



**STANDARD BIDDING DOCUMENT
PROCUREMENT OF
CIVIL WORKS**

PART-1: COMPLETE BIDDING DOCUMENT

**GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
DEPARTMENT OF
ROAD TRANSPORT & HIGHWAY**

Certified that this DNIT contains Pages

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**GOVERNMENT OF PUNJAB
PUBLIC WORKS DEPARTMENT**

**AGREEMENT NO. _____
NATIONAL COMPETITIVE BIDDING
(CIVIL WORKS)**

LIST OF IMPORTANT DATES

Website: <http://eprocure.gov.in/eprocure/app>

- 1 Name of work : DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)
- 2 Mode of Submission of Tender : To be submitted on-line at <http://eprocure.gov.in/eprocure/app>
- 3 Period & Time for download of Bidding Documents from E-procurement portal : From Date 26/06/2026 at 1:15 PM
To Date 27/07/2026 at 11:30 AM
- 4 Time & date of pre bid conference : Dated 09/07/2026 at 11:00 AM
- 5 Time & date of online submission of bid : From Date 26/06/2026 at 1:15 PM
To Date 27/07/2026 at 11:30 AM
- 6 Time & date of opening of online technical bids : Date 29/07/2026 at 11:00 AM
- 7 Time & date of opening of online financial bids : To be announced later on.
- 8 Place of opening of online Bids : O/o Executive Engineer,
National Highway Division, Pb.
PWD B&R Br., Jalandhar.
- 9 Last date of bids validity : Date. 25/10/2026
- 10 Office Inviting Bids : O/o Executive Engineer,
National Highway Division, Pb.
PWD B&R Br., Jalandhar.


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INVITATION FOR BID (IFB)


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**GOVERNMENT OF PUNJAB
PUBLIC WORKS DEPARTMENT
NATIONAL HIGHWAYS PROJECTS
INVITATION FOR BIDS (IFB)
NATIONAL COMPETITIVE BIDDING**

Date : 26/06/2026
Bid No : 02

The Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar invites Bids for construction of works detailed in the Table below.

TABLE

Pack age No	Name of work	Approximate value of work (Rs)	Bid Securit y (Rs)	Cost of document (Rs)	Period of completi on
1	2	3	4	5	6
1.	DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)	Rs.339.20 Lakhs (Excluding GST) ✓	Rs.6.784 Lacs ✓ 2%	Rs.20,000/-	6 Months

1. Period of availability of Tender on-line/Date & Time of on-line bid submission and Date & time of opening of Bids are as given below:

Availability of Tender on-line for bidding		Last Date & Time for on-line Submission of Bids	Date & Time of Opening of tender	
From	To		Technical Bid	Financial Bid
26/06/2026	27/07/2026	27/07/2026 at 11:30 AM	29/07/2026 at 11:00 AM	Date & Time to be announced later on

- i) For detailed terms and conditions of the notice inviting bids refer to our web site <http://eprocure.gov.in/eprocure/app>
- ii) The eligible bidders who do not possess DSC (Digital Signature Certificate) may get the same issued from approved agencies.

Signature of Authorized Officer

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**GOVERNMENT OF PUNJAB
PUBLIC WORKS DEPARTMENT
NATIONAL HIGHWAYS PROJECTS
INVITATION FOR BIDS (IFB)
NATIONAL COMPETITIVE
BIDDING**

The Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar invites Bids for construction of works detailed in the Table below.

Date : 26/06/2026
Bid No : 02

TABLE

Pack age No	Name of work	Approximate value of work (Rs)	Bid Securit y (Rs)	Cost of document (Rs)	Period of completion
1	2	3	4	5	6
1.	DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)	Rs.339.20 Lakhs (Excluding GST)	Rs.6.784 Lacs 27.	Rs.20,000/-	6 Months

2. Period of availability of Tender on-line/Date & Time of on-line bid submission and Date & time of opening of Bids are as given below:

Availability of Tender on-line for bidding		Last Date & Time for on-line Submission of Bids	Date & Time of Opening of tender	
From	To		Technical Bid	Financial Bid
26/06/2026	27/07/2026	27/07/2026 at 11:30AM	29/07/2026 at 11:00AM	

- Bidding documents can be downloaded from the web site:<http://eprocure.gov.in/eprocure/app>. The document downloaded from the website should not be tempered, and if any such tempering is detected before or after the opening of bids, the bidder shall be penalized and blacklisted. The bidder shall submit tender fee through online "Bharatkosh portal" amounting to Rs.20000/- cost of the bidding documents (non- refundable) in favour of Regional Pay & Accounts Officer, MORT&H payable at Chandigarh. The bidder shall upload scanned copy of transactions indicating deposit of tender fees in the Bharatkosh portal.
- The bidders should have the necessary portal enrolment with his/her own Digital Signature Certificate (DSC)
- The bidders should keep checking the website for any addenda/corrigenda to the notice/bidding documents till the date of on-line submission of bids, and the bidder should incorporate the same in his bid documents.

6. Bids must be accompanied by bid security/EMD of the amount specified for the Project/Work/Works in the table above bid security/EMD can be deposited through RTGS in the A/c No. 50100702306636 (IFSC Code HDFC0000340) of HDFC Bank, 245R, Rainbow road, Jalandhar of Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar. The bidder shall upload scanned copy of transactions indicating deposit of tender fees in the bank account EMD can also be furnished as specified in the bidding documents and shall have to be valid for 45 days beyond the validity of the bid.
7. The deposit in the bank account should be made before the opening of technical bid or the original earnest money deposit in the form as specified in the bidding documents should be deposited with the concerned Executive Engineer before the opening of the technical bid as given in the table above. The scanned copies of the same should be attached in Technical Bid as prescribed in the Standard Bidding Document (SBD), failing which the bidder will be disqualified.
8. Bids must be submitted online through an e-portal <http://eprocure.gov.in/eprocure/app> before the time specified in the table above (as per server clock). The department does not take any responsibility for the delay caused due to non-availability of internet connection or network traffic jam etc. for online bids.
9. Bid documents consisting of qualification information and eligibility criterion of bidders, plans, specifications, drawings, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor can be seen on website <http://eprocure.gov.in/eprocure/app> and scanned copies of the required documents and information as per section-2 (formats & annexure) should be attached in the technical bid as prescribed in the SBD.
10. Uploaded documents of valid successful bidders will be verified with the original before signing the agreement. The valid successful bidder has to provide the originals to the concerned authority on receipt of such letter, which will be sent through registered post / EMAIL.
11. Standard Bidding Documents (SBD) is not to be uploaded by the bidder. The bidder has to only agree / disagree on the conditions in the SBD. The bidders who disagree on the conditions of SBD, can not participate in the tender.
12. Technical bids will be opened on-line on the day & time as specified in the above table, in the presence of the bidders who wish to attend. If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received and opened on the next working day at the same time and venue.
13. Conditional bids and the bids not meeting the qualifying criteria on the date of receipt of bids shall be summarily rejected.
14. The Defect Liability Period (DLP) for the works is **Three Years** from the date of completion.
15. A Pre-bid meeting will be held on ~~09/07/2026~~ at ~~11:00 AM~~ at the office of Executive Engineer, National Highway Division,, Pb. PWD B&R Br., jalandhar to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in Clause 9.2 of "Instructions to Bidder" of bidding document.

Signature of Authorized Officer

SECTION – 1^a INSTRUCTIONS TO BIDDERS

(ITB)

Section 1: Instructions to Bidders

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A. GENERAL

1. Scope of Bid

- 1.1 The Employer (named in Appendix to ITB) invites bids for the construction of works (as defined in these documents and referred to as "the works") detailed in the table given in IFB. The bidders may submit bids on-line for any or all of the works detailed in the table given in IFB.
- 1.2 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.
- 1.3 Throughout these bidding documents, the terms 'bid' and 'tender' and their derivatives (bidder/ tenderer, bid/ tender, bidding/ tendering, etc.) are synonymous.

2 Source of Funds

- 2.1 The expenditure on this project will be met from the budget of Govt. of India under N.H scheme

3 Eligible Bidders

- 3.1 This Invitation for Bids is open to all bidders.
- 3.2 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a statement that the Bidder is neither associated, nor has been associated, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

4 Qualification of the Bidder

- 4.1 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary. The proposed methodology should include programme of construction backed with equipment planning and deployment duly supported with broad calculations and quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.
- 4.2 ~~In the event that Pre-qualification of potential bidders has been undertaken, only bids from prequalified bidders will be considered for award of Contract. These qualified bidders should submit with their bids any information updating their original prequalification applications or, alternatively, confirm in their bids that the originally submitted prequalification information remains essentially correct as of date of bid submission. The update or confirmation should be provided in Section 2. A copy of the original prequalification application and the letter of prequalification should also be furnished. With the updated information, the bidder must continue to be qualified in accordance with the criteria laid~~


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~~down in the prequalification document. All bidders shall also furnish the following information in Section 2.~~

- ~~(i) Evidence of access to or availability of credit facilities (minimum 10% of estimated cost) certified by the bankers.~~
- ~~(ii) Undertaking that bidder would be able to invest a minimum of cost upto 25% of the contract value of work, during implementation of contract.~~
- ~~(iii) Proposals, if any, for sub-contracting of elements of work, costing more than 10% of the bid amount.~~
- ~~(iv) Power of attorney.~~
- ~~(v) Latest income tax clearance certificate from concerned department.~~

4.3.* If the Employer has not undertaken prequalification of potential bidders, all bidders shall include the following information and documents with their bids in Section 2:

- (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;
- (b) total monetary value of construction work performed for each of the last five years;
- (c) experience in works of a similar nature and size for each of the last five years, and details of works underway or contractually committed; and clients who may be contacted for further information on those contracts;
- (d) major items of construction equipment proposed to carry out the Contract;
- (e) Qualifications and experience of key site management and technical personnel proposed for Contract;
- (f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (g) evidence of access to line (s) of credit and availability of other financial resources facilities (10% of contract value), certified by the Bankers (Not more than 3 months old)
- (h) undertaking that the bidder will be able to invest a minimum cash upto 25% of contract value of work, during implementation of work.
- (i) authority to seek references from the Bidder's bankers;
- (j) information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed Amount
- (k) proposals for subcontracting components of the Works amounting to more than 10 per cent of the Bid Price (for each, the qualifications and experience of the identified subcontractor in the relevant field should be annexed); and
- (l) the proposed methodology and programme of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and



completion of the work as per technical specifications within the stipulated period of completion as per milestones (for all contracts over Rs.5 Crore).

- 44 Deleted as per Ministry's Circular No. RW/NH-12037/4/2008-P&M/PIC dated 27.11.2009.

Note: Clause 4.5 to 4.8 of Standard Bidding Document is amended below as per Government of India, Ministry of Road Transport & Highways memo No. RW/NH-12035/4/2008-P&M/PIC dated 27th November 2009.

45 QUALIFICATION CRITERIA

- 4.5.1 Qualification will be based on Applicant's meeting on the following minimum pass / fail criteria regarding the Applicant's general and particular experience, personnel and equipment capabilities, and financial position, as demonstrated by the Applicant's responses in the forms attached to the Letter of Application (specified requirements for joint ventures are given under para 4.8 below). Subcontractors' experience and resources shall not be taken into account in determining the Applicant's compliance with the qualifying criteria.

To qualify for more than one contract, the applicant must demonstrate having experience and resources sufficient to meet the aggregate of the qualification criteria for each contract given in paragraphs 4.5.4, 4.5.5, 4.5.6 and 4.6 below:

4.5.2 **Base year and escalation.**

The base year shall be taken as (particular year to be mentioned)

Following enhancement factors will be used for the costs of works executed and the financial figures to common base value for works completed in India.

Year before	Multiplying factor
One	1.10 ✓
Two	1.21 ✓
Three	1.33 ✓
Four	1.46 ✓
Five	1.61 ✓

Applicant should indicate actual figures of costs and amount for the works executed by them without accounting for the above mentioned factors.

In case the financial figures and value of completed works are in foreign currency, the above enhanced multiplying factors will not be applied. Instead, current market exchange rate (State Bank of India BC Selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of amount in foreign currency into Indian rupees.


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4.5.3 General Experience

The applicant shall meet the following minimum criteria:

- (a) Average annual turnover (defined as billing for works in progress and completed in all classes of civil engineering construction works only) over the last five years of 40 per cent of the value of contract/contracts applied for.
- (b) Experience in successfully completing or substantially completing at least one contract of highway (road and / or bridge works) of at least 40 per cent of the value of proposed contract within the last five years.

The works may have been executed by the Applicant as prime contractor or as a member of joint venture or sub contractor. As sub contractor, he should have acquired the experience of execution of all major items of works under the proposed contract. In case a project has been executed by a joint venture, weightage towards experience of the project would be given to each joint venture in proportion to their participation in the joint venture.

Substantially completed works means those works which are at least 90% completed as on the date of submission (i.e. gross value of work done upto the last date of submission is 90% or more of the original contract price) and continuing satisfactorily. For these, a certificate from the employer shall be submitted along with the application incorporating clearly the name of the work, contract value, billing amount, date of commencement of works, satisfactory performance of the contractor and any other relevant information.

4.5.4 Personnel Capabilities

The Applicant must have suitably qualified personnel to fill the following positions. The applicant will supply information on a prime candidate and an alternate for each position, both of whom should meet the experience requirements specified below:

S. No.	Position	Total Experience (Years)	In similar works (Years)	As manager of similar works (Years)
(1)	Project Manager			
(2)	Other positions			
(Suggested lists is given in Annexure-I)				

4.5.5 Equipment Capabilities

The Applicant should own or should have assured ownership to the following key items of equipment, in full working order, and must demonstrate that, based on known commitments; they will be available for use in the proposed contract.

S. No.	Equipment type and characteristics	Minimum number required
(1)		
(2)		
(3)		
(Suggested lists is given in Annexure-II)		

4.5.6 Financial Position

The Applicant should demonstrate that he has access to, or has available, liquid assets (aggregate of working capital, cash in hand and uncommitted bank guarantees) and / or credit facilities of not less than 10 per cent of the value of the contract / contracts applied for (construction cash-flow may be taken as 10 per cent of the estimated value of contract/contracts)

- 4.5.7 The audited balance sheets for the last five years should be submitted, which must demonstrate the soundness of the Applicant's financial position, showing long term profitability including an estimated financial projection for the next two years. If necessary, the Employer will make inquiries with the applicant's bankers.

4.5.8 Litigation History

The Applicant should provide accurate information on any litigation or arbitration resulting from contracts completed or under execution by him over the last five years. A consistent history of awards against the Applicant or any partner of a joint venture may result in failure of the applicant.

46 BID CAPACITY

Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under:

Assessed Available Bid Capacity = $(A * N * 2 - B)$, where

A= Maximum value of works executed in any one year during the last five years (updated to the current price level) rate of inflation may be taken as 10 per cent per year which will take into account the completed as well as works in progress;

B= Value at current price level of the existing commitments and ongoing works to be completed during the next 1-1/4 years (period of completion of works for which bids are invited); and

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

Note: In case of a Joint Venture, the available bid capacity will be applied for each partner to the extent of his proposed participation in the execution of the works.

47 DISQUALIFICATION

Even though the Applicants meet the above criteria, they are subject to be disqualified if they have:

- Made misleading or false representation in the form, statements submitted; and/or
- Records of poor performance such as abandoning the work, rescinding of contract for which the reasons are attributable to the non-performance of the contractor; consistent history of litigation awarded against the Applicant or financial failure due to bankruptcy. The rescinding of contract of a joint venture on account of reasons other than non-performance, such as Most Experienced partner of joint venture pulling out, court


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directions leading to breaking up of a joint venture before the start of work, which are not attributable to the poor performance of the contractor will, however, not affect the qualification of the individual partners

48 JOINT VENTURE (applicable for projects costing more than Rs.25 crores)

4.8.1 Joint ventures must comply with the following requirements;

(a) Following are the minimum qualification requirements;

(i) The lead partner shall meet not less than 50 per cent of all the qualifying criteria given in para 4.5.3 & 4.5.6 above. The joint venture must collectively satisfy the criteria of para 4.5.3 & 4.5.6 above. The experience of the other joint venture partners shall be considered if it is not less than 30 per cent of the qualifying criteria given in para 4.5.3 & 4.5.6 above. However, in case one of the joint venture partners is proposed to be included primarily to provide financial strength to the joint ventures, such joint venture partner shall have to commit to provide liquidity support to the project to the extent of 10 per cent of the value of the contract.

(i) The joint venture must satisfy collectively the criteria of para 4.5.4 and 4.5.5 above for which purpose the relevant figures for each of the partners shall be added together to arrive at the joint venture's total capacity. Individual members must each satisfy the requirements of para 4.5.7 & 4.5.8 above.

(b) The information of a joint venture after prequalification, any change in a pre-qualified joint venture, will be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval shall be denied if (i) partners withdraw from a joint venture and the remaining partners do not meet the qualifying requirements; (ii) the new partners to a joint venture are not qualified individually or as another joint venture; or (iii) in the opinion of the Employer, a substantial reduction in competition may result.

(c) Bid shall be signed so as to legally bind all partners, jointly and severally, and shall be submitted with a copy of the joint venture agreement providing the 'joint and several' liability with respect o the contract.

4.8.2 Qualification of a joint venture does not necessarily qualify any of its partners individually or as a partner in any other joint venture. In case of dissolution of a joint venture, each one of the constituent firms may qualify if they meet all the qualification requirements, subject to the written approval of the Employer.

5 One Bid per Bidder

5.1 Each bidder shall submit only one bid for one package. A bidder who submits for participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

6 Cost of Bidding

- 6.1 The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

7 Site Visit

- 7.1 The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

B. BIDDING DOCUMENTS

8 Content of Bidding Documents

- 8.1 The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 10:

Section	Particulars	Volume No.
	Invitation for Bids	I
1	Instructions to Bidders	
2	Qualification Information, and other forms	
3	Conditions of Contract	
4	Contract Data	
5	Technical Specifications	II
6	Form of bid	III
7	Bill of Quantities	
8	Securities and other forms	
9	Drawings	IV
10	Documents to be furnished by bidder	V

- 8.2 ~~One copy of each of the volumes I, II, III and IV will be issued to the bidder. Documents to be furnished by the bidder in compliance to section 8.1 will be prepared by him and furnished as Volume V in two parts (refer clause 12).~~ Deleted

- 8.3 The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, technical specifications, bill of quantities, forms, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

9 Clarification of Bidding Documents

- 9.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter "cable" includes telex and facsimile, e-mail) at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 15 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry but without identifying its source.


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9.2 Pre-bid meeting

- 9.2.1 The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the address, venue, time and date as indicated in appendix.
- 9.2.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 9.2.3 The bidder is requested to submit any questions in writing or by cable to reach the Employer not later than one week before the meeting.
- 9.2.4 Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be uploaded on the website without any delay. Any modification of the bidding documents listed in Sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting.
- 9.2.5 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10 Amendment of Bidding Documents

- 10.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
- 10.2 Any addendum thus issued shall be part of the bidding documents and shall be uploaded on the web-site as corrigendum.
- 10.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at his discretion, extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

C. PREPARATION OF BIDS

11 Language of the Bid

- 11.1 All documents relating to the bid shall be in the English language.

12 Documents Comprising the Bid

- 12.1 The bid to be submitted on-line by the bidder as Volume V of the bid document (refer Clause 8.1) shall comprise of scanned copies of the following in two separate parts / covers:

Part I shall be named "Technical Bid" and shall comprise

- (i) Bid Security in the form specified in Section 8
- (ii) Qualification Information and supporting documents as specified in Section 2
- (iii) Certificates, undertakings, affidavits as specified in Section 2
- (iv) Any other information pursuant to Clause 4.2 of these instructions
- (v) Undertaking that the bid shall remain valid for the period specified in Clause 15.1
- (vi) Acceptance/ non-acceptance of Dispute Review Expert proposed in Clause 36.1.

Part II shall be named "Financial Bid" and shall comprise

- (i) Form of Bid as specified in Section 6
- (ii) Priced Bill of Quantities for items specified in Section 7
- 12.2 ~~The bidder shall prepare two copies of the bid, marking them 'Original' and 'Copy' respectively.~~

Deleted

12.3 Following documents, which are not submitted with the bid, will be deemed to be part of the bid.

Section	Particulars	Volume No
	Invitation for Bids (1KB)	
1	Instructions to Bidders	Volume – I
3	Conditions of Contract	
4	Contract Data	
5	Specifications	Volume – II
8	Drawings	Volume – IV

13 Bid Prices

- 13.1 The contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.
- 13.2 The bidder shall fill in rates and prices in figures for all items of the Works described in the Bill of Quantities as available online. *Items for which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.*
- 13.3 All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder.
- 13.4 "The rates and prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account (For contract upto 12 months period)."

OR

- ~~13.4 "The rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 47 of the Conditions of Contract (For contract more than 12 months period)."~~

(*Choose one and delete the other)


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14 Currencies of Bid and Payment

- 14.1 The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

15 Bid Validity

- 15.1 Bids shall remain valid for a period not less than 120 days after the deadline date for bid submission specified in Clause 20. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. In case of discrepancy in bid validity period between that given in the undertaking pursuant to Clause 12.1 (v) and the Form of Bid submitted by the bidder, the latter shall be deemed to stand corrected in accordance with the former and the bidder has to provide for any additional security that is required.

- 15.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid except as provided in 15.3 hereinafter, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 16 in all respects.

- 15.3 * In the case of contracts in which the Contract Price is fixed (not subject to price adjustment), in the event that the Employer requests and the Bidder agrees to an extension of the validity period, the contract price, if the Bidder is selected for award shall be the bid price corrected as follows :

The price shall be increased by the factor of 0.2% for each week or part of a week that has elapsed from the expiration of the initial bid validity to the date of issue of letter of acceptance to the successful Bidder.

(* Delete if the contract is more than 12 months period)

- 15.4 Bid evaluation **will** be based on the bid prices without taking into consideration the above correction.

16 Bid Security

- 16.1 The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This bid security shall be in favour of Employer as named in Appendix and may be in one of the following forms:

- a. Receipt in challan of cash deposit in the Govt. Treasury in India.
- b. Deposit-at-call Receipt from any scheduled Indian Bank or a foreign Bank located in India and approved by the Reserve Bank of India.
- c. Indian Post Office / National Savings Certificate duly endorsed by the competent postal authority in India.
- d. Bank Guarantee from any scheduled Indian bank, in the format given in Volume III.
- e. Fixed Deposit Receipt, a certified cheque or an irrevocable letter of credit, issued by any Scheduled Indian Bank or a foreign Bank approved by the Reserve Bank of India.

- 16.2 Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall be valid for 45 days beyond the validity of the bid.
- 16.3 Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 and 16.2 above shall be rejected by the Employer as non-responsive.
- 16.4 The Bid Security of unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 15.1.
- 16.5 The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.
- 16.6 The Bid Security may be forfeited
 - (a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
 - (b) if the Bidder does not accept the correction of the Bid Price, pursuant to Clause 27; or
 - (c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - (i) sign the Agreement; or
 - (ii) furnish the required Performance Security.

17 Alternative Proposals by Bidders

- 17.1 Bidders shall submit offers that fully comply with the requirements of the bidding documents, including the conditions of contract (including mobilisation advance or time for completion), basic technical design as indicated in the drawing and specifications. Conditional offer or alternative offers will not be considered further in the process of tender evaluation.

