SECTION 1

Office of the Chief Municipal Officer, Nagar Parishad Panna,
Distt. Panna (M.P.)

No./ **134**/Tech/2026 DT 22.04.2026

Notice Inviting Tenders

This is for information of all concerned that online bids for the following works have been invited:

S. No./ Pkg /Code	Work	Probable Amount (Rs.in lakh)	FDR IN AMOUNT	Completion Period (months)
1	CONSTRUCTION OF NALA FROM BENISAGAR POND NALA DIVERSION AT WARD NO 14 PANNA MP	8416980.63	63200.00/-	06 months **INCLUDING RAINY SEASON**

1. The besides intending to particulars in this tender are required to get enrolled/registered on the e-procurement website http://www.mptenders.gov.in and get empanelled on the sub portal of public empanelment on the above portal and sub is mandatory.
2. Tender documentation can be purchased from 24.04.2026 date 17:30 to 17:30 Hrs (time) 27.04.2026 (date) & bid submission only online from http://www.mptenders.gov.in by making online payment of portal fees as online processing charges last date 30.05.2026 up to 17:30 pm.
3. Tender opening date 01.06.2026 / 12:30 Hrs (time) the bidder can participate and submit the tender having registration in equivalent category in government of Madhya Pradesh .
4. The brief tender notice and all the conditions and specifications can be seen in details in the tender document. The nit is also available at www.mpurban.gov.in
5. Amendments to NIT, if any, would be published on website only, and not in newspaper.
6. Specification applicable for UADD ISSR 02-08-2021

CHEIF MUNICIPAL OFFICER
MUNICIPAL COUNCIL PANNA (M.P)

Notice Inviting Tender
Office of the Chief Municipal Officer Nagar Parishad Panna
Distt. Panna (M.P.)

No./134/e-tender/2026 DT. 22.04.2026

Online percentage rate bids for the following works are invited from the contractors registered in centralized registration system of MPPWD and firms of repute fulfilling registration criteria, for the works given in the table below on "Percentage Rate Basis" (Above/Below/ At par) based on Integrated Standard Schedule of Rates (ISSR) of Urban Administration & Development Department, effective from 02-08-2021:

S. No.	Name of Work	Probable Amount of Contract (Rs. in lakh)	Earnest Money Deposit (EMD) (In Rupees)	Cost of Bid Document	Category of Contractor	Period of Completion
1	CONSTRUCTION OF NALA FROM BENISAGAR POND NALA DIVERSION AT WARD NO 14 PANNA MP	8416980.63	63200.00/-	10000/-	C & Above	06 months **INCLUDING RAINY SEASON**

1. The bidders intending to participate in this tender are required to get enrolled/ registered on the e-procurement web site https://www.mptender.gov.in and get empanelled with Public Works Department.

2. Tender documents can be purchased only online at https://www.mptender.gov.in from 24.04.2026 17:30 ***(time)TENDER END DATE 30.05.2026 (date) to 17:30*** by making online payment for Tender Document Cost plus Service & Gateway Charges as per keydates.

2. At the time of submission ofthe Bid the eligible bidder shall be required to:

   a) paythe cost of Bid Document (Online);

   b) deposit the Earnest Money;

   c) Submit a check list; and

   d) Submit an affidavit.

   Details can be seen in the Bid Data Sheet

3. Earnest Money is accepted in FDR, drawn in favor of CMO Nagar Palika Parishad Panna only.

4. **ELIGIBILTY FOR BIDDERS:**

   a) At the time of submission of the Bid the bidder should have valid registration in the appropriate category with the MPPWD. However, such bidders who are not registered with the MPPWD and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.

   b) The bidder would be required to have valid registration at the time of signing of the Contract.

c) Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.

5. The Contractor shall get the structural design and crust design And Level Work Strument (for road pavement) done from any recognized Engineering College and get it approved from the Divisional Executive Engineer U.A.D.D. Gwalior at his on cost. The work shall be carried out strictly as per approved designs.

6. The construction of Road shall be strictly as per directives and provisions of Ministry of Surface Transport.

7. The execution procedure and principles mentioned in the directives issued by Directorate Urban Administration and Development vide order no..... in regard to Chief Minister Infrastructure Development scheme shall be followed.

8. **Pre-qualification –** Prequalification conditions, wherever applicable, are given in the Bid Data Sheet.

9. **Special Eligibility -** Special Eligibility Conditions, if any, are given in the Bid Data Sheet.

10. Proposed Work Should be According to Approved Estimates, Drawing, Design.

11. Work has to be completed in prescribed time limit.

Note: Following conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

E-Tendering :

- For participation in e-tendering module, it is mandatory for prospective bidders to get registration on website www.mptender.gov.in . Therefore, it is advised to all prospective bidders to get registration by making on line registration fees payment at the earliest.
- Tender documents can be downloaded from website www.mptender.gov.in. However, the tender document of those bidder shall be acceptable who have made online payment for the tender documents fee of **Rs 10000/- (Rs Ten Thousand only)** plus service & gateway charges, without which bids will not be accepted.

1 Service and gateway charges shall be borne by the bidders.

1 Since the bidders are required to sign their bids online using class-III Digital Signature Certificates, theyare advised to obtain the same at the earliest.

- For further information regarding issue of Digital Signature Certificate, the bidders are requested to visit website www.mptender.gov.in . Please note that it may take upto 7 to 10 working days for issue of Digital Signature Certificate. Client will not be responsible for delay in issue of Digital Signature Certificate.

1 If bidder is bidding first time for e tendering, then it is obligatory on the part of bidder to fulfill all formalities such as registration, obtaining Digital Signature Certificate etc. well in advance.

1 Bidders are requested to visit our e-tendering website regularly for any clarifications and/or due date extension or corrigendum.

- Bidder must positively complete online e-tendering procedure at www.mptender.gov.in

1 Client shall not be responsible in any way for delay/difficulties/ inaccessibility of the downloading facility from the website for anyreason whatsoever.

- For any type of clarifications bidders/contractors can visit www.mptender.gov.in and held desk contract No. 01204001002.

1 Interested bidders may attend the free training programme in Bhopal at their own cost. For further queryplease contact help desk.

1 The bidder who so ever is submitting the tender by his Digital Signature Certificate shall invariably upload the scanned copy of the authority letter as well as submit the copy of the same in physical form with the offer of this tender.

Apart from that, bidder has to submit separate envelopes of

1. EMD (FDR/Demand Draft) of **Rs.** 63200.00 **/- (Sixty Three Thousand Two Hundred Only)**
2. in Envelop-A and
3. Technical Bid in Envelop-B with all relevant enclosures

Envelop-A & Envelop-B are to be kept in one sealed envelope in physical form (as well as all the 3 Envelops must be submitted Online (*The third envelope i.e. Envelope-C refers to financial proposal which has to be submitted online only*). The envelopes submitted in Physical Form should be properly super scribed that this envelope contains 2 envelops of EMD and Technical bid against respective tender with due date & time of tender opening as per NIT. This envelope should be submitted physically as mentioned in Key Dates. Tenders received within specified time (e-tender as well as physical submission) shall only be opened on the date specified in presence of the bidders or their authorized representatives, whosoever may be present.

The prospective bidders, will upload scanned self-Certified copies of Requisite documents as required in e-tendering process.

The tender documents in form shall be accepted 31.05.2026 **(**12:30**)** **AM** .

Those physically submitted documents will be acceptable and considered, if, same are uploaded on the website alongwith tender offer. Cognizance of other physically submitted documents (if any) shall not be taken.

1. The physically submitted envelope of documents will be opened first. The tenders received without pre-requisite EMD shall be returned unopened to the respective bidder. The tender documents fees shall not be refunded.

Earnest Money Deposit and the tender fee:-

1 The Tender fee of **Rs 10000/- (Rs Ten Thousand only)** is to be submitted by bidder bymaking Online Payment only against Tender.

1 The EMD of **Rs. 63200.00/-** is to be submitted by bidder only in the form of FDR/DD drawn in favour of CMO, Nagar Palika, Parishad Panna. The FDR/DD of EMD shall be physically submitted in a sealed envelope super scribing "FDR/DD of EMD". The EMD must be submitted in Envelop-A.

1 No Proposal will be accepted without valid earnest money deposit and Tender Document fee paid Online.

1 The prospective bidders/contractors, submitting EMD envelope in physical form as detailed above for respective tender, will upload scanned self-certified copies of requisite EMD on the website alongwith tender offer. Only those physically submitted document regarding EMD will be acceptable and considered, if, same are uploaded in the website alongwith tender offer.

1 Any mismatch, if found in the documents submitted in physical form and that uploaded online, the documents ONLINE shall be considered final and no justification regarding this shall be entertained by Client.

Technical bid:- Bidders must positively complete online e-tendering procedure at www.mptender.gov.in . They shall have to submit the documents as prescribed in the RFP online in the website.

1 Hard copies of above technical offer, (uploaded in the website) must be submitted in a separate sealed envelope supers scribing "Envelop-B technical bid for Tender

No:_____" . Only those physically submitted documents regarding technical bids will be acceptable and considered, if, same are uploaded in the website along with the Financial Bid.

Price bid:- Bidder shall have to submit the Price bid document as per the format given in RFP and uploaded as per instructions therein. Physical submission of price bid will not be considered. The price of technically qualified bidder shall be opened online at the notified date. The bidder can view the price bid opening date by logging into web-site.

1 On the due date of e-tender opening, the technical bid of bidders and EMD, will be opened online. Client reserves the right for extension of due date of opening of technical bid.

1 Client reserves the right to accept or reject any or all tenders without assigning any reason what so ever.

1 In case, due date for submission & opening of tender happens to be a holiday, the due date shall be shifted to the next working day for which no prior intimation will be given.

1 Any change/modifications/alteration in the tender documents by the Bidder shall not be allowed and such tender shall be liable for rejection.

For amendment, if any, please visit www.mptender.gov.in web site regularly. In case of any bid amendment and clarification, the responsibility lies with the bidders to note the same from web site. Client shall have no responsibility for anydelay/omission on part ofthe bidder.

Chief Municipal Officer
Nagar Parishad Panna
District Panna (M.P.)
Email: cmoPanna@mpurban.gov.in
Mob:
Phone: 07732-252034

CHECK LIST

1. Online Three envelope system shall be followed, but bidder have to submit two envelopes physically also i.e.
   a. Envelop A: EMD
   b. Envelop B: Technical Bid.
   Note: Please note that in any case if price-bid/Financial Offer submitted manually then bid shall be out through rejected.

2. Earnest money should be in the form as given in abstract of Bid (Scanned copy of EMD should be uploaded online).

3. Bidder will get online Form for uploading his price-bid/Financial Offer.

4. Declaration of the contractor for the correctness of the documents. Scanned copy should be uploaded online & physical copyshould be submitted in envelop B.

5. The contractor should digitally sign all the pages in which any entry is made.

6. Performance security shall be @ 5.0 % of the cost put to tender to be submitted as mentioned in abstract of Bid.

7. Bidder should enclose the certificates in support of his experience online as well as physically. (In Envelope-B)

8. This tender is on percentage rate basis.

9. ISSR applicable: - Integrated Standard Schedule of Rates in force from 10th May 2012, issued by Urban Administration & Development Department of Madhya Pradesh.

SECTION 2

INSTRUCTIONS TO BIDDERS (ITB)

A. GENERAL

1. SCOPE OF BID

The detailed description of work, hereinafter 'work', is given in the Bid Data Sheet.

2. General Quality of Work:

The work shall have to be executed in accordance with the technical specifications specified in the Annexure to the Bid Data Sheet, and shall have to meet high standards of workmanship, safety and security of workmen and works.

3. PROCEDURE FOR PARTICIPATION IN E-TENDERING

The procedure for participation in e-tendering is given in the Annexure to the Bid Data Sheet.

4. ONE BID PER BIDDER

The bidder can be an individual entity or a joint venture. The requirement of joint venture is given in the Bid Data Sheet.

No bidder shall be entitled to submit more than one bid whether jointly or severally. If he does so, all bids wherein the bidder has participated shall stand disqualified.

5. Cost of Bidding

The bidder shall bear all costs associated with the preparation and submission of his bid, and no claim whatsoever for the same shall lie on the Government.

6. Site Visit and examination of works

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the work. All costs shall have to be borne by the bidder.

B. BID DOCUMENTS

7. CONTENT OF BID DOCUMENTS

The Bid Document comprises of the following documents:

1. NIT with all amendments.
2. Instructions to Bidders
3. Conditions of Contract:
    i. Part I General Conditions of Contract and Contract Data; and
    ii. Part II Special Conditions of Contract.
4. Specifications
5. Drawings, if any.
6. Bill of Quantities
7. Form of Financial Bid
8. Letter of Acceptance

9. Formof Agreement and

10. Form of Unconditional Bank Guarantee.

8. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms and specifications, bill of quantities, forms and drawings in the Bid Document. Bidder shall be solely responsible for his failure to do so.

9. Pre-Bid Meeting (where applicable)

Wherever the Bid Data Sheet provides for pre-bid meeting:

i) Details of venue, date and time would be mentioned in the Bid Data Sheet. Any change in the schedule of pre-bid meeting would be communicated on the website only, and intimation to bidders would not be given separately.

ii) Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at that stage. The Employer may, at his option, give such clarifications as are felt necessary.

iii) Minutes of the pre-bid meeting including the gist of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.

iv) Pursuant to the pre-bid meeting if the Employer deems it necessary to amend the Bid Document, it shall be done by issuing amendment to the online Bid.

10. Amendment of Bid Documents

10.1 Before the deadline for submission of bids, the Employer mayamend or modifythe Bid Documents by publication of the same on the website.

10.2 All amendments shall form part of the Bid Document.

10.3 The Employer may, at its discretion, extend the last date for submission of bids.

C. PREPARATION OF BID

11. The bidders have to preparetheir bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice Inviting e-Tenders after signing ofthe same bythe Digital Signature of their authorized representative.

12. DOCUMENTS COMPRISING THE BID

The bid submitted online bythe bidder shall be in the following parts:

Part 1 – This shall be known as **Envelope A** and would apply for all bids. **Envelop A** shall contain the following as per details given in the Bid Data Sheet:

i) Registration number or proof of application for registration.
ii) Payment of the cost of Bid Document;
iii) Earnest Money; and
iv) An affidavit duly notarized.

Part 2 – This shall be known as **Envelope B** and required to be submitted only in works where pre-qualification conditions and/or special eligibility conditions are stipulated in the Bid Data Sheet. **Envelop B** shall contain a self-certified sheet duly supported by documents to demonstrate fulfillment of pre-qualification conditions.

Part 3 – This shall be known as **Envelope C** and would apply to all bids. **Envelop C** shall contain financial offer in the format prescribed enclosed with the Bid Data Sheet.

13. The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part ofthe Bid may be in another language provided theyare accompanied by an accurate translation of the relevant passages in English. In such case, for the purposes of interpretation ofthe bid, such translation shall govern.

14. TECHNICAL PROPOSAL

Only, in case of bids with pre-qualification conditions defined [as per [G] of Bid Data Sheet], the Technical Proposal shall comprise of formats and requirements [as per [M] of Bid Data Sheet].

15. FINANCIAL BID

i The bidder shall have to quote rates in overall percentage, and not item wise. If the bid is in absolute amount, overall percentage would be arrived at in relation to the NIT amount. The overall percentage rate would apply for all items of work.

i. Percentage shall be quoted in figures as well as in words. If any difference in figures and words found, lower ofthe two shall be taken as valid and correct.

ii. The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies; and the Employer shall not be liable for the same.

16. PERIOD OF VALIDITY OF BIDS

The bids shall remain valid for a period specified in [O] of Bid Data Sheet after the date of "close for biding" as prescribed by the Employer. The validity of the bid can be extended by mutualconsent in writing.

17. EARNEST MONEY DEPOSIT (EMD)

The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD), in the amount specified in the Bid Data Sheet.

The EMD shall be in the form of Fixed Deposit Receipt of a scheduled commercial bank, issued in favour of the name given in the Bid Data Sheet. The Fixed Deposit Receipt shall be valid for six months or more after the scheduled date of opening of bids.

Bid not accompanied by EMD shall be liable for rejection as non-responsive.

EMD of bidders whose bids are not accepted will be returned within fifteen working days of the decision on the bid.

EMD of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security.

17.6 Failure to sign the contract bythe selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.

D. SUBMISSION OF BID

18. The bidder is required to submit online bid duly signed digitally, and Envelop 'A' and Envelope 'B" in physical form also at the place prescribed in the Bid Data Sheet, by 15.00 hrs one working day before the opening of bid (if not mentioned in NIT/Bid Datasheet).

