, Materials and Equipments in connection with the Contract; and

(d) Personal Injury or death of any personnel employed by the contract is during execution and maintenance defect liability period, employee of PWD, any person using the facility created by the contract during the construction and defect liability period.

40.1.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide is compensation to be payable in the types and proportions of currencies required to rectify the loss of damage incurred.

40.1.3 If the Contractor does not provide any of the policies and certificated required, the employee may affect the insurance which the Contractor should have provided and recover premiums the Employer has paid from payments otherwise due to the Contractor of it's payment is due, the payment of the premiums shall be a debt due shall be recoverable from the bills and deposits of the contractor of any work in Maharashtra and if no dues in work than as arrears of land revenue.

40.1.4 Alternations to the terms of Insurance shall not be made without the approval of the Engineer.

40.1.5 Both parties shall comply with any conditions of the insurance policies.

40.1.6 **The Contractor shall submit the insurance document within 7 working days from the date of work commencement order.** This insurance premium will be reimbursed in the 1st RA Bill. (As per P.W.D. Ltr BDG-2025/Pra,Kra.163/Bldg-2 Dt. 21/01/205)

41. BUILDING AND OTHER CONSTRUCTION WELFARE CESS :

Building and other construction worker welfare cess at 1% or at the rates awarded from time to time as intimated by the competent authority of buildings and other construction worker welfare Act 1996 shall be deducted from bill amount, whether bill advance payment or secured advance.

42. DIARY :

Contractor shall maintain, throughout the construction period, a diary in the form of a register regarding the following :-

i) Daily presence of all categories of labours. ii) Daily availability and use of machinery and equipment's on work. iii) Daily procurement, Consumption and balance of materials on site. iv) Daily record of various visiting authorities along with name of the officers visited and timing. v) Details of works executed per day. The register shall be closed on daily basis and signature of Engineers in charge or his representative should be taken over it.

43. R.C.C. BRIDGE MATERIALS SPECIFICATIONS**Concrete**

1. Concrete shall be design mix and shall have minimum 28 days characteristic strength 25 MPa on 150 mm cubes for all elements of the structure.
2. The total chloride content and sulphuric anhydride (SO₃) of all concrete as 'A' Percentage of mass of cement in mix shall be limited to 0.3% and 4% respectively.
3. The slump of concrete shall be checked as per IS:516. Concrete mix should have adequate workability.
4. Use of admixtures such as super plasticisers for concrete may be made with the approval of the Engineer-in-charge.
5. Aggregate shall conform to CL 3023 of IRC:21-2000 and Maximum Aggregate size should generally not Exceed 20 mm.

REINFORCEMENT

1. All reinforcement shall be T.M.T. steel bars (Grade Designation Fe 500) conforming to IS:1786

EARTH FILL/EMBANKMENT :

1. Back filling material should conform to Cl 305.2 of MORT&H Specifications Fourth Revision 2002 and IRC:78-2000 Appendix 6.
2. Back filling behind abutment wall shall be done after construction of the abutment.

WATER

1. Water to be used in concreting and curing shall be conforming to clause 302.4 of IRC:21-2000.

WORKMANSHIP/DETAILING

1. Minimum clear cover to any reinforcement shall be 75 mm. for raft & cut off walls and 50mm for other components.
2. Construction joints :
 - I. The Location and Provision of construction joints shall be approved by Engineer in charge.
 - II. The concrete surface at the joints shall be brushed with stiff brush after casting while the concrete is still fresh and it has only slightly hardened.
 - III. Before new concrete is poured. The surface of old concrete shall be prepared as under:
 - (a) For hardened concrete the surface shall be thoroughly cleaned. The surface shall be thoroughly cleaned to remove debris/laitance and made rough so that 1/4 of the size of the aggregate is exposed.
 - (b) For old surface shall be soaked with water without leaving puddles immediately before starting concreting to prevent the absorption of water from new concrete.

- IV. new concrete shall be thoroughly compacted in Region of the joint.
3. Welding of Reinforcement bars shall be permitted.
4. Laps in Reinforcement:
 - I. Minimum lap length of reinforcement shall be decided as per the reinforcement arrangement based on the clause - 304.6.6.2 of I.R.C. :21-2000.
 - II. Not more than 25% of reinforcement shall be lapped at any one location laps shall be suitably staggered.
5. Bending of reinforcement bars shall be as per IS:2502.
6. Supporting chairs of 12mm diameter shall be provided at suitable intervals as per IS:2502.
7. Concrete shall be produced in a mechanical mixed of capacity not less than 200 litres. Having integral weight - batching facility and preferably having automatic water measuring and dispensing Device.
8. Proper compaction of concrete shall be ensured by use of appropriate type of vibrators.
9. Properly Braced steel plates shall be used as shuttering.
10. Sharp edges of concrete shall be chamfered.
11. Filter media should be provided in accordance to clause 250.2.2 of MORT&H specifications (Fourth Rev.2002).
- 44 (A). The Contractor shall install biometric attendance for site engineer and site supervisor. If the concern supervisory staff found absent the fine of Rs.50/- per day per person to be levied against absency.**
- 44 (B). Secured Advance. (In accordance with GR No. Sakirn-2018/C.R.150/Building-2 Date 16.01.2019)**
 1. The Engineer in charge shall make advance payment in respect of materials intended for but not yet incorporated in the Works.
 2. The Engineer in charge shall abide by not to make advance payment for work done but not measured.
 3. Secured advance shall be payable not more than 75 percent on material cost.
 4. The materials are in accordance with the specification for works.
 5. Such material have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer in charge. The Contractor shall store the bulk material in measurable stacks.
 6. The Contractor's records of the requirement orders, receipts and use of materials are kept in a form approved by Engineer in charge and such records shall be available for inspection by the Engineer in charge.
 7. The contractor has submitted with his monthly statement, the estimated value of the materials on site together with such documents as may be required by the Engineer in charge for the purpose of valuation of the materials and providing evidence of ownership and payment thereof.
 8. Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Boud -in an acceptable format, and
 9. The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer in charge.
 10. Contractor shall take material photos along with latitude and longitude and same shall be uploaded on the portal of Public Works Department and thereafter Engineer shall make payment after assuring photos are uploaded on PWD's portal.
The Engineer in charge shall attach certificate with Bill.
 11. Secured advance shall not be payable in the month of March.
 12. **Repayment of Secured Advance:** The advance shall be repaid from each monthly payment to the extent materials (for which advance are previously paid pursuant to clause No.1) have been incorporated into the works.

SCADA CONDITIONS

45. CONDITIONS IN DETALIED TENDER NOTICE

45.1. All hot mix items under this contract shall be carried out with **AsphaltBatch Mix Plant having minimum capacity of 80 TPH or hot mix plant (Drum type) having minimum capacity of 40/60(TPH) tonnes per hour capacity.**

45.2. For WBM Grade I / Grade II / Grade III / and BUSG work mechanical vibratory screening unit which is must/ mandatory for screening of metal under required for WBM, Grade I / Grade II/ Grade III and BUSG work.

45.3. Compactions (Earthwork, GSB, WBM, BUSG, All BT works etc.) shall be done in combination with at least one intelligent compactor which shall have inbuilt compaction analyzer as per IRC SP 97-2013 fitted with VSAT for delivering data and graphics on compactor terminal to PWD/Server/User Terminals.

45.4. (a) Asphalt should be brought from only from Government Refinery and in the name of concerned contractor. Contractor should produce the Original Challan i.e. "**Original for Buyer** " or equivalent to site in charge.

(b) The contractor shall open Online Account with Government Refinery from where he procures as asphalt for this work.

(c) Documentary evidence (challan) that he has procured asphalt from Government Refinery shall be produced to the Engineer in charge or his representative as mentioned at (a) above.

(d) Contractor shall provide online facility to Engineer in charge or his representative for online Verification of the **Documentary evidence (Challan)** Submitted to him. Engineer in charge or his representative shall verify the transaction online and take print out of the online document.

(e) Attested copy of the print out of the online document shall be kept on record along with the **Documentary evidence (challan).**

45.5 Extraction Test of Bitumen Mix.

The binder content of hot mix material shall be determined by ignition method only as specified in AASHTO T308. The testing by ignition method shall be done in furnace which shall be equipped with internal balance. The furnace shall have Web based SCADA facility. The data so acquired shall be uploaded to PWD Website in real time with time lag not more than 30 Seconds.

46. CONDITIONS UNDER USE OF SPECIALISED MACHINERY

Use of Specialized Machinery

(1) Scanned copy of proof of ownership or hire of

As per Page No.24 Statement No.2 'A' in this Tender Document

~~(a) AsphaltBatch Mix Plant having minimum capacity of 80 TPH or MODERN HOT MIX PLANT (DRUM TYPE) having minimum capacity of 40/60 TPH~~

~~(b) PAVER FINISHER with VTS~~

~~(c) Static Roller of 8 to 10 Tonne / Smooth wheeled Power Roller - 1 Nos. (may be owned or hired)~~

~~(d) Vibratory Roller - 1 Nos. as per IRC SP : 2013. for B.T. / Hot mix works and for Soil / GSB/WBM. It shall be owned /hire confirmed purchase order of 8 to 10 tonne static weight with amplitude and frequency of vibration desired for Bituminous work and for non B.T. works. with VTS~~

(2) Contractor shall own or Hire AsphaltBatchMix Plant having minimum capacity of 80 TPH or MODERN HOT MIX PLANT (DRUM TYPE) having minimum capacity of 40/60 TPH as required under this contract then he should give details of its current location and under taking whether the AsphaltBatch Mix Plant or MODERN HOT MIX PLANT (DRUM TYPE) needs to be shifted or otherwise for this work.

Note : Please see the Additional General Conditions and Specifications Para No. 40.1 & 40.2

Supervising control and data acquisition for Bituminous works (SCADA).

3) Scanned copy of Valid Certificate issued by the **Superintending Engineer (Mech.) of Public Works Department/Region**, to the effect that specialized Machinery enlisted in Statement No.2 'A' attached herewith are in **"Efficient"** **"Working condition"** and in conformity with M.O.S.T. Specifications, must be enclosed in Envelope No. 1. In absence of this Certificate, Envelope No. 2 will not be opened.

along with this statement as well as their proof of ownership of machinery (i.e. attested copies of invoices) as well as the valid certificate issued by the **Superintending Engineer (Mech)** of Public Works Department to the effect that these machineries are in " Efficient Working Condition" and in conformity with M.O.S.T. Specifications.

Note : Please see the Additional General Conditions and Specifications Para No. 40.1 & 40.2

Supervising control and data acquisition for Bituminous works (SCADA)

47. Supervising Control And Data Acquisition (SCADA) For...

47.1 (A) AsphaltBatchMix Plant or MODERN HOT MIX PLANT (DRUM TYPE)

Engineer In charge shall allocate unique identification number to the work of this contract. For all Bituminous items under this contract, the contractor shall provide web-based Supervisory Control and Data Acquisition (SCADA) arrangements for the following

- (i) Temperature and Weight of metal in all Hot bins before mixing.
- (ii) Temperature and Weight of Bitumen and Filler before mixing.
- (iii) Temperature and weight of mix material.

(B)MIX TRANSPORTATION

- (i) Vehicle tracking system (VTS) for all vehicles transporting and laying bituminous mix.

(C)ROLLERS / COMPACTORS

i) Intelligent Compactors

The data of All parameters as per IRC SP 97 - 2013 in the computer on the intelligent compactor, including graphic displays shall be replicated on the PWD user Terminal on real time basis (time lag not more than 15 seconds).

{ Roller / Compactors shall be intelligent. The intelligent compaction system shall have compaction analyzer. The compaction analyzer system shall be inbuilt and provided by the original manufacturer at the time of first sale of the compactor. In no case retro-fitted system shall be accepted. The compactor shall be fitted with VSAT (Very Small Aperture Terminal). }

ii) Vibratory / Static Rollers

- (i) Temperature of mix during compaction.

(ii) Vehicle tracking to monitor movement of Roller / Compactor and so as to give approximate number of passes, speed and direction (Forward / backward movement) of Roller/Compactor.

If the Contractor intends to carry out Hot Mix work under this contract with the SCADA enabled **AsphaltBatchMix Plant or MODERN HOT MIX PLANT (DRUM TYPE) (Owned or Hired)**, which is already registered with P.W.D., then for carrying out all hot mix bituminous items under this contract, the contractor shall provide web based Supervisory Control and Data Acquisition (SCADA) arrangements as mentioned below. **{ Even if the AsphaltBatchMix Plant or MODERN HOT MIX PLANT (DRUM TYPE) (Owned or Hired), might have been SCADA enabled, as per the condition of other contract} without any extra cost and the following conditions shall be applicable.**

47.2 Machinery & Testing Equipment's-

a) Extraction Test of Bitumen Mix.

The binder content of hot mix material shall be determined by ignition method only as specified in AASHTO T308. The testing by ignition method shall be done in furnace which shall be equipped with internal balance. The furnace shall have Web based SCADA facility. The data so acquired shall be uploaded to PWD Website in real time with time lag not more than 30 Seconds .

47.3 GIS MAP

Displaying locations of Hot mix Plants, Tippers used for hot mix material transportation, Roller/ compactor and Sprayer on GIS map.

Communicate the Data which is beyond the set parameters by SMS and e-mail to the representative of Engineer In charge for all 40.1 to 40.2 above

47.4 THE OFFER OF THE CONTRACTOR SHALL INCLUDE:

- (1) The cost of procuring, establishing, running, operating & maintaining SCADA including all Censors, Vehicle Tracking System (VTS) and any other instrumentation, automation required to acquire the desired data, mentioned at **40.1 to 40.2** above.
- (2) Web connectivity to all locations where data is being acquired, transmitted, processed, stored and retrieved with minimum speed of 1 MPBS and 100 % availability. The contractor shall provide the web application in such a manner that it shall first update the above data in real time on PWD's works monitoring e-governance web application automatically.
- (3) Web-based application including Computer Software, Hardware etc. to transmit, process, store and retrieve the data in the forms and formats as prescribed by the Engineer In charge.
- (4) Arrangement for security of data, Disaster recovery arrangements shall be as per I.T. Industry practice, during the construction period and upto defect liability period.(DLP). Handing over the data on the Web Server after DLP in Electronic form as instructed by Engineer In charge.
- (5) Calibration of all SCADA related attachments /accessories as per the specification:- Web based application to monitor the schedule of Calibration of all SCADA related attachment/accessories. The invalidity of calibration shall lead to non-acceptance of work or measurement and the Contractor shall not be paid for such non-accepted work or measurements
- (6) Submission of printed and authenticated reports to the Engineer In charge as and when required.
- (7) Point (1) to (6) above shall be arranged and maintained during contract period and defect liability period.
- (8) Cost includes rectification, fine tuning, corrections, additions & alterations to the system to the satisfaction of Engineer In charge.
- (9) All data generated as per this special condition of contract shall be the property of PWD.

47.5The Contractor shall make all necessary arrangement required under **Clause 40.1 to 40.2** above (Supervising control and data acquisition for Bituminous / WBM / Testing Equipment's items) well in advance before starting of the related items of work. All necessary arrangements so made shall be offered for inspection to Engineer In charge one month prior to the start of the related items of work. Changes if any, after his inspection suggested by the Engineer In charge shall be carried out at no extra cost and within the period of Three days. A fresh request for inspection, of Engineer In charge after such rectifications shall be requested by the Contractor and final approval to the SCADA arrangements as specified in Clause-19 shall be obtained.

47.6 Additional general Condition and Specifications

a) Intelligent Compacting System - (Page No. 155 Clause No.506.6)

The contractor shall also provide intelligent compacting system on the compactor used for compaction work of PWD. The intelligent compacting system shall have GPS, temperature sensors and screen fitted on the compactor. This system shall be IP-65 compliant. This compaction system shall also record the number of passes made by the compactor. The system shall have the monitor that shall show that compaction in graphical form to the operator on the compactor. The contractor shall provide real time data transfer to the web application to monitor the compaction remotely. The Contractor shall provide the web application in such a manner that it also updates the compaction data in real time on PWD's works management e-governance application dashboard. The intelligent compacting system shall be connected with dashboard system. The contractor shall provide software facility for PWD officials to update QAP (Quality Assurance Plan) related data for compaction through its web application that will get transferred to the intelligent compacting system to benchmark the acceptance norms for colour coding, no of passes and acceptable temperature and density levels. The contractor shall provide compaction register that shall contain information related to the compaction for further analysis. The compaction register shall maintain following record RUN ID, DATE and TIME of compaction, latitude, longitude, location, temperatures (in case of asphalt), density (for soil it can be derived as a compaction measurement value). no of passes, colour for temperature, colour for number of passes. The contractor shall provide web application to replicate the actual view as shown on the monitor of the compactor through live streaming of the compaction operations. The system shall be inbuilt provided by the original manufacturer of compactor. In no case the retrofitted system shall be accepted.

Web Connectivity-

The contractor shall provide web connectivity through satellite communication supporting mobile devices to the above monitoring system(mobile VSAT). The web connectivity shall have minimum two MBPS internet speed and 99% availability. Software should be intelligent; in case of connectivity failure it should maintain the pending files and send them as soon as it is connected. The contractor shall make sure that the entire software and hardware solution is virus free.

The offer of contractor shall be inclusive of all. He shall not be paid separately.

**A) AsphaltBatchMix Plant having minimum capacity of 80 TPH
or MODERN HOT MIX PLANT (DRUM TYPE) having minimum capacity of 40/60
TPH(SCADA enabled)**

It Shall have minimum following FEATURES (Technical Specification)

- a) The plant shall have a coordinated set of essential units capable of producing uniform mix as per the job mix formula.
- b) Cold aggregate feed system with minimum 4 bins having belt conveyor arrangement for initial proportioning of aggregates from each bin in the required quantities. In order to have free flow of fines from the bin, bin should be fitted with vibrator to intermittently shake it.
- c) Belt conveyers below each bin should have variable speed drive motors. There should be electronic load sensor on the main conveyer for measuring the flow of aggregates.
- d) Dryer unit with burner capable of heating the aggregates to the required temperature without any visible unburnt fuel or carbon residue on the aggregates and reducing the moisture content of the aggregates to the specified minimum.
- e) The plant shall be fitted with suitable type of thermometric instruments at appropriate places so as to indicate or record / register the temperature of heated aggregate, bitumen and mix.
- f) Bitumen supply unit capable of heating, measuring / metering and spraying of bitumen and aggregate feed in the required proportion.
- g) A filler system suitable to receive bagged or bulk supply of filler material and its incorporation to the mix in the correct quantity wherever required.
- h) A suitable built – in dust control system for the dryer to contain / recycle permissible fines into the mix. It should be capable of preventing the exhaust of fine dust into atmosphere for environmental control wherever so specified by the Engineer.
- i) The plant should have centralized control panel / cabin capable of presetting, controlling/ synchronizing all operations starting from feeding of cold aggregates to the discharge of the hot mix to ensure proper quality of mix. It should have indicator for any malfunctioning in the operation.
- j) Every hot mix plant should be equipped with siren or horn 'so that the operator may use the same before starting the plant every time in the interest of safety of staff.