18 Format and Signing of Bid

- 18.1 The bidder shall submit on-line one set of bid comprising of documents as prescribed in Clause 12.
- 18.2 ~~The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Sub-Clauses 4.3. All pages of the bid where entries or amendments have been made shall be initialed by the person or persons signing the bid.~~
- 18.3 ~~The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.~~

D. SUBMISSION OF BIDS

19 Sealing and Marking of Bids

The bidder shall place two separate digitally signed files marked "Technical Bid (Cover- 1)" and "Financial Bid (Cover-2)".

The contents of technical and Financial Bids will be as specified in clause 12.1. All documents are to be signed digitally by the bidders.

- 19.1 ~~The Bidder shall seal the original and copy of the Bid in separate envelopes, duly marking the envelopes as "ORIGINAL" and "COPY". These two envelopes (called as inner envelopes) shall then be put inside one outer envelope. Each set of the inner envelope marked "ORIGINAL" and "COPY" shall contain within it two separate sealed~~

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envelopes marked "Technical Bid" and "Financial Bid" with additional markings as follows

Original or Copy, as the case may be

Technical Bid: To be opened on ----- (date of Technical Bid opening) in the presence of Evaluation Committee.

Financial Bid: Not to be opened except with the approval of Evaluation Committee

The contents of Technical and Financial Bids will be as specified in clause 12.1

19.2 The inner, outer, and separate envelopes containing Technical and Financial Bids shall

(a) be addressed to the Employer at the address given in Appendix

(b) bear the identification as indicated in Appendix.

19.3 In addition to the identification required in Sub Clauses 19.1 and 19.2, each of the envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared lost, pursuant to Clause 21, or the Evaluation Committee declares the bid as non-responsive pursuant to Clause 23.

19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

20 Deadline for Submission of the Bids

20.1 Complete Bids (including Technical and Financial) must be uploaded online through a e-portal before the date and time (as per server clock) as specified in the appendix to ITB. The department does not take any responsibility for the delay caused due to non-availability of internet connection or network traffic jam etc.

20.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21 Late Bids

21.1 Any Bid received by the Employer after the deadline prescribed in Clause 20 will be returned unopened to the bidder.

22 Modification and Withdrawal of Bids

22.1 Bidders may modify or withdraw their bids by giving notice in writing before the deadline prescribed in Clause 20 or pursuant to Clause 23.

22.2 Each Bidder's modification or withdrawal notice shall be prepared and uploaded online in accordance with Clause 18 & 19, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", appropriate.

- 22.3 ~~No bid may be modified after the deadline for submission of Bids except in pursuance of Clause 23.~~
- 22.4 Withdrawal or modification of a Bid between the deadline for submission o bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 may result in the forfeiture of the Bid security pursuant to Clause 16.

E. BID OPENING AND EVALUATION

23 Bid Opening

- 23.1 The Employer will open all the Bids received, including modifications made pursuant to Clause 22, in the presence of the Bidders or their representatives who choose to attend at time, date and the place specified in Appendix in the manner specified in Clause 20 and 23.3. In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.
- 23.2 ~~Bids marked "WITHDRAWAL" shall be read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 22 shall not be opened.~~
- 23.3 The ~~envelope containing~~ "Technical Bid" shall be opened. The amount, form and validity of the bid security furnished with each bid will be announced. If the bid security furnished does not conform to the amount and validity period as specified in the Invitation for Bid (ref. Column 4 and paragraph 3), and has not been furnished in the form specified in Clause 16, the remaining technical bid and the financial bid will not be opened.
- 23.4 (i) Subject to confirmation of the bid security by the issuing Bank, the bids accompanied with valid bid security will be taken up for evaluation with respect to the Qualification Information and other information furnished in Parti of the bid pursuant to Clause 12.1.
- (i) After receipt of confirmation of the bid security, the bidder will be asked in writing (usually within 10 days of opening of the Technical Bid) to clarify or modify his technical bid, if necessary, with respect to any rectifiable defects.
- (i) The bidders will respond in not more than 7 days of issue of the clarification letter, which will also indicate the date, time and venue of opening of the Financial Bid (usually on the 21 st day of opening of the Technical Bid)
- (iv) Immediately (usually within 3 or 4 days), on receipt of these clarifications the Evaluation Committee will finalize the list of responsive bidders whose financial bids are eligible for consideration.
- 23.5 ~~If, as a consequence of the modifications carried out by the bidder in response to sub clause 23.4, the bidders desire to modify their financial bid, they will submit the modification in separate sealed envelope so as to reach the Employer's address (refer sub~~



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~~clause 19.2) before the opening of the financial bid as intimated in the clarification letter (refer sub-clause 23.4). The envelope shall have clear marking "MODIFICATION TO FINANCIAL BID Not to be opened except with the approval of the Evaluation Committee"~~

- 23.6 At the time of opening of "Financial Bid", the names of the bidders were found responsive in accordance with Clause 23.4(iv) will be announced. The bids of only these bidders will be opened. The responsive Bidders' names, the Bid prices, the total amount of each bid, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. Any Bid price or discount, which is not read out and recorded will not be taken into account in Bid Evaluation.
- 23.7 In case bids are invited in more than one package, the order for opening of the "Financial Bid" shall be that in which they appear in the "Invitation For Bid".
- 23.8 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 23.6.
- 24 Process to be Confidential**
- 24.1 Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.
- 25 Clarification of Financial Bids**
- 25.1 To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable/e-mail, but no change in the price or substance of the Bid shall be sought, offered, or permitted.
- 25.2 Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded.
- 25.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.
- 26 Examination of Bids and Determination of Responsiveness**
- 26.1 During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3 and 4; (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding documents. During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications, and drawings.


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- 26.2 A substantially responsive "Financial Bid" is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.
- 26.3 If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.
- 27 Correction of Errors**
- 27.1 "Financial Bids" determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (a) where there is a discrepancy between the rates in figures and in words, the rate in words will govern; and
 - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
- 27.2 The amount stated in the "Financial Bid" will be corrected by the Employer in accordance with the above procedure and the bid amount adjusted with the concurrence of the Bidder in the following manner:
- (a) If the Bid price increases as a result of these corrections, the amount as stated in the bid will be the 'bid price' and the increase will be treated as rebate;
 - (b) If the bid price decreases as a result of the corrections, the decreased amount will be treated as the 'bid price'
- Such adjusted bid price shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited in accordance with Sub-Clause 16.6 (b).

28 Deleted

29 Evaluation and Comparison of Financial Bids

- 29.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Sub-Clause 26.2.
- 29.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) making any correction for errors pursuant to Clause 27; or
 - (b) making an appropriate adjustments for any other acceptable variations, deviations; and


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- (c) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub-Clause 23-6. ✓
- 29.3 The Employer reserves the right to accept or reject any variation or deviation. Variations and deviations and other factors, which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation. ✓
- 29.4 The estimated effect of the price adjustment conditions under Clause 47 of the *Conditions of Contract*, during the period of implementation of the Contract, will not be taken into account in Bid evaluation. ✓
- 29.5 If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 34 be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.
- 29.6 A bid which contains several items in the Bill of Quantities which are unrealistically priced low and which cannot be substantiated satisfactorily by the bidder, may be rejected as non-responsive. ✓
- 30 Deleted** ✓

F. AWARD OF CONTRACT

31 Award Criteria

- 31.1 Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined
- (i) to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price; and
 - (ii) to be within the available bid capacity adjusted to account for his bid price which is evaluated the lowest in any of the packages opened earlier than the one under consideration.
- In no case, the contract shall be awarded to any bidder whose available bid capacity is less than the evaluated bid price, even if the said bid is the lowest evaluated bid. The contract will in such cases be awarded to the next lowest bidder at his evaluated bid price.

32 Employer's Right to Accept any Bid and to Reject any or all Bids

- 32.1 Notwithstanding Clause 31, the Employer reserves the right to accept or reject any Bid, and to cancel the Bidding process and reject all Bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

33 Notification of Award and Signing of Agreement.

- 33.1 The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the *Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 33.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 34.
- 33.3 The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and sent to the successful Bidder, within 28 days following the notification of award along with the Letter of Acceptance. Within 21 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.
- 33.4 Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

34 Performance Security

- 34.1 "Within 21 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in any of the forms given below for an amount equivalent to 5% of the Contract Price plus additional security for unbalanced Bids in accordance with Clause 29.5 of ITB and Clause 52 of Conditions of Contract:

- a bank guarantee in the form given in Section 8; or
- certified Cheque/Bank Draft as indicated in Appendix

- 34.2 If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder's option, by a Nationalized/ Scheduled Indian bank or (b) by a foreign bank located in India and acceptable to the Employer .


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- 34.3 Failure of the successful Bidder to comply with the requirements of Sub-Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.
- ~~35~~ **Advance Payment and Security**
- 35.1 The Employer will provide and Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Data.
- 36 **Dispute Review Expert**
- 36.1 The Employer proposes that [name of proposed Dispute Review Expert as indicated in Appendix] be appointed as Dispute Review Expert under the Contract, at a daily fee as indicated in Appendix plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If in the Letter of Acceptance, the Employer has not agreed on the appointment of the Dispute Review Expert, the Dispute Review Expert shall be appointed by the Council of Indian Roads Congress at the request of either party.
- 37 **Corrupt or Fraudulent Practices**
- 37.1 The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with National Highways Authority of India / State PWD and any other, agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contractor, or in execution.
- ~~37.2~~ Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 23.2 and Sub-Clause 59.2 of the Conditions of Contract.


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APPENDIX to ITB

Clause Reference
With respect to Section-I

1. Name of the Employer : Chief Engineer (NH), Punjab PWD B&R Branch,
Mini Secretariat, Patiala.
2. The Last five years : 2020-21
2021-22
2022-23
2023-24
2024-25
- 3 This annual financial turn over amount is Rs.135.68 Lacs [Cl. 4.5.3 (a)]
(Rs. One Crore Thirty Five Lakhs Sixty Eight Thousand only)
- 4 Value of work is Rs.135.68 Lacs [Cl. 4.5.3(b)]
((Rs. One Crore Thirty Five Lakhs Sixty Eight Thousand only)
5. Quantities of work are: (Cl.4.5.A(c))
~~Equal to the BOQ quantities for the contract applied for.~~
6. Liquid assets and/or availability of credit facilities is Rs.33.92 lacs [Cl.4.5.6]
(Rs.Thirty Three Lakhs Ninety Two Thousand only)
7. Price Level of the financial year 2024-2025 [Cl.4.5.2]
8. The pre-bid meeting will take place at O/o Executive Engineer,
National Highway Division, Pb. PWD B&R Br., Jalandhar.
(address and venue) on ~~29.07.2026~~ at ~~11.00AM~~ (Time
and date) [Cl.9.2.1]
9. The Technical Bid will be opened at O/o Executive Engineer,
National Highway Division, Pb. PWD B&R Br., Jalandhar. (Address
and venue) on ~~29.07.2026~~ at ~~11.00AM~~ (Time and date)
[Cl.9.2.1]
10. Address of the Employer: Chief Engineer (NH)
Punjab PWD (B&R) Branch,
Mini Secretariat, 'C' Block, Patiala



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11. Identification: Bid for DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)

Bid reference No.

Do not open before _____ at 11.00 AM (time and date)

12. The Bid should be submitted online through e-portal <http://eprocure.gov.in/eprocure/app> Latest by _____ upto _____ (date and time as per server clock)

[Cl.20.1(a)]

13. The Bid will be opened at O/o Executive Engineer National Highway Division, Pb. PWD B&R Br., Jalandhar. [Cl.23.1] on _____ at 11.10 AM (time and date)

14. The Bank draft in favour of Executive Engineer National Highway Division, Pb. PWD B&R Br., Jalandhar payable at Pb. PWD B&R Br., Jalandhar.

[Cl.34.1]

15. The Name of Dispute Review Expert is to be finalized later on

[Cl.36.1]

Annexure-I

List of Key Personnel to be deployed on Contract Work

Minimum Key personnel required for the Project

(Reference CI 4.5.4)

Sr No	Personnel	Qualification	Lot Size			
			Upto Rs. 50 Million	Rs. 51-200 Million	Rs. 201-500 Million	Rs. 501-1000 Million & above
1	Project Manager	B.E Civil+10 Year experience	1	1No	1No	1No
2	Site Manager	B.E Civil+3 Year experience	1	2No	4No	6No
3	Plant Engineer	B.E Mechanical+3 Year experience or Diploma Mech. + 7 Year experience	1	1No	1No	2No
4	Quantities Surveyor	B.E Civil+7 year experience or Diploma Civil+7 year experience	1	1No	1No	2No
5	Soil and Material Engineer	B.E Civil+7 year experience or Diploma Civil+7 year experience	1	1No	1No	1No
	Total		5	6	8	12



ANNEXURE-II
List of Plant & Equipment to be deployed on Contract work
(Reference Cl. 4.5.5)

Sr. No	Type of Equipment	Minimum	Upto Rs. 50 Million	Rs.51-200 Million	Rs.201-500 Million	Rs. 501-1000 Million & above
1	Tipper Truck	5-7	6	10	15	20
2	Motor grader	1	1	2	3	4
3	Dozer	2	2	1	1	2
4	Front end loader	2	2	2	2	4
5	Smooth Wheeled Roller	2	2	2	3	4
6	Vibratory Roller	2	2	2	2	3
7	Hot Mix plant with electronic controls 30 to 60 tonne capacity)	1	1	1	1	2
8	Pavers finisher with Electronic Sensor	1	1	1	1	2
9	Water tanker	2	2	3	4	5
10	Bitumen Sprayer	1	1	1	1	2
11	Tandem Roller	1	1	1	1	1
12	Concrete Mixer with Integral weight Batching facility	1	1	2	1	2
13	Concrete Batching and Mixing plant (Minimum Capacity-15 cum/ hour.	1	1	-	1	1
14	Concrete paver capable of paving 7.5m width in one single pass including all accessories such as automatic dowel bar inserter, Integral vibratory system and electronic sensors ancillary equipment for applying curing compound joint cutting etc.	5	-	-	-	4
15	Concrete Batching and Mixing plant with automatic control (maximum 30 cum-hour)	5	-	-	-	4
16	Compressive Testing machine	1	1	-	-	-
	Total					



SECTION – 2

QUALIFICATION INFORMATION

The scanned copies of the information prepared by the bidder as per formats given in the following pages, submitted on-line will be used for purposes of post qualification as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

1. For individual bidders

Constitution or legal status of bidder

(Attach copy)

Place of registration:

Principal place of business

Power of attorney of signatory of bid

(Attach)

2020-21

1.2 Total value of Civil Engineering construction

2021-22

work performed in the last five years**

2022-23

(in Rs. Million)

2023-24

2024-25

1.3.1. Work performed as prime contractor, work performed in the past as a nominated subcontractor will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name) on works of a similar nature over the last five years. **

Project Name	Name of the Employer*	Description of work	Contract No.	Value of Contract (Rs crore)	Date of issue of Work Order	Stipulated period of completion	Actual date of completion*	Remarks explaining reasons for delay & work Completed

*Attach certificate(s) from the Engineers)-in-Charge


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**** immediately preceding the financial year in which bids are received.**

B Attach certificate from Chartered Accountant.#1.3.2. Quantities of work executed as prime contractor, work performed in the past as a nominated sub-contractor will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name and style) in the last five years: **

Year	Name of the work	Name of the Employer*	Quantity of work performed (cum)@ Remarks						Remarks* (indicate contract Ref)
			Cement Concrete (including RCC&" PCC)	Masonry	Earth Works	WB M	WMM	Bituminous Work	
20__20__									
20__20__									
20__20__									
20__20__									
20__20__									

1.4. Information on Bid Capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works:

Description of works	Place & State	Contract No.	Name& Address of Employer	Value of Contract (Rs Cr)	Stipulated Period of Completion	Value of works* remaining to be completed (Rs Cr)	Anticipated date of completion
1	2	3	4	5	6	7	8

***Attach certificate(s) from the Engineer(s)-in-Charge**



** immediately preceding the financial year in which bids are received.

Delete, if prequalification has been carried out

(B) Works for which bids already submitted:

Description of works	Place & State	Name& Address of Employer *	Estimated value of works ¹ (RsCr)	Stipulated period of completion	Date when descision is expected	Remarks, if any
1	2	3	4	6	6	7

1.5. Availability of key items of Contractor's Equipment essential for carrying out the Works [Ref. Clause 4.5.5].

The Bidder should list all the information requested below. Refer also to Sub Clause 4.3 (d) of the Instructions to Bidders.

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1.6. Qualifications and experience of key personnel required for administration and execution of the Contract [Ref. Clause 4.5.4)]. Attach biographical data. Refer also to Sub Clause 4.3 (e) of instructions to Bidders and Sub Clause 9.1 of the Conditions of Contract.

Project Manager				
Etc.				

1.7. Proposed sub-contracts and firms involved. [Refer ITB Clause 4.3 (k)]

Sanctions of the works	Value of Sub-contract	Sub-contractor (Name & Address)	Experience in similar work


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~~Attach copies of certificates on possession of valid license for executing water supply work /sanitary work / building electrification works [Reference Clause 4.5(d) & Clause 4.5 (e)]~~

*1.8. **Financial reports for the last five years:** balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

1.9. **Evidence of access to financial resources** to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents.

1.10. Name, address, and telephone, telex, and fax numbers e-mail of the Bidders' bankers who may provide references if contacted by the Employer.

1.11. **Information on litigation history in which the Bidder is involved.**

Other Party (ies)	Employer	Cause of Dispute	Amount involved	Remarks showing Present Status

1.12. Statement of compliance under the requirements of Sub Clause 3.2 of the instructions to Bidders. (Name of Consultant engaged for project preparation is**)

1.13. Proposed work method and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. [Refer ITB Clause 4.1 & 4.3(1)]

1.14. Programme

1.15. Quality Assurance Programme.

2. **Deleted**

3. **Additional Requirements**

3.1 Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

(i) Affidavit

(ii) Undertaking

*** (iii) ~~Update of original prequalification application~~

*** (iv) ~~Copy of original prequalification application~~

*** (v) ~~Copy of prequalification letter~~

* Delete, if prequalification has been carried out.

** Fill the Name of Consultant.

*** Delete, if prequalification has not been carried out.



SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY
OF CREDIT FACILITIES
(CLAUSE 4.2 (i) & 4.3 (g) OF ITB)

BANK CERTIFICATE

This is to certify that M/s. _____ is a reputed company with a good financial standing.

If the contract for the work, namely _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their working capital requirements for executing the above contract during the contract period.

(Signature)
Name of Bank
Senior Bank Manager
Address of the Bank



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AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s _____ have abandoned any work on National Highways in India nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understand and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/ Project implementing agency.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE



UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____
_____ would invest minimum cash up to 25% of the value of the work during
implementation of the Contract.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE

Conditions of Contract

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CONDITIONS OF CONTRACT

A. GENERAL

1. Definitions

- 1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

The **Adjudicator** (synonymous with **Dispute Review Expert**) is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in Clauses 24 and 25. The name of the Adjudicator is defined in the Contract Data.

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

Compensation Events are those defined in Clause 44 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Engineer in accordance with Sub Clause 55.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.3 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body whose Bid to carry out the Works has been accepted by the Employer.

The **Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer and includes Technical and Financial bids.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A **Defect** is any part of the Works not completed in accordance with the Contract.

The **Defects Liability Period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

The **Engineer** is the person named in the Contract Data (or any other competent person appointed and notified to the contractor to act in replacement of the Engineer) who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time, and valuing the Compensation Events.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Site Investigation Reports are those which were included in the Bidding documents and are factual **interpretative** reports about the surface and sub-surface conditions at the site.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.

The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Engineer, which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. **Interpretation**

2.1. In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of Contract.

2.2. If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).

2.3. The documents forming the Contract shall be interpreted in the following order of priority:

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with the works
- (3) Contractor's Bid
- (4) Contract Data
- (5) Conditions of Contract including Special Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bill of quantities and
- (9) any other document listed in the Contract Data as forming part of the Contract.

3. **Language and Law**

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

4. **Engineer's Decisions**

4.1. Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer.


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5. Delegation

- 5.1. The Engineer may delegate any of his duties and responsibilities to other people except to the Adjudicator after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

- 6.1. Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Sub-contracting

- 7.1 The Contractor may sub contract any portion of work, upto a limit specified in Contract Data, with the approval of the Engineer but may not assign the Contract without the approval of the Employer in writing. Sub-contracting does not alter the Contractor's obligations.

8. Other Contractors

- 8.1. The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of other Contractors. The Contractor shall as referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The employer may modify the schedule of other contractors and shall notify the contractor of any such modification.

9. Personnel

- 9.1. The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

- 9.2 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Employer's and Contractor's Risks

- 10.1. The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's Risks

- 11.1. The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in India, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

12. Contractor's Risks

- 12.1. 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 other than the excepted risks are the responsibility of the Contractor.

13. Insurance

- 13.1. The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:
- (a) loss of or damage to the Works, Plant and Materials;
 - (b) loss of or damage to Equipment;
 - (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
 - (d) personal injury or death.
- 13.2. Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 13.3. If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4. Alterations to the terms of an insurance shall not be made without the approval of the Engineer.
- 13.5. Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

- 14.1. The Contractor, in preparing the Bid, shall rely on any site Investigation Reports referred to in the Contract Data, supplemented by any information available to the Bidder.

15. Queries about the Contract Data

- 15.1. The Engineer will clarify queries on the Contract Data.

16. Contractor to Construct the Works

- 16.1. The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

17. The Works to be Completed by the Intended Completion Date

- 17.1. The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Engineer

- 18.1. The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.
- 18.2. The Contractor shall be responsible for design of Temporary Works.
- 18.3. The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 18.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works where required.


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18.5. All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Safety

19.1. The Contractor shall be responsible for the safety of all activities on the Site,

20. Discoveries

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

21. Possession of the Site

21.1. The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

22. Access to the Site

22.1. The Contractor shall allow the Engineer and any person authorized by the Engineer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23. Instructions

23.1. The Contractor shall carry out all instructions of the Engineer pertaining to works which comply with the applicable laws where the Site is located.

23.2. The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Employer, if so required by the Employer.

24. Disputes

24.1. If the Contractor believes that a decision taken by the Engineer was either outside the authority given to the Engineer by the Contract or that the decision was wrongly taken, the decision shall be referred to the Dispute Review Expert within 14 days of the notification of the Engineer's decision.

25. Procedure for Disputes

25.1. The Dispute Review Expert (Board)* shall give a decision in writing within 28 days of receipt of a notification of a dispute.

25.2. The Dispute Review Expert (Board)* shall be paid daily at the rate specified in the Contract Data together with reimbursable expenses of the types specified in the Contract Data and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Dispute Review Expert. Either party may give notice to the other to refer a decision of the Dispute Review Expert to an Arbitrator within 28 days of the Dispute Review Expert's written decision. If neither party refers the dispute to arbitration within the next 28 days, the Dispute Review Expert's decision will be final and binding.

25.3. The arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

26. Replacement of Dispute Review Expert

26.1. Should the Dispute Review Expert resign or die, or should the Employer and the Contractor agree that the Dispute Review Expert is not fulfilling his functions in accordance with the provisions of the Contract, a new Dispute Review Expert will be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Dispute Review Expert, shall be designated by the Appointing Authority designated in the Contract Data at the request of either party, within 14 days of receipt of such request.

B. TIME CONTROL

27. Programme

27.1. 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 along with monthly cash flow forecast.

27.2. 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 work including any changes to the sequence of the activities.

27.3. 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.

27.4. 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 is to show the effect of Variations and Compensation Events.