E. OPENING AND EVALUATION OF BID

Envelope 'A' shall be opened first and it's contents shall be checked. In cases where Envelop 'A' does not contain all requisite documents, such bid shall be treated as non-responsive, and Envelop B and/or C of such bid shall not be opened.

Wherever Envelop 'B' (Technical Bid) is required to be submitted, the same shall be opened online at the time and date notified in the Bid Data Sheet. The bidder shall have freedom to witness opening of the Envelop 'B'. Envelop 'C' (Financial Bid) of bidders who are not qualified in Technical Bid (Envelop 'B') shall not be opened.

Envelope 'C' (Financial Bid) of bids shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelop 'C'.

After opening Envelop 'C' all responsive bids shall be compared to determine the lowest evaluated bid.

The Employer reserves the right to accept or reject any bid, and to annul the biding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.

The Employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

20. Confidentiality

Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.

Any attempt by a bidder to influence the Employer in the evaluation of the bids or contract award decisions may result in the rejection of its bid.

F. AWARD OF CONTRACT

21. Award of Contract

The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' that his bid has been accepted.

22. Performance Security

Prior to signing of the Contract the bidder to whom LOA has been issued shall have to furnish performance security of the amount, form and duration, etc. as specified in the Bid Data Sheet.

Additional performance security, if applicable, is mentioned in the Bid Data Sheet.

23. Signing of Contract Agreement

The successful bidder shall have to furnish Performance security and sign the contract agreement within 15 days of issue of LOA.

The signing of contract agreement shall be reckoned as intimation to commencement of work. No separate work order shall be issued by the Employer to the contractor for commencement of work.

In the vent of failure of the successful bidder to submit Performance Security or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking action against the bidder.

24. CORRUPT PRACTICES

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the Employer:

i may reject the bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and

i. may debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

For the purposes ofthis provision, the terms set forth above are defined as follows:

a. "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

b. "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

c. "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

d. "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

[End of ITB]

Bid Data Sheet

Particulars	Data	
Office of the	**Chief Municipal Officer, Nagar Parishad Panna, Distt. Panna (M.P.)**	
NIT No.	134/e-tender/2026	
Date	22.04.2026	
Bid document Purchase Online from date & time	From: 24.04.2026 17:30 Hrs	To: 30.05.2026 17:30 Hrs
Website link	http://www.mptender.gov.in	

For Section 1 - NIT

Clause reference	Ref No	Particulars	Data
5 & 6 of Annexure F	(A)	Key dates	Annexure A
	(B)	Portal Service Charges	As Applicable
6 & 7 of Annexure F	(C)	Cost of bid document (Online Payment)	Rs. 10000 /-
6 & 7 of Annexure F	(D)	Cost of bid document (Online Payment to)	**Chief Municipal Officer, Nagar Parishad Panna Distt. Panna (M.P.)**
4	(E)	EMD valid for a period of	not less than 180 days
5	(F)	Affidavit	Annexure B
7.2	(G)	Pre-qualifications required	No
		If Yes, details	Annexure C
7.3	(H)	Special Eligibility	NO
		If Yes, details	Annexure D (Not applicable)

For Section 2 - ITB

1.1	(I)	Name of work	CONSTRUCTION OF NALA FROM BENISAGAR POND NALA DIVERSION AT WARD NO 14 PANNA MP
1.2	(J)	Technical Specifications	Annexure E
2	(K)	Procedure for participation in e-tendering	Annexure F
7.1	(L)	Pre bid meeting to held	No pre bid meeting will be held
		If Yes,	Dated…….
11.2	(M)	Envelope-B Technical Proposal	Annexure G (G-1 to G-7)
11.3	(N)	Envelope-C Financial Bid	Annexure H
		Earnest MoneyDeposit	Rs. 63200.00/-
		Forms of Earnest Money Deposit	F.D.R/DD
		FDR (Fixed Deposit Receipt) must be drawn in favour of	**Chief Municipal Officer, Nagar Palika Parishad Panna Distt. Panna (M.P.)**
15.1	[O]	Period of Validation of Bid	180 Days
25	(P)	Letter of Acceptance (LoA) and Commencement of Works	Annexure I & J
26	(Q)	Amount of Performance Security	5.0 % ofthe Bid amount
			Extra Rate Down For 15% Below ISSR 02-08-2021
	(R)	Performance security in the form of Bank Guarantee	Annexure K
	(S)	Performance security in favour of	**Chief Municipal Officer, Nagar Palika Parishad Panna Distt. Panna (M.P.)**
	(T)	Performance security valid up to	36 months or 3 years (whichever is more) from the date of completion of defect liability period.
27	(U)	Insurance Policy	Contractor's All Risks Insurance

28	(V)	ACCOUNT DETAIL	BANK NAME - STATE BANK OF INDIA ACCOUNT NO – 53033061315 IFSC CODE – SBIN0030436 ACCOUNT HOLDER NAME – NAGAR PALIKA PARISHAD PANNA
29	(W)	Details	Nagar Palika Parishad PANNA Distt. PANNA (M.P.) Contact No.- 07732-254343 Email: cmopanna@mpurban.gov.in

Annexure – A

KEY DATES

Publish Date	24-04-2026 17:30	**Bid Opening Date**	01-06-2026 12:30
Document Download / Sale Start Date	24-04-2026 17:30	**Document Download / Sale End Date**	30-05-2026 17:30
Seek Clarification Start Date	NA	**Seek Clarification End Date**	NA
Bid Submission Start Date	27-04-2026 17:30	**Bid Submission End Date**	30-05-2026 17:30

Note: Original term deposit receipt of earnest money deposit and affidavit shall be submitted by the bidder so as to reach the office as prescribed in NIT for E -Tenders by "Physical Submission End Date" mentioned above.

NOTE: THE ABOVE KEY DATES ARE INDICATIVE, URBAN LOCAL BODIES SHALL CHANGE THE KEY DATES AS OER THEIR REQUIREMENTS.

NOTE:-

1- **On acceptance of the tender, the tenderor will have to get the structural design approved from government engineer collage.**

Annexure – B

|| AFFIDAVIT ||

(On Non Judicial Stamp of Rs. 100)

I/we _____who is/ are _____(status in the firm/ company) and competent for submission of the affidavit on behalf of M/S_____(contractor) do solemnly affirm an oath and state that:

I/we are fully satisfied for the correctness of the certificates/records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No._____for_____(name of work) dated _____ issued by the_____(name of the department).

I/we are fully responsible for the correctness of following self certified information/ documents and certificates:

1. That the self certified information given in the bid document is fully true and authentic.
2. That:
   a. Term deposit receipt deposited as earnest money, demand draft for cost of bid document and other relevant documents provided by the Bank are authentic.
   b. Information regarding financial qualification and annual turn-over is correct.
   c. Information regarding various physical qualifications is correct.
3. No close relative of the undersigned and our firm/company is working in the department.

OR

Following close relatives are working in the department:

Name_____Post_____Present Posting _____

Signature with Seal of the Deponent (bidder)

I/ We,_____above deponent do hereby certify that the facts mentioned in above paras 1 to 4 are correct to the best of my knowledge and belief.

Verified today_____(dated) at_____(place).

Signature with Seal of the Deponent (bidder)

Note: Affidavit duly notarized in original shall reach at least one working day before opening of the bid, by 15.00 hrs.

Annexure – C

PRE-QUALIFICATIONS CRITERIA

The bidder should have:

A. Financial

i experience of having successfully executed:

a) three works costing not less than the amount equal to 40% of the probable amount of contract during the last 3 financial years; or

b) two works costing not less than the amount equal to 60% ofthe probable amount of contract during the last 3 financial years; or

c) one work of aggregate cost not less than the amount equal to 80% of the probable amount of contract in anyone financial year during the last 3 financial years;

i. average annual construction turnover on the construction works not less than 40% of the probable amount of contract during the last 3 financial years.

ii. executed similar items of work in any one financial year during the last 3 financial years which should not be less than the minimum physical requirement fixed for the work.

Note: Above criteria are indicative, subject to suitable stipulations by the departments and specific Bid.

Annexure – D

SPECIAL ELIGIBILITY CRITERIA

The bidder should have:

A. Erection of Steel Gates - ----------

B. Construction of tunnel - ----------

C.

Note: Above criteria are indicative, subject to suitable stipulations by the departments and specific bid.

Annexure – E

Specifications

1. **MP UADD Specifications for relevant Volume of Integrated Standard Schedule of Rates, 10th May 2012.**
2. **MOST**
3. **IRC**

The provisions of general / special conditions of contract, those specified elsewhere in the bid document, as well as execution drawings and notes, or other specifications issued in writing by the Employer shall form part of the technical specifications of this work.

Annexure – F

GUIDELINES TO CONTRACTORS FOR IMPLEMENTATION OF E-PROCUREMENT SYSTEM IN URBAN ADMINISTRATION AND DEVELOPMENT DEPARTMENT, GOVERNMENT OF MADHYA PRADESH

As Mentioned in NIT and Manuals available on e-Tendering Portal www.mptender.gov.in.

Annexure – G

Envelope – B, Technical Proposal

Technical Proposal shall comprise the following documents:

Sno	Particulars	Details to be submitted
1	Organizational Details	Format: G-1
2	Valid Registration of bidder in appropriate class through Centralized Registration of Govt. of MP	RegistrationNo._____ Date_____ (Scanned copyof Registration to be uploaded)
3	Experience – Financial & Physical	Format: G-2
4	Annual Turnover	Format: G-3

Note:

1. *Technical Proposal should be uploaded duly pagenumbered and indexed.*
2. *Technical Proposal uploaded otherwise will not be considered.*
3. *All the documents/ information enclosed with the Technical Proposal should be self attested and certified by the bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document / information is found false/ fake/ untrue before acceptance of bid. If it is found after acceptance of the bid, the bid sanctioning authority may at his discretion forfeit his performance security/ guarantee, security deposit and enlistment deposit.*
4. *The bidder shall also furnish an affidavit duly notarized in the format given in Annexure 4 on non judicial stamp of Rs. 100/- regarding correctness of the information furnished and documents submitted with the bid and technical proposal.*

   Original affidavit shall be submitted 30 minute before the specified start time and date in key dates for opening of technical proposal.
5. *The bidder shall furnish the following undertaking as part of the technical proposal on its official letterhead duly signed with proper seal.*

Format: G-1

ORGANIZATIONAL DETAILS
(To be enclosed with technical proposal)

S. No.	Particulars	Details
1.	Name of Organization/ Individual	
2.	Entityof Organization Individual/ Proprietary Firm/ Partnership Firm (Registered under Partnership Act)/ Limited Company (Registered under the Companies Act–1956)/ Corporation	
3.	Address of Communication	
4.	Telephone Number with STD Code	
5.	Fax Number with STD Code	
6.	Mobile Number	
7.	E-mail Address for all communications	
	Details of Authorized Representative	
8.	Name	
9.	Designation	
10.	Postal Address	
11.	Telephone Number with STD Code	
12.	Fax Number with STD Code	
13.	Mobile Number	
14.	E-mail Address	

Note: *In case of partnership firm and limited company certified copy of partnership deed/ Articles of Association and Memorandum of Association alongwith registration certificate of the company shall have to be enclosed.*

Signature of Bidder with Seal

Date: _____

FINANCIAL & PHYSICAL EXPERIENCE DETAILS

A. Financial

Requirement:

Details of successfully completed similar Works:

Three works costing not less than the amount equal to 40% of the probable amount of contract during the last 3 financial years;

or

Two works costing not less than the amount equal to 60% of the probable amount of contract during the last 3 financial years;

or

one work of aggregate cost not less than the amount equal to 80% of the probable amount of contract in anyone financial during the last 3 financial years;

To be filled in by the contractor:

i. Details of successfully completed similar works shall be furnished in the following format.

ii. Certificate duly signed by the employer shall also be enclosed for each completed similar work.

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Contract	Employer's Name and Address
I	II	III	IV	V	VI

B. Physical

Requirement:

Execution of similar items of work in any one financial year during the last 3 financial years should not be less than the minimum physical requirement fixed for the work.

Minimum Physical Requirement			**Actual Quantity Executed (To be filled in by the contractor)**		
S. No.	Item of Work	Quantity	Year – 1	Year – 2	Year – 3
I	II	III	IV	V	VI

Note: 1. *Certificate duly signed by the employer shall be enclosed for the actual quantity executed in any one year during the last 3 financial years.*

2. Similar works: ***The similarity shall be based on the physical size, complexity, methods technology or other characteristics of main items of work viz. earth work, cement concrete, Reinforced cement concrete, brick masonry, stone masonry etc****.*

Format: G-3

ANNUAL TURN OVER

Requirement:

Average annual construction turnover on the construction works not less than 40% of the probable amount of contract during the last 3 financial years;

To be filled in by the contractor:

Financial Year	Payments received for contracts in progress or completed

Note:

i. *Annual turnover of construction should be certified by the Chartered Accountant.*
ii. *Audited balance sheet including all related notes, and income statements for the above financial years to be enclosed.*

Format: G-4

List Of Technical Personnel For The Key Positions

Technical Personnels for Key Positions Available with bidder						
S. No.	Name of Personnel	Key Position	Qualification	Age	Similar work experience	Total Work Experience

Format: G-5

List Of Key Equipments/ Machines For Quality Control Labs

Available with the bidder	
Name of Equipment/ Machinery	Quantity

Format: G-6

List Of Key Equipments/ Machines For Construction Work

Available with the bidder	
Name of Equipment/ Machinery	Quantity

Format: G-7

Litigation History

S. No.	Name of other Party(ies)	Cause of dispute	Litigation whether (Court/Arbitration)	Amount Involved	Final Result / Present status of Litigation

Annexure - H

BILL OF QUANTITIES

General Description of work:

Probable Amount of Contract:

Bill of Quantities:

S. No.	Particulars of Item of Work	Quantity	Rate	Unit	Amount (in figure)	Amount (in words)	Remarks
I	II	III	IV	V	VI	VII	VIII
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
				Total			

Total Rupees (In Words) _____

FINANCIAL BID

FOR

NAME OF `WORK _____

I/We hereby bid for the execution of the above work within the time specified at the **rate (in figures)_____(in words)_____percent below/ above or at par** based on the Bill of Quantities and item wise rates given therein in all respects in accordance with the specifications, designs, drawings and instructions in writing in all respects in accordance with such conditions so far as applicable. I/We have visited the site of work and am/ are fully aware of all the difficulties and conditions likely to affect carrying out the work. I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns, nature and the extent of ground, working conditions including stacking of materials, installation of tools and plant conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the Municipal Corporation/Nagar Palika Parishad/Nagar Parishad or his successors in office the sums of money mentioned in the said conditions.

Note:

i. Only one rate of percentage above or below or at par based on the Bill of Quantities and item wise rates given therein shall be quoted.

ii. Percentage shall be quoted in figures as well as in words. If any difference in figures and words found lower of the two shall be taken as valid and correct rate. If the bidder is not ready to accept such valid and correct rate and declines to furnish performance security and sign the agreement his earnest money deposit shall be forfeited.

iii. In case the percentage "above" or "below" is not given by a bidder, his bid shall be treated as non responsive.

iv. All duties, taxes, and other levies payable by the bidder shall be included in the percentage quoted by the bidder.

Signature of Bidder

Name of Bidder

The above bid is hereby accepted by me on behalf of the Municipal Corporation/Nagar Palika Parishad/ Nagar Parishad on dated the_____day of_____20_____

_____

Chief Municipal Officer
Nagar Parishad Panna
District Panna (M.P.)

Annexure - I

LETTER OF ACCEPTANCE (Low)

No. _____ Dated: _____

To,

M/s._____

(Name and address of the contractor)

Subject: _____

(Name of the work as appearing in the bid for the work)

Dear Sir (s),

Your bid for the work mentioned above has been accepted on behalf of the Municipal Corporation/Nagar Palika Parishad/Nagar Parishad at your bided percentage_____below/ above or at par the Bill of Quantities and item wise rates given therein.

You are requested to submit within 15 (Fifteen) days from the date of issue of this letter:

a. the performance security/ performance guarantee of Rs._____(in figures) (Rupees _____in words only). The performance security shall be in the shape of term deposit receipt/ bank guarantee of any nationalized / schedule commercial bank valid upto three months after the expiry of defects liability period.
b. Insurance policycertificates.
c. Sign the contract agreement.

Please note that the time allowed for carrying out the work as entered in the bid _____ months shall be reckoned from the date of signing the contract agreement.

Signing the contract agreement shall be reckoned as intimation to commencement of work and no separate letter for commencement of work is required. Therefore, after signing of the agreement, you are directed to contact Shri_____the Engineer-in-charge for this work for taking the possession of site and necessary instructions to start the work.

Yours

(NAME OF SIGNING AUTHORITY)
Chief Municipal Officer
Nagar Parishad Panna
District Panna (M.P.)