B. Essential requirements For Batch Mix Plant/Drum Mix Plant

- i) It is a prerequisite that only properly screened and graded materials are fed to the bins. Hence a vibratory screening unit shall be installed at the plant site to ensure the same. A primary 4 – deck vibratory screening unit shall be installed before the multiple bin cold feed system for screening the aggregates and grading the same.
- ii) Belt conveyers below each bin should have variable speed drive motors. There should be electronic load sensor on the conveyer for measuring the flow of aggregate
- iii) There should be arrangement to measure moisture content of the aggregate (s) so that moisture correction may be applied for working out requirement of binder and filler.
- iv) To ensure the automatic synchronization of various variable parameters during the operation of the drum mix plant, as well as to get the output as per desired specifications mentioned herein, appropriate P.L.C. (Programmable Logic Control) based system should be provided on the plant.

Essential Features for Web based SCADA system for Batch Mix Plant/Drum Mix Plant.

1. Weight / percentages of aggregates in all the four bin should be recorded & displayed on PWD Server.
2. Weight / Percentage of bitumen should be recorded & displayed on PWD server.
3. Weight / percentage of mixed (Total) aggregate before entering into the dryer drum shall be recorded & displayed on PWD Server.
4. Weight / percentage of mineral filler should be recorded & displayed on PWD Server.
5. Moisture sensor for aggregate (without bitumen) should be installed & data should be recorded & displayed on PWD Server.
6. Temperature of aggregate while drying should be recorded & displayed on PWD Server.
7. Temperature of bitumen before mixing should be recorded & displayed on PWD Server.
8. Temperature of Mixed aggregate should be recorded & displayed on PWD Server
9. Separate panel for the SCADA system along with independent sensors other than sensors required for operation and controlling of the plant should be installed at the plant site to facilitate the independent supervision by P.W.D.
10. Data should be directly accessible to PWD server.
11. All the sensors should be calibrated properly & necessary calibration certificate along with validity period should be produced by the concern to authority as and when required.
12. Facility to display the location of Hot Mix Plant on GIS map should be provided
13. Facility to communicate the data or messages regarding any discrepancies in the set parameters during the Hot Mix Plant operation or any other technical information to both parties. i.e. Department & Contractor on system should be provided.

PROFORMA**MIX TRANSPORTATION DETAILS**

NAME OF WORK : DIVISION :

NAME OF AGENCY : SUB-DIVISION :

NAME OF ENGINEER-IN-CHARGE :

Sr. No.	Date	Registered Number Of Tipper	Weight of Mix			Time To leave the Plant	Time To reach the paver	Time taken in Minutes.	Temperature		Remarks
			Wt. Of loaded Tipper	Wt. of empty Tipper	Wt. of Mix (4-5)				Mix @ Plant	Mix @ Paver	
1	2	3	4	5	6	7	8	9	10	11	12

NOTE : This information is to be kept upto date as per Tender condition No. 23.2

Contractor

No. of Corrections

Executive Engineer

LIST OF APPARATUS REQUIRED FOR ROAD WORK
INCLUDING HOT MIX WORKS

(Whichever is applicable)

Sr.	Name of Apparatus	Nos. (Min) Required
1	Set of buckets for bulk density 30 Lit. cap sample diving (Various sizes 15,20,30 Lit.)	3
2	Riffle box (Sample Dividing Box)	1
3	Bitumen extractor (Hand / electrically operated)	1
4	Marshal stability testing machine.	1
5	Field density. (Sand replacement method)	1
6	Straight edge 3 M. long ISMC 50 x 100	1
7	M.S. camber plate, 2.75m , 3.5m long.	1 No. each
8	Constant temperature Hot Water Bath.	1 No.
9	Electronic balance capacity upto 1200 g.	1 No.
10	G.I. Trays of various sizes.	12
11	Digital thermometers capacity upto 200c. With 100 least count.	1
12	Electric Oven.	1
13	Marshall stability moulds with rammer.	1 Set.
14	Chemicals (Benzene / Trichloroethylene)	250 Lits.
15	Filter papers.	500/season
16	Weight Box with 5 kg. To 1 gm. Weights.	1
17	Fractional weight Box & pan balance.	1
18	G-1/Brass sieves of various sizes for gradation.	1 No. each
19	Pick axes.	2
20	Cooking gas / kerosene burner with cylinder.	1
21	Impact Test Apparatus (For coarse Aggregate)	1
22	Flakiness & Elongation test gauges.	1
23	Penitrometres with standard needle for Asphalt Test.	1
24	Elastic Recovery test apparatus test for PMB PS-70.	1 Set.
25	Softening point test apparatus.	1
26	Set of equipment for penetration test.	1 Set.
27	C 1 & So ₃ measuring container kit.	1
28	C.C. Cube testing machine.	1
29	Slump measurements equipment.	1
30	Silt content measuring kit.	1
31	Set of sieves for concrete & road work.	1

Calculations to compute the quantity of cement which should have used and that actually used during the month on various items.

1
2
3
4
5
6
7
8

ABSTRACT FOR THE MONTH ENDING

FOR THE MONTH OF _____ 200 .

Sr. No.	NAME OF THE ITEM	APPROXIMATE QUANTITY OF WORK DONE.		QTY. OF CEMENT (IN BAGS) WHICH IS REQUIRED TO BE USED.		TOTAL QTY. OF CEMENT WHICH SHOULD HAVE BEEN USED IN BAGS.	QTY. OF CEMENT WHICH WAS ACTUALLY USED IN BAGS
		QTY.	UNIT	QTY. IN BAGS	PER		
1.	2.	3.	4.	5.	6.	7.	8.

-- SAMPLE FORM --

Contractor

No. of Corrections

Executive Engineer

SPECIFICATIONS FOR BITUMINOUS BOUND MACADAM

Item Providing and laying **50/75 millimeter thick** bituminous bound macadam road surface including supplying all materials, preparing the existing road surface, spreading 40 mm stone metal layers, heating and spraying the bitumen at the rate of 200kg/100 square metre for 75 millimeter thick BBM or 175kg/100 square metre for 50 millimeter thick bituminous bound macadam, spreading 12mm size chips compacting with power roller etc. complete.
(Including picking of existing WBM surface.)

1) General.

The work consists of supply of materials and labour required for providing and laying bituminous bound macadam surface for compacted thickness of 50/75 mm. This item includes preparing the existing road surface to receive the bituminous bound macadam course i.e. picking the existing W.B.M. surface or application of tack coat on existing B.T. surface, spreading of 40 mm. size metal layer in required thickness with compaction with power roller, heating and spraying bitumen with sprayer etc. spreading key aggregates 12 mm. chips and final compaction with power roller etc. complete and finishing in accordance with the requirement in close conformity with grades lines, cross sections and thickness as per approved drawings etc. complete.

2) Diversions

Temporary diversions shall be constructed and maintained by the contractor at his own cost. Diversion shall be watered if dust is likely to blow on to the road.

3) Materials

(A) Aggregates.

The aggregates for providing B.B.M. surface shall comply with specification Nos. RD-22 Page No. 201 to 202 for 40 mm and Rd 41 Page No. 215 to 216 for 12 mm size metal, and shall normally comply with the following regarding size and quantity of aggregates and grade and quantities of bitumen.

Description	Rate of application for 100 square metre			
	75 mm		50 mm	
	On Asphalt Surface	On W.B.M. Surface	On Asphalt Surface	On W.B.M. Surface
a) 40mm size (hand broken metal 70% and crushed metal 30%.)	9.00 cum.	9.00 cum.	6.00 cum.	6.00 cum.
b) 12 mm size chips	1.8 cum	1.8 cum.	1.20 cum.	1.20 cum.
c) Bitumen for grouting I.S. Grade S 65 with 60/70 penetration	200 kg	200 kg	175 kg.	175 kg.
d) Tack coat for existing bituminous surface.	50 kg	----	50 kg	----

Note :- Hand broken metal is preferred, However up to 30% of total quantity of 40 mm size metal, crushed 40 mm metal shall be used.

(B) Bitumen.

The bitumen shall be paving bitumen of suitable penetration grade within the range S 65 of A to 65 (60/70) as per Indian Standard Specifications for "Paving bitumen" IS : 73-1992. (with latest amendments)

4) Preparing the base :

Any pothole in the existing bituminous road surface and broken edges shall be patched well in advance and the surface shall be brought to correct level and camber with additional metal and bitumen as required which will be paid separately. Before starting the work the bituminous surface shall be swept clean of all the dirt, mud cakes, animal droppings other loose foreign material.

If so required by the Engineer the contractor shall keep the side width and nearby diversion watered to prevent dust from blowing over the surface to be bituminised. Existing water bound macadam surface shall be picked for and surface loosened for a depth of 2.5 cm. And the picked surface shall be brought approximately to the correct camber and section. Edge line shall be correctly marked by dog bellying the surface to form a continuous vee notch.

There shall always be sufficient length of prepared surface ahead of the bituminous surfacing operations as directed by the Engineer to keep these operations continuous.

5. Tack coat on bitumen surface.

Applying tack coat for existing B.T. surface only at the rate of 50 kg /100 square metre as per specification No.Rd-47...3.3. Page 224.

6. Picking existing W.B.M. Surface.

Picking of existing W.B.M. surface for receiving Bituminous Bound macadam as per Rd 33. (Page 208)

7. Spreading and Compaction.**7.1. Spreading of 40 mm metal**

40 mm size metal shall be spread evenly at the specified rate of 9 cubic meter for 75mm thick / 6 cubic meter for 50mm thick per 100 square metre of area so as to form a layer over the width of road with correct camber/super elevation as required. Any foreign matter, organic matter, dust, grass etc. shall be removed immediately. The sections shall be checked with camber board and straight edge batten etc. Any irregularities shall be made good by adding aggregates in case of depressions and removing aggregates from high spots, checked with camber board and straight edge batten etc. Any irregularities shall be made good by adding aggregates in case of depressions and removing aggregates from high spots.

7.2 Compaction of 40 mm size metal.

The surface of 40 mm metal layer after bringing it to necessary grades and sections shall be rolled with the use of 8 to 10 tones power roller. Rolling shall commence from the edges and progress towards center longitudinally except on super elevated portion where it shall progress from the lower to upper edge parallel to the center line of pavement. When the roller has passed over the whole area any high spots or depressions, which become apparent shall be corrected by removing or adding aggregates. The rolling shall then be continued till the entire surface has been rolled to desired compaction such that there is no crushing of aggregates and all roller marks have been eliminated. Each pass of roller shall uniformly overlap not less than one third of the track made in the preceding pass.

8. Application of Bitumen.

Bitumen of I.S. grade S.65 with 60/70 penetration supplied for the work shall be heated to temperature of 177 Celsius to 191 Celsius (350 F. to 375 F.) in a bitumen boiler and temperature shall be maintained at the time of actual application. The hot bitumen shall be applied through a pressure sprayer on the road surface uniformly at the rate of 200 kg/100 square meter for 75mm thick or 175kg/100 square metre as the case may be for 50mm thick. The road surface shall be divided into suitable rectangles marked by chalk so as to ensure correct rate of application of the bitumen.

9. key Aggregates.

On completion of bitumen application, 12 mm size key aggregate shall be spread immediately at a uniform rate of 1.8 cubic metre for 75mm thick /1.2 cubic metre for 50mm thick per 100 square meter of area when entire surface is in hot condition. Brooms shall be used to ensure even distribution of key aggregate.

10. Final Compaction.

Immediately after spraying of bitumen and spreading of key aggregates, the surface shall be rolled with power roller to obtain full compaction and to force the blindage of key aggregates into the interstices of the coarse aggregate. The rolling shall continue till the asphalt surface hardens and key aggregates stop moving under power roller.

11. Surface finish and quality control

The surface finish shall confirm to requirement of clause 902 of specification for Road and Bridges by Ministry of Road Transport and Highway. Quality Control Test and their frequencies shall be as per table below.

Sr.No.	Test	Frequency
1.	Quality of binder	Two samples per lot to be subjected to all or some test as directed by the Engineer.
2.	Aggregate Impact value	One test per 200 cubic metre of aggregate.
3.	Flakiness Index and Elongation Index.	One test per 200 cubic metre of aggregate.
4.	Stripping value	Initially one set of three representative specimen for each source of supply subsequently when warranted by changes in the quality of aggregate.
5.	Water absorption of aggregates.	Initially one set of three representative specimen for each source of supply subsequently when warranted by changes in the quality of aggregate.
6.	Aggregate grading	One test per 100 cubic metre of aggregate.
7.	Temperature of binder at application.	At regular close intervals.
8.	Rate of spread of binder.	One test per 500 square metre area.

12. Item to include.

- i) Diversions unless separately provided in the Tender.
- ii) Preparing the road surface
- iii) Applying tack coat on existing B.T. or Picking the existing W.B.M. surface.
- iv) Supplying spreading and compaction of 40mm and 20mm size aggregates.
- v) Supplying, heating and spraying bitumen.
- vi) Supplying, spreading and compaction 12mm size chips.
- vii) All labour, materials, including bitumen and aggregates use of tools, plants and equipment for completing the item satisfactory.

13. Mode of measurement.

The contract rate shall be one square metre. The measurement shall be for the width of the road as executed, limiting it to the width specified or as ordered by the Engineer and the length measured along the center line of road. The measurement of dimensions shall be recorded correct up to two places of decimals of a metre and the area worked out correct up to one place of decimal of a square metre.

QUALITY ASSURANCE AND MAINTENANCE

To ensure the specified quality of work which shall also include necessary surveys, temporary works etc., the contractor shall prepare a quality assurance plan and get the same approved from the **Engineer-in-charge** within eight days from the date of work order. For this, contractor shall submit an organization chart of his technical personnel to be deployed on the work along with their qualification, job descriptions defining the functions of reporting, supervising inspecting and approving. The contractor shall also submit a list of tools, equipment's and the machinery and instrumentation which he proposes to use for the construction and for testing in the field and/or in the laboratory and monitoring. The contractor shall modify/supplement the organization chart and the list of machinery, equipment etc. as per the direction of the Superintending Engineer and shall deploy the personnel and equipment on the field as per the approved chart and list respectively. The contractor shall submit written method statements detailing his exact proposals of execution of the work in accordance with the specifications. He shall get these approved from the **Engineer-in-charge**. The quality of the work shall be properly documented through certificates, records, check-lists and logbooks of results etc. Such records shall be complied from the beginning of the work and be continuously updated and supplemented and this shall be the responsibility of the contractor. The forms should be got approved from the **Executive Engineer-in-charge**.

The contractor shall prepare detailed completion drawing after completion of the work. He shall also prepare and submit a maintenance manual giving procedure for maintenance, with the period of maintenance works including inspections, tools and equipment to be used, means of accessibility for all parts of the structure. He shall also include in the manual, the specifications for maintenance work that would be appropriate for his design and technique of construction. This manual shall be submitted within the contract period.

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PRICE ADJUSTMENT CLAUSE

Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants excluding bitumen, cement and steel in accordance with the following principles and procedures and as per formula given in the contract data. The price variation clause shall be read as follows: (a) The price adjustment shall apply for the work done from the start date given in the contract data upto end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor. (b) The price adjustment shall be determined during each month from the formula given in the contract data. (c) Following expressions and meanings are assigned to the work done during each month:

R = Total value of work done during the month. It would include the amount of secured advance granted, if any, during the month, less the amount of secured advance recovered, if any during the month. It will exclude value for works executed under variations for which price adjustment will be worked separately based on the terms mutually agreed.

To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

The formula (e) for adjustment of prices are R = Value of work

A) Adjustment for labour component

Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$$VL = 0.85 \times P1 / 100 \times R \times (L1 - Lo) / Lo$$

VL = increase or decrease in the cost of work during the month under consideration due to changes in rates for local labour.

Lo = the consumer price index for industrial workers for the State on 28 days preceding the date of opening of Bids as published by Labour Bureau, Ministry of Labour, Government of India.

L1 = The consumer price index for industrial workers for the State for the under consideration as published by Labour Bureau, Ministry of Labour, Government of India.

P1 = Percentage of labour component of the work.

B) Adjustment of POL (fuel and lubricant) component

Price adjustment for increase or decrease in cost of POL (fuel and lubricant) shall be paid in accordance with the following formula :

$$Vf = 0.85 \times P1/100 \times R \times (F1 - Fo) / Fo$$

Vf = Increase or decrease in the cost of York during the month wider consideration due to changes in rates for fuel and lubricants.

Fo = The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at nearest center on the day 28 days prior to the date of opening of Bids.

P1 = The official retail price of HSD at the existing consumer pumps of IOC at nearest center for the 15th day of month of the under consideration.

P, = Percentage of fuel and lubricants component of the work.

Note :- For the application of this clause, the price of High Speed Diesel oil has been chosen to represent fuel and lubricants group.

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C) Adjustment of Other materials Component (Excluding bitumen, steel and cement)

Price adjustment for increase or decrease in cost of local materials other than cement, steel, bitumen and POL procured by the contractor shall be paid in accordance with the following formula:

$$V_m = 0.85 \times P_m / 100 \times R \times (MI - M_0) / M_0$$

V_m = Increase or decrease in the cost of work during the month under consideration due to changes in rates for local materials other than cement, steel, bitumen and POL

M_0 = The all India wholesale price index (all commodities) on 28 days preceding the date of opening of Bids, as published by the Ministry of Industrial Development, Government of India, New Delhi.

MI = The all India wholesale price index (all commodities) for the month under consideration as published by Ministry of Industrial Development, Government of India, New Delhi.

P_m = Percentage of local material component (other than cement, steel, bitumen and POL) of the work.