28. Extension of the Intended Completion Date

28.1. The Engineer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.

28.2. The Engineer shall decide whether and by how much to extend the Intended Completion Date within 35 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.


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28.3. The Engineer shall within 14 days of receiving full justification from the contractor for extension of Intended Completion Date refer to the Employer his decision. The Employer shall in not more than 21 days communicate to the Engineer the acceptance or otherwise of the Engineer's decision. If the Employer fails to give his acceptance, the Engineer shall not grant the extension and the contractor may refer the matter to the Dispute Review Expert under Clause 24.1.

29. Deleted

30. Delays Ordered by the Engineer

30.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

31. Management Meetings

31.1. Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

31.2 The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32. Early Warning

32.1. The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.

32.2. The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. QUALITY CONTROL

33. Identifying Defects

33.1. The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

33.2 **Consultants for Quality Controls** : ~~It is expected that every Contractor will have proper quality control staff and procedures in order to ensure quality. They are also expected to improve their procedures in line with ISO 9002 and get the certification. The fully equipped laboratory shall be set up and trained staff shall be employed by the Contractor. The Contractor shall be responsible for production of quality works at all stages and shall maintain records, reports and test results so as to indicate the extent of quality achieved. The Contractor shall also supply a copy of the all these reports, tests and check to the Engineer regularly. The contractor shall also attach a copy of these reports, tests and checks with his bill, without which no payment shall be made. The Engineer, will be free to conduct surprise, random or in situ checks so as to have cross check in quality. Nothing in this clause shall reduce the overall responsibility of the Contractor regarding quality and he shall remain liable for any defect in the execution.~~

33.3 The quality control testing should be done through NABL (National Accreditation Board for testing and calibration laboratories) accredited laboratories only. CE (NH), State PWD shall ensure strict quality control during actual execution of work and shall ensure that suitable instructions are issued to all field officers in this regard.

34. Tests

34.1. If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

35. Correction of Defects

35.1. The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.



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36. Uncorrected Defects

- 36.1. If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. COST CONTROL

37. Bill of Quantities

- 37.1. The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.
- 37.2. The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

38. Changes in the Quantities

- 38.1. If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 per cent provided the change exceeds 1 % of initial Contract Price, the Engineer shall adjust the rate to allow for the change, duly considering,

- (a) justification for rate adjustment as furnished by the contractor,
- (b) economies resulting from increase in quantities by way of reduced plant, equipment, and overhead costs,
- (c) entitlement of the contractor to compensation events where such events are caused by any additional work

- 38.2. The Engineer shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 per cent, except with the Prior approval of the Employer.

- 38.3. If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

39. Variations

- 39.1. All Variations shall be included in updated Programmes produced by the Contractor.

40. Payments for Variations

- 40.1. The Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Engineer and before the Variation is ordered.

- 40.2. If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work above the limit stated in Sub Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

403. If the Contractor's quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.
404. If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
405. The Contractor shall not be entitled to additional payment for costs which could have been avoided by giving early warning.
- 41. Cash Flow Forecasts**
- 41.1. When the Programme is updated, the contractor is to provide the Engineer with an updated cash flow forecast.
- 42. Payment Certificates**
- 42.1. The Contractor shall submit to the Engineer monthly statements of the estimated value of the work completed less the cumulative amount certified previously. 42.2. The Engineer shall check the Contractor's monthly statement within 14 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 51(3) of the Contract Data (Secured Advance).
- 42.3. The value of work executed shall be determined by the Engineer.
- 42.4. The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- 42.5. The value of work executed shall include the valuation of Variations and Compensation Events.
- 42.6. 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.
- 43. Payments**
- 43.1. Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate. ~~If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made upto the date when the late payment is made at 12% per annum.~~
432. If an amount certified is increased in a later certificate as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

433. Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
- 44. Compensation Events.**
- 44.1. The following are Compensation Events unless they are caused by the Contractor:
- (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.
 - (b) The Employer modifies the schedule of other contractors in a way which affects the work of the contractor under the contract.
 - (c) The Engineer orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.
 - (d) The Engineer instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
 - (e) The Engineer does not approve of a subcontract to be let, within 15 days.
 - (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of Letter of Acceptance from the information issued to Bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the site.
 - (g) The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
 - (h) Other contractors, public authorities, utilities or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
 - (i) The advance payment is delayed, beyond 28 days after receipt of application and bank guarantee.
 - (j) The effect on the Contractor of any of the Employer's Risks,
 - (k) The Engineer unreasonably delays issuing a Certificate of Completion.
 - (l) Other Compensation Events listed in the Contract Data or mentioned in the Contract.
- 44.2. If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Engineer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 44.3. As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Engineer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Engineer shall adjust the Contract Price based on Engineer's own forecast. The Engineer will assume that the Contractor will react competently and promptly to the event.

44.4. The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Engineer.

45. Tax

45.1. The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other taxes that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

46. Currencies

46.1. All payments shall be made in Indian Rupees.

47. Price Adjustment

47.1. ~~Contract price shall be adjusted for increase or decrease in rates and price of labour, material, fuels and lubricants in accordance with the following principles and procedures and as per formula given in the contract data.~~

~~(a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial period completion date or extensions granted by the Engineer and shall apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.~~

~~(b) The price adjustment shall be calculated during each month from the formula given in the contract data.~~

~~(c) Following expressions and meanings are assigned to the work done during each month:~~

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

~~47.2. To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and price included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.~~

48. Retention

48.1. The Employer shall retain from each payment due to the Contractor the proportion stated in the Contract Data until Completion of the whole of the Works.

48.2. On Completion of the whole of the works half the total amount retained is repaid to the contractor and half when the defects liability period has passed and the Engineer has certified that all defects notified by the Engineer to the Contractor before the end of this period have been corrected.


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48.3. In case Contractor requests for refund of the retention money deducted by the employer under the provision of this clause. Employer shall consider the said request of the contractor provided that the refund hereunder shall be made in tranches of not less than 1% (one percent) of the contract price and contractor furnishes an irrevocable and unconditional bank guarantee for an equal amount substantially in the form of bank guarantee for performance guarantee enclosed with SBD and valid upto 28 days beyond the scheduled/ extended Defects Liability period. On completion of the whole work, the contractor has however an option to submit a fresh irrevocable and unconditional bank guarantee for an amount equal to 2.5% of the total value of work executed substantially in the form of bank guarantee enclosed with SBD and valid upto 28 days beyond the Defects Liability Period and get refund the retention money and bank guarantees submitted for refund of retention money.

49. **Liquidated Damages**

49.1. The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the contract data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages does not affect contractor Contractor's liabilities.

49.2. If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the over payment calculated from the date of payment to the date of repayment at the rates specified in Sub Clause 43.1.

49.3. If the contractor fails to comply with the time for completion as stipulated in the tender, then the contractor shall pay to the employer the relevant sum stated in the Contract Data as Liquidated damages for such default and not as penalty for everyday or part of day which shall elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the contractdata.

The employer may, without prejudice to any other method of recovery deduct the amount of such damages from any monies due or to become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from his obligation to complete the works on from any other of his obligations and liabilities under the contract.

49.4. If, before the Time for Completion of the whole of the Works or, if applicable, any Section, a Taking - Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of this Sub-Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

50. Bonus

- 50.1. ~~If the Contractor achieves completion of the whole of the works prior to the Intended Completion Date prescribed in Contract Data the Employer shall pay to the contractor a sum stated in the Contract Data as bonus for every completed month which shall elapse between the date of completion of all items of works as stipulated in the contract, including variations ordered by the Engineer and the time prescribed in Clause 17. For the purpose of calculating bonus payments, the time given in the Bid for completion of the whole of the works is fixed and unless otherwise agreed, no adjustments of the time by reason of granting an extension of time pursuant to clause 28 or any other clause of these conditions will be allowed. Any period falling short of a complete month shall be ignored for the purpose of computing the period relevant for the payment of bonus.~~

51. Advance Payment

- 51.1. ~~The Employer shall make advance payment to the contractor of the amounts stated in the Contract Data by the date stated in the Contract Data, against provision by the Contractor of an Unconditional Bank Guarantee in form and by a bank acceptable to the Employer in amounts and currencies equal to the Advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.~~
- 51.2. ~~The contractor is to use the advance payment only to pay for Equipment, Plant and Mobilization expenses required specifically for execution of the Works. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.~~
- 51.3. ~~The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of the work done, Variations, price adjustments, Compensation Events, or Liquidated Damages.~~
- 51.4. **Secured Advance**
The Engineer shall make advance payment in respect of materials intended for but not yet incorporated in the Works in accordance with conditions stipulated in the Contract Data.


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52. Securities

- 52.1. The Performance Security (including additional security for unbalanced bids) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The Performance Security shall be valid until a date 28 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 28 days from the date of issue of the certificate of completion.

53. Deleted

54. Cost of Repairs

- 54.1. Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

55. Completion

- 55.1 The Contractor shall request the Engineer to issue a Certificate of Completion of the Works and the Engineer will do so upon deciding that the Work is completed.

56. Taking Over

- 56.1. The Employer shall take over the Site and the Works within seven days of the Engineer issuing a certificate of Completion.

57. Final Account

- 57.1. The Contractor shall supply to the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final 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 56 days of receiving the Contractor's revised account.

58. Operating and Maintenance Manuals

- 58.1. If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.
- 58.2. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

59. Termination

- 59.1. The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.


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- 59.2. Fundamental breaches of Contract include, but shall not be limited to the following:
- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;
 - (b) the Engineer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 28 days;
 - (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (d) a payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate;
 - (e) 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;
 - (f) the Contractor does not maintain a security which is required;
 - (g) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
 - (h) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this paragraph : "corrupt practice" means the offering, giving, receiving or soliciting of any-thing of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition."

- 59.3. When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 59.2 above, the Engineer shall decide whether the breach is fundamental or not.
- 59.4. Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 59.5. If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

60. Payment upon Termination

- 60.1. If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in


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the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

602. If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done, the cost of balance material brought by the contractor and available at site, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

61. Property

- 61.1. All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

62. Release from Performance

- 62.1. If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

F. SPECIAL CONDITIONS OF CONTRACT

1. LABOUR:

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.

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.

2. COMPLIANCE WITH LABOUR REGULATIONS :

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made thereunder, 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 below. 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 thereunder, regulations or notifications including amendments. 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/bye laws/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. 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.

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

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- a) **Workmen Compensation Act 1923:-** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972 :-** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) **Employees P.F. and Miscel Janeous Provision Act 1952 :** The Act Provides for monthly contributions by the employer plus workers @ 10%or8.33%. The benefits payable under the Act are :
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker, (iii) Payment of PR accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951:-** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition") Act 1970:-** The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take licence from the designated Officer, The Act is applicable to the establishments or Contractor of Principal Employer, if they employ 20 or more contract labour.

- f) **Minimum Wages Act 1948** :- The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act, if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- g) **Payment of Wages Act 1936**:- It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979**:- The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) **Payment of Bonus Act 1965**:- The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/- per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- j) **Industrial Disputes Act 1947** :- The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) **Industrial Employment (Standing Orders) Act 1946** :- It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) **Trade Unions Act 1926**:- The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act 1986** :- The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) **Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979** :- The Act is applicable to an establishment which employs 5 or more


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inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and back, etc.

- o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996** :- All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) **Factories Act 1948** :- The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.
3. **ARBITRATION (GCC Clause 25.3)**
The procedure for arbitration will be as follows:
- ✓ 25.3 (a) In case of Dispute or difference arising between the Employer and a domestic contractor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The parties shall make efforts to agree on a sole arbitrator and only if such an attempt does not succeed and the Arbitral Tribunal consisting of 3 arbitrators one each to be appointed by the Employer and the Contractor and the third Arbitrator to be chosen by the two Arbitrators so appointed by the Parties to act as Presiding Arbitrator shall be considered. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the * Council, Indian Roads Congress.


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- (b) The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act a presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding arbitrator shall be appointed by the * Council, Indian Roads Congress.
- (c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the * Council, Indian Roads Congress shall appoint the arbitrator. A certified copy of the order of the Council, Indian Roads Congress, making such an appointment shall be furnished to each of the parties.
- (d) Arbitration proceedings shall be held in India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost-and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each partyitself.
- (f) Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the owners shall not be withheld, unless they are the subject matter of the arbitration proceedings.



SECTION – 4

CONTRACT DATA

Clause reference
With respect to
Section 3

Items marked "N/A" do not apply in this Contract.

1. The Employer is (Cl.1.1.)
Name: Chief Engineer (NH),
Address: Punjab PWD B&R Br. Mini Secretariat, Patiala
2. The Engineer is
Name: **Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar.**
The Dispute Review Expert/Board appointed jointly by the Employer and Contractor is : (Cl.1.1.)
Name: ----- TO BE FINALISED LATER ON-----
Address:
4. The Defect Liability Period is 3 years from the date of completion. (Cl.1.1.&35)
5. The Start Date shall be from the date of issue of the notice to proceed with the work (Cl.1.1.)
6. The Intended Completion date for the whole of the work is Six month after start of work with the following milestones. (Cl.1.1.,17&28)
(Cl.2.2 &49.1)

<u>Milestones dates</u>	<u>Period from the start date Milestone</u>
<u>Physical works to be completed</u>	
1. i.e. 30% work completion	From the date of start 54 days
2. i.e. 45% -do-	From the date of start 81 days
3. i.e. 100% -do-	From the date of start 180 days
7. The site is located at **Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 of Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab.** (Cl.1.1)


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8. The name and identification number of the Contract is of **DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)**

(Cl.1.1)

9. The scope of work envisages reconstruction of 3 existing damaged culverts, providing additional 6 new culverts, construction of aprons, curtain wall and toe walls for MNB at Km 56.250 & 59.650 km 23.00 to 24.00, km 44.00 to 45.00 & km 56.00 to 60.860 of Jalandhar - Kapurthala -Sultanpur Lodhi Makhu road section of NH-703A due to extreme floods in 2025 the State of Punjab. The details are as under:

Sr No.	Description	Quantity/Location	Width of Structure
1.	Re-construction of existing Box Culvert 6m Span and Vent Height of 3.0m at Km 57.637, Km 58.749 and Km 59.208 along with wing walls	3.0 Nos.	14.0 meters
2.	Additional 6m span Box Culverts with vent height of 3.0 m between Km 56.00 and 60.860 along with wing walls	3.0 Nos.	14.0 meters
3.	Additional 5m span Box Culverts with vent height of 3.0 m at Km 23-24 along with wing walls	2.0 Nos.	12.0 meters
4.	Additional 5m span Box Culverts with vent height of 3.0 m at Km 44-45 along with wing walls	1.0 Nos	12.0 meters
5.	Construction of aprons, curtain walls and toe wall for MNB at Km 56.250 and 59.650	At 2.0 Nos. MNB	-

The works shall, inter alia, include the following as specified or as directed:

(A) Road Works

Site clearance; construction of embankment with soil in vicinity of 2 Minor Bridges at Km 56.250 and 59.650, BC on culverts (both reconstruction and new additional) ~~setting out and layout; widening of existing carriageway and strengthening including camber corrections; constructions of new road/ parallel service road; bituminous pavements remodeling/construction of junctions, intersections, bus bays, laybys; supplying and placing of drainage channels, flumes, guard posts and guard other related items; construction/extension of cross drainage works, bridges, approaches and other related stones; road markings, road signs and kilometer/hectometer stones; protective works for roads/bridges;~~ all aspects of quality assurance of various components of the works; rectification of the defects in the completed works during the Defects Liability Period; submission of "As-built" drawings and any other related documents; and other item of work as may be required to be carried out for completing the works in accordance with the drawings and provisions of the contract to ensure safety.

(B) Culvert/Bridge Works

Site clearance; dismantling of existing RCC structures, setting out, provision of


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foundations, walls; prestressed/reinforced cement concrete superstructure; wearing coat, parapets, approach slabs, drainage spouts/down take pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; backfilling behind abutment, flooring, providing wing/return walls; painting on concrete surface, curtain walls, aprons, pitching of stone in slopes etc.; all aspects of quality assurance; clearing the site and handing over the works on completion; rectification of the defects during the Defects Liability Period and submission of "As- built" drawings and other related documents; and other items of work as may be required to be carried out for completing the works in accordance with the drawings and the provisions of the contract and to Insure safety.

(C) Other Items.

Any other items as required to fulfill all contractual obligations as per the Bid documents.

10. The following documents also form part of the Contract: (Cl.2.3(9))
11. The law which applies to the Contract is the law of Union of India (Cl. 3.1)
12. The language of the Contract documents is English (Cl.3.1)
13. Limit of Sub-contracting –50% of the Initial Contract Price. (Cl. 7.1)
14. The Schedule of Other Contractors (Cl. 8)
15. The Schedule of Key Personnel – **As per Annex. I to Section I** (Cl. 9)
16. The minimum insurance cover for physical property, injury and death is Rs. 5 lakhs per occurrence with the number of occurrences limited to four. After each occurrence, contractor will pay additional premium necessary to make insurance valid for four occurrences always. (C. 13)
17. Site investigation report (Cl. 14)
18. The Site Possession Dates shall be Date of issue of letter of acceptance. (Cl. 21)
19. Fees and types of reimbursable expenses to be paid to the Dispute Review Expert (To be inserted later) (Cl. 25)
20. Appointing Authority for the Dispute Review Expert – Council, Indian Roads Congress, New Delhi. (Cl. 26)
21. The Period for submission of the programme for approval of Engineer shall be 21 days from the issue of Letter of Acceptance. (Cl. 27.1)
22. The period between programme updates shall be days. (Cl. 27.3)


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23. The amount to be withheld for late submission of an updated programme shall be Rs.2.00 lakhs. (Cl. 27.3)
24. The following events shall also be Compensation Events: (Cl. 44)
- Substantially adverse ground conditions encountered during the course of execution of work not provided for in the bidding document.
- (i) Removal of underground utilities detected subsequently
 - (ii) Significant change in classification of soil requiring additional mobilization by the contractor, e.g. ordinary soil to rock excavation,
 - (iii) Removal of unsuitable material like marsh, debris dumps, etc not caused by the contractor
 - (iv) Artesian conditions
 - (v) Seepage, erosion, landslide
 - (vi) River training requiring protection of permanent work
 - (vii) Presence of historical, archeological or religious structures,
 - (viii) monuments interfering with the works
 - (ix) Restriction of access to ground imposed by civil, judicial, or military authority

25. The currency of the Contract is Indian Rupees. (Cl. 46)

26. The formula (e) for adjustment of prices are: (Cl. 47)

~~R = Value of work as defined in Clause 47.1 of Conditions of Contract~~
Adjustment for labour component

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

~~$$VL = 0.85 \times PI / 100 \times R \times (Li - Lo) / Lo$$~~

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

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

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

~~PI = Percentage of labour component of the work.~~

Adjustment for Cement component

- ~~(ii) Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:~~

~~$$Vc = 0.85 \times Pc / 100 \times R \times (Ci - Co) / Co$$~~

~~Vc = increase or decrease in the cost of work during the month under consideration due to changes in rates for cement.~~

~~Co = The all India wholesale price index for cement on 28 days preceding the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi.~~



C_i = The all India average wholesale price index for cement for the month under consideration as published by Ministry of Industrial Development, Government of India, New Delhi.

P_c = Percentage of cement component of the work.

Adjustment for steel component

- (iii) Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s / 100 \times R \times (S_i - S_o) / S_o$$

V_s = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel.

S_o = The all India wholesale price index for steel (rebars) on 28 days preceding the date of opening of Bids as published by the o/e Ministry of Industrial Development, Government of India, New Delhi.

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

P_s = Percentage of steel component of the work.

Note: For the application of this clause, index of Rebars has been chosen to represent steel group.

Adjustment of bitumen component

- (iv) Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b / 100 \times R \times (B_i - B_o) / B_o$$

V_b = Increase or decrease in the cost of work during the month under consideration due to changes in rates for bitumen.

B_o = The official retail price of bitumen at the IOC depot at nearest center on the day 28 days prior to date of opening of Bids.

B_i = The official retail price of bitumen of IOC depot at nearest center for the 15th day of the month under consideration.

P_b = Percentage of bitumen component of the work.

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

$$V_f = 0.85 \times P_f / 100 \times R \times (F_i - F_o) / F_o$$

V_f = Increase or decrease in the cost of work during the month under consideration due to changes in rates for fuel and lubricants.

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

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

P_f = Percentage of fuel and lubricants component of the work.

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

Adjustment for Plant and Machinery Spares Component



- (vi) ~~Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the Contractor shall be paid in accordance with the following formula:~~

$$V_p = 0.85 \times P_p / 100 \times R \times (P_i - P_o) / P_o \quad [C1.49]$$

~~V_p = Increase or decrease in the cost of work during the month under consideration due to changes in rates for plant and machinery spares.~~

~~P_o = The all India wholesale price index for construction machinery on 28 days preceding the date of opening of Bids as published by the o/o economic advisor Ministry of commerce and industry.~~

~~P_i = The all India average wholesale price index for construction machinery for the month under consideration as published by the o/o economic advisor Ministry of commerce and industry.~~

~~P_p = Percentage of plant and machinery spares component of the work.~~

Note: For the application of this clause, index of Construction Machinery has been chosen to represent Plant and Machinery Spares group.

Adjustment of Other materials Component

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

$$V_m = 0.85 \times P_m / 100 \times R \times (M_i - M_o) / M_o \quad [C1.50]$$

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

~~M_o = The all India wholesale price index (all commodities) on 28 days preceding the date of opening of bids as published by the % economic advisor Ministry of commerce and industry.~~

~~M_i = The all India average wholesale price index (all commodities) for the month under consideration as published by the % economic advisor Ministry of commerce and industry.~~

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

~~The following percentages will govern the price adjustment for the entire contract:~~

1. Labour - P _l	25%
2. Cement - P _c	5%
3. Steel - P _s	5%
4. Bitumen - P _b	10%
5. POL - P _f	5%
6. Plant & Machinery Spares - P _p	5%
7. Other Materials - P _m	45%

Total 100%

27.

The proportion of payments retained (retention money) shall be 6% from each bill subject to a maximum of 5% of final contract price. (Cl. 48)

XEN

28. Amount of liquidated damages for delay in completion of works

(Cl. 49)

For whole of work:
(1/2000)th of the Initial Contract Price, rounded off to the nearest thousand per day.
For sectional completion (wherever specified in item 6 of Contract Date): (1/200)th of Initial Contract Price for 5 Km section, rounded off to the nearest thousand per day.

(Cl. 49)

29. Maximum limit of liquidated damages for delay in completion of works:

10 percent of the Initial Contract Price, rounded off to the nearest thousand per day.

30.30.

~~Amount of bonus for early completion of whole of the works~~

~~1 percent of the Initial Contract Price (part of a month to be excluded), rounded off to the nearest thousand, per month~~

~~[Cl. 50]~~

31.31.

~~Maximum limit of bonus for early completion of work~~

~~6 percent of the Contract Price rounded off to the nearest thousand~~

~~[Cl. 50]~~

32. Deleted (i) & (ii)

The amount of the Advance payment are:

[Cl. 51 & 52]

Nature of Advance

i. Mobilization 10% of the Contract price

Amount (Rs. Conditions to be fulfilled

~~On submission of unconditional Bank Guarantee (to be drawn before the end of 20% of Contract period). The contractor may furnish four bank guarantees of 2.5% each, valid for full period.~~

ii. Equipment 90% for new and 50% of depreciated value for old equipment. Total amount

After equipment is brought to site (provided the Engineer is satisfied that the equipment is required for performance of the contract) and on submission of unconditional Bank Guarantee for amount of advance.