Annexure - J

LETTER FOR COMMENCEMENT OF WORK

No. _____ Dated:_____

To,

M/s._____

(Name and address of the contractor)

Subject: _____

(Name of the work as appearing in the bid for the work)

Reference: This office letter of acceptance of your bid No. _____date _____

Dear Sir (s),

1. You are requested to contact contact Shri_____the Engineer-in-charge for this work for taking the possession of site at starting the work at once)
2. Please note that the time allowed for carrying out the work as entered in the bid _____ months shall be reckoned from the date of signing the contract agreement.

Yours

(NAME OF SIGNING AUTHORITY)
Chief Municipal Officer
Nagar Parishad Panna
District Panna (M.P.)

Annexure –K

Form of Bank Guarantee for Performance Security
(To be used by approved scheduled commercial banks)

Date
Contract No. and Title
Bank's name with Branch and Office
Beneficiary (name of Purchaser)

1. In consideration of the Commissioner/Chief Municipal Officer, Municipal Corporation/Nagar Palika Parishad/Nagar Parishad, ----------, District ---------- (M.P.). (Hereinafter called "the Authority") having agreed to exempt..... (Herein after called "the said contractor(s)") from the demand, under the terms and conditions of NIT/An agreement no. ----------dated…….. made between ..... and …… for …….(hereinafter called "the said Agreement") of security deposit for the due fulfillment by the said contractor (s) of the terms and conditions contained in the said NIT/agreement on production of Bank Guarantee for Rs ---------- (in figures) (Rupees……..only). At the request of the Contractor, we…….(name of Bank) (hereinafter referred to as "the Bank") do hereby irrevocably undertake to pay to Authority an amount not exceeding Rs.....against any loss or damage caused to or suffered or would be caused to or suffered by the Authority by reason of any breach by the said Contractor (s) of any terms of conditions contained in the said agreement.

2. We …….(name of Bank), do hereby undertake to pay the amount due and payable under this guarantee without any demure merely on a demand from the Authority stating that the amount claimed is due by way of loss or damage caused to or suffered by the Authority by reason of any breach by said Contractor(s) of any of the terms or conditions Contained in the said agreement or by reason of the Contactor(s) failure to perform the said agreement. Any such demand made on the bank shall be conclusive as regard the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs…….

3. We …….(name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all dues of the Authority under or by virtue of the said Agreement have been fully paid and its claim satisfied or till Authority certifies that the terms of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges the guarantee. Unless a demand or claim under this guarantee is made on in writing on or before the ….....we shall be discharged from all liability under this guarantee thereafter.

4. We .....(name of Bank) further agree with the Authority that the Authority shall have the fullest liberty without our consent and without effecting in any manner obligations here under or vary any of the terms and condition of the said agreement

or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Authority against the said contractor (s) and to force-bear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liabilities by reasons of any such variation of extension having granted to the said contractor (s) for any forbearance act, or omission on the part of the Authority or any indulgence by the Authority of the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

5. We …….(name of Bank) hereby also undertake to have the signature of Branch Manager issuing the Bank Guarantee verified from the local branch of the bank in M.P.

6. We.....(name of Bank) hereby unequivocally undertake that if the Authority invokes the guarantee the bank (issuing branch) …….. will make the payment to the Authority without any reference and demur.

7. This guarantee will not be discharged due to change in the constitution of the bank or thecontractor(s)/supplier(s).

8. We undertake to pay the Authority any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/Supplier(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

9. The Bank undertake not to revoke this guarantee during its currency except with the previous consent of the Authority in writing.

10. This guarantee shall expire not later than.....(Insert date) day of..... (Month) 20..... .

11. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No., 458 except that subparagraph (ii) of Sub article 20(a) is hereby excluded.

The payment so made by us under this bound shall be a valid discharge of our liability for payment there under and the contractor(s)/Supplier(s) shall have no claim against us.

Dated the ……day of……..20.....

(Signature of the Bank & Contractor)

SECTION 3

Conditions of Contract
Part – I General Conditions of Contract

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A. General

1. DEFINITIONS

1 **Bill of Quantities**: means the priced and completed Bill of Quantities forming part of the Bid.

1 **Completion**: means completion of the work as certified by the Engineer-in-Charge, in accordance with provisions of agreement.

1 **Contract:** means the Contract between the Employer and the Contractor to execute, complete and/or maintain the work. Agreement is synonym of Contract and carries the same meaning wherever used.

1 **Contract Data Sheet**: means the documents and other information which comprise of the Contract.

1 **Contractor**: means a person or legal entity whose bid to carry out the work has been accepted bythe Employer.

1 **Contractor's bid**: means the completed bid document submitted by the Contractor to the Employer.

1 **Contract amount**: means the amount of contract worked out on the basis of accepted bid.

1 **Completion of work**: means completion of the entire contracted work. Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or anycomponent thereof.

1 **Collusive Practice**: means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

1 **Coercive Practice**: means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.

1 **Corrupt Practice**: means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperlythe actions of another party.

1 **Fraudulent Practice :** means any act or omission, including a mis-representation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.

1 **Day**: means the calendar day.

1 **Defect**: means any part of the work not completed in accordance with the specifications included in the contract.

1 **Drawings**: means drawings including calculations and other information provided or approved by the Engineer-in-Charge.

Employer: means the party as defined in the Contract Data, who employs the Contractor to carry out the work. The Employer may delegate any or all functions to a person or body nominated by him for specified functions. The word Employer / Department wherever used denote the Nagar Palika Parishad Morena.

1 **Engineer-in-Charge**: means Engineer-in-Charge of the Nagar Palika Parishad who shall be incharge of the works and who shall sign the agreement on behalf of the Nagar Palika Parishad, ……...

1 **Subordinate Incharge**: means Engineer-in-Charge (second in command) of the Nagar Palika Parishad, who shall be In charge for supervision of the execution of work.

1 Executive Engineer: means Executive Engineer of the concerned Division of the MP Urban Administration & Development Department and /or Executive Engineer of the /Nagar Palika Parishad Panna as the case may be.

1 Superintending Engineer: means Superintending Engineer of the concerned Division ofthe MP Urban Administration & Development Department.

1 **Chief Engineer**: means Chief Engineer of the Directorate of the MP Urban Administration & Development, Shivaji Nagar, Near 6 No. Stop, Bhopal.

1 **Department**: means Nagar Palika Parishad Panna

- **Government**: UADD Madhya Pradesh.

1 **In Writing**: means communicated in written form and delivered against receipt.

- **Equipment** means the Contractor's machinery and vehicles brought temporarily to the Site for execution of work.

1 **Stipulated date of completion**: means the date on which the Contractor is required to complete the work. The stipulated date is specified in the Contract Data.

1 **Material**: means all supplies, including consumables, used by the Contractor for incorporation in the work.

1 **Specification:** means the specification of the work included in the Contract and any modification or addition made or approved bythe Engineer-in-Charge.

1 **Start Date :** means the date 07 days after the signing of agreement for the work. However, the employer may extend this time limit by another 07 days, as and when required.

1 **Sub-Contractor**: means a person or corporate body who has a Contract (duly authorized by the employer) with the Contractor to carry out a part of the construction work under the Contract.

1 **Temporary Work** : means work designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the work.

1 **Tender / Bid, Tenderer /Bidder** : are the synonyms and carry the same meaning where ever used.

1 **Variation** : means any change in the work which is instructed or approved as variation under this contract.

1 **Work**: The expression "work" or "works" where used in these conditions shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

2. INTERPRETATIONS AND DOCUMENTS 2.1 Interpretations

In the contract, except where the context requires otherwise:

- words indicating one gender include all genders;
- words indicating the singular also include the plural and vice versa.
- provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;

d. written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

Documents Forming Part of Contract:

- Notice Inviting e-Tenders (Press)
- Detailed Notice Inviting e-Tenders
- Instructions to Bidders along with Bid Data Sheet.
- General Conditions of Contract.
- Contract Data Sheet
- Special Conditions of Contract
- Anyother document.

3. Language and Law

The language of the Contract and the law governing the Contract are stated in the Contract Data Sheet.

4. Communications

All certificates, notice or instruction to be given to the Contractor by Employer/Engineer shall be sent on the address or contact details given by the Contractor in [Annexure G-1 of ITB]. The address and contract details for communication with the Employer/Engineer shall be as per the details given in Contract Data Sheet. Communication between parties that are referred to in the conditions shall be in writing. The notice sent by facsimile (fax) or other electronic means (email) shall also be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery or at the expiry of the normal deliveryperiod as undertaken by the postal service.

5. Subcontracting

Subcontracting shall be permitted for contracts value more than [amount specified in the Contract Data Sheet] with following conditions.

- The Contractor may subcontract up to 25 percent of the contract price, only with and after the approval of the Employer in writing, but will not assign the Contract. Subcontracting shall not alter the Contractor's obligations.
- The Contractor shall not be required to obtain any consent from the Employer for:
    - the provision for labour or labour component.
    - the purchase of Materials which are in accordance with the standards specified in the Contract
    - hiring of plant & machinery
- The sub-contractor will have to be registered in the appropriate category in the contractor's centralised registration system of the Go MP.

6. Personnel

1. The Contractor shall employ for the construction work and routine maintenance the technical personnel as provided in the Contract Data Sheet. If the Contractor fails to deploy required number of technical staff, recovery as specified in the Contract Data Sheet will be made from the Contractor.
2. If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within three days and has no further connection with the Works in the Contract.

7. Force Majeure

1. The term "Force Majeure" shall mean acts of God or any act not within the control of parties, such as lightening and unprecedented floods, earthquake, hurricane and wars, revolts, riots, fire, sabotage. Upon the occurrence of such cause and upon its termination, the party, alleging that it has been rendered unable, as aforesaid, shall notify the other party in writing immediately but not later than seven days of the alleged beginning as well as ending thereof, giving full particulars and satisfactory evidence in support of its claim.

2. In the event of either party being rendered unable by force majeure to perform any duty or discharge any responsibility arising out of the contract, the relative obligation of the party affected by such force majeure shall upon notification to the other party be suspended for the period during which force majeure event lasts. The cost and loss sustained by either partyshall be borne by respective parties.

3. The time for performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such cause lasts. Should the delay caused by force majeure exceed two months, the parties to the contract shall hold discussions to resolve the situation mutually.

1. All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.
2. All risks and consequences arising from the inaccuracies or falseness of the documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone.

9. Liability For Accidents To Person

1. The contractor shall be deemed to have indemnified and saved harmless the Government against all action, suits, claims, demands, costs etc. arising in connection with injuries suffered by any persons employed by the contractor or his subcontractor for the works whether under the General law or under workman's compensation Act, or any other statute in force at the time of dealing with the question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against anyclaim there under.

2. On the occurrence of an accident which results in the death of the workmen employed by the contractor or which is so serious as is likely to result in the death of any such workmen, the contractor shall within 24 hours of happening of such accident intimate in writing to the Engineer of the facts of such accidents. The contractor shall indemnify Government against all loss or damage sustained by the Government resulting directly from or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if anypayable by Government as a consequence of Governments

failure to give notice under the workmen's Compensation Act or otherwise to conform to the provisions of the said Act in regard to such accident.

3. In the event of any claim being made, or action brought against the Government involving the contractor and arising out of the matter referred to and in respect of which the contractor is liable under this clause the contractor shall be immediately notified thereof, and he shall with the assistance if he so required of the government but at the sole expense of the contractor conduct all negotiations for the settlement of the same or of any litigation that may arise there from. In such cases the Government shall at the expense of the contractor afford all available assistance for any such purposes.

4. Furthermore, the Engineer shall have the right to pay or to defend or to compromise any claim which may be made against the Government or in case of threatened legal proceedings or in anticipation of legal proceedings being instituted is liable to take such steps as he may consider necessary or desirable to ward off of mitigate the effect of such proceedings and to recover the contractor all sums and expenses, the Engineer may injure and pay in this behalf, provided that the Engineer shall before taking any action as aforesaid give to the contractor a notice in writing of the action proposed to be taken by him and in case the Engineer proposed to pay or compromise effected without the consent of the contractor except when the claim does not exceed a sum of Rs. 10,000/- and the payment or the compromise is sanctioned by the government.

5. In the event of an accident on the work under this contract in respect of which compensation become payable under workmen's Compensation Act whether by the contractor or by the government as principle, it shall be lawful for the Engineer to retain, out of the money's due and payable to contractor such sum.

10. Contractor to Construct the Works

1. The Contractor shall construct, install and maintain the Works in accordance with the Specifications and Drawings.

2. The contractor shall supply and take upon himself the entire responsibility of the sufficiency of the scaffolding, timbering, Machinery, tools implements and generally of all means used for the fulfilment of this contract whether such means may or may not approved of or recommended by the Engineer and the contractor must accept all risks of accidents or damages from whatever cause they may arise, except where otherwise provided in this contract, until the completion of this contract.

11. Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

12. Dispute Resolution System

1. No issue of dispute can be raised after 15 days of its occurrence. In the event, matter of dispute is raised before the competent authority as given in the contract data, within 15 days of its occurrence the competent authority, i.e. Municipal Chief Municipal Officer of the Nagar Palika Parishad, ... shall decide the matter within 30 days.

2. Either party will have a right to appeal against the order of the above competent authority within 30 days to the Appellate Authority as defined in Contract Data. Such decision in respect of every matter so referred shall, subject to review as hereinafter provided, be final and binding upon the Contractor. In case the Work is already in progress, the Contractor shall proceed with the execution of the Works, pending receipt of the decision ofthe competent authority as aforesaid, with all due diligence.

Alternative 12. Dispute Resolution System

1. If any question, difference or objection, whatsoever, shall arise in anyway, in connection with or arising out of this instrument, or the meaning of operation of any part thereof, or the right, duties or liabilities of either party then, save in so far, as the decision of any such matter, as herein before provided for, and been so decided every such matter constituting a total claim of Rs. 50,000/- or above, whether its decision has been otherwise provided for and whether it has been finally decided accordingly, or whether the contract should be terminated, or has been rightly terminated, and as regards the rights or obligations of the parties, as the result of such termination shall be referred for decision to the empowered Standing committee, which would consist of the following:-

i Principal Secretary, GoMP, Department of Urban Administration & Development, Bhopal.

i. Secretary, GoMP, Finance or his nominee, not below the rank of Deputy Secretaryand / or Chief Accounts Officer.

ii. Secretary, GoMP, Law or his nominee.

iv. Director, Directorate of Urban Administration & Development, Bhopal

v. Superintending Engineer concerned (Member Secretary)

2. The Engineer-in-charge, on receipt of application along with non-refundable prescribed fee, (the fee would be two percent of the amount in dispute, not exceeding Rs. one lac) from the Contractor, shall refer the disputes to the committee, within a period of **Three month** from the date of receipt of application, Procedure and Application for referred cases for settlement by the Sanding committee shall be, as given **in Contract Data Sheet**.

13. Arbitration

Either party will have the right of appeal against the decision of the Appellate authority of the Dispute Redressal System, within 60 days of such decision nominated under Clause 21, to the Madhya Pradesh Arbitration Tribunal constituted under Madhya Pradesh Madhyastham Adhikaran Adhiniyam,1983 provided the amount of claim is more than Rs. 50,000/-.

B. Time Control

14. Programme

1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works for the construction of works.

2 The contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipments being placed in field laboratory and the location of field laboratory along with the Programme. The Engineer shall cause these details to be verified at each appropriate stage of the programme.

3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

4 The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

5 The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme shall show the effect of Variations and Compensation Events.

15. Extension of Time

1. If the Contractor desires an extension of time for completion of the 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 Engineer-in-charge within 30 days of the date of the hindrance, on account of which he desired such extension as aforesaid, and **The Authority Competent** to grant extension under the rules/delegations of powers for other duly authorized Engineer shall if in his opinion, (which shall be final) reasonable grounds be shown therefore, authorize such extension of time, if any, as may, in his opinion, be necessary or proper, if the period of completion of contract expires before the expiry of the period of one month provided in this clause, the application for extension shall be made before the expiry of the period stipulated for completion of the contract.

2. The competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finality of work. Such extensions shall be granted in accordance with provisions under **clause- 16** of this agreement.

16. Compensation for delay

1. The time allowed for carrying out the work, as entered in the bid, shall be strictly observed by the Contractor and shall be reckoned from the date of signing of agreement.

2. If the contractor does not commence the work within 7 days, he shall stand liable for the forfeiture of the amount of Earnest Money and Security Deposit, Besides, appropriate action may taken by the Engineer-in-Charge/ competent authority to debar him fromtaken apart in future bids for a specified period or black list him.

3. The work shall, throughout the stipulated period of completion of the contract, be proceeded with all due diligence, time being essence of the contract, on the part of the contractor.