D) Price adjustment for Bitumen component Price adjustment for increase or decrease in cost of Bitumen procured by the contractor shall be paid in accordance with the following formula.

Formula for Bitumen component

$$V_1 = QB (B_1 - B_0)$$

V_1 = Amount of price variation in Rupees to be allowed for Bitumen component.

QB = Quantity of Bitumen (VG-30) in metric tonnes used in the permanent works and approved enabling works during the quarter under consideration.

B_1 = Current, average ex-refinery price per metric tonne of Bitumen (VG- 30) under consideration excluding taxes (GST) during the quarter under consideration.

B_0 = Basic rate of Bitumen in rupees per metric ton as considered for working out value of " R". or purchase price of contractor in rupees per metric ton excluding taxes (GST) of Bitumen for the grade of bitumen under consideration prevailing quarter preceding the month in which the last date prescribed for receipt of tender falls, whichever is higher.

E) Price adjustment for Cement component Price adjustment for increase or decrease in cost of Cement procured by the contractor shall be paid in accordance with the following formula.

Formula for Cement Component :

$$V_2 = QC (CI_1 - CI_0)$$

Where

V_2 = Amount of price escalation in Rupees to be allowed for cement component.

QC = Quantity of Cement in metric tons used in the permanent works and approved enabling works during the quarter under consideration.

CI_1 = Current, average rate of cement in rupees per metric tons excluding taxes (GST) as per purchased voucher indicating name of work by supplier produced by contractor.

CI_0 = Basic rate of Cement in rupees per metric ton as considered for working out value of "R" or purchase price of contractor in rupees per metric ton excluding taxes (GST) of Cement under consideration prevailing quarter preceding the month in which the last date prescribed for receipt of tender falls, whichever is higher.

F) Price adjustment for Steel component Price adjustment for increase or decrease in cost of Steel procured by the contractor shall be paid in accordance with the following formula.

Formula for HYSD & Mild Steel / TMT Component

$$V3 = QS (SI1 - SI0)$$

Where -

V3 = Amount of price variation in Rupees to be allowed for HYSD & Mild Steel /TMT component.

QS = Quantity of HYSD & Mild Steel / TMT in metric tonnes used in the permanent works and approved enabling works during the quarter under consideration.

SI1 = Current average rate of HYSD & Mild Steel / TMT in rupees per metric tonne excluding taxes (GST) as per purchased voucher Indicating name of work by supplier produced by contractor.

SI0 = Basic rate of HYSD & Mild Steel / TMT in rupees per metric ton as considered to working out of "R". or purchase price of contractor in rupees per metric ton excluding taxes (GST) of HYSD & Mild Steel / TMT under consideration prevailing quarter preceding the month in which the last date prescribe for receipt of tender falls, whichever is higher.

Component percentage as given below are as of the total cost of work put to tender.

1.	Cost of Labour	13.31 %
2.	Cost of POL	10.57 %
3.	Cost of Other Material	76.12 %
4.	Cost of Bitumen	Actual
5.	Cement Component.	Actual
6.	T.M.T., HYSD & Mild Steel Component	Actual

Total 100.00%

Basic Rate (Excluding (GST))

1.	Bitumen VG-30 Grade	- Rs. 49,862/- Per Metric Tonne.
2.	Cement	- Rs. 6,000/- Per Metric Tonne SSR Rate.
3.	T.M.T. FE 500 Steel	- Rs. 61,000/- Per Metric Tonne SSR Rate
4.	HCRM/CRS Steel	- Rs. 63,755/- Per Metric Tonne SSR Rate
5.	Structural Steel	- Rs. 62,575/- Per Metric Tonne SSR Rate

Total amount Due to price variation =

$$V = VL + VF + VM + V1 + V2 + V3$$

However, the maximum amount due to price variation will be restricted to 5% of the accepted contract Value excluding the compensation payable for the materials (bitumen, steel and cement) which have been directly given difference in purchase price and star rate.

Contractor

No. of Corrections

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The following conditions shall prevail

:-

- i) The operative period of the Contract shall mean the period commencing from the date of the work order issued to the Contractor and ending on the date on which the time allowed for the completion of the works specified in the Contract for work expires, taking into consideration the extension of time, if any, for completion of the work granted by the Engineer, under the relevant clause of the Conditions of Contract in cases other than those where such extension is necessitated on account of default of the Contractor. The decision of the Engineer as regards the Operative Period of the contract shall be final and binding on the Contractor. Where any compensation for liquidated damages is levied on the Contractor on account of delay in completion or inadequate progress under the relevant Contract provisions, the price adjustment amount for the balance of work from the date of levy of such compensation shall be worked out by pegging the indices L_1 , M_1 , C_1 , P_1 , B_1 , SI_1 , & CI_1 to the levels corresponding to the date from which such compensation is levied.
- ii) The price variation shall be applicable to all contracts in B1/B2 & C from but shall not apply to piece works. The price variation shall be determined during each quarter as per formula given above in this clause.
- iii) The Price Variation under this Clause shall not be payable for the extra items required to be executed during the completion of the work and also on the excess quantities of items payable under the provisions of Clause 38/37 of the contract form B1 / B2 respectively. Since the rates payable for the extra items or the extra quantities under Clause 38/37 are to be fixed as per current DSR or as mutually agreed to yearly revision till completion of such work. In other words, when the completion/execution of extra items as well as extra quantities under Clause 38/37 of the contract form B1 / B2 extends beyond the operative date of the DSR then rates payable for the same beyond the date shall be revised with reference to the current DSR prevalent at that time on year to year basis or revised in accordance with mutual agreement thereon, as provided for in the Contract, whichever is less.
- iv) This clause is operative both ways, i.e. if the price variation as calculated above is on the plus side, payment on account of the price variation shall be allowed to the contractor and if it is on the negative side, the Government shall be entitled to recover the same from the Contractor and the amount shall be deductible from any amounts due and payable under the contract.
- v) To the extent that full compensation for any rise or fall in costs to the Contractor is not entirely covered by the provision of this or other clauses in the contract, the unit rate and prices included in the contract shall be deemed to include amounts to cover the contingency of such other actual rise or fall in costs.

NAME OF WORK :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

SCHEDULE 'A'

Schedule showing (approximately) the materials to be supplied from the P.W. Department Stores for Work contracted to be executed and preliminary and ancillary works and the rates at which they are to be charged for.

Sr.No.	Particulars	Quantity	Rate in		Place of Delivery
			In figure	In words	
			NIL		

NOTE :-

- 1) The other material like asphalt, cement, steel are to be supplied by the Contractor. The conditions of Schedule 'A' attached separately.

Contractor

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Executive Engineer

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ADDITIONAL CONDITIONS FOR MATERIALS
(CEMENT , STEEL , BULK ASPHALT ETC.)
BROUGHT BY CONTRACTOR

1. All the materials such as cement , steel , Bulk asphalt etc. required for execution of work shall be brought by contractor at his own cost.
2. The contractor shall maintain the record of these materials (cement , steel , Bulk Asphalt) in the prescribed proforma and registers as directed by Engineer in charge. The sample of prescribed proforma is attached at the end (Page No. *140 to 146*). These registers shall be signed by both contractors and representative of Engineer in charge. These registers shall be made available for inspection, verification for the department as and when required. These registers shall be in the custody of department and shall be maintained by the department.

The Contractor shall submit periodically as well as on completion of work, an account of all materials used by him on the work. In addition, a separate register shall be maintained on site for recording daily item wise asphalt, cement consumption and also item wise consumption of other materials. This shall be signed daily by Contractor or his representative and representative of Engineer-in-charge.

3. The material required only for this work shall be kept in the godown at site. No materials shall be shifted outside of the godown except for the work for which this agreement is entered without prior approval of the Engineer-in-charge.
4. The material cement , steel , bulk asphalt etc. brought on the work site shall be accompanied with necessary Company / manufacturing firm's test certificates.

Contractor shall use Bulk/Packed bitumen obtained from any Government refinery only. It shall be compulsory on the part of contractor to submit schedule of arrival of bouzer in advance to the Engineer in charge.

The contractor shall have to submit original purchase voucher duly supported by original delivery challan and exit gate pass. The bitumen brought by the contractor for the work will be open to check by the Engineer-in-charge or his representative at all times.

The bitumen so procured will have to be tested as per the frequency prescribed by the department. The testing charges will have to be borne by the contractor. It will be compulsory on the part of contractor to establish the well equipment testing laboratory with experienced testing personnel for testing of grade of bitumen obtained at the plant from the Government refinery.

If the test results are satisfactory, then and then only the material shall be allowed to be used on the work. If the test results are not as per standards, these materials shall be immediately removed from the work site at contractor's cost. In case of cement, if so requested by the contractor in writing, material will be allowed to be used before receipt of test results but this will be entirely at the risk and cost of the contractor.

5. The contractor shall produce sufficient documentary evidence i.e. bill for the purchase, Octroi receipt etc. bill for the purchase of material brought on the work site at once if so requested by the department.
6. All these material i.e. cement, steel bulk asphalt etc. shall be protected from any damages, rains etc. by the contractor at his own cost.
7. The Contractor will have to erect temporary shed of approved specifications for storing of above materials at work site at contractors cost having double lock arrangements (By Double lock it is meant that godown shall always be locked by two locks, one lock being owned and operated by Contractor and other by Engineer-in-charge or his authorised representative and the door shall be openable only after both locks are opened.)
8. If required, the weighment of bulk asphalt bouzers etc. brought by the contractor shall be carried out by the contractor at his own cost.
9. The contractor shall not use cement and other material for the item to be executed outside the scope of this contract except for such ancillary small item as are connected and absolutely necessary for execution of this work as may be decided by the Engineer-in-charge.
10. The Government shall not be responsible for the loss in bulk asphalt , cement , steel etc. during transit to work site.

The cement brought by the contractor at the work site shall mean 50 kg equivalent to 0.0347 cubic meters per bag by weight. The rate quoted should correspond to this method of reckoning. In case for ordinary / controlled concrete , if cement is short , the shortage / shortages will be made good by the contractor at his cost.

11. **INDEMNITY**

The condition regarding indemnity as defined on page No. 94 at Sr.No. 8.6. will apply mutatis mutandis in case of material brought by contractor at the site for the execution of the work being executed under this contract.

12. In case the materials brought by the contractor become surplus owing to the change in the design of the work, the materials should be taken back by the contractor at his own cost after prior permission of Engineer-in-charge.

13. All empty bags or empty asphalt drums shall be the property of contractor and the same shall be removed immediately after completion of work.
14. The 60/70 grade bitumen use for bituminous work must be refinery produced.
15. In order to ensure proper grade of bitumen that is to be used for bituminous work, following procedure shall be adopted.
 - a) The schedule of arrival of bouzers and the procurement of bitumen obtained from the Government refinery shall be submitted by the contractor before preparation of the bitumen mix.
 - b) The necessary instruments/machineries (with latest calibration) on plant/site for testing of materials shall be made available by the contractor.
 - c) The original challan and delivery memo of the bitumen obtain the Government Refinery shall be submitted to the Engineer-in-charge and the same shall recorded in measurement book of that work.
 - d) Engineer-in-charge shall collect the sample of the bitumen received from the Government refinery prior to unloading the plant, and shall verify the quality from the Government laboratory and the result obtain shall be recorded. If he is satisfied with the results than only he shall permit in writing to the contract to unload the bitumen in the presence of Engineer-in-charge or his authorized representative.
 - e) The workwise register shall be maintained on the plant containing Bouzers Number, Challan Number, Delivery memo number. Net weight of the bitumen, grade of the bitumen and the name of the officer who conduct the test.

पुंजीत डांबराची आवक आणि खप यांचा हिशोब दर्शविणारी

नोंदवही क्रमांक १

कामाचे नाव :- -----

मागील सप्ताहापासून कामाच्या ठिकाणी असलेली शिल्लक

आवक आणि खप यांचा हिशोब

अ.क्र.	व्हाऊचर नंबर	रिफाईनरचे नाव	गेटपास क्रमांक	प्राप्त डांबराचे निव्वळ वजन	वापरलेल्या डांबराचे निव्वळ वजन	दिवसाच्या अखेरीस शिल्लक डांबराचे वजन
१	२	३	४	५	६	७

कंत्राटदाराची सही

अभियंत्याची सही

नोंदवही क्रमांक २

निरनिराळ्या बाबींवर आठवड्यांमध्ये उपयोगात आणणे आवश्यक असलेले परिमाण यांची तुलना दाखविणारे कोष्टक

आठवड्यांमध्ये केलेल्या कामाचे एकूण अंदाजे परिमाण.

१. ओपन ग्रेडेड कारपेट
२. लिक्वीड सिलकोट
३. बी.बी.एम.
४. बी.एम.
५. बी.यु.एस.जी.
६. एम. पी. एम.
७. बी.सि.

नोंदवही क्रमांक ३

----- रोजी संपणाच्या आठवड्यासाठी गोषवारा.

अ.क्र.	बाबींचे नाव	केलेल्या कामाचे अंदाजे परिमाण		वापरणे आवश्यक असलेले डांबराचे परिमाण मे.टन	वापरावयास हवे असलेल्या डांबराचे एकूण परिमाण मे.टन	प्रत्यक्ष वापरलेले डांबराचे एकूण परिमाण मे.टन
		परिमाण	एकमान			
१	२	३	४	५	६	७

वज्रचूर्णाची आवक आणि खप यांचा हिशोब दर्शविणारी

नोंदवही क्रमांक १

कामाचे नाव :- -----

मागील सप्ताहापासून कामाच्या ठिकाणी असलेली शिल्लक

आवक आणि खप यांचा हिशोब

अ.क्र.	मिळालेल्या पोत्यांची संख्या	वापरलेल्या पोत्यांची संख्या	दिवसाच्या अखेरीस कामाच्या ठिकाणी राहिलेली पोती
१	२	३	४
एकूण			

कंत्राटदाराची सही

अभियंत्याची सही/ अवेक्षकाची सही

नोंदवही क्रमांक २

निरनिराळ्या बाबींवर आठवड्यांमध्ये उपयोगात आणणे आवश्यक असलेले सिमेंट परिमाण व प्रत्यक्षात उपयोगात आणलेले परिमाण यांची तुलना दाखविणारे कोष्टक

आठवड्यांमध्ये केलेल्या कामाचे एकूण अंदाजे परिमाण.

१. सिमेंट काँक्रीट ग्रेड एम १०, ग्रेड एम १५, ग्रेड एम २०, ग्रेड एम २५, एम ३०, एम ३५, एम ४०,
२. प्रचलित कंकरीत (आर.सी.सी.) तुळ्या.
३. सिमेंट अथवा सिमेंटचा गिलावा.
४. पाईप व मोऱ्या
५. इतर संकीर्ण
- ६.

नोंदवही क्रमांक ३

----- रोजी संपणाच्या आठवड्यासाठी गोषवारा.

अ.क्र.	बाबींचे नाव	केलेल्या कामाचे अंदाजे परिमाण		वापरणे आवश्यक असलेले सिमेंटचे परिमाण (पोत्यांमध्ये) (पोत्यांच्या प्रत्येक संख्येत)	वापरावयास हवे असलेल्या सिमेंटचे एकूण परिमाण	प्रत्यक्ष वापरलेल्या सिमेंटचे परिमाण (पोत्यांमध्ये)
		परिमाण	एकमान			
१	२	३	४	५	६	७

कंत्राटदाराची सही

अवेक्षकाची सही

नोंदवही क्र.१

----- ला संपणाच्या महिन्याची पोलादाची आवक जावक आणि शिल्लक

विभागाचे नाव	कामाचे ठिकाण	कामाचे नाव
मागील महिन्यापासून पोलादाची शिल्लक	कामाच्या ठिकाणी असलेली	प्रकार आणि परिमाण (टनामध्ये)
		प्रकार
		परिमाण

----- ला संपणाच्या महिन्याची पोलादाची दैनंदिन आवक जावक व शिल्लक

दिनांक	पोलादाची आवक (टनामध्ये)		वापरलेल्या पोलादाचे परिमाण		प्रत्येक देवघेवीच्या वेळचे परिमाण		रोजी संपणाच्या आठवड्यातील पोलादाच्या प्रकारानुसार टनामधील शिल्लकीचा गोषवारा	
	प्रकार	वजन (टनामध्ये)	प्रकार	वजन (टनामध्ये)	प्रकार	वजन (टनामध्ये)	प्रकार	वजन (टनामध्ये)
	एकूण		एकूण		एकूण		एकूण	

दिलेल्या/ वापरलेल्या परिमाणासाठी कंत्राटदाराची सही

अवेक्षकाची सही

नोंदवही क्रमांक २

----- ला संपणाच्या महिन्यामध्ये पोलादाचे किती परिमाण वेगवेगळ्या बाबींवर उपयोगात आणावयास पाहिजे होते व प्रत्यक्षात किती परिमाण वापरले ही तुलना करण्यासाठी आवश्यक असलेली गणना.

अ.क्र.	पार पाडलेल्या बाबींचा तपशिल	केलेल्या कामाचे अंदाजे परिमाण	संकल्प चित्राप्रमाणे वापरणे आवश्यक असलेल्या पोलादाचे परिमाण (टनामध्ये)	प्रत्यक्ष वापरलेले परिमाण (टनामध्ये)

**REGISTERS TO BE MAINTAINED BY CONTRACTOR IN
CO-ORDINATION WITH DEPTT. STAFF**

(Whichever is applicable)

(I) GENERAL REGISTERS

- 1) Work order book
- 2) Visitor register.
- 3) Work register of daily qty's executed of each item.
- 4) Register of registers.
- 5) Weekly report of work as per miles stone.
- 6) Calibration certificate register.
- 7) Laboratory test register.

(III) FOR B.T. WORK

- 1) Register of machinery.
- 2) Log Books of machinery at site.
- 3) Gradation of mix.
- 4) Extraction of mix.
- 5) Load register at plant & site.
- 6) Impact test register.
- 7) F.I. & E.I. test register.
- 8) Abrasion value register.
- 9) Water absorption test register.
- 10) File of printout of each load.
- 11) Roller pass register.
- 12) Tack coat register.
- 13) Tray test register.
- 14) Field density test register.
- 15) Marshal stability & flow register.
- 16) Thickness register of B.T. layers.
- 17) Asphalt register at plant.
- 18) Penetration test register.
- 19) Specific gravity of asphalt register.
- 20) Ductility test register.
- 21) Elastic recovery test register.
- 22) Hydrometer test register for fines.