XEN

~~will be subject to a
maximum of 5% of the
Contract price.~~

- iii. Secured advance for non perishable materials brought to site 75% of Invoice value
- a) The materials are in accordance with the specification for Works.
 - b) Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks.;
 - c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;
 - d) The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;
 - e) Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and
 - f) The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.

(The advance payment will be paid to the Contractor no later than 28 days after fulfillment of the above conditions).

33.33.

~~Repayment of advance payment for mobilization and equipment:~~

— [Cl. 51.3]

~~The advance loan shall be repaid with percent (5) deductions from the interim payments certified by the Engineer under the Contract. Deductions shall commence in the next Interim Payment Certificate following that in which the total of all such payments to the Contractor has reached not less than 20 per cent of the Contract Price or 6 (six)~~

XEN

~~months from the date of payment of first installment of advance, whichever period concludes earlier, and shall be made at the rate of 20 percent of the amounts of all Interim Payment Certificates until such time as the loan has been repaid, always provided that the loan shall be completely repaid prior to the expiry of the original time for the completion pursuant to Clauses 17 & 28.~~

34. **Repayment of secured advance:**

(Cl. 51.4)

The advance shall be repaid from each succeeding monthly payments to the extent materials [for which advance was previously paid pursuant to Clause 51.4 of G.C.C.] have been incorporated into the Works.

35. The Securities shall be for the following minimum amounts

(Cl. 52)

equivalent as a percentage of the Contract Price:

Performance Security for 5 percent of contract price plus Rs. _____ (to be decided after evaluation of the bid) as additional security in terms of ITB Clause 29.5.

The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type presented in Section 8 of the Bidding Documents.

36. The Schedule of Operating and Maintenance Manuals _____ N/A

[Cl. 58].

37. The date by which "as built" drawings (in scale as directed) in 2 sets are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be.

(Cl. 58)

38. The total amount to be withheld for failing to supply "as built" drawing by the date required is Rs. _____ lakh.

(Cl. 58)

39. The following events shall also be fundamental breach of contract:

"The Contractor has contravened Sub Clause 7.1 & 9 of GCC"

(Cl. 59.2)

40. The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 20 percent.

(3, Cl. 60)



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SECTION – 5
TECHNICAL SPECIFICATIONS


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CLAUSE 1. GENERAL SPECIFICATIONS

The contractor shall execute the whole and every part of the work in the most substantial and workmanship like manner both as regards to material and otherwise in every respects strictly in accordance with the following specifications with latest amendments upto the date of tendering.

1. I.R.C./MORT&H.T./I.S. Codes/AASHTO/Euro Codes in that order
2. Punjab P.W.D. Specification where specifications at S.No. 1 are not applicable or available.

Note: 1

If there are any conflicting provisions in RC/IS codes, the provision in IRC Codes will have precedence over the relevant conflicting provisions in IS code/MORT&H specifications/PWD specifications.

Note: 2

Specifications stipulated above notwithstanding the technical provisions provided in this DNIT shall be followed strictly.

CLAUSE 2. TECHNICAL STAFF

The technical staff shall be available site at all time. In case the contractor fails to employ the minimum technical staff or fails to ensure their attendance/presence, recovery shall be made from his bills at the rate of twice the average pay of corresponding staff working with the Public Works Department.

CLAUSE 3. QUALITY CONTROL ON WORKS AND MATERIAL.

3.1 The contractor shall be responsible for the quality of the work in the entire construction work within the contract. He shall therefore have his own independent and adequate set up for ensuring the same.

For cement, bitumen, mild steel, high tensile steel, bearings, old concrete and similar materials where essential tests are to be carried out at the manufacturer's plants or at the laboratories other than the site laboratories the cost of samples, sampling, testing and furnishing of test certificates shall be borne by the contractor. He shall also furnish the test certificates to the Engineer. The method of sampling and testing of the materials shall be as required by the Hand Book of quality Control for construction of roads and runways IRC Publication or relevant IRC/BIS specifications, or as apprised by the Engineer-in-charge.

3.2 Where the Engineer considers that in the interest of the control of the quality on materials or workmanship, modifications, are necessary, such modifications shall be carried out by the contractor at no extra cost.


XEN

CLAUSE 4: Arrangement of sources of supply for Earthwork forebankment construction and other material.

The materials for embankment construction shall be obtained from areas to be approved by the Engineer. The responsibility for arranging and obtaining the land for borrowing or exploiting in any other way shall rest with the contractor, who shall ensure smooth and uninterrupted supply of the quantity required in construction period. Similarly, the supply of aggregates for construction of road pavement shall be from quarries approved by the Engineer. Responsibility for arranging uninterrupted supply of materials from the source shall be that of contractor.

Clause 5. Road Safety

The Contractor shall provide adequate circuit and arrangements for traffic flow around construction areas, control speed of construction vehicles through road safety and training of drivers, provide adequate signage, barriers and flag persons for traffic control as per IRC 67. If there are traffic jams during construction, measures shall be taken to relieve the congestion with the assistance of traffic police. Safety of workers undertaking various operations during construction will be ensured by providing helmets, masks, safety goggles, safety jackets etc.

Clause 6 Disposal of Materials outside Work Site

Notwithstanding other relevant provisions in the Contract, the excess material generated by dismantling, excavation, waste material and lubricants, used oil, gasoline and other such substance etc., shall be removed from site, outside the right of way at regular intervals and site shall be kept clean from all such disposable materials, grease, cotton and other wastes. Such intervals shall not exceed one month under any circumstances. The selection of the disposal site shall be the responsibility of the Contractor and he shall ensure that the selected site does not result in any claim for damages to the Employer or violation of any existing laws.

Wearing coat shall consist of 40 mm BC wearing coat laid as per MoRT&H specification. For purpose of design its load shall be assumed as that of 100 mm PCC wearing coat.

CLAUSE 7: TACK COAT

Tack coat shall consist of laying Rapid setting coat emulsion @0.20 kg. per square metre of surface area as per MoRT&H specifications for roads and Bridge works Clause 503.

CLAUSE 8:- BITUMINOUS CONCRETE

Bituminous Concrete 40mm thick shall consist of approved aggregates and bitumen of Viscosity Grade 40 with minimum contents of bitumen @5.40% of total weight of the mix. The mix shall meet with requirements set forth in table 500 18 of MoRT&H specifications for Roads and Bridge works. The contractor shall get the mix design approved from the Engineer in charge before laying of any mix and the work shall be carried out in accordance with MoRT&H specifications for Roads and Bridge works Clause 509. The variance in actual percentage of bitumen used will be assessed and the payment adjusted up or down, accordingly.

~~CLAUSE 9: MASTIC ASPHALT~~

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Mastic Asphalt wearing course shall be laid with paving grade bitumen, meeting the requirements given in table 500-29 prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen pre-coated fine grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005 Cum per 10 Sqm and at an approximate spacing of 10 cm center to center in both directions pressed into surface when the temperature of the surface is not less than 100° Centigrade protruding 1 mm to 4 mm over Mastic Surface, all complete as per clause 515

CLAUSE 10: EXPANSION JOINT

- 10.1 Strip seal type expansion joint procured from manufacturer approved by MORT&H be provided at the junction of units of superstructure 15 years complete maintenance guarantee shall be made available by the contractor from the manufacturer and be made available to the department at the time of installation
- 10.2 The expansion joints shall be robust, durable watertight and replaceable. These shall be provided over the full width of Deck and follow the profile including Kerb, Foot Path and crash barrier.
- 10.3 Fabricated steel parts of the expansion joint shall be positioned accurately before the concreting of that portion of deck slab.
- 10.4 Presence of manufacturer's representative at the time of positioning of embedded parts and installation of expansion joint is mandatory.

CLAUSE 11: KERB CHANNEL

Kerb and Channel shall be provided as per bidding document & as per design approved by the engineer in charge.

CLAUSE 12: ECOLOGICAL BALANCE

The contractor shall maintain the ecological balance by preventing deforestation, water pollution and defacing of natural landscape. The contractor shall so conduct his construction operation as to prevent and destruction, scarring or defacing of natural surroundings in the vicinity of work or damage to any tree, scrub or water course unless any of same is specifically required to be cleared or removal for construction purpose. Such removal shall only be done with prior approval of Engineer who may require the contractor to compensatory plantation at his cost.


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No separate payment shall be made for compliance with provisions of this clause and all costs shall be deemed to have been included in the bid. The contractor shall make his own arrangement for the disposal of the spoils from the works to such place where the same shall not cause nuisance and should be acceptable to the authorities concerned.

Executive Engineer,
National Highway
Division,
PWD B&R Br., Jalandhar.

WITNESS

1. _____ 2. _____
Name_ Name_
Address_ Address_

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ANNEXURE 'B'

All the materials including bitumen & cement. are to be arranged by the agency himself and payment for these items shall be based upon on documentary evidence based on invoices from the approved agencies as per given chart below:

Material Brand Chart

Sr no.	Type of Material	Description
1.	Cement	PPC/OPC 43 or above grade of any standard brand conforming BIS Standard with the approval of concerned Engineer in charge. Use of PPC shall be permitted subject to due precautions/specifications as per IRC:21 & IRC:18.
2.	Steel	Fe 550D TMT bars of any standard brand conforming to IS 1786 subject to requirement of IRC:21-2000 (with latest amendment) but procured from manufacturer having integrated steel points and as per approved brands of Ministry/PWD
3.	Bitumen	Emulsion for tack coat, (VG-40) for B.C as per Ministry circular No.RW/NH-35072/05/2018-S&R(P&B) (E165688) Dated 23/08/2023 in India or from the authorized importers of the bitumen (who have established local depot in Punjab for supply of bitumen subject to the condition that the quality of bitumen is as per the specifications of BIS-IRC).
4.	Hume Pipes	NP-3 with ISI mark with the approval of Engineer in charge
5.	Fine Aggregate	The FM of the sand (Ghaggar or Pathankot) shall be 2.0-3.5 as per latest IS-383 It shall free from harmful impurities and deleterious substances. Incase fine silt or dust is found more than 4%, the same shall be washed thoroughly before use.
6.	Prestressing steel	Prestressing strands low relaxation High strength steel conforming to IS-14268
7.	Any other item	With the approval of Engineer in- charge All other materials required for the construction shall confirm to relevant /MORTH specification or latest ISI specification depending upon the product.

Note. 1) The Department will be at liberty to test samples from each lot of such materials and get tested from the approved laboratory at the cost of contractor and the material is allowed to be consumed only if these tests conducted are in order.

2. As all the materials are to be arranged by the contractor, the relevant clauses in the agreement/DNIT relating to stores to be issued by the department will not be applicable.

For recovery purpose the issue rate be taken as follow:

Sr No	Material	Rate
1.	Cement	Latest rate approved by the zonal committee on the date of receipt of tenders.
2.	Steel I.Mild Steel ,Tor Steel and structural steel	Latest rate approved by the zonal committee on the date of receipt of tenders.
3.	Bitumen .	Analyzed rate for site of work / plant site on the date of receipt of tenders.

NOTES & CONDITIONS OF DNIT

1. The tenderer/ bidder should quote his rate against each item in the Bill of quantities.
Any items not covered in the NIT will be paid as per analysis of rate derived as per MORT&H Data Book norms with input rates of material as per collection, Labour rates of Labour Department and Machinery rates as per MORT&H Data Book as taken in estimate.
2. The work shall be executed strictly in accordance with MoRT&H /IRC/Punjab PWD Specification (latest edition as corrected up to date) to the entire satisfaction of the engineer-in-charge coupled with the provision that the various items of work will be carried out as per specifications given in the NIT. In case the specifications given in the NIT are at variance with the MoRT&H /IRC/Punjab PWD Specification. The specifications stipulated in the NIT will take precedence over MORT&H /IRC/Punjab PWD Specifications.
3. The amount and quantity of the work can be increased or decreased to any extent. Any item of the work can be omitted or substituted according to the actual requirement of the department during executing of the work. No extra claim on this account what so-ever shall be entertained.
4. Nothing extra will be paid for damages caused by rains, floods, epidemic, war, earth-quake or any other act of God or any other disorder. The Govt. will not be responsible for payment of any compensation as a result of such damages or losses to the contractor and shall be liable to set right such damage at his own cost to the satisfaction of the Engineer-in-charge.
5. The contractor shall provide at his own cost all tools, plants and other machinery required for the complete job and will physically demonstrate the same before start of work in respect of their performance. If however, the department machinery is available the same will be employed on by the Engineer-in charge.
6. The quality control will be exercised/ observed by the Engineer in charge as per guidelines in hand book of quality control for construction of roads and runways.
7. If any other non-schedule item of work not covered in this NIT is required to got done, the contractor shall have to do the same as per direction of the Engineer in charge in writing and the rates of that item of work will be paid on the rate approved by the competent authority as per condition no 2 above with ceiling premium / rates prevailing at the time of tendering.



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8. The rates to be quoted by the contractor should include all human efforts, machinery and their working expenses and all materials required for the due operations along with the required for test checks etc.
9. The material found surplus material if any after construction will be property of Govt. and the contractor shall have to stack the same surplus materials free of cost as desired by the Engineer in charge.
10. All arrangement for traffic during construction including, maintenance shall be considered as incidental to the works and contractors responsibility and nothing shall be payable to him in this respects.
11. The contractor shall make his own arrangements for obtaining electric connections, if required and make necessary payment directly to the department concerned.
12. Before tendering, the contractor is advised in his own interest to visit the site & acquaint himself about the site conditions No claim will be entertained later on, any whatsoever. Nothing extra shall be payable or any dewatering or diversion of water during execution of work.
13. Nothing extra shall be paid if any local carriage of any material done in respective of lead and lift.
14. The arrangement of water for sprinkling through tube wells, water pumps, shall be the liability of the contractor at his own cost.
15. Nothing extra shall be paid for any type of jungle clearance which the renderer may have to carry out. The through rate to be quoted by the contractor shall be deemed to included all such allowances if involved, however the useful material if available shall remain the property of Govt. and shall be stacked properly free of cost as per direction of the Engineer in charge
16. In case of any omission or error in rates, nomenclature, units and description given in the NIT shall be corrected/rectified as per MOST Data Book norms/MOST specifications amended from time to time upto date of tendering.
17. Cost of binding wire, over laps and hook, wastage supports for reinforcement in the items of reinforcement concrete is including in the rate and shall not be paid separately as it shall be deemed to be for the convenience of the contractor. The rate of steel reinforcement also includes the cutting, straightening, bending and binding and placing in position.


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18. Guidelines on safety in road construction zones including.
- I) Providing and installation of plastic pillars with retro reflective finishing for separation of construction zone and movement zone for traffic/ bifurcation of traffic in two directories.
 - II) Providing and installing of road signals at night for demarcation of the area under construction/ repair for guidance of traffic.
 - III) Providing and installation of adequate number of traffic signs in advance of construction zones of farewell the traffic of construction/ repair activity ahead.
 - IV) Ensuring removal of all obstructions which have been put in place during construction immediately on the completion of construction/ repair work.
19. In case of non-compliance the contractor will be penalized by the Engineer-in-charge in terms of the financial recoveries and his decision in this regard shall be final. The contractor will be liable for criminal proceeding in case of non-compliance of above measures.
- The police department shall be informed regarding regulation of traffic as and where required. In addition, Police Department shall be informed of construction/ repair activity on major roads to provide necessary assistance for safe movement and regulation of traffic.
20. Item for which no rate or price has been entered it will not be paid when executed and shall be deemed covered by the other rates and prices in the Bill of quantities.
21. Where there is a discrepancy between the rate in figures and words, the rates in words will go.
22. In the event of his failure to provide any or all the above amenities the same shall be provided by the Govt. and the cost there shall be recovered from the contractor any dispute regarding the above points shall be settled by the Engineer-in-charge whose decision shall be final.
23. Three stage videography (before, during and after completion of work) shall be done and CD furnished to Regional Officer, Chandigarh before final payment is released. In this regard Ministry's circular No. NH-22023/16/2005-P&M dt. 18.05.2005 may kindly be referred.
24. The rates are inclusive of cost of traffic management during construction. Contractor shall provide road signage, ballads, boards, gunny bags, sheets etc. for safety of traffic during construction period, which will be incidental to work.


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25. Ministry's circular No. RW/NH-24035/4/2008-P&M/PIC dt. 27.11.2009, 21.05.10 and 25.03.2011 must be followed for guidelines and procedure to be adopted for invitation of tenders and qualification of contractor for execution of Road & Bridge works on national Highways and Centrally Finance Schemes.
26. All the relevant Circulars and amendments regarding tender procedures issued from time to time by Ministry shall be followed. While finalizing the tender Central Vigilance Commission (CVC) guidelines circulated vide Circular No. 4/3/07 dt. 03.03.2007 should be strictly followed.
27. The work shall be entrusted to contractors having adequate experience in similar type of works and having adequate machineries and financial resources to execute the work using HMP and sensor Paver finisher of adequate capacity and specifications.
28. Bitumen used for the work shall be heated in boilers only and not in drums on open fire. Spraying of bitumen wherever necessary should be done only with the mechanical sprayers and premixing of bitumen and stone aggregates should be done only in the proper mechanical mixer/ hot mix plant.
29. In order to ensure that there is no slippage in achieving the targets.
30. The display boards on development activities of the work shall be made as per guidelines issued vide Ministry's letter No.RW/NH-33044/10/2002-S&R(R) dt. 26th May 2003.


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GOVT. OF INDIA MORT&H NEW DELHI

LETTER NO. RW/CH/PB/BIDS/1135-39 DT. 11.10.10

~~“Employer or Regional Officer, Ministry of Road Transport and Highways, Chandigarh shall get independent (Third Party) quality control test conducted from Shriram Institute Research New Delhi for any time of work during its execution or unexecuted part carried out as per the contract specification.”~~

GOI MORT&H, New Delhi

“Employer or RO MORT&H Chandigarh shall get independent (3rd party) Quality Control Test of all items from any of the NABL accredited lab. As per IRC SP:94-2011 for any time of work during its execution or unexecuted part carried out as per contract spec.



SECTION – 6

FORM OF BID



FORM OF BID

Description of the Works:

BID
To

Address

1. We offer to execute the Works described above and remedy any defects therein in conformity with the conditions of Contract, specification, drawings, Bill of Quantities and Addenda for the sum(s) of

2. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the document.
3. We agree to abide by this Bid for the period of * _____ days from the date fixed For receiving the same, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.


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6. We accept the appointment of Shri _____ as the
Dispute Review Expert.

(OR)

We do not accept the appointment of Shri _____
as the Dispute Review Expert and propose instead that Shri. _____
be appointed as
Dispute Review Expert, whose BIO-DATA is attached.

Dated this _____ day of _____ 20

Signature _____ in the capacity of duly authorized to sign bids for
and on behalf of _____
(in block capitals or typed)

Address

Witness Address Occupation

Address

Witness Address Occupation


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SECTION-7
BILL OF QUANTITIES

DNTT for the work of Permanent Restoration of damaged portion of stretch from Km 23.00 to 24.00 and Km 44.00 to 45.00 and Km 56.00 to 60.860 and construction of additional culverts in Jalandhar - Kapurthala - Sultanpur Lodhi Mahila road section of NH-703A in the State of Punjab.

App Amount Rs. 339.20 (Excluding GST) Lacs

Earnest Money Rs. 678406/-

Time Limit: 6 Month

Sr. No.	Description of Item	Qty.	Unit	Rate in Figures to be entered by the bidder	
				In Figures	Words.
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 metres. b) Brick Masonry in cement mortar	99.711	Cum		
2	Construction of embankment with good quality earth obtained from borrow pits including compensation of earth, loading, unloading, carriage to site of work, spreading, grading to required slope and compacting to meet requirement of table 300-2 as per technical clause 305 of MORT&H specifications	2320	Cum		
3	Dismantling of flexible pavements thickness above 50mm by mechanical means and disposal of dismantled materials up to a lead of 1000 meters, stacking serviceable and unserviceable materials separately as per technical clause 202 of MORT&H specifications	693.285	Cum		
4	Dismantling Concrete Prestressed / Reinforced cement concrete grade M-20 & above	38.61	Cum		

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5	Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.) i) Ordinary soil B) Mechanical Means j) Depth upto 3 m	4465.351	Cum		
6	Plain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications. A) PCC Grade M15 (iii) With Batching Plant, Transit Mixer and Manual placing	406.295	Cum		
7	Plain/Reinforced cement concrete in sub-structure complete as per drawing and technical specifications B) PCC Grade M20 (p) Height upto 5m	767.139	Cum		
8	Plain/Reinforced cement concrete in sub-structure complete as per drawing and technical specifications G) RCC Grade M30 (p) Height upto 5m	1259.955	Cum		
9	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications	155.406	MT		
10	Providing and laying Flooring complete as per drawing and Technical specifications laid over cement concrete bedding for Culverts. M15 grade concrete	162.108	Cum		
11	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face. Complete as per drawing and Technical specifications	189	Each		
12	Back filling behind abutment, wing wall and return wall complete as per drawing and Technical specification (A) Granular Material	2314.5	Cum		

XEN

13	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MORTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification.	333	Cum		
14	Bituminous Concrete Grading -II (Providing and laying bituminous concrete with higher capacity Continuous type hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects)	52.584	Cum		
15	Drainage Spouts complete as per drawing and Technical specification	18	No		
16	PCC M15 Grade leveling course below approach slab complete as per drawing and Technical specification	126	Cum		
17	Reinforced cement concrete approach slab including reinforcement and formwork complete as per drawing and Technical specification	252	Cum		
18	Construction of Parapet on both sides M 15 concrete	55.08	Cum		
19	Painting on concrete surface (Providing and applying 2 coats of water based cement paint to unplastered concrete surface after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 Sq.m.)	234.216	Sqm		
20	Providing and laying Flooring complete as per drawing and Technical specifications laid over cement concrete bedding for MNB at Km 56.250 and 59.650. (B) Cement Concrete blocks Grade M15	76.8	Cum		
21	Curtain wall complete as per drawing and Technical specification A) Cement Concrete Grade M15	253.389	Cum		

22	Flexible Apron: Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less than 40 kg beyond curtain wall.	706.155 ✓	Cum		
23	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications A) Stone/Boulder	379.831 ✓	Cum		
24	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification	184.01 ✓	Cum		


XEN


Superintending Engineer,
National Highway Circle,
PWD (B&R) Br., Ludhiana.
secw.lhn@gmail.com


Executive Engineer,
National Highway Division,
PWD B&R Br., Jalandhar

BILL OF QUANTITIES

Preamble

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The rates and prices shall be quoted entirely in Indian Currency.
5. A rate or price shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
6. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no Items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
7. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
8. The method of measurement of completed work for payment shall be in accordance with the specification for Road and Bridge Works published by the Ministry of Surface Transport (edition).
9. Errors will be corrected by the Employer for any arithmetic errors pursuant to Clause 29 of the Instructions to Bidders.
10. Rock is defined as all materials which, in the opinion of the Engineer, require blasting, or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 kw with a single rear mounted heavy duty ripper.
11. The rates are inclusive of cost of traffic management during construction contractor shall provide road signage bollards, Boards, gunny, bags, sheet etc for safety of Traffic during construction period which will be incidental to work complete as per IRC:SP 55.2001 "Guideline on safety in construction zone"
12. The rates are inclusive of cost of traffic management during constn. Contractor shall provide road signage, bollards, boards, gunny bags sheet etc. for safety of traffic during construction period which will be incidental to work.