4. To ensure good progress during the execution of work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month (save for special jobs), to complete

i. 1/8thof the whole of the work before 1/4th of the whole time allowed under the contract has elapsed,

ii. 3/8thof the work before ½ of such time has elapsed and

iii. 3/4th of the work before ¾ of such time has elapsed.

5. If the contractor fails to complete the work in accordance with this time schedule in terms of cost in money, and the delay in execution of work is attributed to the contractor, the contractor shall be liable to pay compensation to the Government at every time span as below:-

Compensation payable by the contractor for delay attributable to contractor at the stage of:

- Delay upto one fourth period of the prescribed time span
  — 2.5% of the work remained unexecuted.
- Delay exceeding one forth period but not exceeding half of the prescribed time span
  - 5% ofthe work remained unexecuted.
- Delay exceeding half of the prescribed but not exceeding three fourth of the time span
  - 7.5% of the work remained unexecuted.
- Delay exceeding three fourth ofthe prescribed time span
  —10% ofthe work remained unexecuted.

Note.

In case delayed period over a particular span is split up and is jointly attributable to Government and contractor, the competent authority may reduce the compensation in proportion of delay attributable to Government over entire delayed period over that span after clubbing up the split delays attributable to Government and this reduced compensation would be applicable over the entire delayed period without paying any escalation.

First time span is of 6 months, delay is of 30 days which is split over as under: 5 days (attributable to government)+5 days(attributable to contractor)+5 days(attributable to government)+ 5 days (attributable to contractor)+5 days(attributable to government)+ 5 days (attributable to contractor)

Total delay is thus clubbed to 15 days (attributable to government) and 15 days (attributable to contractor).

Total normal compensation of 30 days as per clause 2 of agreement is 2.5% which can be reduced as 2.5*15/-30==1.25% over 30 days without any escalation by competent authority.

6. The compensation, levied as above, shall be recoverable from the Running Account Bill to be paid immediately after the concerned time span. Total compensation for delays shall not exceed 10 percent of the total value of the work.

7. The contactor shall, further, be bound to carryout the work in accordance with the date and quantityentered in the progress statement attached to the bid.

8. In case the delay in execution of work is attributable to the contractor, time extension shall be granted with penalty and no price adjustment. The span wise compensation, as laid down in this clause shall be mandatory. However, in case the slow progress in one time span is covered upto within original stipulated period, then the amount of such compensation levied earlier shall be refunded.

9. For delays attributable to the Department - No penalty, with price adjustment. for delays attributable to the Contractor.

10. The Price Variation, if any, admissible under **clause 30 of Conditions of contract** would be admissible only on such rates and cost of work, as would be admissible if work would have been carried out in that particular time span.

11. The Engineer-in- charge shall review the progress achieved in everytime span, and grant stage wise extension in case of slow progress with compensation, if the delay is attributable to contractor, otherwise without compensation. However, if for any

special job, a time schedule has been submitted by the Contractor before execution of the agreement, and it is entered in agreement as well as same has been accepted by the Engineer-in-charge, the Contractor shall complete the work within the said time schedule. In the event of the Contactor failing to comply with this condition, he shall be liable to pay compensation as prescribed in **forgoing paragraph of this clause** provided that the entire amount of compensation to be levied under the provisions of this clause shall not exceed 10% of value of the contract. While granting extension in time attributable to the Government, reasons shall be recorded for each delay.

17. Monthly Return of Extra Claims

1. Contractor has to submit a return every month for any work claimed as extra.

2. The Contractor shall deliver the return in the office of the Engineer-in-Charge and obtain Receipt Number of the Receipt Register of the day on or before 10th day of every month during the continuance of the work covered by this contract, a return showing details of any work claimed as extra by the contractor which value shall be based upon the rates and prices mentioned in the contract or in the Schedule of Rates in force in the District for the time being.

3. The contractor shall be deemed to have waived all claims, not included in such return, and will have no right to enforce any such claims nor included, whatsoever be the circumstances.

18. Contractor's percentage, whether applied to net or gross amount of bills

The percentage referred to in the "Bid for works" will be deducted/ added from/to the gross amount of the bill.

C. Quality Control

19. Tests

1. For carrying out tests as prescribed in the specifications, the contractor shall establish field laboratory at the location specified by the Engineer. It shall have such equipment as specified in the **Contract Data Sheet**.

2. The Contractor shall be responsible for:

- Carrying out the tests prescribed in specifications, and
- For the correctness of the test results, whether preformed in his laboratory or elsewhere.

3. In the event the contractor does not establish the quality control lab, the Engineer in Charge can do so at the risk & cost of the contractor.

20. Correction of Defects noticed during the Defect Liability Period

1. The Contractor shall promptly rectify all defects pointed out by the Engineer well before the end of the Defect Liability Period. The Defect Liability Period shall automatically stand extended until the defect is rectified.

2. If the Contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer, within the time specified by the Engineer, the Engineer will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security and other available securities.

D. Cost Control

21. Variations - Change in original Specifications, Designs, Drawings etc.

1. The Employer shall have power to make any alterations, omissions or additions to or substitutions for the original specifications, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Employer, and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted 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 agree to do the main work.

2. The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work and the certificate ofthe Employer shall be conclusive as to such proportion.

22. Payments for Variations

1. The rates for such additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order:-

- **If the rates for the additional, altered or substituted work are specified in the contract for the work** - the contractor is bound carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.
- **If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work** - such rates will be derived from the rates for a similar class of work as are specified in the contract for the work.
- **If the rates for the altered, additional or substituted work can not be determined in the manner specified in the sub clause (a) to (b) above -** then the rates for such composite work item shall be worked out on the basis of the concerned Schedule of Rates minus/plus the percentage which the total bid amount bears to the estimated cost of the entire work put to bid.
- **Provided always that if the rates for a particular part or parts of the item is not in the Schedule of Rates and** the rates for the altered, additional or substituted work item cannot be determined in the manner specified in sub clause (a) to (c) above, the rate for such part or parts will be determined by the Engineer-in-charge on the basis of the prevailing market rates when the work was done.
- But under no circumstances, the contractor shall suspend the work on the plea of non acceptability of rates on items falling under sub clause (a) to (d).

2. All the provisions of the preceding paragraph shall equally apply to the decrease in rates of items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exist in bid for the main work or can be derived in accordance with the provisions of sub-clause (ii) of the preceding clause 12 and the Engineer-in-charge may revise such rates having regard to the prevailing market rates unless otherwise mutually agreed by the Engineer-in- charge and the Contractor.

23. No compensation for alterations in or restriction of work to be carried out.

If at any time after the commencement of the work, the Government, for any reason whatsoever, not require the whole work as specified in the bid to be carried out, the Employer shall give notice in writing of the fact to the Contractor.

The Contractor shall have no claim to any payments or compensation whatsoever, on account of any profit or advantage which he might have derived from the execution of work in full or on account of any loss incurred for idle men and machinery due to such alteration.

24. Recovery from Contractors

Whenever any claim against the Contractor for the payment arises under the contract, the Department shall be entitled to recover such sum by:

- Appropriating, in part or whole of the Performance Guarantee and/or Security Deposit.
- In the event of the security under the contract being insufficient, then the balance sum recoverable shall be deducted from the securities made available by the Contractor to the Department under other contract(s).
- If the recoveries exceed the securities available with the Department as (a) and (b) above, such balance recoveries shall be made from the securities made available by the Contractor to other works Departments/ Government Undertakings of Madhya Pradesh.
- The department shall, further have the right to effect recoveries under Revenue Recovery Certificate of the *M.P. Land Revenue Code*.

27. Tax

1. The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other levies, duties, cess, toll, taxes of Central and State Governments, local bodies and authorities.

2. The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the Contractor.

26. Check Measurements

1. The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders (about which the decision of the department shall be final).

2. Checking of measurement bysuperior officer shall supersede measurements by subordinate officer, and the former will become the basis of the payment.

3. Any over/excess payments detected, as a result of such check measurement or otherwise at any stage upto the date of completion and the defect removal period specified else where in this contract, shall be recoverable from the Contractor, as any other dues payable to the Government.

27. Termination

The Employer may terminate the Contract if the Contractor causes a fundamental breach of the Contract. Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- the Contractor stops work for 28 days when no stoppage of work is warranted and the stoppage has not been authorized bythe Engineer in Charge;
- the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;

- the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer in Charge;
- the Contractor does not maintain a Security, which is required;
- the Contractor has delayed the completion of the Works by such duration for which the maximum amount of liquidated damages is recoverable;
- if the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified in the Contract Data; and
- If the Contractor fails to deploy machinery and equipment or personnel as specified in the Contract Data at the appropriate time.
- any other fundamental breaches as specified in the Contract Data.

28. Payment upon Termination

1 If the contract is terminated because of a fundamental breach of contract by the contractor, the Engineer shall issue a certificate for value of the work done and materials ordered less liquidated damages, if any, less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value ofthe work not completed as indicated in the Contract Data.

2 If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit and performance security, if any amount is still left un-recovered it will be a debt payable to the Employer.

29. Performance Security

1. The Contractor shall have to submit performance security as specified in the Contract Data Sheet at the time of signing of the contract. The contractor shall have to ensure that such performance security remains valid at all the time until completion of the construction works.
   On satisfactory completion of the contract work, the security deposit may be refunded to the Contractor on submission of equivalent amount of bank guarantee of a nationalized or scheduled commercial bank or fixed deposit receipt assigned to the Employer.
   It is clarified that in contracts including construction, operation & maintenance, the performance guarantee shall be returnable after completion of construction and defect liabilityperiod as stated in clause.

2. Security Deposit :

Security Deposit, in addition to the Performance Security above, shall be five percent (5%) of the amount of contract. The security deposit will be deducted from each RA bill payable to the Contractor. The security deposit shall be refunded to the Contractor without any interest after 3 months of the date of completion.

30. Price Variations

1. No price variations and /or escalations shall be allowed.

31. General Conditions for Admissibility of Variations

1. The exact percentage of labour/material (excluding materials to be supplied by the department)/ bitumen/diesel and petrol component and labour component for the work shall be approved by the authoritywhile sanctioning the detailed Estimates.

2. The statement of escalation shall be prepared at the end of three months in which the work was awarded and the work done from the date of start to the end of this period shall be taken into account. For subsequent statement, cost of work done during every quarter shall be taken into account. At the completion of work, the work done during the last quarter of fraction, thereof, shall be taken into account.

3. For the purpose of reckoning the work done during any period, the bills prepared during the period shall be considered. The dates of recording measurements in the Measurement Book by the Assistant Engineer shall be the guiding factor to decide the bills relevant to any period. The date of completion as finally recorded by the competent authority in the Measurement Book, shall be the criterion.

4. The index relevant to any quarter, for which such compensation is paid, shall be the arithmetical average of the indices relevant ofthe calendar month.

5. Price adjustment clause shall be applicable only for the work that is carried out within the stipulated time, or extension thereof, as are not attributed to the contractor.

6. If during the progress in respect of contract works stipulated to cost Rs. 50 lac or less, the value of work actually done excluding cost of material supplied by the department, exceed Rs. 50 lack and completion period is more than 3 months, then escalation would be payable only in respect of value of work in excess over Rs. 50 lac from the date of satisfying both the conditions.

7. Where originally stipulated period is 3 month or less but actual period of execution exceeds beyond 3 months on account of reasons not attributable to contractor, escalation amount would be payable only in respect of extended period if amount of work is more than Rs. 50 lack.

8. In case the contractor does not make prorata progress in the first or another time span and the short fall in progress is covered up by him during subsequent time span within original stipulated period then the price escalation of such work expected to be done

E. Finishing the Contract

32 Completion Certificate

1. When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer to issue a Completion and Taking-Over Certificate in respect of the Works. The Engineer shall, within 21 days of the date of delivery of such notice, either issue to the Contractor, a Completion and Taking-Over Certificate stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all work which, in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Completion and Taking-Over Certificate within 21 days of completion, to the satisfaction of the Engineer, of the Works so specified and remedying anydefects so notified.

2. **Taking Over of Section or Parts**

Similarly, in accordance with the procedure set out in Sub-Clause 32(1), the Contractor may request and the Engineer shall issue a Completion and Taking - Over Certificate in respect of

a. any Section in respect of which a separate Time for Completion is provided in the Appendix to Bid, or

b. any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used bythe Employer, or

c. any part of the Permanent Works which the Employer has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contractor has not been agreed by the Contractor as a temporary measure).

3 Substantial Completion Parts

If any part of the Permanent Works has been substantially completed and has satisfactorily passed any Tests on Completion prescribed by the Contract, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent Works before completion of the whole of the Works and, upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work in that part of the permanent Works during the Defects Liability Period.

4 Surfaces Requiring Reinstatement

Provided that a Completion and Taking-Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Completion and Taking-Over Certificate shall expressly so state.

33. Final Account

1 The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the Contract within 21 days of issue of certificate of completion of construction of works.

The Engineer shall issue a Defects Liability Certificate and certify any payment that is due to the Contractor within 45 days of receiving the Contractor's account if it is correct and complete. If the account is not correct or complete, the Engineer shall issue within 45 days a schedule that states the scope of the corrections or additions that are necessary. If the Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate within 28 days of receiving the Contractor's revised account. The payment of final bill for construction of works will be made within 28 days thereafter.

2 In case the account is not received within 30 days of issue of Certificate of Completion as provided in clause 32.1 above, the Engineer shall proceed to finalise the account and issue a payment certificate within 28 days. The payment of final bill for construction of works will be made within 28 days thereafter.

34. Payment Certificates

The payment to the contractor will be as follows for construction work**:**

(a) The Contractor shall submit to the Engineer monthly statements of the value of the work executed less the cumulative amount certified previously supported with detailed measurement of the items of work executed.

(b) The Engineer shall check the Contractor's monthly statement and certifythe amount to be paid to the Contractor within 15 days.

(c) The value of work executed shall be determined, based on measurements by the Engineer.

(d) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

(e) The value of work executed shall also include the valuation of Variations and Compensation Events.

(f) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

(g) The payment of final bill shall be governed by the provisions of clause 32 of GCC.

35. Currencies

All payments will be made in Indian Rupees.

36. Securities

The Contractor shall have to submit performance security as specified in the Contract Data at the time of signing of the contract. The contractor shall have to ensure that such performance security remains valid at all the time until completion of the construction works.

Security Deposit, in addition to the Performance Security above, shall also be deducted from each RA bill payable to the Contractor.

1916. Labour

1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

2 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

38. COMPLIANCE WITH LABOUR REGULATIONS

1. During continuance of the Contract, the Contractor and his sub Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in Appendix to General Condition of Contract.

2. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments.

3. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/byelaws/Acts/Rules/ regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security.

4. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

5. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at anypoint of time.

39. Drawings and Photographs of the Works

1. The contractor shall do photography/video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. No separate payment will be made to the contractor for this.

2. The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval ofthe Engineer in writing.

3. No photograph of the works or any part thereof or plant employed thereon, expect those permitted shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing. No photographs/ Video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

40. Defects Liability

1. Defects Liability Period

In these Conditions the expression "Defects Liability Period" shall mean the defects liabilityperiod named in the Appendix to Bid, calculated from:

a. the date of completion of works certified by the Engineer in accordance with clause 32, or

b. in the event of more than one certificate having been issued by the Engineer under clause 32, the respective dates so certified and in relation to the Defects Liability Period the expression "the Works' shall be construed accordingly.

c. Defect liabilityperiod is indicated in the Contract Data Sheet

2 Completion of Outstanding Work and Remedying Defects

To the extent that the Works shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall:

a. complete the work, if any, outstanding on the date stated in the Taking-Over Certificate as soon as practicable after such date, and

b. execute all such work of amendment, reconstruction, and remedying defects, shrinkage or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf ofthe Engineer prior to its expiration, instruct the Contractor to execute.

3 Cost of Remedying Defects

All work referred to in Sub-Clause 32.2 shall be executed bythe Contractor at his own cost if the necessitythereof is, in the opinion of the Engineer, due to:

a. the use of materials, Plant or workmanship not in accordance with the Contract, or

b. where the Contractor is responsible for the design for part of the Permanent Works, any fault in such design, or

c. the neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

If, in the opinion of the employer, such necessity is due to any other cause, he shall determine an addition to the Contract Price in accordance with Sub-Clause mentioned and shall notify the Contractor accordingly after due in consultation with engineer.