(II) FOR BRIDGE WORK

- 1) Register of gradation of metal for concrete.
- 2) Silt content register.
- 3) Cement register
- 4) Ghani register.
- 5) Cube register.

**(IV) FOR EARTH WORK &
SHOULDERS**

- 1) Register of machineries at site.
- 2) Field density test register for shoulder.
- 3) Log book of each machinery working at site.
- 4) Boulder register. (If require)
- 5) Daily earthwork register.

Annexure 'A'
QUALITY CONTROL TESTS

(Whichever is applicable)

Sr.No.	Material	Test
1	Masonry Stone	i) Compressive Strength. ii) Crushing Value.
2	Metal	i) Crushing value. ii) Impact value. iii) Abrasion value. iv) Water Absorption. v) Flakiness & Elongation Index vi) Gradation
3	Bricks	i) Crushing Strength. ii) Water Absorption.
4	Mangalore Tiles	i) Breaking load. ii) Water Absorption.
5	Flooring Tiles	i) Flexural strength ii) Water Absorption
6	Glazed Tiles	i) Water Absorption
7	Cement	i) Compressive Strength ii) Initial setting time. iii) Final setting time. iv) Specific Gravity v) Soundness vi) Fineness vii) Std. Consistency
8	Steel	i) Weight per meter. ii) Ultimate Tensile stress. iii) Yield stress iv) Elongation
9	Granular	i) Density of compacted layer. ii) C.B.R.
10	Lime/ Cement stabilized soil sub base	i) Quality of Lime/Cement ii) Degree of pulverization iii) Lime/Cement content iv) CBR or unconfined Compressive strength test on a set of 3 Specimens. v) Density of compacted layer.
11	Water Bound Macadam	i) Aggregate impact value ii) Flakiness Index & Elongation index
12	Wet mix Macadam	i) Impact value ii) Flakiness index & Elongation index iii) Density of compacted layer
13	Prime coat/ tack coat/ Fog spray	i) Quality of Binder
14	Seal Coat/ Surface Dressing	i) Quality of Binder ii) Impact value/ Los Angle's Abrasion value iii) Flakiness & Elongation Index iv) Water Absorption.
15	Murum	i) Optimum Dry Density ii) C.B.R. iii) Liquid & Plastic Limit/Plasticity Index iv) Filed Density 100% P.D. v) Filed Moisture Content

Contractor

No. of Corrections

Executive Engineer

Sr.No.	Material	Test
16	Open graded premix surfacing/ Close graded premix surfacing.	i) Quality of Binder ii) Impact/ Abrasion value iii) Flakiness & Elongation Index iv) Water Absorption
17	Bituminous Macadam	i) Quality of Binder ii) Impact/Abrasion value. iii) Flakiness & Elongation Index iv) Water Absorption v) Density of compacted layer
18	Bituminous Penetration Macadam, Built up spray Grout.	i) Quality of Binder ii) Impact/Abrasion value. iii) Flakiness & Elongation Index iv) Water Absorption
19	Dense Bituminous Macadam/ Semi dense Bituminous concretes/ Bituminous concrete	i) Quality of Binder ii) Impact/Abrasion value iii) Flakiness & Elongation Index iv) Water Absorption.
20	Mastic Asphalt	i) Quality of Binder ii) Impact/ Abrasion value. iii) Flakiness & Elongation Index iv) Water Absorption
21	Slurry Seal	i) Quality of Binder
22	Modified Binder	i) Softening point ii) Penetration at 25 ⁰ C & 4 ⁰ C iii) Elastic Recovery iv) Ductility v) Flash point vi) Viscosity vii) Thin film over test, penetration, softening point, Elastic Recovery of residue, loss on heating.
23	Thermoplastic paint	i) Glass bead contents and grading Analysis ii) Reflectance & Yellowness index iii) Flowability iv) Drying Time
24	Interlocking concrete paving block	i) Compressive Strength ii) Flexural Test iii) Resistance to wear
25	Wood work (shutters)	i) End immersion tests ii) Knife test iii) Glue adhesion test
26	Cement Concrete	i) Mix design
27	Asphalt Concrete	i) Job mix design with all tests on basic Material
28	Reinforcement steel bars	i) Tensile strength ii) % Elongation
29	Sand	i) Water Absorption & Specific Gravity ii) Fineness Modulus iii) Silt Content iv) Bulkage
30	Water	i) P.H. Value / For water ii) Chloride & Sulphate content

Annexure 'B'**Construction Material Testing & its frequency**

(Whichever is applicable)

Sr.	Material	Rate	Frequency
1	CEMENT		
	1) Consistency 2) Initial & Final Setting time 3) Fineness 4) Specific Gravity 5) Soundness 6) Compressive Strength		Test per 50 M.t. above six tests shall be carried.
2	METAL		
a	1) Sieve Analysis (Gradation) (Concrete work) 2) Sieve Analysis Red Book Specification 3) Sieve Analysis Granular Sub Base (N.H.Work) MOST		1 Test for every day work 1 Test per 100 m ³ 1 Test per 200 m ³
b	Water Absorption		1 Test per 200 m ³
c	Impact (Concrete WBM/BT)		1 Test per 200 m ³
d	Crushing		1 Test per for Each Source
e	Abrasion		1 Test per for Each Source
f	Flakiness & Elongation Index		1 Test per 200 m ³
g	Plasticity Index for blindage used for WBM		1 Test per 25 m ³
3	SAND		
	1) Water Absorption & Specific Gravity 2) Fineness Modulus 3) Slit Content 4) Bulkage		1 Test per for Each Source 1 Test per for Each day 1 Test per for Each day work 1 Test per for Each day work
4	BRICKS		
	1) Water Absorption 2) Comp Strength 3) Effloresce		For each 50000 Nos bricks Above three test are to be carried out
5	Flooring Tiles		
	1) Flexural Strength 2) Water Absorption 3) Abrasion		For 2000 Nos of Tiles above three tests are to be carried out
6	Manglore tiles		
	1) Water Absorption 2) Breaking Load		1 Test- 6 Tiles per 50000 Nos. 2 Test- 6 Tiles per 50000 Nos.
7	Glazed Tiles		
	1) Water Absorption		1 Test- 6 Tiles per 2000 Nos.
8	Concrete Mix Design		
	Compressive strength C.C. Cubes for Qty Qty. upto 5 m ³ 6-15 m ³		1 Concrete Mix Design for each grade of concrete per every per hour 1 Set (3 Nos.) 2 Set (3 Nos)

Contractor

No. of Corrections

Executive Engineer

	16-30 m ³ 31-50 m ³ Quantity above 51 m ³		3 Set (3 Nos) 4 Set (3 Nos) 4+1 additional set per 50 m ³
9	MURUM/ SOIL for earth work 1) Optimum Dry Density 2) C.B.R. 3) Liquid & Plastic Limit/Plasticity Index 4) Filed Density 100% P.D. 5) Filed Moisture Content		2 Test per 3000 m ³ 1 Test per 3000 m ³ 1 Test per 3000 m ³ 1 Test per 3000 m ³ 1 Test per 3000 m ³
10	WOOD 1) Moisture Content 2) Density		1 test per Source 1 test per Source
11	WATER 1) P.H. Value/ For Water and Sand 2) Chloride & Sulphate content		1 test per Source 2 test per Source
12	Bituminous Mix 1) Extraction Test 2) Gradation Below test shall be taken before mixing 3) Gradation 4) Aggregate impact Value 5) Flakiness Index & Elongation Index 6) Water absorption 7) Marshall stability of Mix 8) Density of compacted layer		2- Test per day per plant 2- Test per day per plant One set of 3 sample for each source subsequently when source changes One set of 3 mould for each 400 MT of mix per plant of Minimum 2 sets per day per plant. 1 -test for 250 M2
13	Bitumen For every lot (10 to 12 MT) below 5 test shall be taken 1. Penetration 2. Ductility 3. Softening 4. Viscosity 5. Specific Gravity		2 Test per lot of 10 to 12 MT 1 Test per lot of 10 to 12 MT 1 Test per lot of 10 to 12 MT 1 Test per lot of 10 to 12 MT 1 Test per lot of 10 to 12 MT
14	Job Mix Design DBM/SDBC/BC		1 Job Mix Design per mix per work per plant for single source of supply
15	Steel 1) Wt per meter 2) Ultimate Tensile Stress 3) Yield stress 4) Elongation		One test for every 5.0 MT or parther of for each diameter

NAME OF WORK : Construction of V. R. B. on Het Maunde Road at Aruna Dam and Improvement & B.T.to Aruna Dam Left Bank Alternate Road (Including Construction of CD Work and Retaining Wall) Tal. Vaibhavwadi, Dist. Sindhudurg (Proposed Work Portion of Road Length is 7.50 Km.)

SCHEDULE 'B'

Estimated quantity may be more or less	Item of work	Estimated Rate		Unit	Amount	
		In figure	In words			
1	2	3	4	5	6	
278.370	Cubic metre	Item No. 1 :- Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	97.10	Rupees ninety-seven and paise ten only	Per One Cubic metre	27029.73
69.590	Cubic metre	Item No. 2 :- Excavation for foundation in hard rock by chiselling and wedging or line drilling including shoring and strutting as necessary and disposing off excavated stuff as directed etc. complete.	2084.65	Rupees two thousand eighty-four and paise sixty-five only	Per One Cubic metre	145070.79
48.000	Hour	Item No. 3 :- Dewatering on BHP basis by using water pump including diversion of stream, providing cofferdams, earthen bunds etc. as may be necessary for foundation and other parts of the the works and pumping out water during and after excavation as may be required by using 3.0 BHP pump etc. complete.	193.15	Rupees one hundred ninety-three and paise fifteen only	Per One Hour	9271.20
31.040	Cubic metre	Item No. 4 :- Providing soling using 80 millimeter size trap metal in 15 centimeter layer including filling voids with Crushed sand/grit, ramming, watering etc. complete.	2185.90	Rupees two thousand one hundred eighty-five and paise ninety only	Per One Cubic metre	67850.34

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1		2	3	4	5	6
20	Number	Item No. 5 :- Providing and fixing 25 millimetre diameter steel anchor dowel in hard rock including drilling hole of 32 millimetre diameter up to 0.75 metre depth, placing the dowel in position and effectively grouting the hole with C. M. 1:1 proportion etc. complete.	1806.25	Rupees one thousand eight hundred six and paise twenty-five only	Per One Number	36125.00
15.540	Cubic metre	Item No. 6 :- Providing and laying PCC in M15 grade levelling course of 100 millimetre thick below pile cap with fully automatic micro processor PLC with SCADA enabled reversible drum type mixer/ concrete batch mix plant (pan mixer) etc. complete.	6791.85	Rupees six thousand seven hundred ninety-one and paise eighty-five only	Per One Cubic metre	105545.35
62.020	Cubic metre	Item No. 7 :- Providing and laying plain in situ / ready mix M-25 cement concrete of trap stone metal mechanically mixed, placed in foundation and compacted by vibration including necessary bailing out water, curing curing concrete batch mix plant / pan mixer with fine aggregates of required specifications (VSI sand finely washed etc) (excluding dewatering by pump) for 14 days RCC Grade.	9614.50	Rupees nine thousand six hundred fourteen and paise fifty only	Per One Cubic metre	596291.29
243.930	Cubic Metre	Item No. 8 :- Providing and laying in situ / ready mix M-25 cement concrete of trap metal for cast in situ Reinforce Cement Concrete solid piers, column etc. including provision of V shaped false joints to form suitable panels on the faces to approve design with compacting by vibrating and curing complete. Including plywood/steel formwork, centering (excluding dewatering by means of pump) and including bailing out water and including cement mortar 1:3 curing complete. (a) Height upto 5 M. (With Concrete Mixer) With fine aggregates of required specifications (VSI sand finely washed etc.)	10024.55	Rupees ten thousand twenty-four and paise fifty-five only	Per One Cubic Metre	2445288.48
77.140	Running metre	Item No. 9 :- Providing and laying weep holes of 100 mm diameter PVC pipes as per drawing for abutment returns, return walls etc. Complete	575.10	Rupees five hundred seventy-five and paise ten only	Per One Running metre	44363.21

1		2	3	4	5	6
4.290	Cubic Metre	Item No. 10 :- Providing and laying in situ / ready mix controlled M-30 cement concrete of of trap metal for reinforced cement concrete caps over piers and abutments including necessary scaffolding plywood/steel formwork, compacting by vibrating, finishing in CM 1:3 and curing etc complete (Excluding reinforcement) With reversible drum type mixer/ concrete batch mix plant (pan mixer) with fine agreeegates of required specifications (VSI sand finely washed etc.)	10864.55	Rupees ten thousand eight hundred sixty-four and paise fifty-five only	Per One Cubic Metre	46608.92
14.310	Square Metre	Item No. 11 :- Providing tar paper bearing including laying in proper position etc. complete.	106.80	Rupees one hundred six and paise eighty only	Per One Square Metre	1528.31
76.270	Cubic Metre	Item No. 12 :- Providing and laying in situ / ready mix M-30 controlled cement concrete of trap metal for Reinforced Cement Concrete work in solid/ deck slab etc. including ramming, vibrating, curing, formwork, centering and finishing in cement plaster excluding reinforcement etc. complete. (with fully automatic micro processor based PLC with SCADA enabled concrete batch mix plant / pan mixer and fine agreeegates of required specifications (VSI sand finely washed etc.)	13112.15	Rupees thirteen thousand one hundred twelve and paise fifteen only	Per One Cubic Metre	1000063.68
3.81	Cubic Metre	Item No. 13 :- Providing and laying in situ / ready mix M-20 RCC of trap metal for RCC work of ballast walls, kerbs and box returns including scaffolding, compaction, formwork finishing and curing etc. complete. (excluding reinforcement, with fully automatic micro processor based PLC with SCADA enabled concrete batch mix plant / pan mixer with fine agreeegates of required specifications (VSI sand finely washed etc) RCC work of Ballast walls & Kerb	11516.20	Rupees eleven thousand five hundred sixteen and paise twenty only	Per One Cubic Metre	43918.35

1		2	3	4	5	6
35.67	Square Metre	Item No. 14 :- Providing expansion joints with 25 millimeter thick bituminous pad as per detailed drawings etc. complete.	1171.80	Rupees one thousand one hundred seventy-one and paise eighty only	Per One Square Metre	41800.22
7.200	Cubic Metre	Item No. 15 :- Providing and laying in situ / ready mix M-20 cement concrete of trap metal for wearing course 8 centimeter thick including compacting, finishing, curing and filling in joints with bitumen etc. complete. (with fully automatic micro processor based PLC with SCADA enabled concrete batch mix plant / pan mixer with fine aggregates of required specifications (VSI sand finely washed etc.)	8226.35	Rupees eight thousand two hundred twenty-six and paise thirty-five only	Per One Cubic Metre	59229.72
10.837	Metric Tonne	Item No. 16 :- Providing, cutting, bending, hooking, tying and laying in position TMT FE 500 steel bars for reinforcement for all RCC works as per detailed drawings etc. complete.	95320.00	Rupees ninety-five thousand three hundred twenty and paise nil only	Per One Metric Tonne	1033003.95
8	Number	Item No. 17 :- Providing 100 millimetre diameter Galvanised Iron water spouts as per detailed drawings in reinforced cement concrete slab and wearing surface / kerb etc. complete.	1216.05	Rupees one thousand two hundred sixteen and paise five only	Per One Number	9728.40
4.480	Cubic metre	Item No. 18 :- Providing and filling annular space around footing in rock by using concrete of M-15 grade etc. complete.	7261.20	Rupees seven thousand two hundred sixty-one and paise twenty only	Per One Cubic metre	32530.18
73.500	Square Metre	Item No. 19 :- Providing and laying 0.90 meter thick metal mat consisting of rubble, oversize metal and normal size metal in specified thickness as per detailed drawing including supplying all materials, hand packing of rubble, spreading metal in layers and hard murum including watering and compaction with power roller etc. complete.	1592.60	Rupees one thousand five hundred ninety-two and paise sixty only	Per One Square Metre	117056.10

1	2	3	4	5	6	
44.000	Running metre	Item No. 20 :- Providing railing of mild steel angle post 2.0 metre center to center of section 75 millimetre x 75 millimetre x 10 millimetre or equivalent I/C section of height 1.05 above bridge surface with minimum anchor length of 30 centimetre including hold fast of 25 millimetre diameter Mild Steel bar welded at the bottom and concreting of 1:3:6 of size 30 centimetre x 30 centimetre x 30 centimetre with three rows of 40 millimetre B class Galvanised Iron pipe provided at 30 centimetre on center to center including scaffolding and one coat of anticorrosive paint with two coats of oil painting, curing of concrete etc. complete.	4175.75	Rupees four thousand one hundred seventy-five and paise seventy-five only	Per One Running metre	183733.00
747.050	Square Metre	Item No. 21 :- Providing dry rubble stone pitching 23 cm. (about 9") thick including all material, quarry spalls, labour etc. complete.	1062.65	Rupees one thousand sixty-two and paise sixty-five only	Per One Square Metre	793852.68
4488.750	Cubic metre	Item No. 22 :- Excavation for catch / side water gutter in all sorts of soils to the specified section including stacking the excavated stuff in a regular bund and disposing of unsuitable or excess stuff as directed all sorts of soils etc. complete.	128.40	Rupees one hundred twenty-eight and paise forty only	Per One Cubic metre	576355.50
236.250	Cubic metre	Item No. 23 :- Excavation for catch / side water gutters in hard rock by wedging and chiselling to the specified section including stacking the excavated stuff in a regular bund if necessary and disposing off unsuitable or excess stuff as directed with all leads and lifts etc.complete.	1531.10	Rupees one thousand five hundred thirty-one and paise ten only	Per One Cubic metre	361722.38
4124.000	Cubic Metre	Item No. 24 :- Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50 metre and spreading for embankment or stacking as directed.	128.40	Rupees one hundred twenty-eight and paise forty only	Per One Cubic Metre	529521.60