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BILL OF QUANTITIES

Sl. No	Description of Item (with brief specification and reference to book of specification)	Quantity	Unit	Rate		Amount
				In Figures	In Words	
	Attached separately					

Note 1.

1. Item for which no rate or price has been entered in will not be paid for by the Employer when executed and shall be defined covered by the other rates and prices in the bill of quantities (Refer : ITB Clause 13.2 and GCC Clause 43.3).
2. Unit rates and prices shall be quoted by the bidder in Indian rupee [ITB Clause 14.1].
3. Where there is a discrepancy between the rate in figures and words, the rates in words will govern. [ITB Clause 27.1 (a)].
4. Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by quantity, the unit rate quoted shall govern [ITB Clause 27.1(b)].


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SECTION – 8
SECURITIES AND OTHER FORMS


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BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the construction of _____ [name of Contract hereinafter called "the Bid"].

KNOW ALL PEOPLE by these presents that We _____ [name of Bank] of _____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____ * for which payment well and truly to be made to the said Employer the Bank itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____, 20____

THE CONDITIONS of this obligation are :

(1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;

OR

(2) If the Bidder having been notified to the acceptance of his bid by the Employer during the period of Bid validity :

- (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
- (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders; or
- (c) does not accept the correction of the Bid Price pursuant to Clause 27.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions. This Guarantee will remain in force up to and including the date _____ ** days after the deadline for submission of Bids as such dead-line is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____

SIGNATURE _____

WITNESS _____
[Signature, name and address]

SEAL _____



* The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.

** 45 days after the end of the validity period of the Bid. Date should be inserted by the Employer before the Bidding documents are issued.



PERFORMANCE BANK GUARANTEE

To

_____ [name of Employer]

_____ [address of Employer]

WHEREAS _____ [name and address of Contractor] (hereafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee :

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____ [amount of guarantee]*
_____ (in words), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between your and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 28 days from the date of expiry of the Defect Liability Period.

Signature and Seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

* An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.


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BANK GUARANTEE FOR ADVANCE PAYMENT

To

_____[name of Employer]
_____[address of Employer]
_____[name of Contractor]

Gentlemen :

In accordance with the provisions of the Conditions of Contract, sub-clause 51.1 ("Advance Payment") of the above-mentioned Contract, _____ [name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of Guarantee]* _____ [in words].

We, the _____ [bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee]* _____ [in words].

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed thereunder or of any of the Contract documents which may be made between _____ [name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal : _____
Name of Bank / Financial Institution : _____
Address : _____
Date : _____

- An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.



**INDENTURE FOR SECURED ADVANCES
FORM 31**

(for use in cases in which the contract is for finished work and the contractor has entered into an agreement for the execution of a certain specified quantity of work in a given time)

This indenture made the _____ day of _____, 20____
BETWEEN _____ (hereinafter called the contractor which expression shall where the context so admits or implies be deemed to include his executors, administrators and assigns) or the one part and the Employer of the other part.

Whereas by an agreement dated _____ (hereinafter called the said agreement) the contractor has agreed.

AND WHEREAS the contractor has applied to the Employer that he may be allowed advanced on the security of materials absolutely belonging to him and brought by him to the site of the works the subject of the said agreement for use in the construction of such of the works as he has undertaken to execute at rates fixed for the finished work (inclusive of the cost of materials and labour and other charges)

AND WHEREAS the Employer has agreed to advance to the Contractor the sum of Rupees _____ on the security of materials the quantities and other particulars of which are detailed in Accounts of Secured Advances attached to the Running Account bill for the said works signed by the Contractor on _____ and the Employer has reserved to himself the option of making any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

Now THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees _____ on or before the execution of these presents paid to the Contractor by the Employer (the receipt whereof the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as aforesaid the Contractor doth hereby covenant and agree with the President and declare as follows :

- (1) That the said sum of Rupees _____ so advanced by the Employer to the Contractor as aforesaid and all or any further sum of sums advanced as aforesaid shall be employed by the Contractor in or towards expending the execution of the said works and for no other purpose whatsoever.


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- (2) That the materials details in the said Account of Secured Advances which have been offered to and accepted by the Employer as security are absolutely the Contractor's own propriety and free from encumbrances of any kind and the contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnified the Employer against all claims to any materials in respect of which an advance has been made to him as aforesaid.
- (3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.
- (4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same required by the Engineer.
- (5) That the said materials shall not be any account be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.
- (6) That the advances shall be repayable in full when or before the Contractor receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.
- (7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default be repayable by the Contractor to be the Employer together with interest thereon at twelve per cent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the **Employer** in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of


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the Contractor and the Contractor hereby covenants and agrees with the **Employer** to reply and pay the same respectively to him accordingly.

- (8) That the Contractor hereby charges all the said materials with the repayment to the Employer of the said sum of Rupees _____ and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment here-in-before contained shall become enforceable and the money owing shall not be paid in accordance there with the Employer may at any time thereafter adopt all or any of the following courses as he may deem best:
- (a) Seize and utilise the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance with the provisions in that behalf contained in the said agreement debiting the contractor with the actual cost of effecting such completion and the amount due to the contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the contractor, he is to pay same to the Employer on demand.
 - (b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable or payable to the Employer under these presents and pay over the surplus (if any) to the Contractor.
 - (c) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.
- (9) That except in the event of such default on the part of the contractor as aforesaid interest on the said advance shall not be payable.
- (10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here-in-before expressly provided for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.



Letter of Acceptance
(Letterhead paper of the Employer)

(Date)

To

_____ (Name and address of the Contractor)

Dear Sirs,

This is to notify you that your Bid dated _____ for execution of the
(name of the contract and identification number, as given in the Instructions to Bidders)
for the Contract Price of Rupees _____
(_____) (amount in words and figures), as corrected and modified in
accordance with the Instructions to Bidders¹ is hereby accepted by our agency.

We accept / do not accept that _____ be appointed as the Adjudicator²
. You are hereby requested to furnish Performance Security, in the form detailed in Para 34.1 of
ITB for an amount equivalent to Rs. _____ within 21 days of the receipt of this letter of
acceptance valid up to 28 days from the date of expiry of defects Liability Period i.e. up to
_____ and sign the contract, failing
which action as stated in Para 34.3 of ITB will be taken.

Yours faithfully,

Authorized Signature Name and
title of Signatory Name of Agency

Delete "corrected and" or "and modified" if only one of these actions applies. Delete as corrected and modified in accordance with the Instructions to Bidders, if corrections or modifications have not been affected.

To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the Employer in the "Instructions to Bidders".



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Issue of Notice to proceed with the work
(Letterhead of the Employer)

_____ (Date)

To

(Name and address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite security as stipulated in ITB Clause 34.1 and signing of the Contract for the construction of _____ at _____
a Bid Price of Rs. _____

You are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory authorized to sign on behalf of Employer)



Agreement Form

Agreement

This agreement, made the _____ day of _____ between _____ (name and address of Employer) [hereinafter called "the Employer] and _____ (name and address of contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute _____ (name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein , at a cost of Rs. _____

NOW THIS AGREEMENT WITNESSETH as follows :

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
 - i) Letter of Acceptance
 - ii) Notice to proceed with the works;
 - iii) Contractor's Bid
 - iv) Condition of Contract: General and Special
 - v) Contract Data
 - vi) Additional condition
 - vii) Drawings
 - viii) Bill of Quantities and
 - ix) Any other documents listed in the Contract Data as forming part of the Contract.


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In witnessed whereof the parties there to have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____
was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____

in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____


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UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____
_____ agree to abide by this bid for a period _____
days for the date fixed for receiving the same and it shall be binding on us and may be
accepted at any time before the expiration of that period.

(Signed by an Authorised Officer of the Firm)

Title of Officer

Name of Firm

DATE


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Section - 9
DRAWINGS


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Section - 10
DOCUMENTS TO BE FURNISHED BY BIDDER

2

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MS 7.9.208

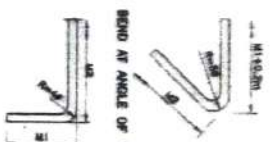
- ### **BENDING OF PAIRS**



BENDING OF PAIRS



BOND WITH CLOSE HOOPS



SEND AT RIGHT ANGLE



BEND AT ANGLE OF 45°

LEGEND: ● SHOWS DIA. OF TAP

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.
STANDARD DRAWINGS FOR BOX CELL STRUCTURE

SINGLE CELL, R.C.C. BOX CHAMBERS

(WITHOUT EARTH CURSION)

BAR BENDING SCHEDULE

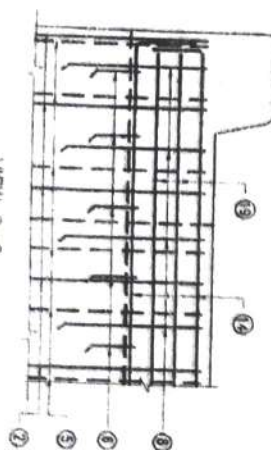
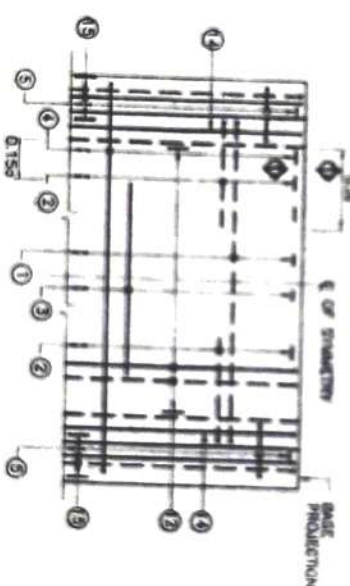
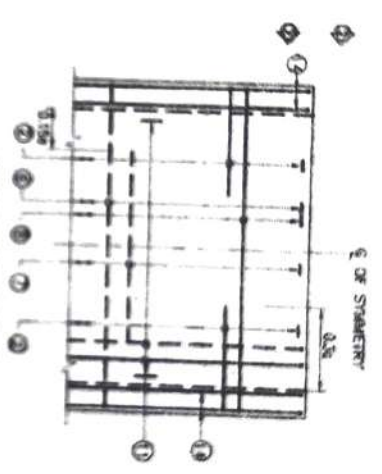
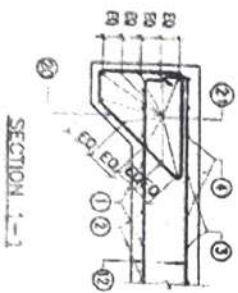
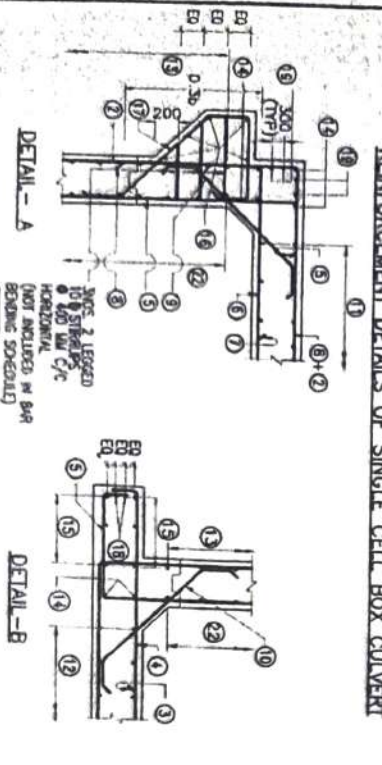
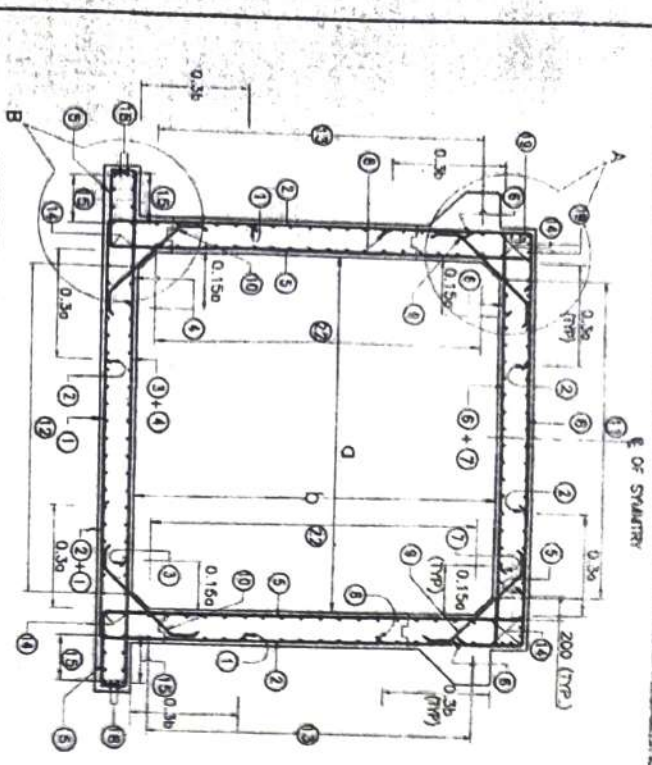
APPROVED BY	CHECKED BY	APPROVED FOR SLE BY
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John Lee
C. C. SANCHEZ
C. C. SANCHEZ

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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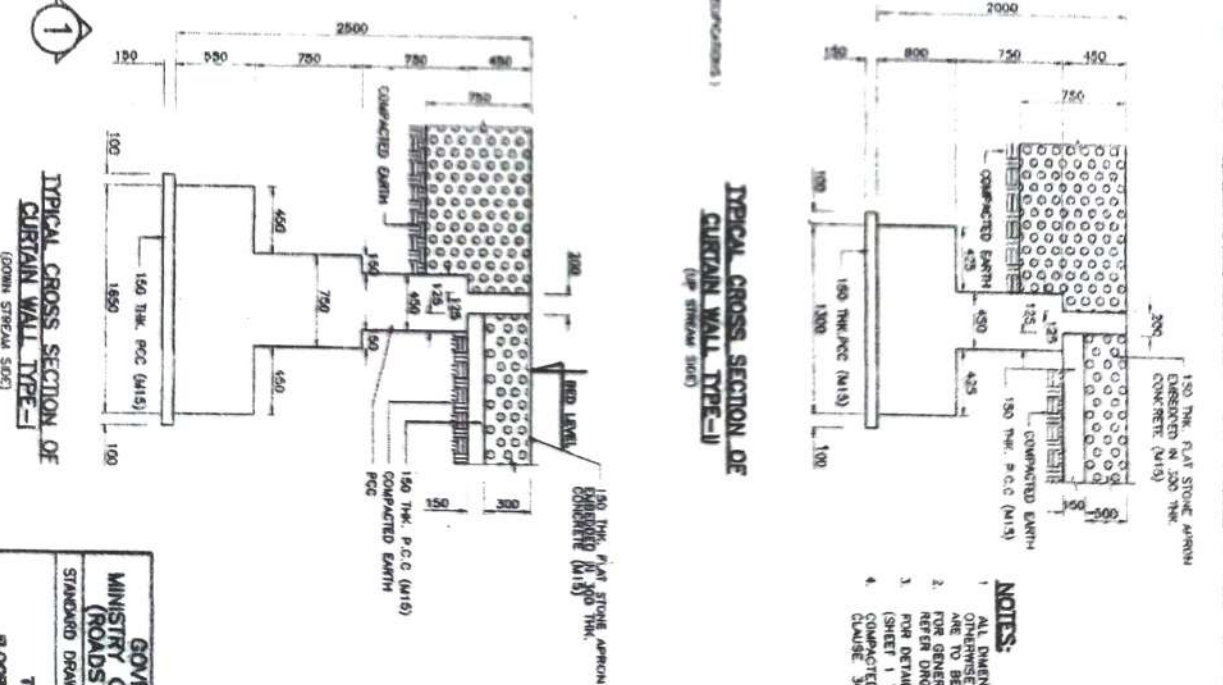
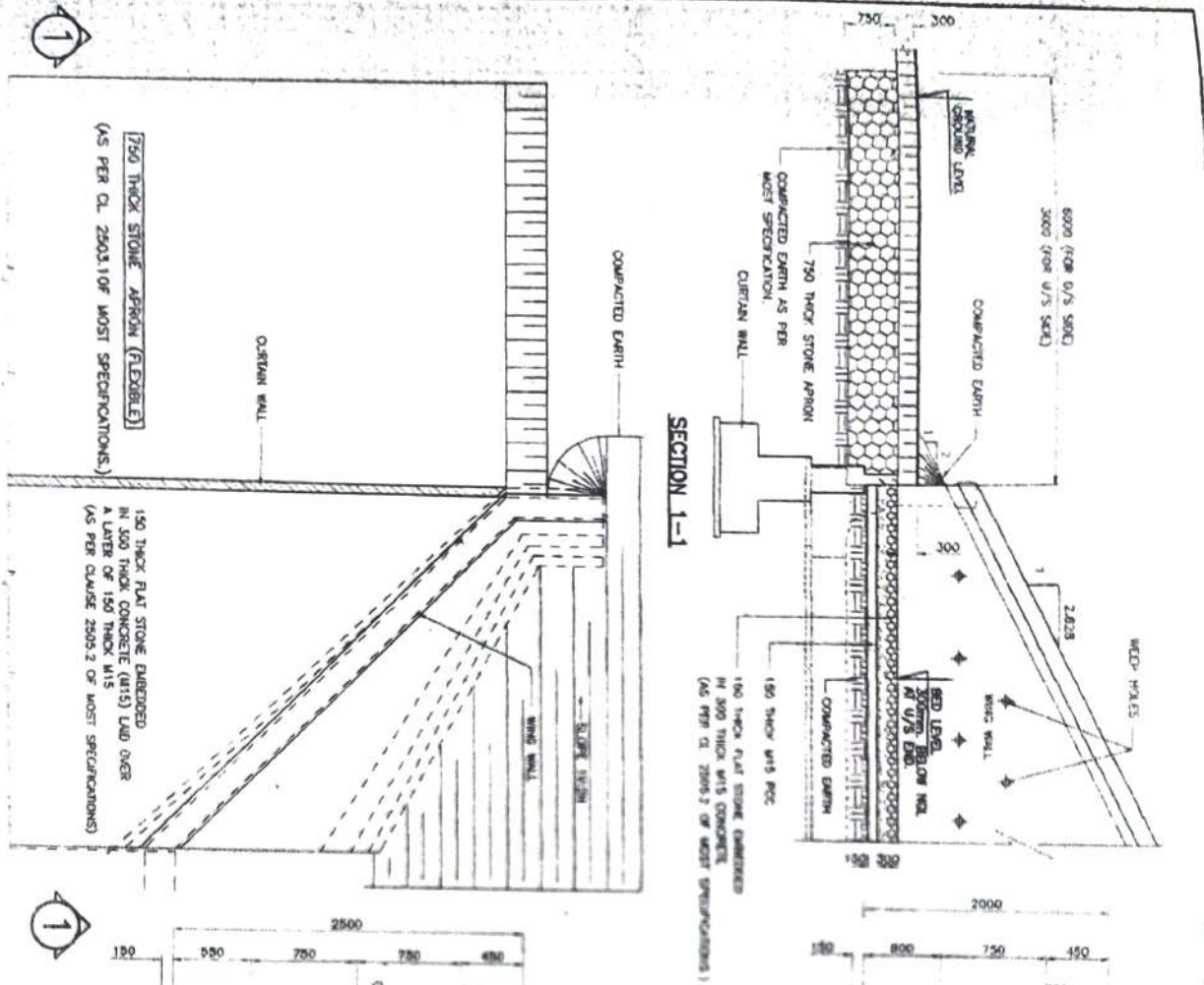
- NOTES:**
1. FOR GENERAL NOTES REFER DWA NO. SD/101.
 2. FOR GENERAL ARRANGEMENT REFER DWA NO. SD/102.
 3. FOR BAR BENDING SCHEDULE REFER DRAWING NO. SD/108 (SHEET 2 TO 4 OF 9).
 4. FOR LAP ZONES REFER DRAWING NO. SD/117 (SHEET 2 OF 2).