4 Contractor's Failure to Carry Out Instructions

In case of default on the part of the Contractor in carrying out such instruction within a reasonable time, the Employer after issue of notice to Contractor to this effect, shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, be determined by the Employer and shall be recoverable from the Contractor by the Employer and may be deducted from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

5 Contractor to Search

If any defect, shrinkage or other fault in the Works appears at any time prior to the end of the Defects Liability Period, the Engineer may instruct the Contractor, to search under the directions of the Engineer for the cause thereof. If such defect, shrinkage or other fault is one for which the Contractor is liable, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case remedy such defect, shrinkage or other fault at his own cost in accordance with the provisions of Sub-Clause 40.1 to 40.4.

41. Training of Government Personnel

The contractor shall, if and as directed by the Engineer provide, free of any change adequate facilities to the Government for training of Government officers, supervisors, foremen, skilled workmen etc. not exceeding **fifteen** in number at any one time on the contractor's staff and remain under his control. Their salaries etc. will be borne by the government and training scheme will be arranged by the Engineer in consultation with the contractor. The officers in question will be subject to discipline of the contractor.

42. Jurisdiction

This contract has been entered into the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the exclusive jurisdiction of the courts in Bhopal or of the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

43. Special condition

1- The Contractor shall get the structural design and crust design (for roadpavement) done from any recognised Engineering College and get it approved from the Divisional Executive Engineer U.A.D.D. Gwalior at his on cost. The work shall be acrried out strictly as per approved designs.

2- The execution procedure and principles mentioned in the directives issued by Directorate Urban Administration and Development vide order no. F 10- 8/2012/18-2 Bhopal, dated 13.09.2012 in regard to Chief Minister Infrastructure Development scheme shall be followed.

3- During execution of the work all ground levels and other required levels for quantity of Items are to be taken bythe contractor in the presence of municipal engineer in-charge.

4- During execution of the work all types of enchrochment & illegal construction if any shall be removed by the contractor with the help of municipality. No extra payment will be paid to the contractor for this work byMunicipal Council, Panna .

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Contract Data Sheet

For Section 3 - GCC

Clause reference	Particulars	Data
3	Language & Law of Contract	English & Indian Contract Act 1872
4	Address & contact details of the Contractor	Annexure G-1 of ITB
	Address & contact details of the Employer	**Chief Municipal Officer** **Nagar Parishad Panna** **District Panna (M.P.)**
	Engineer	ExecutiveEngineer/Assistant/Sub.Engineer/------ of the Nagar Palika Parishad ……
5	Subcontracting permitted for contract value more than	Refer clause 5 of GCC
6	Technical Personnel to be provided by the contractor – requirement & penalty.	Annexure L
12	Appellate Authority	Commissioner, Urban Administration & Development, Shivaji Nagar, near 6 No. Stop, Bhopal is the Appellate Authority. The appellate authority may form a Arbitration Board of at least three members
15 (1)	Competent Authority for granting Time Extension	Chief Municipal Officer (after getting approvals of the competent authorityas per the MP Municipal Corporation Act, 1956 / MP Nagar Palika Act 1961.
19 (1)	Quality Control measures List of equipments for lab	Annexure M Annexure N
28 (1)	% value of work not completed as penalty	NIL
29	Performance Security	5% ofthe Bid cost
29	Security Deposit to be retained out ofrunning bills	5% ofthe bill amount paid
32	Substantial Completion	95% completion of the stipulated works
38	Model Labour Laws	Annexure P
40	Defect Liability Period	36 months after completion of works (date of completion as given in the Completion Certificate issued bythe employer)
43	Special Condition of contract	Can be seen on back page

Annexure L

Technical Staff

The contractor shall employ the following technical staff during the execution of work:-

- Two Graduate Engineer
- One Diploma holder Sub-Engineer on each major work .

The Technical staff should be available at site when-ever required by Engineer-in-Charge to take instructions.

- In case the contractor fails to employ the technical staff as aforesaid, Government shall have the right to take suitable remedial measures.
- The Contractor should give the names and other details of the Graduate Engineer/Diploma holder Sub Engineer when he intends to employ or who is under employment, at the time he commences the work.
- The Contractor should give a certificate to the effect that the Graduate Engineer/Diploma holder Sub-Engineer is exclusively in his employment.

(1) A Graduate Engineer or Sub-Engineer may look after more than one work in the same locality but total value of such work under him should not exceed Rs. 100.00 Lacks in the case of Graduate Engineer and Rs. 25.00 Lacks in case of Sub Engineer.

(2) It is not necessary for the contractor (or partner in case of firm/company), who is himself an Engineer / Sub Engineer to employ Engineer / Sub Engineer for the supervision of the work as long as the Contractor/Partner does work similar to what would have been done by an employed Engineer/Sub Engineer.

(3) A retired Executive Engineer/Assistant Engineer who is holding Diploma may be treated at par with the Graduate Engineer for the operation ofthe above clause.

In case the contractor fails to employ the technical staff as aforesaid, he shall be liable to pay to the Nagar Palika,.....a sumof Rs. 50,000- (Rs. Fifty Thousand) only for each month of defaults in case of Graduate Engineer and Rs. 30,000- (Rs. Thirty Thousand) only for each month in case of Diploma holder Sub-Engineer.

Annexure M

Quality Control Measures

Following specifications shall be followed:-

(i) IRC:

(ii) Ministry of Surface & Transport (MOST) Specifications for Roads published by the Indian Roads Congress.

Earth work, Erosion control and Drainage

Table 300-1, Density Requirements of Embankment and Sub- Grade Materials.

S. No.	Type of Work	Maximum laboratory dry unit weight when tested as per IS : 2720 (Part 8)
1.	Embankments upto 3 meters height not subjected to extensive flooding	Not less than 15.2 KN/m2
2.	Embankments exceeding 3 meters height of Embankments of any height subject to long periods inundation	Not less than 16.0KN/m^2
3.	Sub-grade and earthen shoulders/verges/ back fill	Not less than 17.5 KN/m^2

Notes :- 1. This table is not applicable for lightweight fill material e.g. under fly ash etc.

2. The Engineer may relas these requirements at has discretion taking into account the advisability of materials for construction and other relevant factors.

3. The materials to be used in sub-grade should also satisfy design CBR at the dry unit weight applicable as per Table 300-2

Table 300-2 Compaction Requirements for Embankments and sub-grade

S. No.	Type of Work	Relative compaction as percentage of Max. laboratory dry density as per IS: 2720 (Part 8)
1	Sub-grade and earthen shoulders	Not less than 97
2.	Embankments	Not less than 95
3.	Expensive clays • Sub-grade and 500 mm portion just below the sub grade • Remaining portion o embankment	Not allowed Not less than 90

The contactor shall, at least 7 working days before commencement of compaction submit the following to the Engineer for approval.

- *The values of maximum dry density and Optimum Moisture Content obtained in accordance with IS : 2720 (Part 7 or Part 8) as the case my be, appreciate for each of the fill materials he intends to use.*
- *A graph of density plotted against moisture content from which each of the vaules in '1' above of maximum dry density and Optimum Moisture Content were determined.*
- *The dry density – moisture content – CBR relationship for light, intermediate and heavy compactor efforts (Light corresponding to IS:2720 part 7) Heavy corresponding to IS : 2720 (part 8) and intermediate in between the two for each of the fill materials he intends to in the sub-grade.*

Table 300-3 Grading requirement for filter material.

Sieve Designation	Percentage passing by weight		
	Class I	Class II	Class III
53mm	-		100
45mm	-		95-100
26.5mm		100	-
22.4mm		95-100	58-100
11.2 mm	100	48-100	20-60
5.6 mm	92-100	28-54	4-32
2.8 mm	83-100	20-35	0-10
1.4 mm	59-96	-	0-5
710micron	35-80	6-18	-
355 micron	14-40	2-9	-
180 micron	3-15	-	-
90 micron	0-5	0-4	0-3

Sub-Base, Bases (Non – Bituminous) And shoulders

Table 400-1, Grading for closed – graded granular sub-base material.

Sieve Designation	Percentage by weight passing the IS sieve		
	Grading I	Grading II	Grading III
75mm	100	-	-
53 mm	80-100	100	-
26.50 mm	55-90	70-100	100
9.50 mm	35-65	50-80	65-95
4.75 mm	25-55	40-65	50-80
2.36 mm	20-40	30-50	40-65
0.425 mm	10-25-	15-25	20-35
0.075 mm	3-10	3-10	3-10
CBR Value (Maximum)	30	25	20

Table 400-2 Grading for course- graded granular sub-base materials

Sieve Designation	Percentage by weight passing the IS sieve		
	Grading I	Grading II	Grading III
75mm	100	-	-
53 mm	-	100	-
26.50 mm	55-75	50-80	100
9.50 mm	-	-	-
4.75 mm	10-30	15-35	25-45
2.36 mm	-	-	-
0.425 mm	-	-	-
0.075 mm	<10	<10	<10
CBR Value (Maximum)	30	25	20

Note: The materials passing 425 micron (0.425mm) sieve for all the three grading when tasted according to IS: 2720 (part 5) shall have liquid limit and plasticity index not more than 25% and 6% respectively .

Table 400-7, Grading requirement of Coarse Aggregate.

IS Sieve Designation	Size Range	IS Sieve Designation	Percentage by weight passing
1	90 mm to 45 mm	125mm 90 mm 63 mm 45 mm 22.4 mm	100 90-100 25-60 0-15 0-5
2	63 mm to 45 mm	90 mm 63 mm 53 mm 45 mm 22.4 mm	100 90-100 25-75 0-15 0-5
3	53 mm to 22.4 mm	63 mm 53 mm 45 mm 22.4 mm 11.2 mm	100 95-100 65-90 0-10 0-5

Note : The compacted thickness for a layer with Grading I shall be 100mm while for layer with other Grading i.e. II & III it shall be 75mm.

Table 400-8, Grading for Screenings

IS Sieve Designation	Size Range	IS Sieve Designation	Percentage by weight passing
A	13.2mm	13.2mm 11.2 mm 5.6 mm 180micron	100 95-100 15-35 0-10
B	11.2mm	11.2 mm 5.6 mm 180micron	100 95-100 15-35
3	53 mmto 22.4 mm		100 95-100 65-90 0-10 0-5

Table 400-9 Approximate Quantities of Coarse Aggregate and Screening Required for 100/75 mm compacted thickness of WBM) sub base course 10m2 area

Classification	Size Range	Compacted	Loose Quantity	Screenings			
				Stone Screenings		Crushable type such moorum or Gravel	
				Grading Classification & Size	For WBM sub base base course (Loose Qty.)	Grading Classification & size	Loose Quantity
Grading-I	90 mm to 45mm	100mm	1.21 to 1.43m^3	Type A 13.2 mm	0.27 to 0.30 m^3	Not uniform	0.30 to 0.22m^3

Grading-II	63 mm to 45mm	75mm	0.91 to 1.07m^3	Type A 13.2 mm	0.12 to 0.15 m^3	Not uniform	0.22 to 0.20m^3
Grading-II	63 mm to 45mm	75mm	0.91 to 1.07m^3	Type A 11.2 mm	0.20 to 0.22m^3	Not uniform	0.22 to 0.20m^3
Grading-III	53 mm to 22.4mm	75mm	0.9 t 1.07m^3	Type A 11.2 mm	0.1 t 0.21 m^3	Not uniform	0.2 to 0.20m^3

Table 400-10 Physical requirement of course aggregate wet mix macadam for sub base/base course

S. No.	Test	Test Method	Requirements
1	*Los of angles Abrasion value or * Aggregate impact value	IS : 2386 (Part 4) IS:2386 (part 4) IS:5641	40 percent (Max) 30 percent (Max)
2.	Combined Frankness and Elongation Indices (Total)	IS:2386 (part 4)	3 percent (Max)**

* *Aggregate may satisfy requirements of either of the towtests.*

** *To determine this combined proportion, the flaky stone from a representative sample should first be separated out. Flakiness index is weight of flaky stone metal divided by weight of stone sample. Only the elongated particles be separated out from the remaining (non-flaky) stone metal. Elongation index is weight of elongated particles divided gby total non-flaky metal. Elongation index is weight of elongated particles divided by total non-flaky particles. The value of flakiness index and elongation index so found are added up.*

Sub-Base, Bases (Non – Bituminous) And shoulders

400-11, Grading Requirement of Aggregate for Wet Mix Macadam

IS Sieve Designation	Percent by weight passing the IS Sieve
53.00 mm	100
45.00 mm	95-100
26.50 mm	-
22.40 mm	60-80
11.20 mm	40-60
4.75 mm	25-40
2.36 mm	15-30
600 micron	8-22
75 micron	0-8

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-4, Composition of Bituminous Macadam

Mix designation nominal Aggregate size layer thickness IS Sieve (mm)	Grade – I 40 mm 80-100 mm	Grade – II 19mm 50-75mm
	Cumulative % by Weight of total aggregate passing	
45	100	-
1916.5	90-100	-
26.5	75-100	100
19	-	90-100
13.2	35-61	56-88
4.75	13-22	16-36
2.36	4-19	4-19
0.3	2-10	2-10
0.075	0-8	0-8
Bitumen content % by weight of total mixture	3.1 – 3.4	3.3-3.5
Bitumen Grade	35-90	35-90

Note : Appropriate bitumen contents for conditions in cooler areas of India may be upto 0.5% higher subject to the approval of the Engineer.

Table 500-5, Manufacturing and Rolling Temperatures.

Bitumen Penetration	Bitume Mixing (^{0}C)	Aggregate Mixing (^{0}C)	Mixed Material (^{0}C)	Rolling (^{0}C)	Laying (^{0}C)
35	160-170	160-170	170 Maximum	100 Minimum	130 Minimum
65	150-165	150-165	165 Maximum	90 Minimum	125 Minimum
90	140-160	140-160	155 Maximum	80 Minimum	115 Minimum

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-6, Composition of Penetration Macadam

IS Sieve Designation (mm)	Cumulative percent by weight of total aggregate passing			
	For 50 mm compacted thickness		For 75 mm compacted thickness	
	Coarse Aggregate	Key Aggregate	Coarse Aggregate	Key Aggregate
63	-	-	100	-
45	100	-	58-82	-
26.5	1916-72	-	-	100
22.4	-	100	5-27	50-75
13.2	2-20	50-75	-	-
11.2	-	-	-	5-25
5.6	-	5-25	-	-
2.8	0-5	0-5	0-5	0-25

Approx, Loose Aggregate Quantities cu./m^2	0.06	0.015	0.09	0.018
Binder quantity 1 (penetration grade) (kg/m^2)	5		0.8*	

Note : if cutback is used, adjust binder quantity such that the residual bitumen is equal to the values in this table.

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-7, Grading requirement for coarse & key aggregate &

IS Sieve Designation	Cumulative percent by weight of total aggregate passing	
53.0 mm	100	-
26.5 mm	40-75	-
22.4 mm	-	100
13.2 mm	0-20	0-75
5.6 mm	-	0-20
2.8 mm	0-5	0-54

Table 500-9, Grading requirements for mineral fillers

IS Sieve (mm)	Cumulative percent passing by weight of total aggregate
0.6	100
0.3	95-100
0.075	85-100

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-10, Composition of Dense Graded Bituminous Macadam Pavement Layers.

Grading	1	2
Nominal Aggregate size	40mm	25mm
Layer Thickness	80-100 mm	50-75mm
IS Sieve (mm)	Cumulative % by weight of total aggregate passing	
45	100	-
1916.5	95-100	100
26.5	63-93	90-100
19	-	71-95
13.2	55-75	56-80
9.5	-	-
4.75	38-54	38-54
2.36	28-42	28-42
1.18	-	-
0.6	-	-
0.3	7-21	7-21
0.15	-	-
0.075	2-8	2-8
Bitumen content % by mass oftotal mix[2]	Min 4.0	Min 4.5
Bitumen grade (pen.)	65 or 90	65 or 90

Note: 1. The combined aggregated grading shall not vary from the low limit on one sieve to the high limit on the adjacent sieve.

2. Determined by the Marshall method.

Table 500-11, Requirements for Dense Graded Bituminous Macadam Mix.

Minimum stability kN at 60^0C	9.0
Minimum flow (mm)	2
Maximum flow (mm)	4
Compaction level (Number of blows)	75 blows on each of the two faces of the specimen
Percent air voids	3-6
Percent voids in mineral aggregate (VMA)	see Table 500-12 below
Percent voids filled with bitumen (VFB)	65-75

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-12, Minimum percent Voids in Mineral Aggregate (VMA)

Nominal Maximum Particle size[1] (mm)	**Minimum VMA, percent related to Design Air Voids, Percent[2]**		
	3.0	**4.0**	**5.0**
9.5	14.0	15.0	16.0
12.5	13.0	14.0	15.0
19.0	12.0	13.0	14.0
25.0	11.0	12.0	13.0
1916.5	10.0	11.0	12.0

Note: 1. The nominal maximum particle size is one size larger than the first sieve to retain more than 10 percent.