1	2	3	4	5	6	
896.660	Cubic Metre	Item No. 25 :- Excavation for roadway in hard rock by controlled blasting including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stocking as directed. (Inculding 50% Utilisation of useable Excavated material)	269.75	Rupees two hundred sixty-nine and paise seventy-five only	Per One Cubic Metre	241874.04
1312.500	Square Metre	Item No. 26 :- Picking the B. T. road surface (Scarifying existing B. T.) including sectioning etc. complete.	47.50	Rupees forty-seven and paise fifty only	Per One Square Metre	62343.75
722.550	Cubic Metre	Item No. 27 :- Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting with Intelligent Compactor with compaction analyzer and V-Sat attachment to the required density. Grading I (Using Screening Type A (13.2 millimetre) Aggregate)	3134.40	Rupees three thousand one hundred thirty-four and paise forty only	Per One Cubic Metre	2264760.72
352.275	Cubic Metre	Item No. 28 :- Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting with Intelligent Compactor with compaction analyzer and V- Sat attachment to the required density. Grading II (Using Screening Type B (11.2 millimetre) Aggregate)	3078.30	Rupees three thousand seventy-eight and paise thirty only	Per One Cubic Metre	1084408.13

1		2	3	4	5	6
29802.876	Square Metre	Item No. 29 :- Providing and constructing 50 millimetre thick Modified Penetration Macadam (MPM) road surface including all materials, preparing the existing road surface, spreading 40 millimetre stone layers metal 100% crusher broken metal with conical crusher palnt, heating and spraying the bitumen of specified grade @ 1.75 kilogram / square metre, spreading 12 millimetre size chips compacting with Static roller having weight 8 to 10 Metric Ton to achive the desired degree of compaction as per Technical Specification Clause 506 etc. complete, including applying tack coat at the rate of 0.30 kilogram / square metre on existing bitumen surface. (on existing bitumen surface)	333.41	Rupees three hundred thirty-three and paise forty-one only	Per One Square Metre	9936577.00
29803.250	Square Metre	Item No. 30 :- Open Graded Premix Surfacing- Providing and Laying OGC 20 millimetre thickness composed of 13.2 millimetre to 5.6 millimetre aggregates premixed with bituminous binder transported to site with VTS , laid over a previously prepared surface, finished to the required grade, level, alignment and rolling to achieve the desired compaction, including tack coat at the rate 3.00 kilogramme per 10 square metre. For Bitumen VG-30 bulk—USING drum mix type hot mix plant with SCADA, Paver and Vibratory roller. (Over M. P. M. surface)	286.50	Rupees two hundred eighty-six and paise fifty only	Per One Square Metre	8538631.13
29803.250	Square Metre	Item No. 31 :- Providing bituminous Type A liquid seal coat on bituminous surface including supplying all materials and bitumen of VG-30 grade preparing existing road surface, heating and applying bitumen @ 0.98 kilogram / Square Metre by mechanical means, spreading chips and rolling, by static roller having weight 8 to 10 Metric Ton etc. complete.	108.35	Rupees one hundred eight and paise thirty-five only	Per One Square Metre	3229182.14

1	2	3	4	5	6	
452.250	Cubic Metre	Item No. 32 :- Supplying hard murum/ kankar at the road site, including conveying and stacking complete.	718.35	Rupees seven hundred eighteen and paise thirty-five only	Per One Cubic Metre	324873.79
1350.000	Cubic Metre	Item No. 33 :- Spreading hard murum/ soft murum/ gravel or kankar for side width etc. complete.	85.25	Rupees eighty-five and paise twenty-five only	Per One Cubic Metre	115087.50
13500.000	Square Metre	Item No. 34 :- Compacting the hard murum side widths including laying in layers on each side with vibratory roller including artificial watering etc. complete.	22.65	Rupees twenty-two and paise sixty-five only	Per One Square Metre	305775.00
625.670	Cubic Metre	Item No. 35 :- Providing earth work in embankment with approved materials obtained from other sources upto lead of 50 metre including all lifts, laying in layers of 20 centimetre to 30 centimetre thickness breaking clods, dressing to the required lines, curves, grades and section, watering and compaction with vibratory roller with V-Sat attachment to achieve not less than 97 % of standard proctor density etc. complete.	816.80	Rupees eight hundred sixteen and paise eighty only	Per One Cubic Metre	511047.26

1	2	3	4	5	6
6	<p>Item No. 36 :- Providing and fixing cautionary/warning sign board of size 60 centimetre having shape of equilateral triangle with apex point upwards prepared on 16 gauge Mild Steel sheet including painting with one coat of zinc chromate stoving primer and two coats each of white back ground, red border and back side gray stove enamelled, bonded with cut out of Retro reflective sheet Engineering grade, symbol/ letters/ numerals/ border/ arrow, coated with nonpealable crystal clear protective transparent coat retaining 100% reflection including one number of Mild Steel Angle iron post of size 50 x 50 x 5 millimetre of 3.65 metre long inflated at bottom drilled on top in one piece without joint painted with white and black bands of 30 centimetre fixing board and post with 2 Nos. high strength G.I. bolts and nuts of size 10 millimetre diametre and 20 millimetre long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60 centimetre x 60 centimetre x 75 centimetre size etc. complete. 60 centimetre equilateral triangle Mild Steel sheet with Engineering grade.</p>	5073.45	Rupees five thousand seventy-three and paise forty-five only	Per One Number	30440.70

1	2	3	4	5	6	
6	Number	<p>Item No. 37 :- Providing and fixing Mandatory / Regulatory sign board of circular shape of size 60 centimetre diametre prepared on 16 gauge Mild Steel sheet including painting with zinc chromate stoving primer and two coats each of white back ground,red border and backside gray stove enamelled, bonded with cut out of Retro reflective sheet Engineering grade, symbol / letters / numerals / border, coated with non pealable crystal clear protective transparent coat retaining 100% relection including one One Number of M.S. Angle iron post of size 50 x 50 x 5 mm of 3.45 m. long inflated at bottom drilled on top in one piece without joint painted with white and black bands of 30 cm. fixing board and post with 2 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20 mm long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60 cm x 60 cm x 75 cm size etc. complete. circular shape of size 60 cm. dia. M.S. sheet with Retro reflective sheet Engineering grade.</p>	6263.60	Rupees six thousand two hundred sixty-three and paise sixty only	Per One Number	37581.60

1	2	3	4	5	6
6.000	<p>Item No. 38 :- Providing and fixing of retro-reflectorised informatory sign board rectangular/Square in shape having area greater than 0.9 One Square Meterr made out of 4 mm aluminum composite panel with 0.5 mm skin thickness on either side bonded with white retro reflective sheeting of Class B (Type IV High intensity micro-prismatic grade sheeting-HIP) having pressure sensitive adhesive retroreflective specified back ground, border and back side retroreflective symbols, letters, numerals, arrow as per IRC:67-2012 Table No 8.3, supported with back support frame 25mm x 25mm x 3mm, duly painted on back side with two coats of grey stove enamel paint and supported on two no. mild steel angle iron post 75 mm x 75 mm x 6 mm, 3.5 mt ~ 3.9 mtlong firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing The angle iron post shall be duly painted with one coat of epoxy primer and two coats of epoxy finish paints having alternate black and white bands of 25 cm width including fixtures and transportation etc.complete.The nut bolts of board with angle iron post/supporting structure after fixing at site has to be electrically welded. Class B (Type IV High intensity micro-prismatic grade sheeting-HIP) sheeting shall have 7 years written warranty from the manufacturer including the Digitally Printed areas with approved printing technology with sheeting manufacturer approved inks and laminated with UV overlay film and this warranty certificate along with sheeting manufacturer attested 3 years outdoor weathering test report from Indian govt lab must be submitted to the Engineer in charge by the contractor/supplier.</p>	17360.05	Rupees seventeen thousand three hundred sixty and paise five only	Per One Square Metre	104160.30

1		2	3	4	5	6
375.000	Square Metre	Item No. 39 :- Providing and Laying hot applied thermoplastic road marking strip on Bituminous Surface of specified shade/colour of 2.5 mm thick including 1.5 Refractive index reflectorizing glass beads @ 250gm/sqm .Thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC 35:2015. Initial Dry reflectivity RL shall be > 250 mcd/sqm/lux measured in the initial 7 days and sustained reflectivity RL of 100 mcd/sqm/ lux and Qd of 100 mcd/sqm/ lux measured at the end of 2 years by means of a Standard Reflectometer of Zehntner, Easylux, Delta make capable of measuring RL & QD both according to IRC 35:2015 clause 15.5. The finished surface to be level, uniform, and free from streaks and holes complete as per direction of Engineer-in-charge and in accordance with applicable specifications. (Refer MORTH Clause 803 for technical Specification and Performance for IRC 35:2015).	718.60	Rupees seven hundred eighteen and paise sixty only	Per One Square Metre	269475.00
100.000	Running metre	Item No. 40 :- Metal Beam Crash Barrier -- Type - A, W : Metal Beam Crash Barrier (Providing and erecting a W metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810)""	5300.05	Rupees five thousand three hundred and paise five only	Per One Running metre	530005.00

1		2	3	4	5	6
1	Number	Item No. 41 :- Providing and fixing board displaying information, such as 'Name of work, Tender cost, Name of Contractor, Work completion and liability period etc', having rectangular shape of 1.20m x 0.90m size made out 18 gauge (1.25mm) thick mild steel sheet painted with one coat of Zinc chromate stoving primer and two coats of enamel paint on front side and grey stove enamel on back side and border / messages / symbols etc. with approved colour shade paint complete, on M.S.angle of size 35 x 35 x 3 mm frame with properly cross braced M.S. angles of size 35mmx35mmx3mm duly painted including Two M.S. angle iron posts of size 65 mm x 65 mm x 6 mm, 3.65 m long painted with alternate black and white bands of 25 cm width including all fixtures etc.and fixing the boards in 1:4:8 concrete block of size 60 cm x 60 cm x 75 cm including, excavation, refilling, transportation, and labour etc complete.	10750.10	Rupees ten thousand seven hundred fifty and paise ten only	Per One Number	10750.10
30	Numbers	Item No. 42 :- Providing and fixing Reinforced Cement Concrete 200 metre stones as per I.R.C. standard including fixing in standard size Cement Concrete 1:4:8 block including curing, painting lettering etc. complete.	1108.15	Rupees one thousand one hundred eight and paise fifteen only	Per One Numbers	33244.50
7	Numbers	Item No. 43 :- Providing and fixing Reinforced Cement Concrete 1:2:4 ordinary kilometre stones including painting numbering etc. complete for N.H./ S.H./ M.D.R. etc. as per IRC design for highway kilometre stone and fixing in standard size Cement Concrete 1:4:8 block etc. complete.	3505.65	Rupees three thousand five hundred five and paise sixty-five only	Per One Numbers	24539.55
100	Numbers	Item No. 44 :- Providing and fixing stream lined M-20 grade RCC guard stone including mild steel bar reinforcement etc. complete.	1039.10	Rupees one thousand thirty-nine and paise ten only	Per One Numbers	103910.00

1	2	3	4	5	6	
339.560	Cubic Metre	Item No. 45 :- Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	257.90	Rupees two hundred fifty-seven and paise ninety only	Per One Cubic Metre	87572.52
84.890	Cubic Metre	Item No. 46 :- Excavation for foundation in hard murum and boulders including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	260.05	Rupees two hundred sixty and paise five only	Per One Cubic Metre	22075.64
63.710	Cubic metre	Item No. 47 :- Providing soling using 80 millimeter size trap metal in 15 centimeter layer including filling voids with Crushed sand/grit, ramming, watering etc. complete.	2452.40	Rupees two thousand four hundred fifty-two and paise forty only	Per One Cubic metre	156242.40
31.855	Cubic metre	Item No. 48 :- Providing and laying in situ / ready mix cement concrete of M-10 proportion with trap metal in foundation including necessary form work, compacting and curing etc. complete. (with reversible drum type mixer with SCADA with fine aggregates of required specifications (Natural sand / VSI sand finely	7128.05	Rupees seven thousand one hundred twenty-eight and paise five only	Per One Cubic metre	227064.00
639.44	Cubic metre	Item No. 49 :- Providing and laying in situ M-25 cement concrete of trap metal with 15% plum of trap stones for retaining walls and jetty etc. including necessary formwork, compacting, curing, bailing out water manually in tidal range etc. complete.	8044.60	Rupees eight thousand forty-four and paise sixty only	Per One Cubic metre	5144019.00
166.500	Running metre	Item No. 50 :- Providing and laying weep holes of 100 mm diameter PVC pipes as per drawing for abutment returns, return walls etc. Complete	575.10	Rupees five hundred seventy-five and paise ten only	Per One Running metre	95754.15

1	2	3	4	5	6	
226.080	Cubic Metre	Item No. 51 :- Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	257.90	Rupees two hundred fifty-seven and paise ninety only	Per One Cubic Metre	58306.03
11.900	Cubic Metre	Item No. 52 :- Excavation for foundation in hard rock by blasting including shoring and strutting as necessary and disposing off excavated stuff as directed etc. complete.	1329.35	Rupees one thousand three hundred twenty-nine and paise thirty-five only	Per One Cubic Metre	15819.27
21.630	Cubic metre	Item No. 53 :- Providing rubble filling of trap stones for foundations including filling voids with sand/grit and compaction etc complete.	2452.40	Rupees two thousand four hundred fifty-two and paise forty only	Per One Cubic metre	53045.41
14.420	Cubic metre	Item No. 54 :- Providing and laying in situ / ready mix M-10 cement concrete of trap metal in foundation including necessary centering, formwork, bailing out water, compacting and curing etc. complete. (with fully automatic micro processor based PLC with SCADA enabled with reversible drum type mixer/ concrete batch mix plant (pan mixer) with natural /artificial sand)	7769.00	Rupees seven thousand seven hundred sixty-nine and paise nil only	Per One Cubic metre	112028.98
51.510	Cubic metre	Item No. 55 :- Providing cast in situ / ready mix M-25 grade cement concrete for head walls of CD work / retaining walls etc. including necessary form work, compaction, finishing and curing etc. complete. (with reversible drum type mixer/ concrete batch mix plant (pan mixer) with SCADA with Natural / VSI standard Artificial Sand)	11831.85	Rupees eleven thousand eight hundred thirty-one and paise eighty-five only	Per One Cubic metre	609458.59

1		2	3	4	5	6
90.000	Running metre	Item No. 56 :- Providing and laying cement concrete pipes of IS-458-2003 NP-3 class of 900 milimetre diametre for C. D. work in proper lines, level and slope including providing and fixing collars in cement mortar 1:2 and curing including all lead and lifts etc. complete.	8925.50	Rupees eight thousand nine hundred twenty-five and paise fifty only	Per One Running metre	803295.00
45.236	Cubic metre	Item No. 57 :- Providing selected hard murum filling including laying in layers of 15 to 20 centimetres watering and compacting etc. complete.	964.35	Rupees nine hundred sixty-four and paise thirty-five only	Per One Cubic metre	43623.34

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Total Rs. 43494459.92

Total For Civil Work = Say Rs 43494460.00 (A)

		<u>B) Royalty and Testing Charges</u>				
		Item No. 58 :- Royalty charges for various building construction bonafied materials which are to be use for Government bonfied works and for which Royalty charges are to be paid by the contractor.				
1869.17	Cubic Metre	<u>A) For Rubble / Murum / Metal</u>	216.18	Rupees two hundred sixteen and paise eighteen only	Per One Cubic Metre	404077.18
507.88	Cubic Metre	<u>B) For Sand</u>	237.37	Rupees two hundred thirty-seven and paise thirty-seven only	Per One Cubic Metre	120555.92

1	2	3	4	5	6
	Item No. 59 :- Carrying out various test in Government P.W.D. Laboratory as per relevant standards and submitting test results to Engineer-in-charge or his representative and retesting if required, including taxes, overheads and other allied charges etc. complete.				
	<u>For Bridge Work</u> <u>Cement</u>				
13	Number Standard Consistency, Fineness, Specific Gravity, Setting time (initial and final), Compressive strength, Soundness test for cement.	3960.00	Rupees three thousand nine hundred sixty and paise nil only	Per one Number	51480.00
	<u>Aggregates - Metal below 40 mm.</u>				
9	Number Sieve Analysis.	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	6525.00
9	Number Water Absorption, Specific Gravity, Impact value, Crushing value test.	2730.00	Rupees two thousand seven hundred thirty and paise nil only	Per One Number	24570.00
9	Number Flakiness Index and Elongation index test.	895.00	Rupees eight hundred ninety-five and paise nil only	Per One Number	8055.00
	<u>Sand</u>				
1	Number Fineness Modulus (Sieve Analysis), Silt and Clay content test for sand.	1450.00	Rupees one thousand four hundred fifty and paise nil only	Per One Number	1450.00
1	Number <u>Concrete mix design (with all test on basic materials) M-25</u>	14445.00	Rupees fourteen thousand four hundred forty-five and paise nil only	Per one Number	14445.00

1		2	3	4	5	6
1	Number	<u>Concrete mix design (with all test on basic materials) M-30</u>	14445.00	Rupees fourteen thousand four hundred forty-five and paise nil only	Per one Number	14445.00
1	Number	Compressive strength of cement concrete cube. (Set of 3 cubes) M-10	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	725.00
1	Number	Compressive strength of cement concrete cube. (Set of 3 cubes) M-15	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	725.00
2	Number	Compressive strength of cement concrete cube. (Set of 3 cubes) M-20	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	1450.00
6	Number	Compressive strength of cement concrete cube. (Set of 3 cubes) M-25	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	4350.00
		<u>For Road Work</u>				
		<u>Metal 60 mm. (Hand Broken)</u>				
14	Number	Sieve Analysis.	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	10150.00
7	Number	Water Absorption, Specific Gravity, Impact value, Crushing value test.	2730.00	Rupees two thousand seven hundred thirty and paise nil only	Per One Number	19110.00
		<u>Metal for M.P.M., Carpet and Seal Coat</u>				
33	Number	Sieve Analysis.	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	23925.00

1		2	3	4	5	6
17	Number	Water Absorption, Specific Gravity, Impact value, Crushing value test.	2730.00	Rupees two thousand seven hundred thirty and paise nil only	Per One Number	46410.00
		<u>Soil/Murum</u>				
7	Number	Sieve Analysis.	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	5075.00
7	Number	Liquid Limit and Plastic Limit.	1230.00	Rupees one thousand two hundred thirty and paise nil only	Per one Number	8610.00
		<u>Earth Work</u>				
3	Number	Compaction Test (Proctor Density) for Earth Work	1955.00	Rupees one thousand nine hundred fifty-five and paise nil only	Per One Number	5865.00
		<u>Metal for Gr I and Gr II</u>				
2	Number	Sieve Analysis.	725.00	Rupees seven hundred twenty-five and paise nil only	Per One Number	1450.00
2	Number	Water Absorption, Specific Gravity, Impact value, Crushing value test.	2730.00	Rupees two thousand seven hundred thirty and paise nil only	Per One Number	5460.00
2	Number	Flakiness Index and Elongation index test.	895.00	Rupees eight hundred ninety-five and paise nil only	Per One Number	1790.00

Dy. E. E.