LEGEND:

- TOP FACE BARS/OUTER FACE BARS
- BOTTOM FACE BARS/INNER FACE BARS

GOVERNMENT OF INDIA			
MINISTRY OF SURFACE TRANSPORT (ROADS WING), NEW DELHI.			
STANDARD DRAWINGS FOR BOX CELL STRUCTURES			
SINGLE CELL R.C.C. BOX CULVERTS (WITHOUT EARTH CURBING)			
TYPICAL REINFORCEMENT DETAILS			
DESIGNED BY	CHECKED BY	APPROVED FOR	DATE
SD/108	SD/108	SD/108	SD/108

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- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
 2. FOR GENERAL NOTES AND REFERENCE DRAWINGS REFER DWS NO. 30.1/101.
 3. FOR DETAILS OF WING WALL, REFER DWS NO. 30.2/111 (SHEET 1 TO 6 OF 8)
 4. COMPACTED EARTH SHOULD CONFORM TO CLAUSE 308.2.1.5 OF MOST SPECIFICATIONS

GOVERNMENT OF INDIA MINISTRY OF SURFACE TRANSPORT (ROADS WING) , NEW DELHI.		
STANDARD DRAWINGS FOR BOX CELL STRUCTURES		
TYPICAL DETAILS OF FLOOR PROTECTION WORKS GENERAL ARRANGEMENT		
DESIGNED BY	CHECKED BY	APPROVED FOR
CR.L.	SR.L.	SR.L.
(Assistant)	(Officer)	(Officer)
222/1/22	102	102
		SR/111
		1994

EXEN

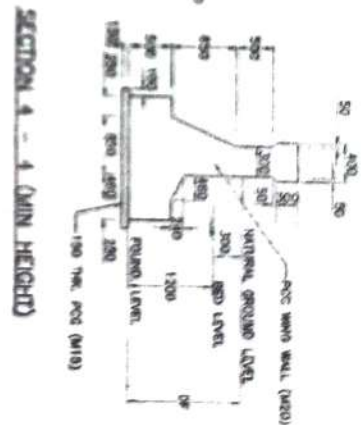
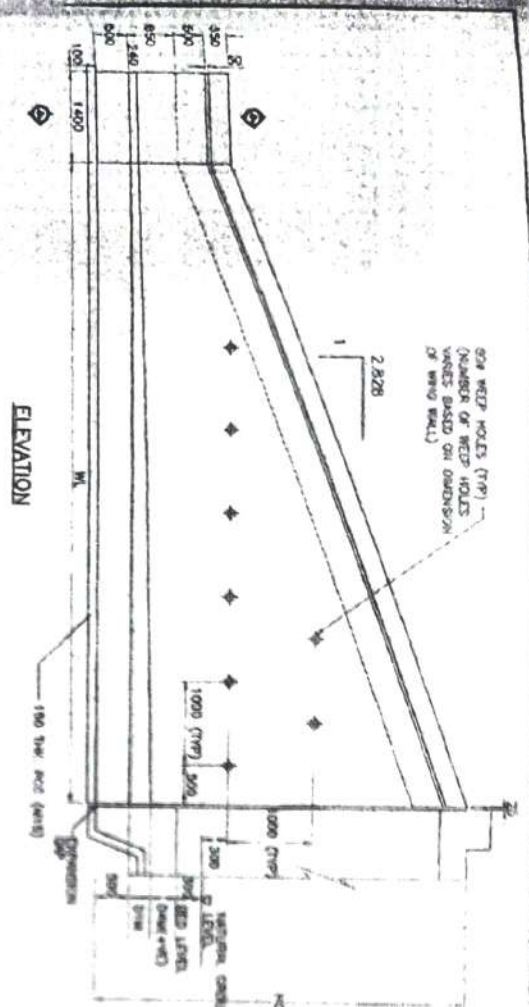
APRON:

BOX CELL RESERVATION NO./SQ.FE.	100 SQ. FT. AREA (SQ.M)	500 SQ. FT. AREA (SQ.M)	1000 SQ. FT. AREA (SQ.M)	1500 SQ. FT. AREA (SQ.M)
1/22/0	5.0	7.6	3.8	49.8
1/23/0	9.6	16.7	9.6	77.6
1/23/0	11.4	22.8	11.4	85.6
1/24/0	20.5	41.0	20.5	113.4
1/23/0	12.1	28.2	13.1	93.1
1/24/0	22.8	45.6	22.8	120.9
1/25/0	25.4	50.8	25.4	149.0
1/25/0	16.0	30.0	15.0	101.2
1/25/0	25.4	50.9	25.4	128.8
1/25/0	28.0	57.9	28.8	157.4
1/25/0	18.2	36.8	18.2	119.6
1/24/3	29.2	59.0	29.2	129.8
1/25/0	43.2	86.3	43.2	166.8
1/26/0	59.2	119.1	59.2	194.4
1/23/0	47.1	94.1	47.1	175.5
1/24/0	54.4	108.8	54.4	203.2
1/27/0	87.2	174.4	87.2	234.9
1/25/0	50.7	101.4	50.7	183.6
1/26/0	68.6	137.2	68.6	211.1
1/27/0	88.2	178.5	88.2	238.6
2/22/0	6.0	11.9	6.0	66.8
2/23/0	13.1	26.2	13.1	93.8
2/22/0	8.0	16.0	8.0	81.7
2/23/0	16.7	32.5	16.7	109.0
2/22/0	7.7	15.4	7.7	81.3
2/23/0	21.6	43.2	21.6	132.3

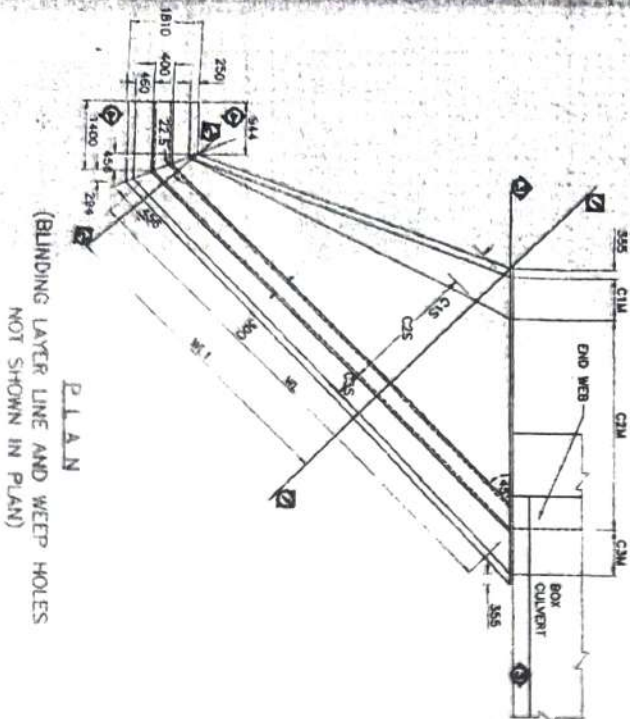
CURTAIN WALL:

BOX CELL RESERVATION NO./SQ.FE.	CONCRETE CURTAIN WALL AREA (SQ.M)	CONCRETE CURTAIN WALL AREA (SQ.M)	CONCRETE CURTAIN WALL AREA (SQ.M)	CONCRETE CURTAIN WALL AREA (SQ.M)
1/22/0	14.0	10.9	21.9	3.7
1/23/0	21.3	15.8	36.8	5.3
1/23/0	24.1	18.4	42.7	6.2
1/24/0	21.8	24.4	46.8	8.4
1/25/0	28.2	28.2	48.6	6.6
1/24/0	34.0	28.2	60.2	9.0
1/26/0	41.0	37.0	78.0	11.7
1/25/0	48.5	37.0	85.5	9.9
1/26/0	56.2	38.0	94.2	9.8
1/26/0	64.2	38.0	102.2	11.1
1/26/0	71.4	38.0	110.4	8.6
1/26/0	79.1	38.0	118.1	10.8
1/26/0	86.8	38.0	125.8	13.9
1/26/0	94.4	38.0	133.4	16.9
1/26/0	102.1	38.0	141.1	19.1
1/26/0	109.8	38.0	148.8	21.3
1/26/0	117.5	38.0	156.5	23.5
1/26/0	125.2	38.0	164.2	25.7
1/26/0	132.9	38.0	171.9	27.9
1/26/0	140.6	38.0	179.6	30.1
1/26/0	148.3	38.0	187.3	32.3
1/26/0	156.0	38.0	195.0	34.5
1/26/0	163.7	38.0	202.7	36.7
1/26/0	171.4	38.0	210.4	38.9
1/26/0	179.1	38.0	218.1	41.1
1/26/0	186.8	38.0	225.8	43.3
1/26/0	194.5	38.0	233.5	45.5
1/26/0	202.2	38.0	241.2	47.7
1/26/0	209.9	38.0	248.9	49.9
1/26/0	217.6	38.0	256.6	52.1
1/26/0	225.3	38.0	264.3	54.3
1/26/0	233.0	38.0	272.0	56.5
1/26/0	240.7	38.0	279.7	58.7
1/26/0	248.4	38.0	287.4	60.9
1/26/0	256.1	38.0	295.1	63.1
1/26/0	263.8	38.0	302.8	65.3
1/26/0	271.5	38.0	310.5	67.5
1/26/0	279.2	38.0	318.2	69.7
1/26/0	286.9	38.0	325.9	71.9
1/26/0	294.6	38.0	333.6	74.1
1/26/0	302.3	38.0	341.3	76.3
1/26/0	310.0	38.0	349.0	78.5
1/26/0	317.7	38.0	356.7	80.7
1/26/0	325.4	38.0	364.4	82.9
1/26/0	333.1	38.0	372.1	85.1
1/26/0	340.8	38.0	379.8	87.3
1/26/0	348.5	38.0	387.5	89.5
1/26/0	356.2	38.0	395.2	91.7
1/26/0	363.9	38.0	402.9	93.9
1/26/0	371.6	38.0	410.6	96.1
1/26/0	379.3	38.0	418.3	98.3
1/26/0	387.0	38.0	426.0	100.5
1/26/0	394.7	38.0	433.7	102.7
1/26/0	402.4	38.0	441.4	104.9
1/26/0	410.1	38.0	449.1	107.1
1/26/0	417.8	38.0	456.8	109.3
1/26/0	425.5	38.0	464.5	111.5
1/26/0	433.2	38.0	472.2	113.7
1/26/0	440.9	38.0	479.9	115.9
1/26/0	448.6	38.0	487.6	118.1
1/26/0	456.3	38.0	495.3	120.3
1/26/0	464.0	38.0	503.0	122.5
1/26/0	471.7	38.0	510.7	124.7
1/26/0	479.4	38.0	518.4	126.9
1/26/0	487.1	38.0	526.1	129.1
1/26/0	494.8	38.0	533.8	131.3
1/26/0	502.5	38.0	541.5	133.5
1/26/0	510.2	38.0	549.2	135.7
1/26/0	517.9	38.0	556.9	137.9
1/26/0	525.6	38.0	564.6	140.1
1/26/0	533.3	38.0	572.3	142.3
1/26/0	541.0	38.0	580.0	144.5
1/26/0	548.7	38.0	587.7	146.7
1/26/0	556.4	38.0	595.4	148.9
1/26/0	564.1	38.0	603.1	151.1
1/26/0	571.8	38.0	610.8	153.3
1/26/0	579.5	38.0	618.5	155.5
1/26/0	587.2	38.0	626.2	157.7
1/26/0	594.9	38.0	633.9	159.9
1/26/0	602.6	38.0	641.6	162.1
1/26/0	610.3	38.0	649.3	164.3
1/26/0	618.0	38.0	657.0	166.5
1/26/0	625.7	38.0	664.7	168.7
1/26/0	633.4	38.0	672.4	170.9
1/26/0	641.1	38.0	680.1	173.1
1/26/0	648.8	38.0	687.8	175.3
1/26/0	656.5	38.0	695.5	177.5
1/26/0	664.2	38.0	703.2	179.7
1/26/0	671.9	38.0	710.9	181.9
1/26/0	679.6	38.0	718.6	184.1
1/26/0	687.3	38.0	726.3	186.3
1/26/0	695.0	38.0	734.0	188.5
1/26/0	702.7	38.0	741.7	190.7
1/26/0	710.4	38.0	749.4	192.9
1/26/0	718.1	38.0	757.1	195.1
1/26/0	725.8	38.0	764.8	197.3
1/26/0	733.5	38.0	772.5	199.5
1/26/0	741.2	38.0	780.2	201.7
1/26/0	748.9	38.0	787.9	203.9
1/26/0	756.6	38.0	795.6	206.1
1/26/0	764.3	38.0	803.3	208.3
1/26/0	772.0	38.0	811.0	210.5
1/26/0	779.7	38.0	818.7	212.7
1/26/0	787.4	38.0	826.4	214.9
1/26/0	795.1	38.0	834.1	217.1
1/26/0	802.8	38.0	841.8	219.3
1/26/0	810.5	38.0	849.5	221.5
1/26/0	818.2	38.0	857.2	223.7
1/26/0	825.9	38.0	864.9	225.9
1/26/0	833.6	38.0	872.6	228.1
1/26/0	841.3	38.0	880.3	230.3
1/26/0	849.0	38.0	888.0	232.5
1/26/0	856.7	38.0	895.7	234.7
1/26/0	864.4	38.0	903.4	236.9
1/26/0	872.1	38.0	911.1	239.1
1/26/0	879.8	38.0	918.8	241.3
1/26/0	887.5	38.0	926.5	243.5
1/26/0	895.2	38.0	934.2	245.7
1/26/0	902.9	38.0	941.9	247.9
1/26/0	910.6	38.0	949.6	250.1
1/26/0	918.3	38.0	957.3	252.3
1/26/0	926.0	38.0	965.0	254.5
1/26/0	933.7	38.0	972.7	256.7
1/26/0	941.4	38.0	980.4	258.9
1/26/0	949.1	38.0	988.1	261.1
1/26/0	956.8	38.0	995.8	263.3
1/26/0	964.5	38.0	1003.5	265.5
1/26/0	972.2	38.0	1011.2	267.7
1/26/0	979.9	38.0	1018.9	269.9
1/26/0	987.6	38.0	1026.6	272.1
1/26/0	995.3	38.0	1034.3	274.3
1/26/0	1003.0	38.0	1042.0	276.5
1/26/0	1010.7	38.0	1049.7	278.7
1/26/0	1018.4	38.0	1057.4	280.9
1/26/0	1026.1	38.0	1065.1	283.1
1/26/0	1033.8	38.0	1072.8	285.3
1/26/0	1041.5	38.0	1080.5	287.5
1/26/0	1049.2	38.0	1088.2	289.7
1/26/0	1056.9	38.0	1095.9	291.9
1/26/0	1064.6	38.0	1103.6	294.1
1/26/0	1072.3	38.0	1111.3	296.3
1/26/0	1080.0	38.0	1119.0	298.5
1/26/0	1087.7	38.0	1126.7	300.7
1/26/0	1095.4	38.0	1134.4	302.9
1/26/0	1103.1	38.0	1142.1	305.1
1/26/0	1110.8	38.0	1149.8	307.3
1/26/0	1118.5	38.0	1157.5	309.5
1/26/0	1126.2	38.0	1165.2	311.7
1/26/0	1133.9	38.0	1172.9	313.9
1/26/0	1141.6	38.0	1180.6	316.1
1/26/0	1149.3	38.0	1188.3	318.3
1/26/0	1157.0	38.0	1196.0	320.5
1/26/0	1164.7	38.0	1203.7	322.7
1/26/0	1172.4	38.0	1211.4	324.9
1/26/0	1180.1	38.0	1219.1	327.1
1/26/0	1187.8	38.0	1226.8	329.3
1/26/0	1195.5	38.0	1234.5	331.5
1/26/0	1203.2	38.0	1242.2	333.7
1/26/0	1210.9	38.0	1249.9	335.9
1/26/0	1218.6	38.0	1257.6	338.1
1/26/0	1226.3	38.0	1265.3	340.3
1/26/0	1234.0	38.0	1273.0	342.5
1/26/0	1241.7	38.0	1280.7	344.7
1/26/0	1249.4	38.0	1288.4	346.9
1/26/0	1257.1	38.0	1296.1	349.1
1/26/0	1264.8	38.0	1303.8	351.3
1/26/0	1272.5	38.0	1311.5	353.5
1/26/0	1280.2	38.0	1319.2	355.7
1/26/0	1287.9	38.0	1326.9	357.9
1/26/0	1295.6	38.0	1334.6	360.1
1/26/0	1303.3	38.0	1342.3	362.3
1/26/0	1311.0	38.0	1350.0	364.5
1/26/0	1318.7	38.0	1357.7	366.7
1/26/0	1326.4	38.0	1365.4	368.9
1/26/0	1334.1	38.0	1373.1	371.1
1/26/0	1341.8	38.0	1380.8	373.3
1/26/0	1349.5	38.0	1388.5	375.5
1/26/0	1357.2	38.0	1396.2	377.7
1/26/0	1364.9	38.0	1403.9	379.9
1/26/0	1372.6	38.0	1411.6	382.1
1/26/0	1380.3	38.0	1419.3	384.3
1/26/0	1388.0	38.0	1427.0	386.5
1/26/0	1395.7	38.0	1434.7	388.7
1/26/0	1403.4	38.0	1442.4	390.9
1/26/0	1411.1	38.0	1450.1	393.1
1/26/0	1418.8	38.0	1457.8	395.3
1/26/0	1426.5	38.0	1465.5	397.5
1/26/0	1434.2	38.0	1473.2	399.7
1/26/0	1441.9	38.0	1480.9	401.9
1/26/0	1449.6	38.0	1488.6	404.1
1/26/0	1457.3	38.0	1496.3	406.3
1/26/0	1465.0	38.0	1504.0	408.5
1/26/0	1472.7	38.0	1511.7	410.7
1/26/0	1480.4	38.0	1519.4	412.9
1/26/0	1488.1	38.0	1527.1	415.1
1/26/0	1495.8	38.0	1534.8	417.3
1/26/0	1503.5	38.0	1542.5	419.5
1/26/0	1511.2	38.0	1550.2	421.7
1/26/0	1518.9	38.0	1557.9	423.9
1/26/0	1526.6	38.0	1565.6	426.1
1/26/0	1534.3	38.0	1573.3	428.3
1/26/0	1542.0	38.0	1581.0	430.5
1/26/0	1549.7	38.0	1588.7	432.7
1/26/0	1557.4	38.0	1596.4	434.9
1/26/0	1565.1	38.0	1604.1	437.1
1/26/0	1572.8	38.0	1611.8	439.3
1/26/0	1580.5	38.0	1619.5	441.5
1/26/0	1588.2	38.0	1627.2	443.7
1/26/0	1595.9	38.0	1634.9	445.9
1/26/0	1603.6	38.0	1642.6	448.1
1/26/0	1611.3	38.0	1650.3	450.3
1/26/0	1619.0	38.0	1658.0	452.5
1/26/0	1626.7	38.0	1665.7	454.7
1/26/0	1634.4	38.0	1673.4	456.9
1/26/0	1642.1	38.0	1681.1	459.1
1/26/0	1649.8	38.0	1688.8	461.3
1/26/0	1657.5	38.0	1696.5	463.5
1/26/0	1665.2	38.0	1704.2	465.7
1/26/0	1672.9	38.0	1711.9	467.9
1/26/0	1680.6	38.0	1719.6	470.1
1/26/0	1688.3	38.0	1727.3	472.3
1/26/0	1696.0	38.0	1735.0	474.5
1/26/0	1703.7	38.0	1742.7	476.7
1/26/0	1711.4	38.0	1750.4	478.9
1/26/0	1719.1	38.0	1758.1	481.1
1/26/0	1726			

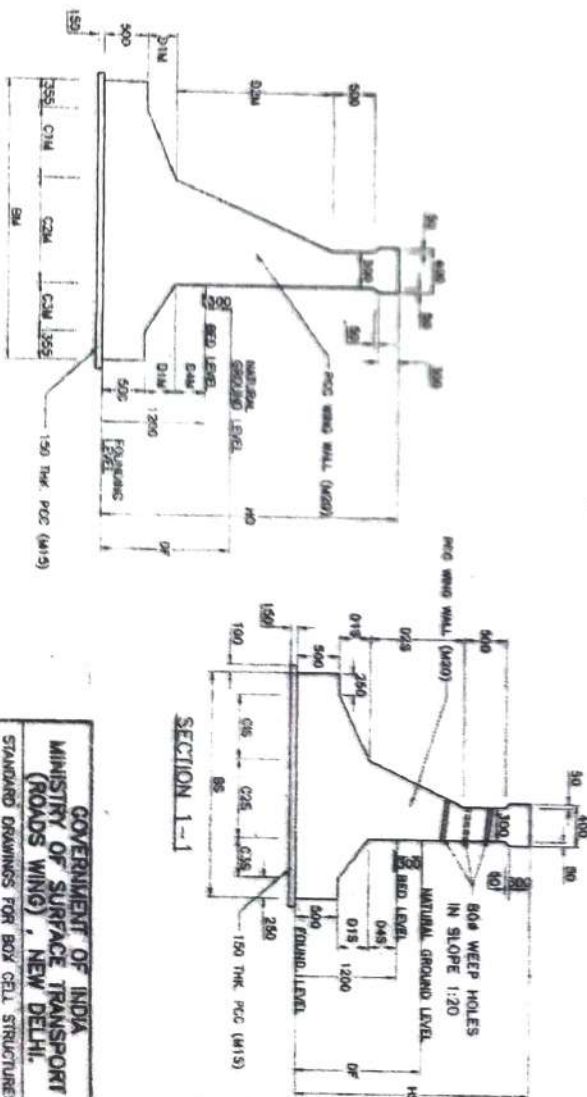
NE



- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED. DIMENSIONS ARE NOT TO BE SCALED.
 2. FOR GENERAL NOTES REFER DRG. NO. SD/101.
 3. FOR DIMENSION SCHEDULE REFER DRG. NO. SD/113 (SHEET 3 TO 6 OF 6).
 4. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANULAR FILL WITH LAYERS NOT EXCEEDING 300mm.
 5. IF THERE IS ANY LEVEL DIFFERENCE IN FOUNDATION LEVEL OF WIND WALL AND DOWNWARD PROJECTION AT THE ADJACENT EDGE OF BOX STRUCTURE, PROPER SPALL/SLUR PROTECTION IS TO BE PROVIDED IN THIS AREA TO COMPENSATE THE LEVEL DIFFERENCE.
 6. MARKED SECTION 3-3 NOT SHOWN IN DRG & IS GIVEN ONLY TO MENTION LENGTH W.L.
 7. THE PILES/WEA SHALL BE PROVIDED BEHIND THE SURFACE OF WIND WALL AS PER DET'S.



SECTION 3-3

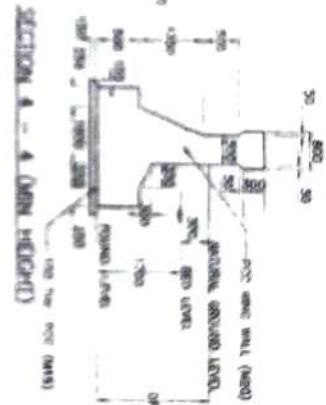
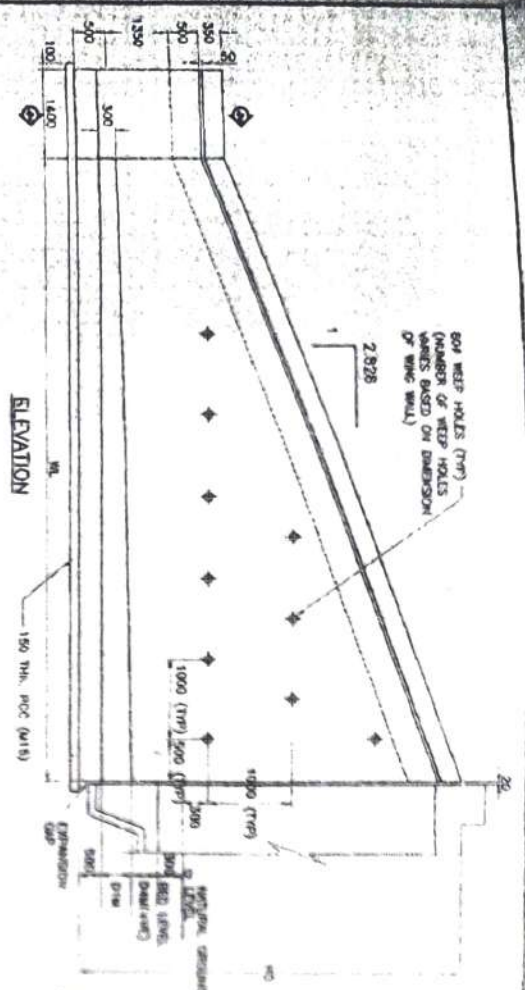


SECTION 1-1

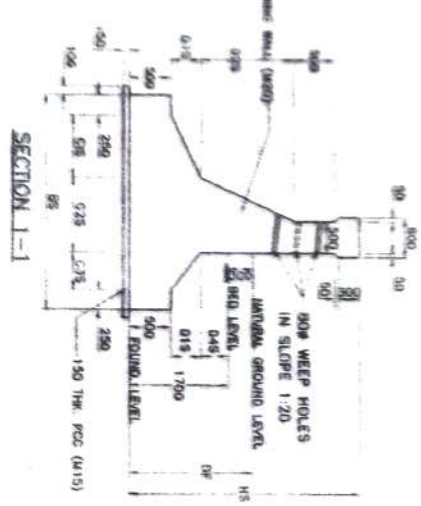
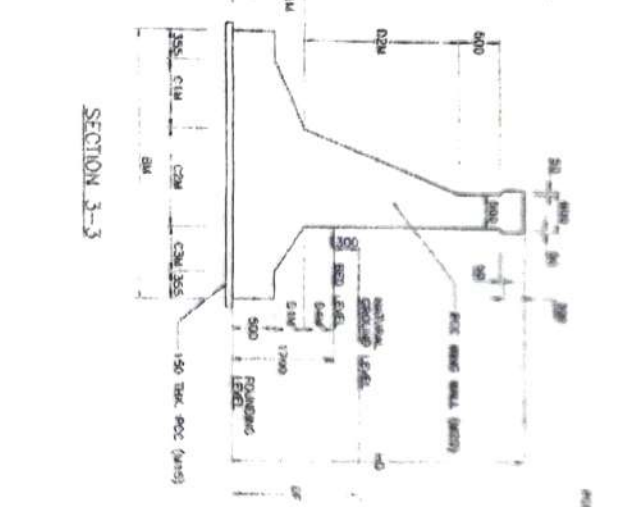
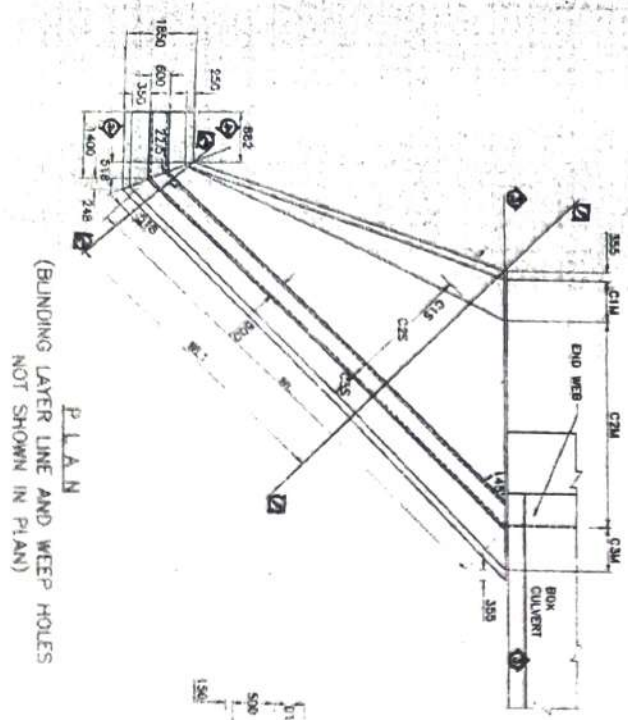
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.
STANDARD DRAWINGS FOR BOX CUL STRUCTURES
DETAILS OF PCC WIND WALL
GENERAL ARRANGEMENT
(MAX HEIGHT OF WIND WALL
BELOW 6m.)