- *Interpolate minimum voids in the miner aggregate (VMA) for design are voids values between those listed.*

Table 500-13, Permissible variations from the Job Mix Formula

Description	**Permissible Variation**	
	Base/Binder course	**Wearing Course**
Aggregate passing 19mm sieve or larger	8%	7%
Aggregate passing 13.2 mm, 9.5mm	7%	6%
Aggregate passing 4.75mm	6%	5%
Aggregate passing 2.36 mm, 1.18mm,0.6mm	5%	4%
Aggregate passing 0.3mm, 0.15mm	4%	3%
Aggregate passing 00.075mm	2%	4.5%
Binder content	0.3%	0.3%
Mixing Temperature	10^0C	10^0C

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-15, Compaction of Semi-Dense Bituminous Concrete Pavement Layers.

Grading	**1**	**2**
Nominal Aggregate size	**13mm**	**10mm**
Layer Thickness	**35-40 mm**	**25-30 mm**
IS Sieve (mm)	**Cumulative % by weight of total aggregate passing**	
45	100	-
1916.5	95-100	100
26.5	63-93	90-100
19	-	71-95
13.2	55-75	56-80
9.5	-	-
4.75	38-54	38-54
2.36	28-42	28-42
1.18	-	-

0.6	-	-
0.3	7-21	7-21
0.15	-	-
0.075	2-8	2-8
Bitumen content % by mass of total mix[2]	Min 4.0	Min 4.5
Bitumen grade (pen.)	65*	65*

Note: 1. The combined aggregated grading shall not vary from the low limit on one sieve to the high limit on the adjacent sieve.

2. Determined by the Marshall method.
Only in exceptional circumstances , 80-100 penetration grade my be used, as approved by the engineer.

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-16, Requirement for Semi-Dense Bituminous Concrete Pavement Layers.

Minimum stability kN at 60^{0}C	8.2
Minimum flow (mm)	2
Maximum flow (mm)	4
Compaction level (Number of blows)	75 blows on each of the two faces of the specimen
Percent air voids	3-5
Percent voids in mineral aggregate (VMA)	see Table 500-12 below
Percent voids filled with bitumen (VFB)	65-78

Table 500- 18, Compaction of Bituminous Concrete Pavement Layers.

Grading	**1**	**2**
Nominal Aggregate size	**19 mm**	**13 mm**
Layer Thickness	**50-65 mm**	**30-45 mm**
IS Sieve (mm)	**Cumulative % by weight of total aggregate passing**	
45	-	-
1916.5	-	-
26.5	100	-
19	79-100	100
13.2	59-79	79-100
9.5	52-72	70-88
4.75	35-55	53-71
2.36	28-44	42-58
1.18	20-34	34-
0.6	15-27	26-38
0.3	10-20	28-28
0.15	5	12-50
0.075	2-8	4-
Bitume content % by mass of total mix[2]	3.00-6.00	5.00-7.00
Bitumen grade (pen.)	65	65

Note: 1. The combined aggregated grading shall not vary from the low limit on one sieve to the high limit on the adjacent sieve.

2. Determined by the Marshall method.

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-19, Compaction of Bituminous Concrete Pavement Layers.

Minimum stability kN at 60^0C	9.0
Minimum flow (mm)	2
Maximum flow (mm)	4
Compaction level (Number of blows)	75 blows on each of the two faces of the specimen
Percent air voids	3-6
Percent voids in mineral aggregate (VMA)	see Table 500-12 below
Percent voids filled with bitumen (VFB)	65-75
Loss of stabilityon immersion in water at 60^0C (ASTM)	Min. 75 percent retained strength

Table 500-20, Nominal Rates of Spread for Binder and Chippings

Nominal chipping Size mm	Binder (Penetration grade bitumen) (kg/m^2)	Chips Cum/m^2
19	1.2	0.015
13	1.0	0.010
10	0.9	0.008
6	0.75	0.004

Note :

- *These rates of spread are for pricing purpose – see 510.2.3 and clause 510.8*
- *For emulsion, these rates of spread are for the residual bitumen and appropriate adjustment must be made to determine the total quantity.*
- *Refer to Manual for construction and Supervision of Bituminous works for the procedure of determining the rates of spread of binder and chips.*

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-21, Grading requirements for chips for surface Dressing

IS Sieve Designation (mm)	Cumulative percent by weight of total aggregate passing for the following nominal sizes (mm)			
26.5	100	-	-	-
19.0	85-100	100	-	-
13.2	0-40	85-100	100	-
9.5	0-7	0-40	85-100	100
6.3	-	0-7	0-35	85-100
4.75	-	-	0-10	-
3.35	-	-	-	0-35
2.36	0-2	0-2	0-2	0-10
0.60	-	-	-	0-2
0.075	0-1.5	0-1.5	0-1.5	0-1.5
Minimum 65% by weight of aggregate	Passing 19 m retained 13.2 mm	Passing 13.2 mm retained 9.5mm	Passing 9.5 mm retained 6.3 mm	Passing 6.3 mm retained 3.35 mm

Table 500-32, Spraying Temperatures for Binders.

Binder grades	Whirling spray jets		Slot jets	
	Min.^{0}C	Max.^{0}C	Min.^{0}C	Max.^{0}C
Penetration grades				
400/500	160	170	140	150
280/320	165	175	150	160
180/200	170	190	155	165
80/100	180	200	165	175

BASE AND SURFACE COURSES (BITUMINOUS) Table 500-23, Quantities of materials Required for 10 Sqm. of Road surface for 20mm Thick open graded premix surfacing using penetration bitumen or cutback.

Aggregates		
(a)	Nominal Stone size 13.2mm (passing 22.4mm sieve and retained on 11.2mm sieve)	0.18m^3
(b)	Nominal Stone size 11.2mm (passing 13.2mm sieve and retained on 5.6mm sieve)	0.09m^3
	Total	0.27m^3
Binder	(quantities in Terms of Straight run bitumen)	
(a)	For 0.18m^3 of 13.2 mm nominal size stone at 52 kg bitumen per m	9.5kg.
(b)	For 0.09m^3 of 11.2 mm nominal size stone at 56 kg bitumen per m^3	5.1kg.
	Total	14.kg

Table 500-24, Quantities of aggregate for 10m^2 area

(A)	Premix Carpet (a) Coarse aggregate nominal 13.2 mm size, passing IS 22.4mm sieve and retained on IS 11.2 mm sieve	0.18m^3
	(b) Coarse aggregate nominal 11.2 mm size, passing IS 22.4mm sieve and retained on IS 13.2 mm sieve	0.09m^3
(B)	For Seal Coat: Refer to Clause 513	

Table 500-25, Quantities of Emulsion Binder.

(A)	Premix Carpet	For 10m area 20to 23kg
(B)	For Seal Coat	12 to 14 kg 10 to 12 kg

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-26, Aggregate Gradation

IS Sieve Designation	Cumulative percent by weight of total aggregate passing	
	Type A	Type B
13.2 mm	-	100
11.2 mm	100	88-100
5.6 mm	52-88	31-52
2.8 mm	14-38	5-25
0.09 mm	0-5	0-5

Table 500-27, size requirement for coarse stone Aggregates.

S. NO.	Nominal Size of Aggregate	Designation of Sieve though which the aggregates shall wholly pass	Designation of sieve on which the aggregates shall be wholly retained
(i)	75 mm	106 mm	63 mm
(ii)	63 mm	90 mm	53 mm
(iii)	45 mm	53 mm	26.5 mm
(iv)	26.5 mm	45 mm	22.4 mm
(v)	22.4 mm	26.5 mm	13.2 mm
(vi)	13.2 mm	22.4 mm	11.2 mm
(vii)	11.2 mm	13.2 mm	6.7 mm

(viii)	6.7 mm	11.2 mm	2.8 mm

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-28, Percentage Reduction of Volume of Aggregates.

S.NO.	Standard size of aggregates	Percentage reduction in volume computed by stack measure to arrive at the volume to be paid for
1	75 mm and 63 mm	12.5
2	45 mm and 26.5 mm	10.0
3	22.4 mm, 13.2 mm, 11.2 mm and 6.7 mm	5.0
4	Fine aggregate	5.0

Table 500-29, Requirement for physical properties of Binder.

Property	Test method	Requirement
Penetration at 25^0C	IS 1203	15 5*
Softening point, ^{0}C	IS 1205	65 10
Loss on heating of 5h at 160^0C, % of mass Max.	IS 1212	2.0
Solubility in Trichloethylene, % by mass Min	IS 1216	95
Ash (mineral matter), % by mass Max.	IS 1468	1.0

**In cold climatic regions (temperature 10^0C), a softer penetration grade of 30/40 may be used.*

Table 500-30, Grade and Thickness of Mastic Asphalt paving and Grading of Coarseaggregate.

Application	Thickness Range (mm)	Nominal size of coarse aggregate (mm)	Coarse aggregate content, % by mass of total mix
Roads and carriageways	25-50	13	40 10
Heavily stressed areas i.e. junctions and toll plaza.	40-50	13	45 10
Nominal size of coarse aggregate	13 m		
IS sieve (mm)	Cumulative % passing byweight		
19	100		
13.2	88-96		
2.36	0-5		

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-31, Grading of Fine Aggregates.(Inclusive Filler)

S.No.	IS Sieve	Percentage of weight of aggregate
1	passing 2.36 mm but retained on 0.60 mm	0-25
2	passing 0.600 mm but retained on 0.212 mm	10-30
3	passing 0.212 mm but retained on 0.075 mm	10-30
4	passing 0.075 mm	30-35

Table 500-32, Composition of Mastic Asphalt Blocks without Coarse Aggregates

S.No. IS Sieve		Percentage of weight of aggregate	
		Minimum	Maximum
1	passing 2.36 mm but retained on 0.60 mm	0	22
2	passing 0.600 mm but retained on 0.212 mm	4	30
3	passing 0.212 mm but retained on 0.075 mm	8	18
4	passing 0.075 mm	25	45

5	Bitumen content	14	17

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-33, Sand Grading and Physical Requirements

Sieve Size (mm)	Percentage by mass passing finished thickness of sealing		
	5 mm	3 mm	1.5 mm
9.5	100	-	-
4.75	90-100	100	-
3.35	-	80-100	100
2.36	65-90	75-100	95-100
1.18	45-70	55-90	70-95
0.600	30-50	35-70	55-75
0.300	18-30	20-45	30-50
0.150	10-21	10-25	10-30
0.075	5-15	5-15	5-15
Quantity of residual binder, percentage by mass of aggregate	7.5-13.5	10-16	12-20
Coverage rate (kg/m^2)	8-15	4-6	2-4

Table 500-41, Sand Grading and Physical Requirements.

Sieve size (mm)	Cumulative Percentage by weight of total aggregate passing
9.5	100
4.75	85-100
2.36	80-100
1.18	70-98
0.60	55-95
0.30	30-75
0.15	10-40
0.075	4-10
Plasticity Index (%)	6 max.
Sand equivalent (IS : 2386, part01)	30min.
Loss Angles Abrasion Value (IS:2386 part4)	40 max.

Note : Maximum thickness for sand asphat is 80 mm

BASE AND SURFACE COURSES (BITUMINOUS)

Table 500-42, Requirements for Sand Asphalt Base Coarse

Parameter	Requirement
Minimum stability (kN at 60^0C)	2.0
Minimum flow (mm)	2
Compaction level (Number of blows)	2×75
Percent air voids	3-5
Percent voids in mineralaggregate (VMA)	>16
Percent voids filled with bitumen (VFB)	65-75

Table 500-44, Requirements of polymer modified binders (Electrometric Thermoplastics and Rubber Latex)

Designation	Grade and Requirement	Method of

	PMB 120	PMB 70	PMB 40	Test
Penetration at 25 C, 0.1mm, 100g, 5 sec	90 to 150	50 to 89	30-49	IS : 1203-1978
Penetration at 4 C, 0.1mm, 200g, 60 sec minimum	35	22	18	IS : 1205-1978
Softening Point (R & B), C, Minimum	38	48	59	IS : 1205-1978
FraassBreakingPont C, Maximum	-24	-16	-12	IS : 2351-1978
Ductility at 27^{0}C, cm, Minimum	75	50	50	IS : 1215-1978
Flash point, COC, ^{0}C,, Minimum	220	220	220	IS : 1209-1978
Elastic Recovery of Half thread in	70	60	50	ASTM
Declinometer,at15 C,% Minimum	(50)**	(40)**	(30)**	D5976-1996
Separation,Difference 0in Softening point, R & B C, Minimum	4	4	4	ASTM D5976-1996
Viscosity at 40C, Poise	1-3	2-6	4-8	IS:1206-1978
Test on Thin Oven Test Residue TFOT (IS : 2352-1979)				

Table 500-45, Requirements of polymer modified binders (Electrometric Thermoplastics)

Designation	Grade and Requirement			Method of Test
	PMB 120	PMB 70	PMB 40	
Penetration at 25^{0}C, 0.1mm, 100g, 5 sec	90 to 150	50 to 89	30-49	IS : 1203-1978
Penetration at 4^{0}C, 0.1mm, 200g, 60 sec minimum	35	22	18	IS : 1205-1978
Softening Point (R & B), ^{0}C, Minimum	38	48	59	IS : 1205-1978
Fraass BreakingPont ^{0}C, Maximum	-20	-15	-10	IS : 2351-1978
Ductility at 27^{0}C, cm, Minimum	50	40	30	IS : 1215-1978
Flash point, COC, ^{0}C,, Minimum	220	220	220	IS : 1209-1978
Elastic Recovery of Half thread in	60	50	40	ASTM
Declinometer,at15^{0}C,% Minimum				D5976-1996
Separation ,Difference in Softening point, R & B ^{0}C, Minimum	3	3	4	ASTM D5976-1996
Viscosity at 40C, Poise	1-2	2-4	4-8	IS:1206-1978
Test on Thin Oven Test Residue TFOT (IS : 2352-1979)				

Table 500-46, Requirements of polymer modified binders (Treated with modified Crumb Rubber)

Designation	Grade and Requirement			Method of Test
	PMB 120	PMB 70	PMB 40	
Penetration at 25 C, 0.1mm, 100g, 5 sec	50-70	50-60	40-60	IS : 1203-1978
Softening Point (R & B), ^{0}C,	40	55	60	IS : 1205-1978

Minimum				
Elastic Recovery of Half thread in Declinometer,at15 C,% Minimum	60	35	30	ASTM D5976-1996
Test on Thin Oven Test Residue TFOT (IS : 2352-1979)				
Reduction in Penetration at 25 C, % Maximum	60	60	60	IS : 1203-1978
^{0}C, Minimum	5	5	5	IS : 1205-1978
Elastic Recovery of Half Thread in Declinometer,at15^{0}C,% Minimum	25	20	15	ASTM D5976-1996

Quality Control For Road Works

Table 900-1, Tolerance in Surface Levels.

1	Sub Grade	+ 20mm - 25mm
2	Sub-base + 10mm Flexible pavement Concrete Pavement (Dry lean concrete or rolled concrete)	 - 20mm +6 mm - 10mm
3.	Base Course for flexible pavement Bituminous Courses Other than bituminous Machine laid Manually laid	 +6 mm -6 mm +10 mm -10 mm +15 mm -15 mm
4.	Wearing Course for flexible pavement Machine laid Manually laid	 +6 mm -6 mm +10 mm -10 mm
5.	Cement Concrete Pavement	+5mm -6mm*

**This may not exceed – 8 mm at 0-30 cm from the edge.*

Table 900-2, Maximum Permitted Number of Surface Irregularities.