1	2	3	4	5	6	
	<u>Bitumen</u>					
1	Number	Penetration, softening Point, Flash and Fire Point, Specific Gravity for Asphalt Test	3290.00	Rupees three thousand two hundred ninety and paise nil only	Per One Number	3290.00
1	Number	Ductility.	950.00	Rupees nine hundred fifty and paise nil only	Per one Number	950.00
1	Number	Extraction of Bituminous Mix	1675.00	Rupees one thousand six hundred seventy-five and paise nil only	Per One Number	1675.00

Total cost of Royalty and Testing charges = Rs. 786613.10 (B)

Total for A +B = Rs. 44281073.10

Say Grand Total for A +B = Rs. 44281073.00

Note :- Bidder shall quote his offer only on Work portion/Civil cost (A) without GST.

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Contractor

No. of correction

Executive Engineer

NAME OF WORK : Construction of V. R. B. on Het Maunde Road at Aruna Dam and Improvement & B.T.to Aruna Dam Left Bank Alternate Road (Including Construction of CD Work and Retaining Wall) Tal. Vaibhavwadi, Dist. Sindhudurg (Proposed Work Portion of Road Length is 7.50 Km.)

SCHEDULE 'C' AND SPECIFICATIONS

Item of work	Reference to M.O.R.T.H. specification book 2013 Edition fifth revision / Standard Specification Book 2012 edition		Additional specification if any
	Clause No.	Page No.	
1	2	3	4
Item No. 1 :- Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	MORT&H specification Section No. 100 Section 304 BR.3	1 to 33 59 to 62 113 to 114	Work shall be done as per directions of Engineer in charge.
Item No. 2 :- Excavation for foundation in hard rock by chiselling and wedging or line drilling including shoring and strutting as necessary and disposing off excavated stuff as directed etc. complete.	MORT&H specification Section No. 100 Section 304 BR - 3 e, f, g	1 to 33 59 to 62 113 to 114	This shall includes isolated boulders above 0.1 cum. volume each. Useful material from excavation shall be conveyed and stacked properly as directed by Engineer in charge.
Item No. 3 :- Dewatering on BHP basis by using water pump including diversion of stream, providing cofferdams, earthen bunds etc. as may be necessary for foundation and other parts of the the works and pumping out water during and after excavation as may be required by using 3.0 BHP pump etc. complete.	BR - 4	114 to 116 'Red Book Volume-I 2012	As directed by Engineer-in-charge.

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1	2	3	4
Item No. 4 :- Providing soling using 80 millimeter size trap metal in 15 centimeter layer including filling voids with Crushed sand/grit, ramming, watering etc. complete.	Bd A 12 Red Book Volume-II 2012	19	The size of trap metal should be 80 millimeter and sample of metal shall be approved from Engineer - in- Charge before use and the item shall be carried out as per wording of the item and as directed by Engineer-in-charge.
Item No. 5 :- Providing and fixing 25 millimetre diameter steel anchor dowel in hard rock including drilling hole of 32 millimetre diameter up to 0.75 metre depth, placing the dowel in position and effectively grouting the hole with C. M. 1:1 proportion etc. complete.	BR-15	129 Red Book Volume-I 2012	As directed by Engineer in charge.
Item No. 6 :- Providing and laying PCC in M15 grade levelling course of 100 millimetre thick below pile cap with fully automatic micro processor PLC with SCADA enabled reversible drum type mixer/ concrete batch mix plant (pan mixer) etc. complete.	MORT&H specification Section No. 1100 1700	457 to 476 535 to 562	As directed by Engineer in charge.
Item No. 7 :- Providing and laying plain in situ / ready mix M-25 cement concrete of trap stone metal mechanically mixed, placed in foundation and compacted by vibration including necessary bailing out water, curing concrete batch mix plant / pan mixer with fine aggregates of required specifications (VSI sand finely washed etc) (excluding dewatering by pump) for 14 days RCC Grade.	BR - 5 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.	116 to 118 49 to 52	1) Grade of concrete shall be M-25 instead of 1:3:6. 2) Necessary concrete mix design of grade M-30 shall be carried out as per IS - 456 - 2000 with minimum cemen content as per IRC-21-2000. 3) The cement consumption considered for this item is 375 kg./m3 of concrete. For variation in cement consumption due to mix design sub para B.6.4 of B-6 of specification shall be applicable. 4) For concrete work use of blended cement may be made confirming to IS-1489 (Part I) after confirmation of due tests. 5) The minimum curing period shall be as per IS 456 : 2000. 6) Wooden centering / shuttering is not allowed. 7) Testing of materials type and frequency shall be as per Annexure A & B attached separately. 8) Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of concrete.

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<p>Item No. 8 :- Providing and laying in situ / ready mix M-25 cement concrete of trap metal for cast in situ Reinforce Cement Concrete solid piers, column etc. including provision of V shaped false joints to form suitable panels on the faces to approve design with compacting by vibrating and curing complete. Including plywood/steel formwork, centering (excluding dewatering by means of pump) and including bailing out water and including cement mortar 1:3 curing complete. (a) Height upto 5 M. (With Concrete Mixer) With fine aggregates of required specifications (VSI sand finely washed etc.)</p>	<p>MORT&H Specification Section No. 1700 Section 2204</p> <p>BR - 24 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.</p>	<p>535 to 562 669 to 670</p> <p>137 to 138 49 to 52</p>	<p>1) Grade of concrete shall be M-25. 2) Necessary concrete mix design of grade M-25 shall be carried out as per IS - 456 - 2000 with minimum cemen content as per IRC-21-2000. 3) The cement consumption considered for this item is 375 kg. / m3 of concrete. For variation in cement consumption due to mix design as B-6 para 6.4 page no. 49 to 52 of specification shall be applicable. 4) Use of admixture in appropriate quantity shall be permitted, however no extra payment will be made on that account. 5) Mix design shall be done from Govt. Laboratory and approved by Engineer-in-charge. 6) Mix design shall be redone whenever there is change in source of quarry materials or after every months whichever is earlier. 7) For all R.C.C. and concreting work use of blended cement may be made confirming to IS 1489 (Part 1) after confirmation of due tests. 8) The minimum curing period shall be as per IS 456 : 2000. 9) Wooden centering / shuttering is not allowed. 10) Testing of materials type and frequency shall be as per Annexure A & B attached separately. 11) Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of concrete. 12) Payment shall be made on level basis only.</p>
<p>Item No. 9 :- Providing and laying weep holes of 100 mm diameter PVC pipes as per drawing for abutment returns, return walls etc. Complete</p>	<p>MORT&H Section 2706 2707,2708 (v) & 2709</p>	<p>755 to 756 MORTH 2013</p>	<p>As directed by Engineer in charge.</p>

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<p>Item No. 10 :- Providing and laying in situ / ready mix controlled M-30 cement concrete of of trap metal for reinforced cement concrete caps over piers and abutments including necessary scaffolding plywood/steel formwork, compacting by vibrating, finishing in CM 1:3 and curing etc complete (Excluding reinforcement) With reversible drum type mixer/ concrete batch mix plant (pan mixer) with fine aggregates of required specifications (VSI sand finely washed etc.)</p>	<p>MORT&H Specification Section No. 1700 Section 2205 Section 2304 BR - 26 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.</p>	<p>535 to 562 670 to 671 675 to 676 139 to 140 49 to 52</p>	<p>1) Grade of concrete shall be M-30. 2) Necessary concrete mix design of grade M-30 shall be carried out as per IS: 456-2000 with minimum cement content as per IRC-21-2000. 3) The cement consumption considered for this item is 400 kg/m³ of concrete. For variation in cement consumption due to mix design sub para B.6.4 of B -6 of specification shall be applicable. 4) Use of admixture in appropriate quantity shall be permitted , however no extra payment will be made on that account. 5) Mix design shall be done from Govt. Laboratory and approved by Engineer in charge. 6) Mix design shall be redone whenever there is change in source of quarry materials or after every months whichever is earlier. 7) For all R.C.C. and concreting work , blended cement may be used , confirming to IS 1489 (Part 1) after confirmation of due tests. 8) The minimum curing period shall be as per IS 456:2000. 9) Wooden centering / shuttering is not allowed . 10) Testing of materials type and frequency shall be as per Annexure A and B attached seperately 11) Only plastic coated G.I. wires be used as binding wires. 12) Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of concrete.</p>
<p>Item No. 11 :- Providing tar paper bearing including laying in proper position etc. complete.</p>	<p>---</p>	<p>---</p>	<p>As directed by Engineer-in-charge.</p>

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<p>Item No. 12 :- Providing and laying in situ / ready mix M-30 controlled cement concrete of trap metal for Reinforced Cement Concrete work in solid/ deck slab etc. including ramming, vibrating, curing, formwork, centering and finishing in cement plaster excluding reinforcement etc. complete. (with fully automatic micro processor based PLC with SCADA enabled concrete batch mix plant / pan mixer and fine aggregates of required specifications (VSI sand finely washed etc.)</p>	<p>MORT&H Specification Section No. 1700 Section No. 2300 BR - 31 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.</p>	<p>535 to 562 675 to 676 142 to 143 49 to 52</p>	<p>1) Grade of concrete shall be M-30. 2) Necessary concrete mix design of grade M-30 shall be carried out as per IS - 456 - 2000 with minimum cement content as per IRC-21-2000. 3) The cement consumption considered for this item is 400 kg. / m3 of concrete. For variation in cement consumption due to mix design as B-6 page no. 49 to 52 of specification shall be applicable. 4) Use of admixture in appropriate quantity shall be permitted, however no extra payment will be made on that account. 5) Mix design shall be done from Govt. Laboratory and approved by Engineer-in-charge. 6) Mix design shall be redone whenever there is change in source of quarry materials or after every months whichever is earlier. 7) For all R.C.C. and concreting work use of blended cement may be made confirming to IS 1489 (Part 1) after confirmation of due tests. 8) The minimum curing period shall be as per IS 456 : 2000. 9) Wooden centering / shuttering is not allowed. 10) Testing of materials type and frequency shall be as per Annexure A & B attached separately. 11) Only plastic coated G.I. wires be used as binding wires. 12) Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of concrete.</p>

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<p>Item No. 13 :- Providing and laying in situ / ready mix M-20 RCC of trap metal for RCC work of ballast walls, kerbs and box returns including scaffolding, compaction, formwork finishing and curing etc. complete. (excluding reinforcement, with fully automatic micro processor based PLC with SCADA enabled concrete batch mix plant / pan mixer with fine aggregates of required specifications (VSI sand finely washed etc)</p> <p>RCC work of Ballast walls & Kerb</p>	<p>MORT&H Specification Section No. 1700 Section No. 2200</p> <p>BR - 38 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.</p>	<p>535 to 562 669 to 672 149 to 150 49 to 52</p>	<p>1) Grade of concrete shall be M-20. 2) Necessary concrete mix design of grade M-20 shall be carried out as per IS - 456 - 2000 with minimum cemen content as per IRC-21-2000. 3) The cement consumption considered for this item is 350 kg. / m3 of concrete. For variation in cement consumption due to mix design as B-6 page no. 49 to 52 of specification shall be applicable. 4) Use of admixture in appropriate quantity shall be permitted, however no extra payment will be made on that account. 5) Mix design shall be done from Govt. Laboratory and approved by Engineer-in-charge. 6) Mix design shall be redone whenever there is change in source of quarry materials or after every months whichever is earlier. 7) For all R.C.C. and concreting work use of blended cement may be made confirming to IS 1489 (Part 1) after confirmation of due tests. 8) The minimum curing period shall be as per IS 456 : 2000. 9) Wooden centering / shuttering is not allowed. 10) Testing of materials type and frequency shall be as per Annexure A & B attached separately. 11) Only plastic coated G.I. wires be used as binding wires. 12) Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of</p>
<p>Item No. 14 :- Providing expansion joints with 25 millimeter thick bituminous pad as per detailed drawings etc. complete.</p>	<p>BR - 32</p>	<p>143 to 145</p>	<p>As directed by Engineer-in-charge.</p>
<p>Item No. 15 :- Providing and laying in situ / ready mix M-20 cement concrete of trap metal for wearing course 8 centimeter thick including compacting, finishing, curing and filling in joints with bitumen etc. complete. (with fully automatic micro processor based PLC with SCADA enabled concrete batch mix plant / pan mixer with fine aggregates of required specifications (VSI sand finely washed etc.)</p>	<p>BR-35</p>	<p>146 to 148 Red Book Volume-I 2012</p>	<p>As directed by Engineer in charge.</p>

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Item No. 16 :- Providing, cutting, bending, hooking, tying and laying in position TMT FE 500 steel bars for reinforcement for all RCC works as per detailed drawings etc. complete.	MORT&H Specification Section No. 1600 BR - 25 BR - 28 BR - 37	527 to 532 138 141 149	(1) Read T.M.T. Steel in place of mild steel / HYSD steel. (2) Tested steel bars brought by contractor shall be used. (3) The steel shall be tested and confirm to relevent I.S. code / specifications. (4) The bar bending schedule should be submitted and got approved from the Engineer-in-charge. (5) The measurement and payment shall be made based on weight of steel actually used for work under particular item of reinforcement. (6) As directed by Engineer-in-charge.
Item No. 17 :- Providing 100 millimetre diameter Galvanised Iron water spouts as per detailed drawings in reinforced cement concrete slab and wearing surface / kerb etc. complete.	MORT&H Specification Section 2705 BR - 41 BR - 36	754 to 755 156 to 157 149	As directed by Engineer in charge.
Item No. 18 :- Providing and filling annular space around footing in rock by using concrete of M-15 grade etc. complete.	MORT & H Section 2100	'663 to 666	As directed by Engineer in charge.
Item No. 19 :- Providing and laying 0.90 meter thick metal mat consisting of rubble, oversize metal and normal size metal in specified thickness as per detailed drawing including supplying all materials, hand packing of rubble, spreading metal in layers and hard murum including watering and compaction with power roller etc. complete.	MORT&H Section 2504, 2505	709 to 712	As directed by Engineer in charge.
Item No. 20 :- Providing railing of mild steel angle post 2.0 metre center to center of section 75 millimetre x 75 millimetre x 10 millimetre or equivalent I/C section of height 1.05 above bridge surface with minimum anchor length of 30 centimetre including hold fast of 25 millimetre diameter Mild Steel bar welded at the bottom and concreting of 1:3:6 of size 30 centimetre x 30 centimetre x 30 centimetre with three rows of 40 millimetre B class Galvanised Iron pipe provided at 30 centimetre on center to center including scaffolding and one coat of anticorrosive paint with two coats of oil painting, curing of concrete etc. complete.	MORT&H Specification Section 2703	752 to 753	Work shall be carried out as directed by Engineer-in-charge.

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Item No. 21 :- Providing dry rubble stone pitching 23 cm. (about 9") thick including all material, quarry spalls, labour etc. complete.	Rd - 60 Red Book Volume - I (2012)	413	As directed by Engineer-in-charge.
Item No. 22 :- Excavation for catch / side water gutter in all sorts of soils to the specified section including stacking the excavated stuff in a regular bund and disposing of unsuitable or excess stuff as directed all sorts of soils etc. complete.	MORT&H Section 309 Rd - 9 Red Book Volume - I (2012)	85 to 89 358 to 359	As directed by Engineer in charge
Item No. 23 :- Excavation for catch / side water gutters in hard rock by wedging and chiselling to the specified section including stacking the excavated stuff in a regular bund if necessary and disposing off unsuitable or excess stuff as directed with all leads and lifts etc.complete.	Rd - 9 Red Book Volume - I (2012)	358 to 359	This shall include isolated boulders above 0.10 cubic metre volume which do not require blasting. Useful material obtained from excavation shall be conveyed and stacked properly as directed by Engineer in charge.
Item No. 24 :- Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50 metre and spreading for embankment or stacking as directed.	MORT&H Section 301 Rd - 2 Red Book Volume - I (2012)	45 to 53 351 to 354	As directed by Engineer in charge
Item No. 25 :- Excavation for roadway in hard rock by controlled blasting including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stocking as directed. (Including 50% Utilisation of useable Excavated material)	MORT&H specification Section No. 100 Section 301 303	1 to 33 45 to 53 56 to 58	Strata classification shall be decided by Executive Engineer and his decision shall be final and binding on contractor. The payment of this item shall be made on level basis only. This shall include isolated boulders above 0.10 cubic metre volume which do not require blasting. Useful material from excavation shall be conveyed and stacked properly as directed by Engineer in charge.
Item No. 26 :- Picking the B. T. road surface (Scarifying existing B. T.) including sectioning etc. complete.	MORT&H section 402 3.8		As directed by Engineer-in-charge.