DESIGNED BY	CHECKED BY	APPROVED BY	DATE
W.L.	W.L.	W.L.	10.09.08
W.L.	W.L.	W.L.	10.09.08
W.L.	W.L.	W.L.	10.09.08

35N



- NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. FOR GENERAL NOTES REFER DRG. NO. SD/101.
 3. FOR DIMENSIONS SPECIFIED REFER DRG. NO. SD/113 (SM 3 TO 8 OF 6).
 4. SOFT AND LOOSE MATERIALS IN THE SOILING AREA ARE TO BE REMOVED BY COMPACTED GRANULAR FILL WITH LAYERS NOT EXCEEDING 100MM.
 5. IF THERE IS ANY LEVEL DIFFERENCE IN FOUNDING LEVEL OF WING WALL AND DOWNWARD PROTECTION AT THE DOWNSTREAM END OF BOX STRUCTURE, PROPER GRANULAR PROTECTION IS TO BE PROVIDED IN THIS AREA TO COMPENSATE THE LEVEL DIFFERENCE.
 6. DOWNSTREAM SECTION 3-3 NOT SHOWN IN DRG. NO. SD/101.
 7. IF OVERALL HEIGHT IS ABOVE 6M, IT IS BETTER TO BE SET FOR R.C.C. TYPE WING WALL RATHER THAN P.C.G. WING WALL. FOR THIS SPECIFIC CASE INDEPENDENT DESIGN HAS TO BE DONE AS PER SITE CONDITION AND DIRECTION OF THE ENGINEER-IN-CHARGE.
 8. THE FILLER AREA SHALL BE PROVIDED BEHIND THE SUBPACT OF WING WALL AS PER DRG. NO. SD/101.



GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.

STANDARD DRAWINGS FOR BOX CELL STRUCTURES

DETAILS OF P.C.G. WING WALL

GENERAL ARRANGEMENT
(MAX HEIGHT OF WING WALL
BELOW 6m.)

DESIGNED BY	CHECKED BY	APPROVED FOR
SD/113	SD/113	SD/113
DATE	DATE	DATE
10/10/10	10/10/10	10/10/10

TABLE No. - 1
SALENT DIMENSIONS OF PCC WING WALL
CONSIDERING NET SBC = 5t/m²

PCC (M20)

SECTION 1-1										SECTION 2-2									
S.NO.	MAX.HT. OF PCC WING WALL (mm)	DEPTH OF SEC. 1-1 AND SEC. 2-2 (mm)	HT.AT SEC. 1-1 HS (mm)	C1S (mm)	C2S (mm)	C3S (mm)	BS (mm)	D1S (mm)	D2S (mm)	D4S (mm)	C1HS (mm)	C2HS (mm)	C3HS (mm)	BS (mm)	D1HS (mm)	D2HS (mm)	D4HS (mm)		
1.	2000	1500	2071	0	650	900	1000	270	841	280	0	1003	1157	2800	444	1204	284		
2.	4000	1500	2427	3300	650	650	650	264	813	430	8700	1203	7200	12000	844	1810	1400		

NOTES:

- FOR GENERAL NOTES REFER TO NO. 50/101
- THIS DRAWING SHALL BE READ IN CONNECTION WITH Dwg. No. 50/113 (SHEET 1 & 2 OF 3)
- WING WALL IS DESIGNED FOR SEVERE CONDITION OF MODERATE FOUNDATION OR EXPOSURE.
- MIN. VALUE OF DASH ALLOWED IS - 130mm.
- IF DASH IS (-VE), IT SHOULD BE MEASURED ABOVE BED LEVEL & FOR (+VE) VALUES, IT SHOULD BE TAKEN BELOW BED LEVEL.

TABLE No. - 2
SALENT DIMENSIONS OF PCC WING WALL
CONSIDERING NET SBC = 10t/m²

PCC (M20)

SECTION 1-1										SECTION 2-2															
MAX.HT. OF ROAD	DEPTH OF ROAD	LENGTH BETWEEN SEC. 1-1 AND 2-2 (mm)	HT.AT SEC. 1-1 HS (mm)	C1S (mm)	C2S (mm)	C3S (mm)	BS (mm)	D1S (mm)	D2S (mm)	D4S (mm)	C1HS (mm)	C2HS (mm)	C3HS (mm)	BS (mm)	D1HS (mm)	D2HS (mm)	D4HS (mm)	C1HS (mm)	C2HS (mm)	C3HS (mm)	BS (mm)	D1HS (mm)	D2HS (mm)	D4HS (mm)	
1.	2000	1500	777	2611	0	650	440	1810	280	681	430	0	1203	601	2800	444	1204	284	0	0	0	0	0	0	0
2.	4000	1500	2635	3348	600	650	650	2550	600	1448	130	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	
3.	2000	1500	654	2798	1600	1550	650	4320	970	1470	130	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	
4.	4000	1500	4242	3841	4100	1700	670	4770	400	2031	230	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	
5.	6000	2000	4316	4408	2700	1500	670	6420	700	3208	400	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	
6.	7000	2000	4454	4535	4700	2030	630	7880	700	3480	400	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	

TABLE No. - 3
SALENT DIMENSIONS OF PCC WING WALL
CONSIDERING NET SBC = 15t/m²

PCC (M20)

SECTION 1-1										SECTION 2-2															
S.NO.	MAX. HT. OF PCC WING WALL (mm)	DEPTH OF PCC (mm)	LENGTH BETWEEN SEC. 1-1 AND SEC. 2-2 (mm)	HT.AT SEC. 1-1 HS (mm)	C1S (mm)	C2S (mm)	C3S (mm)	BS (mm)	D1S (mm)	D2S (mm)	D4S (mm)	C1HS (mm)	C2HS (mm)	C3HS (mm)	BS (mm)	D1HS (mm)	D2HS (mm)	D4HS (mm)	C1HS (mm)	C2HS (mm)	C3HS (mm)	BS (mm)	D1HS (mm)	D2HS (mm)	D4HS (mm)
1.	2000	1500	777	2611	0	650	440	1810	280	681	430	0	1202	601	2800	444	1204	284	0	0	0	0	0	0	0
2.	4000	1500	2785	3346	600	1600	500	2550	600	1448	130	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0
3.	6000	1500	4814	4645	1120	1300	440	3360	400	2003	200	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0
4.	8000	1500	4449	3932	3000	1070	440	6560	500	2082	200	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0
5.	10000	1500	4556	4651	1400	1550	600	4100	910	2561	280	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0
6.	12000	1500	4544	4785	2800	1350	110	8180	750	2881	450	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0
7.	14000	1500	4633	4728	4150	980	460	6570	780	3118	600	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0
8.	16000	1500	4720	4750	5400	410	11810	680	3190	680	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0	0
9.	18000	1500	4796	4760	6700	300	14650	420	3234	780	1203	1157	2800	444	1204	284	0	0	0	0	0	0	0	0	0

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.
STANDARD DRAWINGS FOR BOX CELL STRUCTURES
DIMENSION SCHEDULE FOR PCC
WING WALL (GENERAL)

DESIGNED BY	C.A.	CHECKED BY	APPROVED FOR	DATE	1989
SCALE	1:100	DATE	1989	1989	1989
PROJECT NO.	10/113	PROJECT NO.	10/113	PROJECT NO.	10/113
REVISION	1	REVISION	1	REVISION	1

TABLE NO. - 5 (CONT.)
SAJENT DIMENSIONS OF PCC WING WALL
PCC (M20)

Sl. No.	BOX NO.	DESIGNATION	NET SAFE WALL THICKNESS (mm)	REINFORC. NO.	DEPTH OF FOUNDATION (mm)	LENGTH OF WALL (mm)	LENGTH BETWEEN 1-1 AND 2-2 (mm)	SECTION 1-1										SECTION 2-2										TOTAL VOLUME OF CONCRETE IN WALL (cum.)
								HT AT SEC 1-1 (mm)	C15 (mm)	C25 (mm)	C35 (mm)	B5 (mm)	D15 (mm)	D25 (mm)	D35 (mm)	C14 (mm)	C24 (mm)	C34 (mm)	B4 (mm)	D14 (mm)	D24 (mm)	D34 (mm)						
1	1/22/0	15	3000	1500	1600	1600	1600	3015	330	833	462	2345	401	1204	206	467	1370	703	3130	524	1678	782	2420	-42	90.75			
2	1/23/0	15	4000	1500	1500	1500	3472	3735	995	1171	477	3033	595	1616	137	1202	1677	407	4301	702	2420	-70	99.00					
3	1/23/0	15	4400	1500	1644	1644	3791	910	1168	475	3071	574	1668	136	1207	1677	407	4301	710	2400	-70	108.77						
4	1/24/0	15	3600	1500	1757	1757	3978	2695	1625	460	5440	542	2506	156	4038	3206	611	3949	637	3483	-137	108.77						
5	1/24/0	15	4800	1500	1829	1829	4164	3812	925	1195	474	2694	678	1684	137	1300	1680	404	4302	714	2420	-74	101.85					
6	1/24/0	15	3900	1600	1841	1841	4661	2874	2935	1440	460	3536	636	2006	142	4702	3330	611	3833	3483	-138	101.09						
7	1/25/0	15	2200	2000	1783	1783	4320	6121	3218	2448	503	6990	778	2032	463	4630	3661	612	4988	1146	4733	94	434.69					
8	1/25/0	14	4200	1500	1703	1703	3725	3878	1460	1160	965	3105	679	1346	121	2083	1641	608	3182	635	2016	-131	106.79					
9	1/24/0	15	6700	1500	1925	1925	4644	3949	2044	1660	460	6844	534	2080	464	4300	3346	611	4674	3530	-130	108.31						
10	1/25/0	15	7800	2000	1783	1783	6383	6128	3317	2807	507	6830	778	2043	464	4702	3661	611	4979	1149	4781	81	448.00					
11	1/25/0	10	4800	1800	1757	1757	3929	3100	1722	1214	656	4005	674	1437	130	1440	1142	403	3779	841	2089	-144	121.04					
12	1/24/0	15	2800	1800	1947	1947	4467	3848	3478	1740	480	6176	614	2083	160	4638	3640	611	4788	446	2080	-140	314.14					
13	1/26/0	15	7300	2000	1723	1723	6262	5143	3323	2905	499	5976	721	2082	469	4687	3643	609	4981	1162	4678	46	447.60					
14	1/26/0	15	8400	2000	1610	1610	6020	6188	2746	2084	482	6708	603	2146	549	4616	4306	609	4681	1128	4621	71	706.64					
15	1/27/0	15	7400	2000	1343	1343	6416	5153	3060	3663	497	7946	708	2075	473	4680	3647	609	4656	1164	4646	46	448.21					
16	1/27/0	15	8400	2000	1634	1634	6498	5180	3048	3135	444	10039	643	2168	508	4612	4633	614	4686	1150	4610	80	728.87					
17	1/27/0	15	8400	2000	1614	1614	6183	5009	3728	287	13084	603	2016	475	4687	4630	609	4680	1160	7340	310	1023.71						
18	1/28/0	15	7900	2000	13514	13514	6436	5180	3100	3730	2680	678	7380	710	2080	475	4680	609	4680	1116	4644	44	462.88					
19	1/28/0	15	8300	2000	16408	16408	6468	5177	3177	4002	444	10751	638	2149	502	4680	4643	609	4680	1116	4644	64	737.01					
20	1/27/0	15	8200	2000	16177	16177	6188	5060	3875	3774	350	13299	602	2014	708	13288	6337	609	4676	1166	4646	340	1094.03					
21	2/22/0	10	3400	1500	2659	2659	2044	3064	300	910	544	2254	472	1263	228	424	1267	636	3260	422	1928	78	90.04					
22	2/23/0	10	4400	1500	6787	6787	4002	3176	800	1180	478	3506	672	1654	138	1773	1666	609	4340	797	2483	-47	84.88					
23	2/23/0	10	3600	1500	4161	4161	2155	3123	325	813	531	3281	446	1285	212	440	1294	654	3318	645	1665	55	62.14					
24	2/23/0	10	4676	1500	6863	6863	3891	3466	1436	1151	347	3456	580	1736	120	2054	1436	910	5202	633	2487	-133	109.83					
25	3/22/0	10	3070	1500	3874	3874	1877	2060	765	907	540	2232	462	1346	726	463	1283	623	3225	608	1912	82	46.80					
26	3/23/0	15	4600	1600	5638	5638	3668	3666	1410	1146	568	3973	581	1728	1267	1594	1426	912	5225	613	2467	-133	106.53					

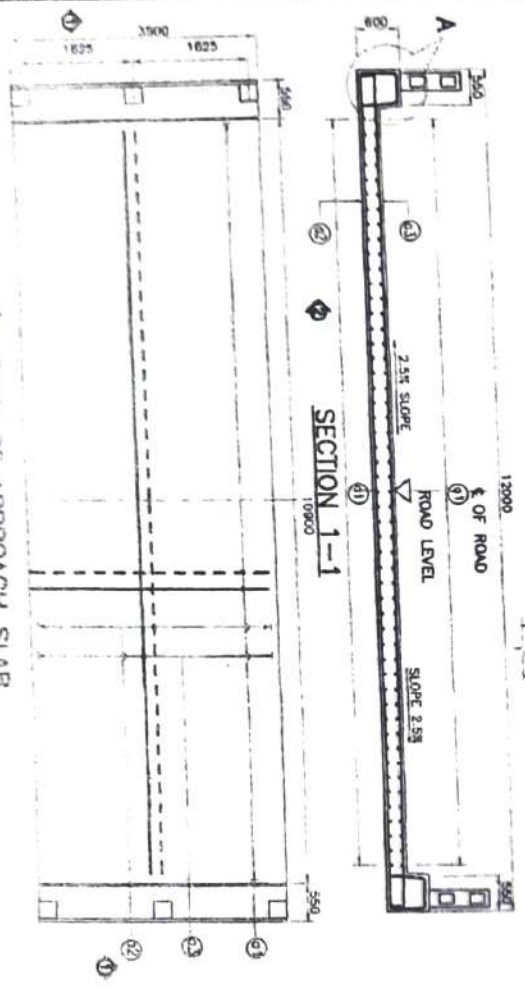
NOTES:

FOR ALL NOTES REFER. DRG. NO. SD/113
(SHEET 4 OF 5)

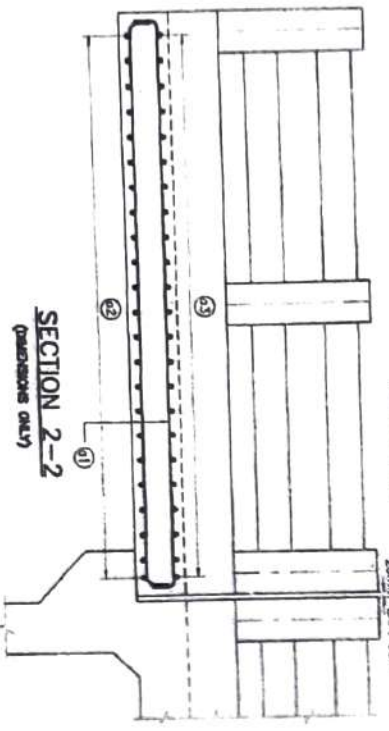
DRG. NO. SD/113 SHEET 4 OF 5

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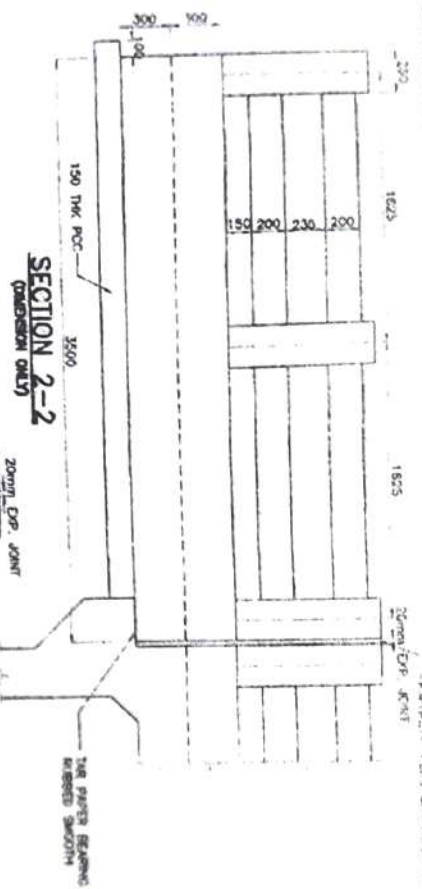
PLAN OF APPROACH SLAB



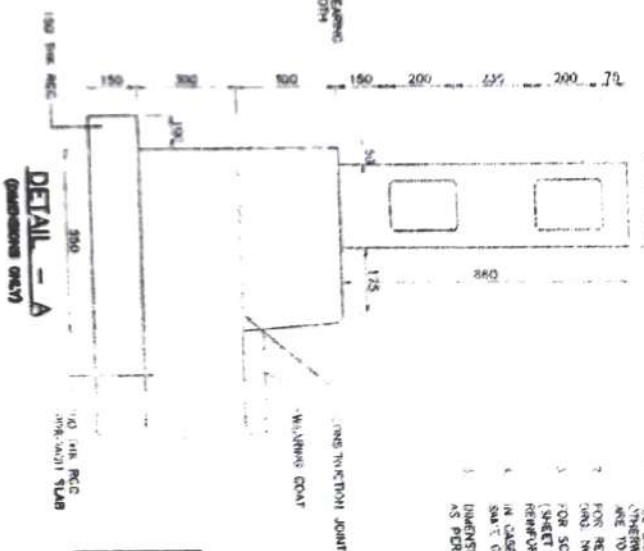
SECTION 2-2
(DIMENSIONS ONLY)



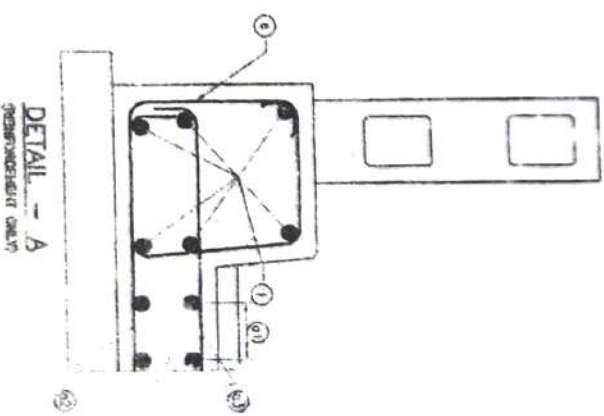
SECTION 2-2
(DIMENSIONS ONLY)



DETAIL - A
(DIMENSIONS ONLY)



DETAIL - A
(DIMENSIONS ONLY)



LEGEND:

- TOP FACE BARS/
OUTER FACE BARS
- BOTTOM FACE BARS/
INNER FACE BARS

BAR NO.	REINFORCEMENT
1	12 @ 150 c/c
2	12 @ 150 c/c
3	12 @ 150 c/c
4	12 @ 150 c/c
5	12 @ 150 c/c
6	12 @ 150 c/c
7	12 @ 150 c/c
8	12 @ 150 c/c
9	12 @ 150 c/c
10	12 @ 150 c/c
11	12 @ 150 c/c
12	12 @ 150 c/c

- NOTES:
1. DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS ARE TO BE FOLLOWED.
 3. FOR REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 4. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 5. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 6. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 7. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 8. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 9. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 10. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 11. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.
 12. FOR SCHEDULE OF REINFORCEMENT, REFER TO SCHEDULE OF REINFORCEMENT.

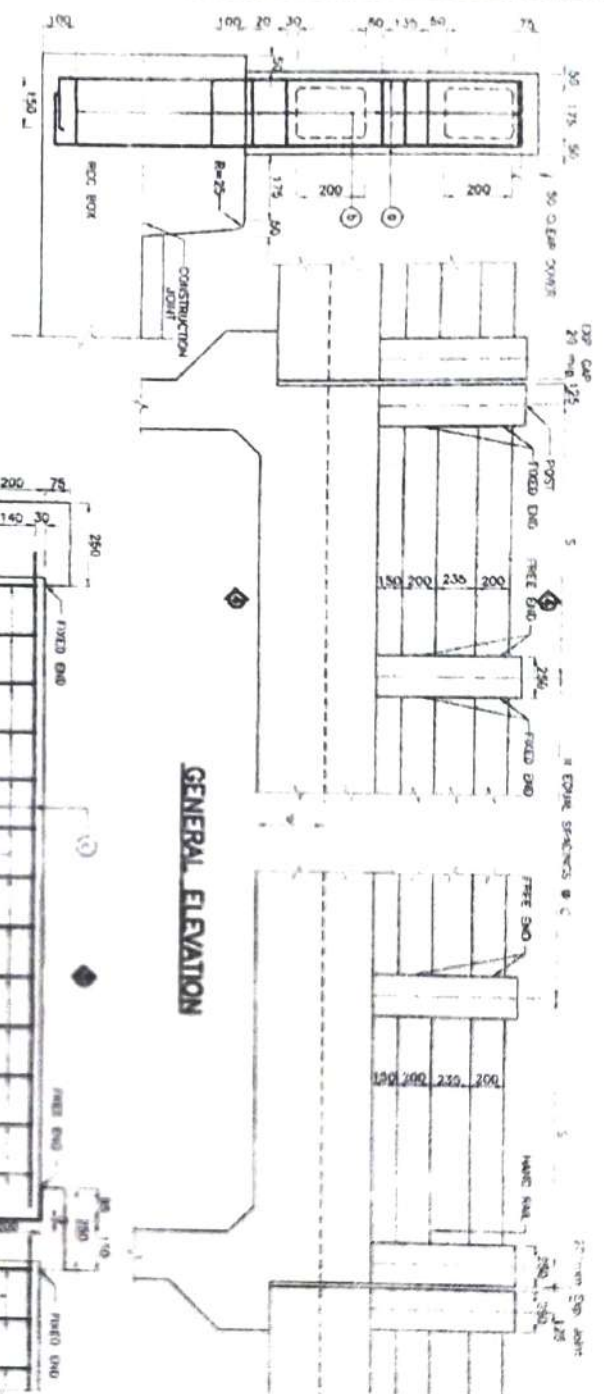
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.