	Surface of carriageways and paved shoulders				**Surface of laybys, service areas and all bituminous base course**			
Irregularity	**4 mm**		**7 mm**		**4 mm**		**7 mm**	
Length (m)	300	75	300	75	300	75	300	75
National Highways Expressway*	20	9	2	1	40	18	4	2
Roads of Lower Category*	40	18	4	2	60	27	6	3

**Category of each section of road as described in the contract.*

The maximum allowable difference between the road surface and underside of a 3 m straight edge when placed parallel with, or at right angles to the center line of road at points decided bythe Engineer shall be for :

(i) Pavement surface (bituminous and cement concrete)	3mm
(ii) Bituminous base courses	6mm
Granular sub-base/base course	8mm
Sub-base under concrete pavements	10mm

Table 900-3, Control tests and their Minimum Frequency for Sub-Bases and Bases (Excluding bitumen Bound Bases)

S. No.	Type of Construction	Test	Frequency (Min.)
1.	Granular	Gradation	One test per 200m
		Atterberg Limits	One test per 200m^3
		Moisture content Prior to compaction	One test per 250m^3
		Densityof Compacted layer	One test per 500m^3
		Deleterious constituents	As required
		CBR	As required
2.	Lime/Cement Establishment Soil Sub base	Quality of Lime/Cement	One test for each consignment subject to a minimum of one text per 5 tonnes
		Lime/Cement content	Regularly through procedural checks
		Degree of pulverisation	Periodically as considered necessary
		CRB or unconfined compressive strength test on a set of three sepcimens.	As required
		Moisture content prior to compaction.	One test per 250m^2
		Densityof Compacted layer	One test per 500m^2
		Deleterious constituents	As required
3.	Water Bound Macadam	Aggregate index and Elongation index	One test per 200m^3 o aggregate
		Grading	One test per 100m^3
		Flakiness index and Elongation index	One test per 200m^3 o aggregate
		Ateerberg limits of binding material	One test per 25m^3 of binding material
		Atterberg limits of portion of aggregate passing 425 micron sieve.	One test per 100m^3 o aggregate
4.	Wet Mix Macadam	Aggregate impact value	One test per 200m
		Grading	One test per 100m^3
		Flakiness index and Elongation index	One test per 200m^3
		Atterberg limits of portion of aggregate passing 425 micron sieve.	One test per 100m^3
		Densityof Compact layar	One test per 500m^3

Table 900-4, Control tests and their Minimum Frequency for Sub-Bases and Bases (Excluding bitumen Bound Bases)

S. No.	Type of Construction	Test	Frequency (Min.)
1.	Primer Coat/Tack Coat/For spray	Quality of binder	No. of samples per lot of be and tests as per IS: 73, IS 468 and IS:8887 as applicable.
		Binder temperature fo application	At regular close intervals
		Rate of spread of binder	One test per 500m^2 and not less than two test per day
2.	Seal coat/surface dressing	Quality of binder	Same as mentioned under Serial no. 1
		Aggregate Impact value	One test per 50m^2 o aggregate
		Flakiness index of Elongation index	One test per 50m^2 o aggregate
		Stripping value of aggregate	Initially one set of 3 representative specimens for each sources o supply. Sub-sequently when warranted by changes in the quality of aggregate
		Water absorption of aggregate	----do-----
		Grading aggregates	One test per 25m^3 aggregate
		Stone Polishing Value	As required
		Temperature of binder a application	At regular close intervals
		Rate of spread of materials	One test per 500m^2 of work
3.	Open graded premix carpet Mix seal surfacing	Quality of binder	as mentioned under serial no. 1
		Aggregate Impact value	as mentioned under serial no. 2
		Flakiness Index or Elongation Index	as mentioned under serial no. 2
		Stripping value	as mentioned under serial no. 2
		Water absorption of aggregate	as mentioned under serial no. 2
		Grading aggregates	As required
		Stone Polishing Value	At regular close intervals
		Temperature of binder a application	One test per 500m^3 and not less than two test per day
		Binder Content	
		Rate of spread of materials	

			One test per 500m^3 of work
4.	Bituminous Macadam	• Qualityof binder	as mentioned under serial no. 1
		• Aggregate Impact value	as mentioned under serial no. 2
		• Flakiness Index o Elongation Index	as mentioned under serial no. 2
		• Stripping value	as mentioned under serial no. 2
		• Grading aggregates	Two test per dayper plant both on the individual constituents and mixed aggregates from the dryer.
		• Water absorption o aggregates	as mentioned under serial no. 2
		• Binder Content	Periodic, Subject to minimum of two tests per dayper plant
		• Control of temperature of binder and aggregate for mixing and of the mix at the time of laying and rolling	At regular close intervals.
		• Rate of spread o materials	Regular control through checks of layer thickness
		• Density of Compact rea	One test per 250m^2 of layar

5.	Bituminous Penetration Macadam/Builtup Spray Grout	• Quality of binder	as mentioned under serial no. 1
		• Aggregate Impact value	as mentioned under serial no. 2
		• Flakiness Index or Elongation Index	as mentioned under serial no. 2
		• Stripping value	as mentioned under serial no. 2
		• Water absorption of aggregate	as mentioned under serial no. 2
		• Grading aggregates	One test per 100m^3 of aggregate
		• Temperature of binder a application	At regular close intervals
		• Rate of spread of binders	as mentioned under S.No. 2
6.	Dense Bituminous Macadam/Semi Dense bituminous/ Concrete/Bituminous Concrete	Quality of binder	same as mentioned under serial no. 1
		Aggregate Impact value	same as mentioned under serial no. 2
		Flakiness Index or Elongation Index	same as mentioned under serial no. 2
		Stripping value	same as mentioned under serial no. 2
		Water absorption of aggregates	same as mentioned under serial no. 2
		Sand equivalent test	As required
		Plasticity Index	As required for semi dense bituminous concrete /bituminous concrete
		Stone Polishing value	one set of tests on individual constituent and mixed aggregate from the dryer for each 400 tonnes of mix subject to a minimum of two tests per plant per day
		Mix Grading	For each 400 tonnes of mix produced, a set of 3 Marshall specimens to be prepared and tested for stability flow value, density and void content subject to a minimum of two sets being tested per plant per day.
		Stability of Mix	

		water sensitivityof mix retention of Marshal stability	As required for th bituminous concrete.
		Swell test onthe mix	As required for th bituminous concrete.
		Controlof temperature of binder in boiler, aggregate in the dryer and mix at the time of laying and rolling	At regular close intervals
		Control of binder content and grading of the mix.	One test for each 400 tonnes of mix subject to a minimum of two tests per dayper plant.
		Rate of spread of mixed material.	Regular control through checks on the weigh materials and laye thickness.
		Densityof compacted layer	One test per 250m^2 area
7.	Mastic Asphalt	Qualityof binder	same as mentioned under serial no. 1
		Aggregate Impact value	same as mentioned under serial no. 2
		Flakiness Index or Elongatio Index	same as mentioned under serial no. 2
		Stripping value	same as mentioned under serial no. 2
		Water sensitivity of mix	same as mentioned under serial no. 2
		Grading of aggregates	Two tests per day per plant both of th individual constituents and mixed aggregate from the dryer
		Water absorption of aggregates	same as mentioned under serial no. 2
		Binder content and aggregat grading	Period, subject t minimum of two tests per dayper plant
		Controlof temperature of binder in boiler, aggregate in the dryer and mix at the time of laying and rolling	At regular close intervals
		Rate of spread of mixed material.	Regular control throug checks on the weigh materials and laye thickness.
		Densityof compacted layer	One test for each 400 tonnes of mix subject to a minimum of two tests per day.
8.	Slurry Seal	Quality of binder	same as mentioned under serial no. 1
		Film Stripping test	Initially one set of 3 representative specimens for each sources o supply. Sub-sequentl when warranted by changes in the quality of

			aggregate
9.	Sand Asphalt base course	• Quality of binder	same as mentioned under serial no. 1
		• Loss Angles abrasion Value	same as mentioned under serial no. 2
			As required
		• Sand equivalent test	As required
		• Plasticity Index	one set of tests on individual constituents and mixed aggregate from the dryer for each 400 tonnes of mix subject to a minimum of two tests per plant per day
		• Mix grading	
		• Stability of Mix.	For each 400 tonnes of mix produced, a set of 3 Marshall specimens to be prepared and tested fo stability flow value, density and void content subject to a minimum of two sets being tested per plant per day.
		• Control of temperature of binder in boiler, aggregate in the dryer and mix at the time of laying and rolling	At regular close intervals
		• Control of binder conten and grading ofthe mix.	One test for each 400 tonnes of mix subject to a minimum of two tests per dayper plant.
		• Rate of spread of mixed material.	Regular control through checks on the weight materials and layer thickness
		• Densityof compacted layer	One test per 250m^2 area.
10	Modified binder	• Softening point	Initially one submission thereafter daily if sit blended, weekly if pre-blended
		• Penetration at 25^0C and 4^0C	------- do ------
		• Elastic Recovery	------- do ------
		• Ductility	------- do ------
		• Flash Point	------- do ------
		• Frass Breaking	Initially on submission

		• Viscosity at 40C • Thin film oven test, Initia penetration, softening point, elastic recovery of residue, loss on heating	Initially on submission lly on submission

FREQUENCY OF QUALITY CONTROL TEST FOR PAVING QUALITY CONCRETE

S.NO.	TEST	FREQUENCY
(1)	**Levels, alignment and texture**	
	(i) Level tolerance	Clause 902.3
	(ii) Width of pavement and position of paving edges	Clause 902.2
	(iii) Pavement thickness	Clause 902.3 and 903.5.2.3
	(iv) alignment of joint, widths, depths of dowel grooves	To be checked @one joint per 400 m length or a day's work whichever is more
	(v) Surface regularity both transversely and longitudinally	Once a day or one day's work, without disturbing the curing operation.
	(vi) Alignment of dowel bars and their accuracy/tie bars	To be checked in trial length as per clause 602.10.5..2 and once on every 2 km.
	(vii) Texture depth	Clause 602.9.8
2	**Quality of Materials and Concrete**	
	Controltest for materials and concrete shall be as under:	
	1. Cement Physical and chemical test	
	IS :269 IS :455 IS :11916 IS :8112 IS :12269	Once or each source of supply and occasionally when called for in case of long/improper storage. Besides, the Contractor also will submit daily test data on cement released by the manufacture.
	2 Coarse and Fine aggregates	
	(ı) Gradatıon IS:2386(Pt.1)	One test for everyday's work of each fraction of coarse aggregate and fine aggregate, initially; may be relaxed later at the discretion of the Engineer
	(ii) Deleterious constituents IS:2386(Pt.2)	-do-
	(iii) Water absorption IS:2386(Pt.3)	Regularly as required subject to a minimum of one test a day for coarse aggregate & two test a day for Fine aggregate. This data shall be used for correcting the water demand of the mix on daily basis.
	3Coarse and Fine aggregates	

	(i) Los Angeles Abrasion value or aggregate impact test IS:2386(Pt.4)	Once for each source of supply and subsequentlyon monthly basis.
	(ii) Soundness IS:2386(Pt.5)	Before approving the aggregates and every month subsequently
	(iii) Alkali aggregate reactivity IS:2386(Pt.7)	-do-
	4 Water Chemical Test IS:456	Once for approval of source of supply, subsequently only in case of doubt
	5 concrete	
	(ı) Strength of concrete IS:516	2cube and 2 beam per 150 cum or part thereof (one for 7 dayand other for 28 daystrength) or minimum 6 cube and 6 beam per day's work whichever is more.
	(ii) Core strength on hardened concrete IS:516	As per the requirement of the Engineer ; only in case of doubt
	(ıii) Workabılityof fresh concrete-slump Test IS:1199	One test per each dumper load at both Batching plant site and paving site initially when work starts. Subsequently sampling may be done from alternate dumper
	(iv) Thickness determination	From the level data of concrete pavement surface and sub-base at grid points of 5/6.25mX3.5 m
	(v) Thickness measurement for trial length	3 cores per trial length
	(vı) Verification of level of string line in the case of slip form paving and steel forms in case of fixed form paving	String line or steel forms shall be checked for level at an interval of 5.0 mor 6.25 m. The level tolerance allowed shall be +_ 2mm. These shall be got approved 1-2 hours before the commencement ofthe concreting activity.

Useful Data

Areas & Weights of Steel

(a) Mild Steel Round Bars

Dia in mm	Area Sq.Cm.	Weight Kg/M	Perimeter Cms.
6	0.283	0.222	1.877
8	0.503	0.405	2.514
10	0.785	0.617	3.143
12	1.131	0.888	3.771
16	2.011	1.578	5.028
18	2.545	2.000	5.657
20	3.142	2.500	6.286
22	3.801	2.984	6.914
25	4.909	3.853	7.857
28	6.157	4.830	8.800
32	8.042	6.313	10.057
40	12.566	9.684	12.571

(b) High Tensile Steel

Dia in mm	Area Sq.Cm.	Weight Kg/M	Perimeter Cms.
3	0.070	0.056	0.943
5	0.196	0.154	1.571
7	0.385	0.302	2.200
8	0.503	0.405	2.514

(c) H.T. Cables each containing 12 wires

Dia of wire mm	Total area of H.T. Sq.Cm.	Weight Kg/M
3	2.352	1.848
5	4.620	3.624
8	6.036	4.740

(d) Structural steel (Sections which are normally required in bridges works)

Type section	Size in M.M.	Weight Kg/M
Angle	40×40×6	3.500
	50×50×6	4.500
	75×75×6	6.800
	75×75×10	11.000
	100×100×6	9.200
	100×100×10	14.900
	130×130×10	19.700
	130×130×12	23.400
Tee	100×100×10	15.00
Channel	75×40×6	5.700

(e) Structural Flats (Sections which are normally required in bridges works)

Thickness of Plate	Weight Kg/M
1 M.M.	0.00078
2 M.M.	0.00156
3 M.M.	0.00235
6 M.M.	0.00470
10 M.M.	0.00783
12 M.M.	0.00235
20 M.M.	0.01566
25 M.M.	0.01957

2. Weight of Materials for construction.

S.No.	Materials	Unit Metric	Weights
1.	Cement	Cum.	1440
2.	Steel		
	Mild Steel	Cu.Cm.	0.0078
	Cast Steel	Cu.Cm.	0.0078
	H.T. Steel	Cu.Cm.	0.0078

3.	Stainless Steel	Cu.Cm.	0.0078
4.	Lead	Cu.Cm.	0.0113
5.	Plain Cement Concrete or R.C.C.	Cu.m.	2306 to 63500
6.	Stone Lime Sand	 Cum. Cum.	 2650 63200.00
7.	Stone Masonry Rubble	Cum.	1100 0
8.	Bricks	Cum.	1600
9.	Brick Masonry	Cum.	01
10.	Timber	Cum.	650 to 720

3. Conversion Factors

Top Convert	Into	Multiply	
Inch	Millimeter	25.40	0.040
Inch	Centimeter	2.540	0.401916
Foot	Meter	0.3048	3.2808
Mile	Kilometer	1.609	0.621
Square Inch	Sq. Centimeter	6.4516	0.155
Square Foot	Square Meter	0.0929	10.764
Acre	Hectare	0.4047	2.471
Sq. Mile	Sq. Kilometer	2.590	0.386
Cubic Inch	Cu. Centimeter	16.387	0.0161
Cubic Foot	Cu. Meter	0.0283	35.3147
Gallon (Imp.)	Liter	4.546	0.220
Pound	Kilogram	0.4536	2.2046
Ton	Tonne	1.0160	0.9842
Lbs. Per Sq. Inch	Kg. per Sq. Cm.	0.0703	14.223
Ton per Sq. Foot	Tonne per Sq. M.	10.91916	0.0914

4- Strength of Concrete In Metric Unit

Symbol of Concrete in M. Unit	**Strength kg./Cm^2**
M- 15	150
M- 20	200
M- 25	250
M- 30	300
M- 35	350
M- 40	400
M- 45	450

5. Quantities of Materials for Finished Items of works.

S.No.	Items	Materials	Quantities
(a)	**Unit per Cubic meter of finished item**		
1.	Cement Mortar (1:3)	Cement Sand	0.33 Cum. 1.00 Cum.
2.	Cement Mortar (1:4)	Cement Sand	0.25 Cum. 1.00 Cum.
3.	Cement Mortar (1:6)	Cement Sand	0.16 Cum. 1.00 Cum.
4.	Course Rubble Masonry	Stones Mortar	1.00 Cum. 0.33 Cum.
5.	Cut Stone Masonry	Stones Mortar	1.00 Cum. 0.16 Cum.

6.	Fine Ashlars Stone Masonry	Stones Mortar	1.00 Cum. 0.12 Cum.
(b)	**Unit per Cubic met0er of finished item**		
7	Flush pointing to stone work	Mortar	0.004 Cum.
8	Tuck pointing to stone work	Mortar	0.008 Cum.

Quality Control Tests and Frequency thereof for cross drainage works

S.No.	Material	I.S. Code	Frequency of Test
1	OrdinaryPortland Cement / PPC etc. Physical and chemical tests	I.S. 269 I.S. 455 I.S. 11916 I.S. 8112 I.S. 12269	Once for each source of supply and occasionally when called for in case of long/improperstorage.Besides,the contractor also shall submit daily test data on cement released bythe manufacturer
2	**Coarse and Fine aggregates :-**		
	(a) Gradation	I.S. 2386 (Part 1)	One test for each day's work.
	(b) Deleterious constituents	I.S. 2386 (Part 2)	One test for each day's work.
	(c) Water absorption/content	I.S. 2386 (Part 3)	Regularly as required subject to a minimum of one test a day for coarse aggregate and two tests a day for fine aggregate. This data shall be used for correcting the water demand of the mix on daily basis.
3	**Coarse Aggregate :-**		
	(a) Aggregate Impact Test	I.S. 2386 (Part 4)	One test per source
	(b) Soundness	I.S. 2386 (Part 5)	One test per source
	(c) Alkali aggregate reactivity	I.S. 2386 (Part 7)	One test per source
4	**Water :-**		
	(a) Chemical Test	I.S. 456	Once for approval of source ofsupply, subsequently only in case of doubt.
5	**Mandatory Test for Workmanship :-**		
	(a) Strength of concrete	I.S. 516	Minimum 6 cubes and 6 beams per day's work (3 each for 7 day and 28 day strength)
	(b) Workability of fresh concrete- Slump Test	I.S. 1199	One test per 3 cum of concrete at paving site or one test for each dumper laid at plant site.