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<p>Item No. 27 :- Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting with Intelligent Compactor with compaction analyzer and V-Sat attachment to the required density. Grading I (Using Screening Type A (13.2 millimetre) Aggregate)</p>	<p>MORT & H specification Section 101 to 121 404</p>	<p>1 to 33 121 to 129</p>	<p>Work shall be carried out as directed by the Engineer-in-charge. Payment shall be made on level basis only.</p>
<p>Item No. 28 :- Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting with Intelligent Compactor with compaction analyzer and V- Sat attachment to the required density. Grading II (Using Screening Type B (11.2 millimetre) Aggregate)</p>	<p>MORT & H specification Section 101 to 121 404</p>	<p>1 to 33 121 to 129</p>	<p>Work shall be carried out as directed by the Engineer-in-charge. Payment shall be made on level basis only.</p>
<p>Item No. 29 :- Providing and constructing 50 millimetre thick Modified Penetration Macadam (MPM) road surface including all materials, preparing the existing road surface, spreading 40 millimetre stone layers metal 100% crusher broken metal with conical crusher palnt, heating and spraying the bitumen of specified grade @ 1.75 kilogram / square metre, spreading 12 millimetre size chips compacting with Static roller having weight 8 to 10 Metric Ton to achive the desired degree of compaction as per Technical Specification Clause 506 etc. complete, including applying tack coat at the rate of 0.30 kilogram / square metre on existing bitumen surface. (on existing bitumen surface)</p>	<p>MORT&H specification Section 501 503 Rd - 66 Red Book Volume - I (2012)</p>	<p>149 to 165 168 to 170 422 to 423</p>	<p>Work shall be carried out as directed by the Engineer-in-charge. For penetration and for tack coat VG-30 grade bulk Bitumen shall be used. Tack coat shall be applied at the rate of 3 kilogram / 10 square metre and bitumen shall be used for penetration 17.50 kilogram / 10 square metre instead of 50 kilogram / 10 square metre as mentioned in the standard specification on page no. 173.</p>

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<p>Item No. 30 :- Open Graded Premix Surfacing- Providing and Laying OGC 20 millimetre thickness composed of 13.2 millimetre to 5.6 millimetre aggregates premixed with bituminous binder transported to site with VTS , laid over a previously prepared surface, finished to the required grade, level, alignment and rolling to achieve the desired compaction, including tack coat at the rate 3.00 kilogramme per 10 square metre. For Bitumen VG-30 bulk—USING drum mix type hot mix plant with SCADA, Paver and Vibratory roller. (Over M. P. M. surface)</p>	<p>MORT & H specification Section 101 to 121 501 503 510 511 Red Book Volume - I (2012) Rd - 45 Rd - 68</p>	<p>1 to 33 149 to 165 168 to 170 198 to 205 205 to 207 396 425</p>	<p>For carpet and for tack coat VG-30 grade bulk asphalt shall be used. Tack coat shall be applied at the rate 3.00 kilogramme per 10 square metre and for seal coat at the rate of 9.80 kilogramme / 10 square metre by using mechanical sprayer only.</p>
<p>Item No. 31 :- Providing bituminous Type A liquid seal coat on bituminous surface including supplying all materials and bitumen of VG-30 grade preparing existing road surface, heating and applying bitumen @ 0.98 kilogram / Square Metre by mechanical means, spreading chips and rolling, by static roller having weight 8 to 10 Metric Ton etc. complete.</p>	<p>MORT & H specification Section 101 to 122 501 511 Rd - 45 Red Book Volume - I (2012)</p>	<p>1 to 33 149 to 165 205 to 207 396</p>	<p>The bitumen grade shall be of 60/70 and shall applied at the rate of 9.80 kilogramme / 10 square metre. The application of bitumen shall be done by mechanical sprayer only.</p>
<p>Item No. 32 :- Supplying hard murum/ kankar at the road site, including conveying and stacking complete.</p>	<p>MORT&H specification Setion 408 Rd-23</p>	<p>'139 to 142 375 to 376</p>	<p>Work shall be carried out as per directions of Engineer in charge.</p>
<p>Item No. 33 :- Spreading hard murum/ soft murum/ gravel or kankar for side width etc. complete.</p>	<p>MORT & H specification Section 408 Rd - 28</p>	<p>139 to 142 379</p>	<p>5% slope shall be kept for side shoulder during execution.</p>

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Item No. 34 :- Compacting the hard murum side widths including laying in layers on each side with vibratory roller including artificial watering etc. complete.	MORT & H specification Section 408 Rd - 30 Rd - 32	139 to 142 380 to 381 382	Work shall be carried out as directed by the Engineer-in-charge.
Item No. 35 :- Providing earth work in embankment with approved materials obtained from other sources upto lead of 50 metre including all lifts, laying in layers of 20 centimetre to 30 centimetre thickness breaking clods, dressing to the required lines, curves, grades and section, watering and compaction with vibratory roller with V-Sat attachment to achieve not less than 97 % of standard proctor density etc. complete.	MORT&H Section No. 100 Section 305 Rd - 12 Red Book Volume - I (2012)	1 to 33 63 to 77 361 to 366	i) The material obtained from other sources shall be used in layers of 20 to 30 cm. thick loose in each layers and rolling should be done with vibratory roller to required density. ii) The payment of this item shall be on level basis only.
Item No. 36 :- Providing and fixing cautionary/warning sign board of size 60 centimetre having shape of equilateral triangle with apex point upwards prepared on 16 gauge Mild Steel sheet including painting with one coat of zinc cromate stoving primer and two coats each of white back ground, red border and back side gray stove enamelled, bonded with cut out of Retro reflective sheet Engineering grade, symbol/ letters/ numerals/ border/ arrow, coated with nonpealable crystal clear protective transparent coat retaining 100% reflection including one number of Mild Steel Angle iron post of size 50 x 50 x 5 millimetre of 3.65 metre long inflated at bottom drilled on top in one piece without joint painted with white and black bands of 30 centimetre fixing board and post with 2 Nos. high strength G.I. bolts and nuts of size 10 millimetre diametre and 20 millimetre long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60 centimetre x 60 centimetre x 75 centimetre size etc. complete. 60 centimetre equilateral triangle Mild Steel sheet with Engineering grade.	MORT & H specification Section 801 IRC 67 - 1977 Circular No. RW / NH- 33023 / 31 / 88 D. O. III dated 2-5-94 and 11-5-94	325 to 335 646 to 654	As directed by Engineer in charge and as per wording of item.

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<p>Item No. 37 :- Providing and fixing Mandatory / Regulatory sign board of circular shape of size 60 centimetre diametre prepared on 16 gauge Mild Steel sheet including painting with zinc chromate stoving primer and two coats each of white back ground,red border and backside gray stove enamelled, bonded with cut out of Retro reflective sheet Engineering grade, symbol / letters / numerals / border, coated with non pealable crystal clear protective transparent coat retaining 100% relection including one One Number of M.S. Angle iron post of size 50 x 50 x 5 mm of 3.45 m. long inflated at bottom drilled on top in one piece without joint painted with white and black bands of 30 cm. fixing board and post with 2 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20 mm long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60 cm x 60 cm x 75 cm size etc. complete. circular shape of size 60 cm. dia. M.S. sheet with Retro reflective sheet Engineering grade.</p>	<p>MORT & H specification Section 801 IRC 67 - 1977 Circular No. RW / NH- 33023 / 31 / 88 D. O. III dated 2-5-94 and 11-5-94</p>	<p>325 to 335 646 to 654</p>	<p>As directed by Engineer in charge and as per wording of item.</p>

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<p>Item No. 38 :- Providing and fixing of retro- reflectorised informatory sign board rectangular/Square in shape having area greater than 0.9 One Square Meterr made out of 4 mm aluminum composite panel with 0.5 mm skin thickness on either side bonded with white retro reflective sheeting of Class B (Type IV High intensity micro-prismatic grade sheeting-HIP) having pressure sensitive adhesive retroreflective specified back ground, border and back side retoreflective symbols, letters, numerals, arrow as per IRC:67-2012 Table No 8.3, supported with back support frame 25mm x 25mm x 3mm, duly painted on back side with two coats of grey stove enamel paint and supported on two no. mild steel angle iron post 75 mm x 75 mm x 6 mm, 3.5 mt ~ 3.9 mtlong firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing The angle iron post shall be duly painted with one coat of epoxy primer and two coats of epoxy finish paints having alternate black and white bands of 25 cm width including fixtures and transportation etc.complete.The nut bolts of board with angle iron post/supporting structure after fixing at site has to be electrically welded.</p> <p>Class B (Type IV High intensity micro-prismatic grade sheeting-HIP) sheeting shall have 7 years written warranty from the manufacturer including the Digitally Printed areas with approved printing technology with sheeting manufacturer approved inks and laminated with UV overlay film and this warranty certificate along with sheeting manufacturer attested 3 years outdoor weathering test report from Indian govt lab must be submitted to the Engineer in charge by the contractor/supplier.</p>	<p>MORT & H specification Section 801 IRC 67 - 1977 Circular No. RW / NH- 33023 / 31 / 88 D. O. III dated 2-5-94 and 11-5-94 Red Book Volume - I (2012)</p>	<p>325 to 335 646 to 654</p>	<p>i) Item shall be executed as per direction of Engineer in charge. ii) Seven year warranty bond for Retro reflective sheeting is necessary and must submitted.</p>

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<p>Item No. 39 :- Providing and Laying hot applied thermoplastic road marking strip on Bituminous Surface of specified shade/ colour of 2.5 mm thick including 1.5 Refractive index reflectorizing glass beads @ 250gm/sqm .Thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC 35:2015. Initial Dry reflectivity RL shall be > 250 mcd/sqm/lux measured in the initial 7 days and sustained reflectivity RL of 100 mcd/sqm/ lux and Qd of 100 mcd/sqm/ lux measured at the end of 2 years by means of a Standard Reflectometer of Zehntner, Easylux, Delta make capable of measuring RL & QD both according to IRC 35:2015 clause 15.5. The finished surface to be level, uniform, and free from streaks and holes complete as per direction of Engineer-in-charge and in accordance with applicable specifications. (Refer MORTH Clause 803 for technical Specification and Performance for IRC 35:2015).</p>	<p>MORT & H specification clause no. 803</p>	<p>338 to 352</p>	<p>i) Item shall be executed as per direction of Engineer in charge.</p>
<p>Item No. 40 :- Metal Beam Crash Barrier -- Type - A, W : Metal Beam Crash Barrier (Providing and erecting a W metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810)""</p>	<p>MORT&H Section 803.4</p>	<p>338 to 352</p>	<p>As directed by Engineer in charge.</p>

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<p>Item No. 41 :- Providing and fixing board displaying information, such as 'Name of work, Tender cost, Name of Contractor, Work completion and liability period etc', having rectangular shape of 1.20m x 0.90m size made out 18 gauge (1.25mm) thick mild steel sheet painted with one coat of Zinc chromate stoving primer and two coats of enamel paint on front side and grey stove enamel on back side and border / messages / symbols etc. with approved colour shade paint complete, on M.S.angle of size 35 x 35 x 3 mm frame with properly cross braced M.S. angles of size 35mmx35mmx3mm duly painted including Two M.S. angle iron posts of size 65 mm x 65 mm x 6 mm, 3.65 m long painted with alternate black and white bands of 25 cm width including all fixtures etc.and fixing the boards in 1:4:8 concrete block of size 60 cm x 60 cm x 75 cm including, excavation, refilling, transportation, and labour etc complete.</p>	<p>MORT & H specification Section 801 IRC 67 - 1977 Circular No. RW / NH- 33023 / 31 / 88 D. O. III dated 2-5-94 and 11-5-94</p>	<p>325 to 335 646 to 654</p>	<p>As directed by Engineer in charge and as per wording of item.</p>
<p>Item No. 42 :- Providing and fixing Reinforced Cement Concrete 200 metre stones as per I.R.C. standard including fixing in standard size Cement Concrete 1:4:8 block including curing, painting lettering etc. complete.</p>	<p>MORT & H specification Section 805 Rd - 56</p>	<p>356 to 357 410 to 411</p>	<p>Item shall be executed as per direction of Engineer in charge.</p>
<p>Item No. 43 :- Providing and fixing Reinforced Cement Concrete 1:2:4 ordinary kilometre stones including painting numbering etc. complete for N.H./ S.H./ M.D.R. etc. as per IRC design for highway kilometre stone and fixing in standard size Cement Concrete 1:4:8 block etc. complete.</p>	<p>MORT & H specification Section 805 Rd - 56</p>	<p>356 to 357 410 to 411</p>	<p>Item shall be executed as per direction of Engineer in charge.</p>
<p>Item No. 44 :- Providing and fixing stream lined M-20 grade RCC guard stone including mild steel bar reinforcement etc. complete.</p>	<p>MORT & H specification Section 805 Rd - 56</p>	<p>356 to 357 410 to 411</p>	<p>Item shall be executed as per direction of Engineer in charge.</p>

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Item No. 45 :- Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	MORT&H specification Section No. 100 Section 304 BR.3	1 to 33 59 to 62 113 to 114	Work shall be done as per directions of Engineer in charge.
Item No. 46 :- Excavation for foundation in hard murum and boulders including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	MORT&H specification Section No. 100 Section 304 2903 BR - 3 c	1 to 33 59 to 62 783 to 784 113 to 114	Strata classification shall be decided by Executive Engineer and his decision shall be final and binding on contractor. The payment of this item shall be made on level basis only. This shall include isolated boulders upto 0.10 cubic metre volume which do not require blasting.
Item No. 47 :- Providing soling using 80 millimeter size trap metal in 15 centimeter layer including filling voids with Crushed sand/grit, ramming, watering etc. complete.	Bd A 12 'Red Book Volume-II 2012	19	The size of trap metal should be 80 millimeter and sample of metal shall be approved from Engineer - in- Charge before use and the item shall be carried out as per wording of the item and as directed by Engineer-in-charge.
Item No. 48 :- Providing and laying in situ / ready mix cement concrete of M-10 proportion with trap metal in foundation including necessary form work, compacting and curing etc. complete. (with reversible drum type mixer with SCADA with fine aggregates of required specifications (Natural sand / VSI sand finely washed etc)	MORTH Specification Section 2904 BR - 5 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.	784 116 to 117 49 to 52	Work shall be executed as directed by Engineer in charge.

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Item No. 49 :- Providing and laying in situ M-25 cement concrete of trap metal with 15% plum of trap stones for retaining walls and jetty etc. including necessary formwork, compacting, curing, bailing out water manually in tidal range etc. complete.	MORT&H specification Section No. 1700 Bd. E. 1	532 to 562 69 to 70	Work shall be executed as directed by Engineer in charge. Payment shall be made on level basis only.
Item No. 50 :- Providing and laying weep holes of 100 mm diameter PVC pipes as per drawing for abutment returns, return walls etc. Complete	MORT&H Section 2706 2707,2708 (v) & 2709	755 to 756 MORTH 2013	As directed by Engineer in charge.
Item No. 51 :- Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.	MORT&H specification Section No. 100 Section 304 BR.3	1 to 33 59 to 62 113 to 114	Work shall be done as per directions of Engineer in charge.
Item No. 52 :- Excavation for foundation in hard rock by blasting including shoring and strutting as necessary and disposing off excavated stuff as directed etc. complete.	MORT&H specification Section No. 100 Section 304 BR - 3 e, f, g	1 to 33 59 to 62 113 to 114	This shall includes isolated boulders above 0.1 cum. volume each. Useful material from excavation shall be conveyed and stacked properly as directed by Engineer in charge.
Item No. 53 :- Providing rubble filling of trap stones for foundations including filling voids with sand/grit and compaction etc complete.	BDA 13	20 'Red Book Volume-II 2012	As directed by the Engineer-in-charge.

1	2	3	4
<p>Item No. 54 :- Providing and laying in situ / ready mix M-10 cement concrete of trap metal in foundation including necessary centering, formwork, bailing out water, compacting and curing etc. complete. (with fully automatic micro processor based PLC with SCADA enabled with reversible drum type mixer/ concrete batch mix plant (pan mixer) with natural /artificial sand)</p>	<p>MORTH Specification Section 2904 BR - 5 B - 6 (except for Mix proportions) Mix proportions shall be as per mix design.</p>	<p>784 116 to 117 49 to 52</p>	<p>Work shall be executed as directed by Engineer in charge.</p>
<p>Item No. 55 :- Providing cast in situ / ready mix M-25 grade cement concrete for head walls of CD work / retaining walls etc. including necessary form work, compaction, finishing and curing etc. complete. (with reversible drum type mixer/ concrete batch mix plant (pan mixer) with SCADA with Natural / VSI standard Artificial Sand)</p>	<p>BR - 24 B-6 Red Book Volume - I (2012) MORT&H Specification Section 2901 2908 2910</p>	<p>137 to 138 49 to 52 783 786 786</p>	<p>1) Grade of concrete shall be M-25. 2) The cement consumption considered for this item is 375 kg. / m³ of concrete. For variation in cement consumption due to mix design B-6 para 6.4 page 49 to 52 of specification shall be applicable. 3) Use of admixture in appropriate quantity shall be permitted, however no extra payment will be made on that account. 4) Mix design shall be done from Govt. Laboratory and approved by Engineer-in-charge. 5) Mix design shall be redone whenever there is change in source of quarry materials or after every months whichever is earlier. 6) For all R.C.C. and concreting work use of blended cement may be made confirming to IS 1489 (Part 1) after confirmation of due tests. 7) The minimum curing period shall be as per IS 456 : 2000. 8) Wooden centering / shuttering is not allowed. 9) Testing of materials type and frequency shall be as per Annexure A & B attached separately. 10) Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of concrete.</p>

1	2	3	4
Item No. 56 :- Providing and laying cement concrete pipes of IS-458-2003 NP-3 class of 900 milimetre diametre for C. D. work in proper lines, level and slope including providing and fixing collars in cement mortar 1:2 and curing including all lead and lifts etc. complete.	MORTH Section No. 2900 CD - 5	783 to 786 319 to 320	i) The pipe shall be laid as mentioned in specification. ii) Proper sequence of both earthwork and pipe laying shall be maintained. iii) Due care shall be taken while compacting soil so that pipe shall not be damaged.
Item No. 57 :- Providing selected hard murum filling including laying in layers of 15 to 20 centimetres watering and compacting etc. complete.	CD - 8 Red Book Volume - I (2012)	321	Work shall be carried out as directed by the Engineer-in-charge.
Item No. 58 :- Royalty charges for various building construction bonafied materials which are to be use for Government bonfied works and for which Royalty charges are to be paid by the contractor.	---	---	Royalty shall be paid to the contractor only after submission of receipt duly sign by competent Revenue authority.
Item No. 59 :- Carrying out various test in Government P.W.D. Laboratory as per relevant standards and submitting test results to Engineer-in-charge or his representative and retesting if required, including taxes, overheads and other allied charges etc. complete.	MORT & H specification Section 903	421 to 436	1) As directed by Engineer in charge. Number of tests to be taken as per frequency chart. 2) Testing charges shall be reimbursed to the Agency after submission of satisfactory test results obtained from Government Laboratory, on production of authorised receipts of bills paid.

1	2	3	4
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B L A N K P A G E

SPECIFICATION FOR MODIFIED PENETRATION MACADAM

Rd.66. providing and laying 50 mm / 75 mm thick penetration Macadam including all materials, preparing road surface, laying metal layer, heating & applying bitumen spreading chips, compacting etc. complete.