MANDATORY TYPE OF TESTS AND FREQUENCY THEREOF

S.No.	Type of Test	Frequency of Test
1	**Earth Work: Embankment/Subgrade/Earthen Shoulder**	
	(a) Lab Test :-	
	(i) Free Swelling Index	Each soil type to be tested, one test per 63500 cum of soil
	(ii) MDD/OMC	Each soil type to be tested, one test per 63500 cum of soil
	(iii) Plasticity Test (Atterberg Limit)	Each soil type to be tested, one test per 63500 cum of soil
	(iv) CBR for Subgrade	One CBR test for every 63200.00 cum atleast or closer as and when required
	(b) Field Test :-	
	(i) Moisture Content	1 in 250 cum for each layer, subject to a maximum of 4 tests per day
	(ii) Degree of Compaction	One set of the test per 10000 sqm area comprising 5 to 6 measurements
2	**Gravel : Base/Surface Course/Hard shoulder**	
	(a) Gradation (IS:2720 part 4)	2 tests per 500 cum subject to a minimum of 2 test per day
	(ii) Atterberg's Limit (IS:2720 part 5)	2 tests per 500 cum subject to a minimum of 2 test per day
	(iii) Placement moisture content (IS:2720 part 2)	2 tests per 500 cum subject to a minimum of 2 test per day
	(iv) Degree of compaction (IS:2720 part 28)	One set of the test per 10000 sqm area comprising 5 to 6 measurements
	(v) CBR (IS:2720 part 16)	1 in 10000 cum
	(vi) Aggregate Impact Value (IS:2386 part 4)	1 in 250 cum or source
	(vii) Water Absorption (IS:2386 part 3)	1 test per source
	(viii) Flakiness Index (IS:2386 part 1)	1 in 250 cum or per day

ANNEXURE -P

List of Essential Equipment for Quality Control

S.No	Description	Quantity	S.No.	Description	Quantity
1	Digging tools like pick axe, shovel, etc.	One set	20	Post Hole Auger with extensions	One set
2	IS Sieves Nos. with lid and pan (90 mm, 80 mm, 63 mm, 53 mm, 45 mm,01.5 mm, 26.5 mm, 19 mm, 13.2 mm 11.2 mm, 9.5 mm, 4.75 mm 2.8 mm, 5.6 mm, 3.35 mm 2.36 mm, 600 Micron, 425 Micron, 300 Micron, 150 Micron, 180 Micron, 90 Micron and 75	ONE SET	21	Measuring tape, spatula, glassware, porcelain dish, pestle mortar	One set

	Micron)				
3	Sand Pouring Cylinder with traycomplete for field Density test	One set	22	Standard Proctor Density Test Apparatus with rammer	One set
4	Speedymoisture meter complete with chemicals	One set	23	Electronic/digital balance 1 kg with the least count of 0.01 gm	One set
5	Straight Edges 3.00 metre width	Two set	24	Camber Board	Two no.
6	Liquid Limit and plastic limit testing apparatus complete with water bottle and glass wares	One set	25	Core Cutter (10 cm dia) 10cm/15cm height complete with dolly and hummer.	One set
7	Electronic/digital balance 5 kg	One no.	26	CBR Testing machine	One no.
8	Pan balance with weight box, 5 kg.	One no.	27	Oven (ambient to 200°C)	One no.
9	Slump cone	Two no.	28	Digital Thermometers	Threee no.
10	Concrete cube moulds (150 mm x 150mm)	Twelve no.		Aggregate Soundness test apparatus	One no.
11	Free swelling index test apparatus	Six no.	30	Concrete cube testing machine	One no.
12	Flakiness and elongation testing gauges	Two no.	31	First aid box	One no.
13	Water absorption test apparatus	One no.	32	Sampling Pipette	One no.
14	Specific gravitytest apparatus	One no.	33	Balance	One no.
15	B.S. compaction apparatus	One no.	34	Dial Gauges	Six No.
16	Proving rings	One each	35	Thickness gauge	One set
17	Glass ware	One set	36	Water still (4 ft.)	One no.
18	Auto level and staff	Three nos.	1916	A.I.V. testing equipment	One no.
19	Rapid moisture meter	One no.			

The above list of essential equipment for quality control is for guidance and is not complete. Other apparatus and equipment as desired/required by the Engineer-in-Charge shall be procured by the Contractor

Engagement of Labour

(1) The Contractor shall make his own arrangements for the engagement of all labour, local or otherwise, and save insofar as the Contract otherwise provides, for the transport, housing, feeding and payment thereof.

Supply of Water

(2) The Contractor shall, so far as reasonably practicable having regard to local conditions, provide on the Site, to the satisfaction of the Engineer's Representative an adequate supply of drinking and other water for the use of the Contractor's staff and work people

Alcoholic Liquor or Drugs

(3) The Contractor shall not, otherwise than in accordance with the Statutes, Ordinance and Government Regulations or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor, or drugs or permit or suffer any such importation sale, gift, barter or disposal by his sub-contractors, agents or employees.

Arms and Ammunition

(4) The Contractor shall not give, barter or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

Festivals and Religious Customs

(5) The Contractor shall in all dealings with labour in his employment have due regard to all recognised festivals, days of rest and religious or other customs.

Epidemics

(6) In the event of any outbreak of illness of an epidemics nature the Contractor shall comply with and carry out such regulations orders and requirements as may be made by the Government or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.

Disorderly Conduct etc.

(7) The contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighborhood of the Works against the same.

(8) The Contractor shall be responsible for observance by his sub-contractors of the foregoing provisions

Compliance to Labour laws & Regulations

(9) The Contractor shall comply with all Labour laws and Government regulations applicable at the site of work and shall indemnify the Government in respect of all claims arising out of non-compliance thereof by the Contractor.

Returns of Labour, etc.

(10) The contractor shall deliver to the Engineer's Representative, or at his office a return in detail in such front and at such intervals as the Engineer may prescribe showing the supervisory staff and the numbers of the several classes of labour from time to time employed by the contractor on the Site and such information respecting Constructional Plant as the Engineer's Representative mayrequire.

MODEL RULES RELATING TO LABOUR WATER SUPPLY AND SANITATION IN LABOUR CAMPS

NOTE : **These model rules are intended primarily for labour camps which are not of a permanent nature. They lay down the minimum desirable standard which should be adhered to as standard for permanent or semi permanent labour camps and should not obviously be lower than those for temporary camps.**

1. LOCATION :

The camp should be located in elevated and well drained ground in the locality.

2. Labour huts to be constructed for one family of 5 persons each. The lay out to be shown in the prescribed sketch.

3. HUTTING :

The huts to be built of local materials. Each hut should provide at least 20 sq. meters of living space.

4. SANITARY FACILITIES :

Latrines and Urinals shall be provided at least 16 meters away from the nearest quarters separately for men and women and specially so marked on it.

5. LATRINES :

Pit privies at the rate of 10 users or two families per seat, separate urinals as required & part can also be used for this purpose.

6. DRINKING WATER :

Adequate arrangements shall be made for the supply of drinking water. If practicable filtered and chlorinated supplies shall be arranged, when supplies are from intermittent sources covered storage tank shall be provided with a capacity of five liters a person per day. Where the supply is to be made from a well it shall conform to the sanitary standard laid down in the report of the Rural sanitation committee. The well should be at least 30 meters away from any latrines or other source of pollution. If possible hand pump should be installed for drawing the water from well. The well should be effectively disinfected once every month and the quality of the water should be got tested from the nearest Public Health Engg. Laboratory between each work of disinfections.

7. BATHING AND WASHING :

Separate bathing and washing places shall be provided for men and women for every 25 persons in the camp. There shall be one gap and space of 2 sq. meters for washing and bathing. Proper drainage for the water should be provided.

8. WASTE DISPOSAL :

Dustbin be provided at suitable places in camp and the residents shall be directed to throw all rubbish into those dustbins. The dustbins shall be provided with cover. The contents shall be removed every day and disposed off bytrenching.

9. MEDICAL FACILITIES :

(a) Every camp where 1,000 or more persons reside shall be provided with whole time doctor and dispensary. If there are women in the camp a whole time nurse shall be employed.

(b) Everycamp where less than 1,000 but more than 250 persons reside shall be provided with a dispensary and a part time nurse/mid wife.

(c) Ifthere are less than 250 persons in anycamp a first aid kit shall be maintained in charge of whole time persons, trained in first aid.

(d) All the medical facilities mentioned above shall be for all residents in the camp including dependent of the worker, if any free of cost.

SANITARY STAFF :

For such labour camp there should be qualified sanitary inspector and sweepers should be provided in the following scale :-

1. For camps with strength over 200 but not exceeding 500 persons one sweeper for every 75 persons above the first 200 for which 3 sweepers shall be provided.

- For camps with a strength over 500 persons one sweeper for every 100 persons above first 500 for which 5 sweepers should be provided.

CONTRACT LABOUR REGULATION

(a) The contractor shall pay not less than fair wages to labourers engaged by him in the work.

'Fair Wages' means wages whether for time or piece work as notified on the date of Inviting Tenders and where such wages have not been so notified the wages prescribed bythe Labour department for the division in which the works is done.

(b) The contractor shall, notwithstanding the provisions of any contract to the contrary, shall ensure the payment of fair-wage to laborers indirectly engaged on the work including any labour engaged by his sub contractors in connection with the said work as if laborers had been immediately employed by him.

(c) In respect of all labour directly or indirectly employed on the works or the performance of his contract, the contractor shall comply with or cause to be compiled with the labour Act in force.

(d) The Engineer/Employer shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a workers by reason of non fulfillment of the conditions of the contract for the benefit of the workers non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of regulations.

(e) The contractor shall be primarily liable for all payments to be made under and for the observance of the regulations aforesaid without prejudice to his right to claim identify from his sub-contractors.

(f) The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

(g) The contractor shall obtain a valid license under the contract (regulations and Abolition) Act, in force and rules made there under by the competent authority from, time to time before commencement of work, and continue to have a valid license until the completion of the work.

Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out ofthe resulted non-execution of the work assigned to the contractor.

Annexure – Q

1. Vanijya Kar Registration and Clearance Certificate -

The tender or supplier should have a business in the state of Madhya Pradesh goods would be supplied of various destinations in the state and also should hold a registration certificate under the M.P. Vanjahack Kar Adhiniyam.

The tender/supplier shall also submit the Clearance Certificate as provided under section 36 of the M.P. Vanijahack Kar/Adhiniyam.

2. Royalty

Final Bill of the contractor shall be paid only after he submits the certificate of clearance of royalty, issued by the District Collector, Datia or the official authorized by him (on his behalf).

3. Asphalting works -

- Contractor has to produce all copies of original cash memo obtained from the companies supplying bitumen emulsion/asphalt, like Bharat Petroleum Co. Ltd. Hindustan Petroleum Co. Ltd. or Indian Oil Company from, where the material is purchased along with the bill without, which payment will not made.
- In addition to the above the toll tax receipt from the toll barrier passed by the trucks carrying asphalt/bitumen emulsion from the factory to the site if work also here to provided.
- Contractor has also to get done all mandatory test as laid down as per MOST specification as per required quantity and frequency before using the bitumen emulsion/Asphalt, without, which payment will not made.

4. Building & Construction Workers Act- 1996

In accordance to the Section 3(1) of the Building & Other Construction Workers (Appointment Regulation and Service Conditions), cess will be charged from the contractor.

5. Regarding Suspension of Registration-

In the event of tender with drawing his/her offer the expiry of the Period of validity of offer falling to execute the contract agreement as required by condition No. 8.1.1 of Notice inviting Tender (N.I.T.) he/she will not be entitled to tender for this work in case of recall in addition of forfeiture of his/her earnest money as per provisions of the conditions No. 4, 7 and 8.1.1 of the N.I.T. as may be applicable. If the tender has committed a similar default on an earlier occasion as well his/her registration in the department may be suspended temporarily for a period of 6 months from such date as may be suspended temporarily for a period of 6 months from such date as my be ordered by the competent authority, which had registered him/her.

REGARDING FLY ASH

(A) BUILDING WORKS :-

It is obligatory for every construction agency to use fly ash bricks of blocks or tiles or elay fly-ash bricks of cement fly ash bricks of similar products of a contribution of aggregate of them in construction as per following minimum percentage (by volume) of totals blocks or tiles :-

(a) In construction activities within radius of 50 to 100 km. from the following coal/ignite based thermal power plants. :

- M/s Vindhyacahl Super Thermal Power Project (NTPC) Vindhya Nagar, Sidhi State I & II.
- M/s Sanjay Gandhi Thermal Power Project (MPEB) state I & II Birsinghpur District Umaria.
- M/s Satpura Thermal Power Project Station, Sarni, Distt. Betul.
- M/s Garskm Industries Ltd. Nagda, Distt. Ujjain.

the following minimum percentage (by Volume) of the total bricks and tiles shall apply 25% by 31.08.2004; 50% by 31.08.2005; 75% by 31.08.2006; 100% by 31.08.2007;

(b) In construction activities within 50km. radius of above coal/ignite based thermal power plants, the following minimum percentage (by Volume) of use of bricks and tiles shall apply 50% by 31.08.2004; 100% by 31.08.2005;

Note: - "No separate payment shall be made for use of fly-ash/fly ash bricks tiles or blocks, clay fly-ash brick of cement fly-ash bricks/blocks or similar products".

(B) ROAD EMBANKMENT OR FLY OVERS:-

In the construction of roads and fly over embankment, fly ash shall be used as per IRC SP – 58 Guidelines for use of fly ash in road embankments, within a distance of 100 Km of above coal/ignite base thermal power plants.

(C) USE OF FLY- ASH IN RECLAMATION AND COMPACTION:-

No, agency, person or organization shall within a radius of 100 km. of above mentioned coal/ignite thermal power plant, allow reclamation and compaction of low lying areas with soil only. Pond ash shall be used compaction, reclamation and compaction shall be in accordance with the bye laws and specifications as per IRC SP – 58 of 2001.

Following new items are introduced in the Chapter No. – 2 "Excavation and Earthwork"

S. No.	Item	Rate (Rs)	Unit
1.0	Construction of embankment/subgrade including clearing & grabbing including collection of flyash & its transportation to site (as per clause 305 and is sub clauses, where required and as per IRC SP : 58-2001) i/c all lifts. cost of spreading, watering compacting and maintenance of surface during construction to ensure shedding and preventing ponding of water shaping & dressing, finishing etc. complete but excluding scarflying existing granular/bituminous road surface vide clause 305.6		
	1) Flyash lead up to 25 Km.	91.00	Cum
	2) Flyash lead more than 25 Km. and up to 50 Km	172.00	Cum
	3) Flyash lead more than 50 Km and up to 75 Km.	252.00	Cum
	4) Flyash lead more than 75 Km and up to 100Km.	332.00	Cum

Note : Earth cover will have to be provided on fly ash embankment as per para – 3.3.2 of IRC SP : 58-2001 and shall be compacted along with the fly ash as per para – 4.7.1 of IRC SP: 58-2001 & earth cover will be paid separately as per SOR item for embankment construction.

The above errata/amendment/addendum No. – 4 shall be applicable with effect.

The royalty will be levied on selected soil used in embankment, as per govt. of M.P.P.W.D. circular No. . F19-40/2002/12/1/Bhopal dated 22.10.2008

Chief Municipal Officer
Nagar Parishad Panna
District Panna (M.P.)

S.NO	MANDATORY DOCUMENT TO BE SUBMITED IN ENVOLAPE A	
(A)	MANDATORY PRAPOSAL	REGISTRATION
(B)	MANDATORY PRAPOSAL	GSTIN NUMBER
(C)	MANDATORY PRAPOSAL	PAN NUMBER
(D)	MANDATORY PRAPOSAL	AFFADAVIT
(E)	MANDATORY PRAPOSAL	FDR/DD
(F)	MANDATORY PRAPOSAL	GST REGISTRATION
(G)	MANDATORY PRAPOSAL	PURCHASE RECIEPT

Signature Not Verified
Digitally signed by UMASHANKAR MISHRA
Date: 2026.04.22 12:55:26 IST
Location: Madhya Pradesh-MP