Rd.66.1 General - The item providing for 50 mm / 75 mm thick penetration Macadam as per the following specification including all necessary materials, labour, use of equipment etc. complete. The item includes tack coat and seal coat.

Rd.66.2 Materials - Materials shall conform to Rd.65.3 with modification of grading of aggregates as under.

Sieve Designation	Percent by Weight passing the sieve			
	For 50 mm compacted		For 75 mm compacted	
	Coarse	Key	Coarse	Key
Key	Aggregate	Aggregate	Aggregate	Aggregate
63 mm.	--	--	100	--
53 mm.	100	--	--	--
45 mm.	--	--	58-82	--
26.5 mm	37-72	--	--	100
22.4 mm	--	100	5-27	50-75
13.2 mm	2-20	50-75	--	--
11.2 mm	--	--	--	5-25
5.6 mm	--	5-25	--	--
2.8 mm	0-5	0-5	0-5	0-5

The Los Angeles abrasion value shall be 40 % max and impact value shall be 30% max.

Quantities of Materials Required for 10 sqm. of Road surface For Bituminous Penetration Macadam Base / Binder Course.

Compacted thickness	Binder		Coarse Aggregate	Key Aggregate
	Straight run bitumen	Road Tar RT-4/Rt-9		
50 mm	50 kg	60-65 kg	0.60 Cum	0.15 Cum
75 mm	68 kg	82-88 kg	0.90 Cum	0.18 Cum

Rd.66.3 Construction-

This shall conform to Rd.65.3 except that the quantities shall be as specified in Rd.65.2.

Rd.66.4 Item to include - As per Rd.65.4.

Rd.66.5 Mode of Measurement and payment - As per Rd.65.5

Contractor

No. of Corrections

Executive Engineer

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GUARANTEE BOND FOR SECURITY DEPOSIT**(ON STAMP PAPER WORTH RUPEES 500 / -)**

In consideration of the Governor of Maharashtra (herein after referred to as “ the Government “) having agreed to exempt _____ (herein after referred to as “ the contractor “) from depositing with the Government in cash the sum of Rs. _____ (Rupees _____ only.) being the amount of security deposit payable by the Contractor to the Government under the terms and conditions of the agreement dated the _____ day of _____ 20__ and made between the Government on the one part, and the Contractor of the other part (hereinafter referred to as “ the said Agreement “) for _____ as security for due observance and performance by the Contractor of the term.s and conditions of the said agreement, on the contractor furnishing to the Government a Guarantee in the prescribed form of a Schedule bank in India being in fact those presents in the like sum of Rs. _____ (Rs. _____ only.)

We _____ BANK / LIMITED registered in India under _____ Act and having one of our Local Head office at _____ do hereby.

1. GUARANTEE TO THE GOVERNMENT :

- (a) Due performance and observance by the Contractor of the terms, covenants and conditions on the part of the contractor contained in the said Agreement **and**
- (b) Due and punctual payment by the Contractor to the Government of all sums of money, losses, damages, costs, charges, penalties and expenses payable to the Government by the contractor under or in respect of the said Agreement.
2. Undertake to pay to the Government on demand and without demur and notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding filed in any Court of Tribunal relating there to the said sum of Rs. _____ (Rupees _____ only.) or such less sum may be demanded by the Government from us, our liability hereunder being absolute and unequivocal and agree that.

3.(a) The guarantee herein contained shall remain in full force and effect during the subsistence of the said Agreement and that the same will continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been duly paid and its claims satisfied or discharged and till the Government certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the Contractor.

(b) We shall not be discharged or released from liability under this Guarantee by reasons of

- (i) Any change in the constitution of the Bank of the Contractor; or
- (ii) Any agreement entered into between the Government and the Contractor with or without our consent .
- (iii) Any forbearance or indulgence shown to the Contractor ;
- (iv) Any variations in the terms, covenants or conditions contained in the said Agreement.
- (v) Any time given to the Contractor, or ;
- (vi) Any other conditions or circumstances under which, in law, a surety would be discharged.

(c) Our liability herein under shall be joint and several with that of the Contractor as if we were the principal debtors in respect of the said sum of Rs. _____ (Rupees _____ only.) and

(d) We shall not revoke this guarantee during its currency except with the previous consent in writing of the Government.

IN WITNESS WHERE OF THE common seal of _____ has been herein affixed this _____ day of _____ 20___. The common seal of _____ was pursuant to the resolution of the Board of Directors of the company dated the _____ day of _____ 20___. herein affixed in the presence of _____ who, in token thereof, have hereto set their respective hands in the presence of .

(1) _____

(2) _____

INTEGRITY PACT

Between

Public Works Department, Maharashtra Government
having its Office at Bandhkam Bhavan, Fort, Mumbai – 400 001

hereinafter referred to as

“ PUBLIC WORKS DEPARTMENT ”

and

(Insert the name of the Sole Bidder / Lend Partner of Joint Venture)

having its Registered Office at –

(Insert full address)

and

(Insert the name of the Partner(s) of Joint Venture, as applicable)

having its Registered Office at -

(Insert full address)

hereinafter referred to as

“ The Bidder / Contractor ”

Preamble

PUBLIC WORKS DEPARTMENT intends to award, under laid-down organizational procedures, contract(s) for –

(Insert the name of the package)

(Signature)
(For and On behalf of PUBLIC
WORKS DEPARTMENT)

(Signature)
(For and On behalf of Bidder / Partner(s)
of Joint Venture / Contractor)

Contractor

No. of Corrections

Executive Engineer

Package and Specification Number (Insert Specification Number of the package)

PUBLIC WORKS DEPARTMENT values full compliance with all relevant laws and regulations, and the principles of economical use of resources, and of fairness and transparency in its relations with its Bidders / Contractors.

In order to achieve these goals PUBLIC WORKS DEPARTMENT and the above named Bidder / Contractor enter into this agreement called '**Integrity Pact**' which will form a part of the bid.

It is hereby agreed by and between the parties as under :

Section I – Commitments of PUBLIC WORKS DEPARTMENT

- (1) PUBLIC WORKS DEPARTMENT commits itself to take all measures necessary to prevent corruption and to observe the following principles :
 - a) No employee of PUBLIC WORKS DEPARTMENT, personally or through family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept, for him/herself or third person, any material or other benefit which he/she is not legally entitled to.
 - b) PUBLIC WORKS DEPARTMENT will during the tender process treat all Bidder(s) with equity and fairness. PUBLIC WORKS DEPARTMENT will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - c) PUBLIC WORKS DEPARTMENT will exclude from evaluation of Bids its such employee(s) who has any personnel interest in the Companies / Agencies participating in the Bidding / Tendering Process.
- (2) If Principle Secretary PWD, Maharashtra Government obtains information on the conduct of any employee of PUBLIC WORKS DEPARTMENT which is a criminal offence under the relevant anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, he will inform its Chief Vigilance Officer and in addition can initiate disciplinary actions under its Rules.

Section II – Commitments of the Bidder / Contractor

- (1) The Bidder / Contractor commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution :

(Signature)

(For and On behalf of PUBLIC
WORKS DEPARTMENT)

Contractor

(Signature)

(For and On behalf of Bidder / Partner(s)
of Joint Venture / Contractor)

No. of Corrections

Executive Engineer

- a) DEPARTMENT's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange an advantage during the tender process or the execution of the contract.
 - b) The Bidder / Contractor will not enter into any illegal agreement or understanding, whether formal or informal with other Bidders / Contractors. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c) The Bidder / Contractor will not commit any criminal offence under the relevant Anti-corruption Laws of India; further, the Bidder / Contractor will not use for illegitimate purposes or for purposes of restrictive competition or personal gain, or pass on to others, any information provided by PUBLIC WORKS DEPARTMENT as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d) The Bidder / Contractor of foreign origin shall disclose the name and address of the Agents / representatives in India, if any, involved directly or indirectly in the Bidding. Similarly, the Bidder / Contractor of Indian Nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the Bidding.
 - e) The Bidder / Contractor will, when presenting his bid, disclose any and all payments he has made, or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and/or with the execution of the contract.
 - f) The Bidder / Contractor will not misrepresent facts or furnish false / forged documents / informations in order to influence the bidding process or the execution of the contract to the detriment of PUBLIC WORKS DEPARTMENT.
- (2) The Bidder / Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section III – Disqualification from tender process and exclusion from future contracts

- (1) If the Bidder, before contract award, has committed a serious transgression through a violation of Section II or in any other form such as to put his reliability or credibility as Bidder into question, PUBLIC WORKS DEPARTMENT may disqualify the Bidder from the tender process or terminate the contract, if already signed, for such reason.

(Signature)
(For and On behalf of PUBLIC
WORKS DEPARTMENT)

(Signature)
(For and On behalf of Bidder / Partner(s)
of Joint Venture / Contractor)

Contractor

No. of Corrections

Executive Engineer

- (2) Section II such as to put his reliability or credibility into question, PUBLIC WORKS DEPARTMENT may after following due procedures also exclude the Bidder / Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstance of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder / Contractor and the amount of the damage. The exclusion will be imposed for a minimum of 12 months and maximum of 3 years.
- (3) If the Bidder / Contractor can prove that he has restored / recouped the damage caused by him and has installed a suitable corruption prevention system, PUBLIC WORKS DEPARTMENT may revoke the exclusion prematurely.

Section IV – Liability for violation of Integrity Pact

- (1) If PUBLIC WORKS DEPARTMENT has disqualified the Bidder from the tender process prior to the award under Section III, PUBLIC WORKS DEPARTMENT may forfeit the Bid Guarantee under the Bid.
- (2) If PUBLIC WORKS DEPARTMENT has terminated the contract under Section III, PUBLIC WORKS DEPARTMENT may forfeit the Contract Performance Guarantee of this contract besides restoring to other remedies under the contract.

Section V – Previous Transgression

- (1) The Bidder shall declare in his Bid that no previous transgressions occurred in the last 3 years with any other Public Sector Undertaking or Government Department that could justify his exclusion from the tender process.
- (2) If the Bider makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section VI – Equal treatment to all Bidders / Contractors

- (1) PUBLIC WORKS DEPARTMENT will enter into agreements with identical conditions as this one with all Bidders.
- (2) PUBLIC WORKS DEPARTMENT will disqualify from the tender process any bidder who does not sign this Pact or violate its provisions.

(Signature)
 (For and On behalf of PUBLIC
 WORKS DEPARTMENT)

(Signature)
 (For and On behalf of Bidder / Partner(s)
 of Joint Venture / Contractor)

Section VII – Punitive Action against violating Bidders / Contractors

If PUBLIC WORKS DEPARTMENT obtains knowledge of conduct of a Bidder or a Contractor or his subcontractor or of an employee or a representative or an associate of a Bidder or Contractor or his Subcontractor which constitutes corruption, or if PUBLIC WORKS DEPARTMENT will inform the Chief Vigilance Officer (CVO).

Section VIII – Independent External Monitor / Monitors

- (1) PUBLIC WORKS DEPARTMENT has appointed a panel of Independent External Monitors (IEMs) for this Pact with the approval of Central Vigilance Commission (CVC), Government of India, out of which one of the IEMs has been indicated in the NIT/IFB.
- (2) The IEM is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement. He has right of access to all project documentation. The IEM may examine any complaint received by him and submit a report to Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT, at the earliest. He may also submit a report directly to the CVO and the CVC, in case of suspicion of serious irregularities attracting the provisions of the PC Act. However, for ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter shall be referred to the full panel of IEMs, who would examine the records, conduct the investigations and submit report to Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT, giving joint findings.
- (3) The IEM is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. he reports to the Principle Secretary, PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT.
- (4) The Bidder(s) / Contractor(s) accepts that the IEM has the right to access without restriction to all documentation of PUBLIC WORKS DEPARTMENT related to this contract including that provided by the Contractor / Bidder. The Bidder / Contractor will also grant the IEM, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his documentation. The same is applicable to Subcontractors. The IEM is under contractual obligation to treat the information and documents of the Bidder(s) / Contractor(s) / Subcontractor(s) with confidentiality.
- (5) PUBLIC WORKS DEPARTMENT will provide to the IEM information as sought by him which could have an impact on the contractual relations between PUBLIC WORKS DEPARTMENT and the Bidder/Contractor related to this contract.

(Signature)
(For and On behalf of PUBLIC
WORKS DEPARTMENT)

Contractor

(Signature)
(For and On behalf of Bidder / Partner(s)
of Joint Venture / Contractor)

No. of Corrections

Executive Engineer

- (6) As soon as the IEM notices, or believes to notice, a violation of this agreement, he will so inform the Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT and request the Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT to discontinue or take corrective action, or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the IEM shall give an opportunity to PUBLIC WORKS DEPARTMENT and the Bidder / Contractor, as deemed fit, to present its case before making its recommendations to PUBLIC WORKS DEPARTMENT.
- (7) The IEM will submit a written report to the Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT within 8 to 10 weeks from the date of reference or intimation to him by PUBLIC WORKS DEPARTMENT and, should the occasion arise, submit proposals for correcting problematic situations.
- (8) If the IEM has reported to the Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT, a substantiated suspicion of an offence under relevant ANti-Corruption Laws of India, and the Principle Secretary PWD, Maharashtra Government, PUBLIC WORKS DEPARTMENT has not, within the reasonable time taken visible action to proceed against such offence or reported it to the CVO, the Monitor may also transmit this information directly to the CVC, Government of India.
- (9) The word “**IEM**” would include both singular and plural.
 (*) This Section shall be applicable for only those packages wherein the IEMs have been identified in Section – I : Invitation for Bids and / or Clause ITB 9.3 in Section – III : Bid Data Sheets of Conditions of Contract, Volume – I of the Bidding Documents.

Section IX – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor after the closure of the contract and for all other Bidder’s six month after the contract has been awarded.

Section X – Other Provisions

- (1) This agreement is subject to Indian Law Place of performance and jurisdiction is the establishment of PUBLIC WORKS DEPARTMENT. The Arbitration clause provided in the main tender document / contract shall not be applicable for any issue / dispute arising under Integrity Pact.
- (2) Changes and supplements as well as termination notices need to be made in writing.

(Signature)

(For and On behalf of PUBLIC
WORKS DEPARTMENT)

Contractor

(Signature)

(For and On behalf of Bidder / Partner(s)
of Joint Venture / Contractor)

No. of Corrections

Executive Engineer

- (3) If the Contractor is a partnership firm or a consortium or Joint Venture, this agreement must be signed by all partners, consortium members and joint Venture partners.
- (4) Nothing in this agreement shall affect the rights of the parties available under the General Conditions of Contract (GCC) and Special Conditions of Contract (SCC).
- (5) Views expressed or suggestions / submissions made by the parties and the recommendations of the CVO/IEM# in respect of the violation of this agreement, shall not be relied on or introduced as evidence in the arbitral or judicial proceedings (arising out of the arbitral proceedings) by the parties in connection with the disputes / differences arising out of the subject contract.

CVO shall be applicable for packages wherein IEM are not identified in Section IFB/BDS of Condition of Contract, Volume – I. IEM shall be applicable for packages wherein IEM are identified in Section IFB/BDS of Conditions of Contract, Volume – I.

- (6) Should one or several provisions of this agreement turnout to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(Signature)
(For and On behalf of PUBLIC
WORKS DEPARTMENT)

(Signature)
(For and On behalf of Bidder / Partner(s)
of Joint Venture / Contractor)

(Official Seal)

(Official Seal)

Name :

Name :

Designation :

Designation :

Witness 1 :
(Name and Address)

Witness 1 :
(Name and Address)

Witness 2 :
(Name and Address)

Witness 2 :
(Name and Address)

Contractor

No. of Corrections

Executive Engineer

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NAME OF WORK :- CONSTRUCTION OF V. R. B. ON HET MAUNDE ROAD AT ARUNA DAM AND IMPROVEMENT & B.T.TO ARUNA DAM LEFT BANK ALTERNATE ROAD (INCLUDING CONSTRUCTION OF CD WORK AND RETAINING WALL) TAL. VAIBHAVWADI, DIST. SINDHUDURG (PROPOSED WORK PORTION OF ROAD LENGTH IS 7.50.

DECLARATION OF THE CONTRACTOR

I/We hereby declare that I/we have made myself / ourselves thoroughly conversant with the local conditions regarding availability of all materials and labour of which I/we have based my/our rates for this tender. The specifications, and lead of materials on this work have been carefully studied and understood by me/us before submitting this tender. I/we undertake to use only the best materials approved by the **Executive Engineer, Kankavali Public Works Division, Kankavali** or his duly authorised representative before starting the work and to abide by his decision.

I/We hereby undertake to pay the labourers engaged on the work as per minimum wages Act 1948 applicable to the Zone concerned.

Signature of Contractor

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NAME OF WORK : Construction of V. R. B. on Het Maunde Road at Aruna Dam and Improvement & B.T.to Aruna Dam Left Bank Alternate Road (Including Construction of CD Work and Retaining Wall) Tal. Vaibhavwadi, Dist. Sindhudurg (Proposed Work Portion of Road Length is 7.50 Km.)

Bar Chart

Sr. No.	Item of work	TIME PERIOD											
		1 st Month	2 nd Month	3 rd Month	4 th Month	5 th Month	6 th Month	7 th Month	8 th Month	9 th Month	10 th Month	11 th Month	12 th Month
1	Diversion Road, Dismantling existing structure	■											
2	Foundation		■	■	■								
3	Substructure					■	■	■					
4	Superstructure							■	■	■	■		
5	Fixed Items											■	
6	Approach Road									■	■	■	■
7	Misc. items												■

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B L A N K P A G E

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DRAWINGS

CONTRACT DRAWINGS :-

The Contract Drawings provided for tendering purpose with the tender documents shall be used as a reference only. Contractor should visualize the nature and type of work contemplated and to ensure that the rates and prices quoted by him in the bill of quantities take due consideration of the complexities of work involved during actual execution / construction as experienced contractors in the field.

The tendered rates / prices for the work shall be deemed to include the cost of preparation, supply and delivery of all necessary drawings, prints, tracings and negatives which the contractor is required to provide in accordance with the contract.

DOCUMENTATION :

If so ordered by the Engineer-in-charge, the contractor will prepare drawings of the work as constructed and will supply original and three copies to the Engineer who will verify and certify these drawings.

Final as constructed drawings shall then be prepared by the contractor and applied in triplicate along with a micro-film of the same to Engineer for record and reference purpose at the contractors cost.

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