STANDARD DRAWINGS FOR BOX CUL STRUCTURES

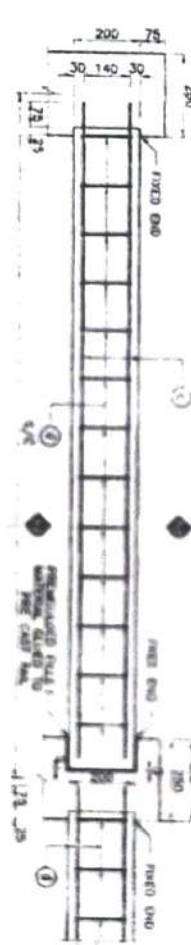
MISCELLANEOUS DETAILS
APPROACH SLAB
(WITHOUT EARTH CURBING)

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: [Date]
SCALE: [Scale]

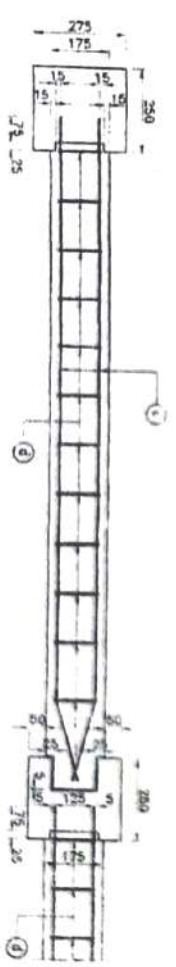
Hand
XEN



SECTION 4-4
(PRECAST ONLY)

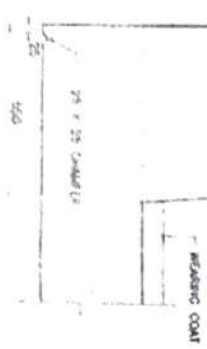


SECTION ELEVATION

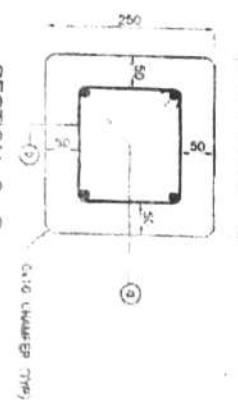


PLAN

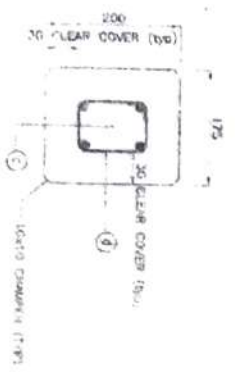
DETAIL OF PRECAST HANDRAIL



SECTION 4-4
(PRECAST ONLY)



SECTION 6-6



SECTION 5-5

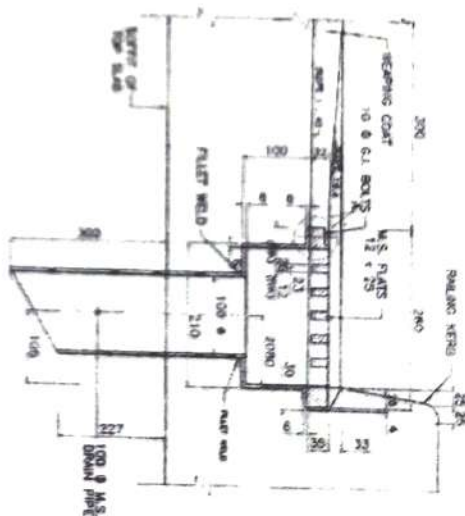
- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
 2. REINFORCEMENT OF RAILING POST SHOULD BE SUITABLE ANCHORED IN TOP SLOES OF BOX COVER.
 3. CASTING OF POST SHALL BE DONE IN SINGLE POUR AFTER ACCURATELY POSITIONING THE PRECAST HANDRAIL.
 4. FOR DETAILS & NUMBER OF POST & SPACING REFER DRAWING SO-115 (SHEET 4 OF 4).
 5. FOR DETAILS & REINFORCEMENT, REFER DRAWING SO-115 (SHEET 4 OF 4).

DATE	REVISION	BY	CHKD
15/03/15	1	...	...
15/03/15	2	...	...
15/03/15	3	...	...

GOVERNMENT OF INDIA			
MINISTRY OF SURFACE TRANSPORT			
(ROADS WING), NEW DELHI.			
STANDARD DRAWINGS FOR BOX CELL STRUCTURES			
MISCELLANEOUS DETAILS			
RCC RAILING			
(WITHIN EARTH CUSHION)			
DESIGNED BY	CHKD BY	APPROVED FOR	DATE
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

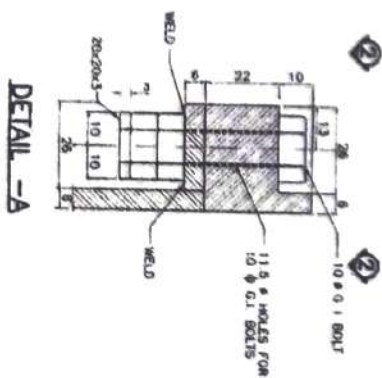
52

SECTION 1-1



Doc. No. SD/115

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. DIMENSIONS IN PARENTHESES ARE FOR FIELD CUTS.
2. THE REINFORCEMENT OF TOP SLAB OF BOX SPALL BE SPACED ACCORDING TO THE REQUIREMENT OF IS 456-2000.
3. THE DRAINAGE SPOT SHALL BE LAID DOWN AFTER LAYING THE PLATES & CURS.
4. FOR DRAINAGE SPOT LOCATION REFER DETAIL-B FOR CORRESPONDENCE OF A DRAINAGE.



DETAIL -A

Page 116

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TABLE: BAR BENDING SCHEDULE FOR RAILINGS AND POSTS

BOX - CELL DESIGNATION	RAILINGS POST	BAR BENDING SCHEDULE FOR RAILINGS				BAR BENDING SCHEDULE FOR POSTS			
		BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.
M/60/EC	TOTAL TOP WIDTH	S	C	N	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.	BAR NO. - 12 @ 4 NOS.
1/22/0	2000	1175	0	0	1800.00	24	30.25	33.86	67.33
1/23/0	2000	1275	0	0	1812.50	24	30.75	34.36	67.33
1/24/0	2000	1300	0	0	1825.00	24	31.25	34.86	67.33
1/25/0	2000	1325	0	0	1837.50	24	31.75	35.36	67.33
1/26/0	2000	1350	0	0	1850.00	24	32.25	35.86	67.33
1/27/0	2000	1375	0	0	1862.50	24	32.75	36.36	67.33
1/28/0	2000	1400	0	0	1875.00	24	33.25	36.86	67.33
1/29/0	2000	1425	0	0	1887.50	24	33.75	37.36	67.33
1/30/0	2000	1450	0	0	1900.00	24	34.25	37.86	67.33
1/31/0	2000	1475	0	0	1912.50	24	34.75	38.36	67.33
1/32/0	2000	1500	0	0	1925.00	24	35.25	38.86	67.33
1/33/0	2000	1525	0	0	1937.50	24	35.75	39.36	67.33
1/34/0	2000	1550	0	0	1950.00	24	36.25	39.86	67.33
1/35/0	2000	1575	0	0	1962.50	24	36.75	40.36	67.33
1/36/0	2000	1600	0	0	1975.00	24	37.25	40.86	67.33
1/37/0	2000	1625	0	0	1987.50	24	37.75	41.36	67.33
1/38/0	2000	1650	0	0	2000.00	24	38.25	41.86	67.33
1/39/0	2000	1675	0	0	2012.50	24	38.75	42.36	67.33
1/40/0	2000	1700	0	0	2025.00	24	39.25	42.86	67.33
1/41/0	2000	1725	0	0	2037.50	24	39.75	43.36	67.33
1/42/0	2000	1750	0	0	2050.00	24	40.25	43.86	67.33
1/43/0	2000	1775	0	0	2062.50	24	40.75	44.36	67.33
1/44/0	2000	1800	0	0	2075.00	24	41.25	44.86	67.33
1/45/0	2000	1825	0	0	2087.50	24	41.75	45.36	67.33
1/46/0	2000	1850	0	0	2100.00	24	42.25	45.86	67.33
1/47/0	2000	1875	0	0	2112.50	24	42.75	46.36	67.33
1/48/0	2000	1900	0	0	2125.00	24	43.25	46.86	67.33
1/49/0	2000	1925	0	0	2137.50	24	43.75	47.36	67.33
1/50/0	2000	1950	0	0	2150.00	24	44.25	47.86	67.33
1/51/0	2000	1975	0	0	2162.50	24	44.75	48.36	67.33
1/52/0	2000	2000	0	0	2175.00	24	45.25	48.86	67.33
1/53/0	2000	2025	0	0	2187.50	24	45.75	49.36	67.33
1/54/0	2000	2050	0	0	2200.00	24	46.25	49.86	67.33
1/55/0	2000	2075	0	0	2212.50	24	46.75	50.36	67.33
1/56/0	2000	2100	0	0	2225.00	24	47.25	50.86	67.33
1/57/0	2000	2125	0	0	2237.50	24	47.75	51.36	67.33
1/58/0	2000	2150	0	0	2250.00	24	48.25	51.86	67.33
1/59/0	2000	2175	0	0	2262.50	24	48.75	52.36	67.33
1/60/0	2000	2200	0	0	2275.00	24	49.25	52.86	67.33
1/61/0	2000	2225	0	0	2287.50	24	49.75	53.36	67.33
1/62/0	2000	2250	0	0	2300.00	24	50.25	53.86	67.33
1/63/0	2000	2275	0	0	2312.50	24	50.75	54.36	67.33
1/64/0	2000	2300	0	0	2325.00	24	51.25	54.86	67.33
1/65/0	2000	2325	0	0	2337.50	24	51.75	55.36	67.33
1/66/0	2000	2350	0	0	2350.00	24	52.25	55.86	67.33
1/67/0	2000	2375	0	0	2362.50	24	52.75	56.36	67.33
1/68/0	2000	2400	0	0	2375.00	24	53.25	56.86	67.33
1/69/0	2000	2425	0	0	2387.50	24	53.75	57.36	67.33
1/70/0	2000	2450	0	0	2400.00	24	54.25	57.86	67.33
1/71/0	2000	2475	0	0	2412.50	24	54.75	58.36	67.33
1/72/0	2000	2500	0	0	2425.00	24	55.25	58.86	67.33
1/73/0	2000	2525	0	0	2437.50	24	55.75	59.36	67.33
1/74/0	2000	2550	0	0	2450.00	24	56.25	59.86	67.33
1/75/0	2000	2575	0	0	2462.50	24	56.75	60.36	67.33
1/76/0	2000	2600	0	0	2475.00	24	57.25	60.86	67.33
1/77/0	2000	2625	0	0	2487.50	24	57.75	61.36	67.33
1/78/0	2000	2650	0	0	2500.00	24	58.25	61.86	67.33
1/79/0	2000	2675	0	0	2512.50	24	58.75	62.36	67.33
1/80/0	2000	2700	0	0	2525.00	24	59.25	62.86	67.33
1/81/0	2000	2725	0	0	2537.50	24	59.75	63.36	67.33
1/82/0	2000	2750	0	0	2550.00	24	60.25	63.86	67.33
1/83/0	2000	2775	0	0	2562.50	24	60.75	64.36	67.33
1/84/0	2000	2800	0	0	2575.00	24	61.25	64.86	67.33
1/85/0	2000	2825	0	0	2587.50	24	61.75	65.36	67.33
1/86/0	2000	2850	0	0	2600.00	24	62.25	65.86	67.33
1/87/0	2000	2875	0	0	2612.50	24	62.75	66.36	67.33
1/88/0	2000	2900	0	0	2625.00	24	63.25	66.86	67.33
1/89/0	2000	2925	0	0	2637.50	24	63.75	67.36	67.33
1/90/0	2000	2950	0	0	2650.00	24	64.25	67.86	67.33
1/91/0	2000	2975	0	0	2662.50	24	64.75	68.36	67.33
1/92/0	2000	3000	0	0	2675.00	24	65.25	68.86	67.33
1/93/0	2000	3025	0	0	2687.50	24	65.75	69.36	67.33
1/94/0	2000	3050	0	0	2700.00	24	66.25	69.86	67.33
1/95/0	2000	3075	0	0	2712.50	24	66.75	70.36	67.33
1/96/0	2000	3100	0	0	2725.00	24	67.25	70.86	67.33
1/97/0	2000	3125	0	0	2737.50	24	67.75	71.36	67.33
1/98/0	2000	3150	0	0	2750.00	24	68.25	71.86	67.33
1/99/0	2000	3175	0	0	2762.50	24	68.75	72.36	67.33
1/100/0	2000	3200	0	0	2775.00	24	69.25	72.86	67.33
1/101/0	2000	3225	0	0	2787.50	24	69.75	73.36	67.33
1/102/0	2000	3250	0	0	2800.00	24	70.25	73.86	67.33
1/103/0	2000	3275	0	0	2812.50	24	70.75	74.36	67.33
1/104/0	2000	3300	0	0	2825.00	24	71.25	74.86	67.33
1/105/0	2000	3325	0	0	2837.50	24	71.75	75.36	67.33
1/106/0	2000	3350	0	0	2850.00	24	72.25	75.86	67.33
1/107/0	2000	3375	0	0	2862.50	24	72.75	76.36	67.33
1/108/0	2000	3400	0	0	2875.00	24	73.25	76.86	67.33
1/109/0	2000	3425	0	0	2887.50	24	73.75	77.36	67.33
1/110/0	2000	3450	0	0	2900.00	24	74.25	77.86	67.33
1/111/0	2000	3475	0	0	2912.50	24	74.75	78.36	67.33
1/112/0	2000	3500	0	0	2925.00	24	75.25	78.86	67.33
1/113/0	2000	3525	0	0	2937.50	24	75.75	79.36	67.33
1/114/0	2000	3550	0	0	2950.00	24	76.25	79.86	67.33
1/115/0	2000	3575	0	0	2962.50	24	76.75	80.36	67.33
1/116/0	2000	3600	0	0	2975.00	24	77.25	80.86	67.33
1/117/0	2000	3625	0	0	2987.50	24	77.75	81.36	67.33
1/118/0	2000	3650	0	0	3000.00	24	78.25	81.86	67.33
1/119/0	2000	3675	0	0	3012.50	24	78.75	82.36	67.33
1/120/0	2000	3700	0	0	3025.00	24	79.25	82.86	67.33
1/121/0	2000	3725	0	0	3037.50	24	79.75	83.36	67.33
1/122/0	2000	3750	0	0	3050.00	24	80.25	83.86	67.33
1/123/0	2000	3775	0	0	3062.50	24	80.75	84.36	67.33
1/124/0	2000	3800	0	0	3075.00	24	81.25	84.86	67.33
1/125/0	2000	3825	0	0	3087.50	24	81.75	85.36	67.33
1/126/0	2000	3850	0	0	3100.00	24	82.25	85.86	67.33
1/127/0	2000	3875	0	0	3112.50	24	82.75	86.36	67.33
1/128/0	2000	3900	0	0	3125.00	24	83.25	86.86	67.33
1/129/0	2000	3925	0	0	3137.50	24	83.75	87.36	67.33
1/130/0	2000	3950	0	0	3150.00	24	84.25	87.86	67.33
1/131/0	2000	3975	0	0	3162.50	24	84.75	88.36	67.33
1/132/0	2000	4000	0	0	3175.00	24	85.25	88.86	67.33
1/133/0	2000	4025	0	0	3187.50	24	85.75	89.36	67.33
1/134/0	2000	4050	0	0	3200.00	24	86.25	89.86	67.33
1/135/0	2000	4075	0	0	3212.50	24	86.75	90.36	67.33
1/136/0	2000	4100	0	0	3225.00	24	87.25	90.86	67.33
1/137/0	2000	4125	0	0	3237.50	24	87.75	91.36	67.33
1/138/0	2000	4150	0	0	3250.00	24	88.25	91.86	67.33
1/139/0	2000	4175	0	0	3262.50	24	88.75	92.36	67.33
1/140/0	2000	4200	0	0	3275.00	24	89.25	92.86	67.33
1/141/0	2000	4225	0	0	3287.50	24	89.75	93.36	67.33
1/142/0	2000	4250	0	0	3300.00	24	90.25	93.86	67.33
1/143/0	2000	4275	0	0	3312.50	24	90.75	94.36	67.33
1/144/0	2000	4300	0	0	3325.00	24	91.25	94.86	67.33



**STANDARD BIDDING DOCUMENT
PROCUREMENT OF
CIVIL WORKS**

PART-2: FORMS

**GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
DEPARTMENT OF
ROAD TRANSPORT & HIGHWAY**

Certified that this DNIT contains Pages

1 to 55



**GOVERNMENT OF PUNJAB
PUBLIC WORKS DEPARTMENT**

AGREEMENT NO. _____
NATIONAL COMPETITIVE BIDDING
(CIVIL WORKS)

LIST OF IMPORTANT DATES

Website: <http://eprocure.gov.in/eprocure/app>

- 1 Name of work : DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)
- 2 Mode of Submission of Tender : To be submitted on-line at <http://eprocure.gov.in/eprocure/app>
- 3 Period & Time for download of Bidding Documents from E-procurement portal : From Date 26/06/2026 at 1:15 PM
To Date 27/07/2026 at 11:30 AM
- 4 Time & date of pre bid conference : Dated 09/07/2026 at 11:00 AM
- 5 Time & date of online submission of bid : From Date 26/06/2026 at 1:15 PM
To Date 27/07/2026 at 11:30 AM
- 6 Time & date of opening of online technical bids : Date 29/07/2026 at 11:00 AM
- 7 Time & date of opening of online financial bids : To be announced later on.
- 8 Place of opening of online Bids : O/o Executive Engineer,
National Highway Division, Pb.
PWD B&R Br., Jalandhar.
- 9 Last date of bids validity : Date 25/10/2026
- 10 Office Inviting Bids : O/o Executive Engineer,
National Highway Division,
Pb. PWD B&R Br., Jalandhar.


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INVITATION FOR BID
(IFB)



**GOVERNMENT OF PUNJAB
PUBLIC WORKS DEPARTMENT
NATIONAL HIGHWAYS PROJECTS
INVITATION FOR BIDS (IFB)
NATIONAL COMPETITIVE BIDDING**

Date : 26/06/2026
Bid No : 02

The Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar invites Bids for construction of works detailed in the Table below.

TABLE

Package No	Name of work	Approximate value of work (Rs)	Bid Security (Rs)	Cost of document (Rs)	Period of completion
1	2	3	4	5	6
1	DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)	Rs.339.20 Lakhs (Excluding GST)	Rs.6.784 Lacs 2%	Rs.20,000/-	6 Months

1. Period of availability of Tender on-line/Date & Time of on-line bid submission and Date & time of opening of Bids are as given below:

Availability of Tender on-line for bidding		Last Date & Time for on-line Submission of Bids	Date & Time of Opening of tender	
From	To		Technical Bid	Financial Bid
26/06/2026	27/07/2026	27/07/2026 at 11:30AM	29/07/2026 at 11:00AM	Date & Time to be announced later on.

- i) For detailed terms and conditions of the notice inviting bids refer to our web site <http://eprocure.gov.in/eprocure/app>
- ii) The eligible bidders who do not possess DSC (Digital Signature Certificate) may get the same issued from approved agencies.

Signature of Authorized Officer



**GOVERNMENT OF PUNJAB
PUBLIC WORKS DEPARTMENT
NATIONAL HIGHWAYS PROJECTS
INVITATION FOR BIDS (IFB)
NATIONAL COMPETITIVE BIDDING**

Date : 26/06/2026
Bid No : 02

The Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar invites Bids for construction of works detailed in the Table below.

TABLE

Packa ge No	Name of work	Approximate value of work (Rs)	Bid Security (Rs)	Cost of documen t (Rs)	Period of completi on
1	2	3	4	5	6
1	DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)	Rs.339.20 Lakhs (Excluding GST)	Rs.6.784 Lacs 2 %	Rs.20,000/-	6 Months

2. Period of availability of Tender on-line/Date & Time of on-line bid submission and Date & time of opening of Bids are as given below:

Availability of Tender on-line for bidding		Last Date & Time for on-line Submission of Bids	Date & Time of Opening of tender	
From	To		Technical Bid	Financial Bid
26/06/2026	27/07/2026	27/07/2026 at 11:30 AM	29/07/2026 at 11:00 AM	Date & Time to be announced later on.

3. Bidding documents can be downloaded from the web site: <http://eprocure.gov.in/eprocure/app>. The document downloaded from the website should not be tempered, and if any such tempering is detected before or after the opening of bids, the bidder shall be penalized and blacklisted. The bidder shall submit tender fee through online "Bharatkosh portal" amounting to Rs.20,000/-cost of the bidding documents (non-refundable) in favour of Regional Pay & Accounts Officer, MORT&H payable at Chandigarh. The bidder shall upload scanned copy of transactions indicating deposit of tender fees in the Bharatkosh portal.


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4. The bidders should have the necessary portal enrolment with his/her own Digital Signature Certificate (DSC)
5. The bidders should keep checking the website for any addenda/corrigenda to the notice/bidding documents till the date of on-line submission of bids, and the bidder should incorporate the same in his bid documents.
6. Bids must be accompanied by bid security/EMD of the amount specified for the Project/Work/Works in the table above bid security/EMD can be deposited through RTGS in the A/c No.50100702306636 (IFSC Code HDFC0000340) of HDFC Bank, 245R, Rainbow road, Jalandhar of Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar. **The bidder shall upload scanned copy of transactions indicating deposit of tender fees in the bank account EMD can also be furnished as specified in the bidding documents and shall have to be valid for 45 days beyond the validity of the bid.**
7. The deposit in the bank account should be made before the opening of technical bid or the original earnest money deposit in the form as specified in the bidding documents should be deposited with the concerned Executive Engineer before the opening of the technical bid as given in the table above. The scanned copies of the same should be attached in Technical Bid as prescribed in the Standard Bidding Document (SBD), failing which the bidder will be disqualified.
8. Bids must be submitted online through an e-portal before the time specified in the table above (as per server clock). The department does not take any responsibility for the delay caused due to non-availability of internet connection or network traffic jam etc. for online bids.
9. Bid documents consisting of qualification information and eligibility criterion of bidders, plans, specifications, drawings, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor can be seen on website <http://eprocure.gov.in/eprocure/app> and scanned copies of the required documents and information as per section-2 (formats & annexure) should be attached in the technical bid as prescribed in the SBD.
10. Uploaded documents of valid successful bidders will be verified with the original before signing the agreement. The valid successful bidder has to provide the originals to the concerned authority on receipt of such letter, which will be sent through registered post / EMAIL.
11. Standard Bidding Documents (SBD) is not to be uploaded by the bidder. The bidder has to only agree / disagree on the conditions in the SBD. The bidders who disagree on the conditions of SBD, can not participate in the tender.
12. Technical bids will be opened on-line on the day & time as specified in the above table, in the presence of the bidders who wish to attend. If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received and opened on the next working day at the same time and venue.
13. Conditional bids and the bids not meeting the qualifying criteria on the date of receipt of bids shall be summarily rejected.
14. The Defect Liability Period (DLP) for the works is **Three Years** from the date of completion.
15. A Pre-bid meeting will be held on **09/07/2024** at **11:00 AM** at the office of Executive Engineer, **National Highway Division,, Pb. PWD B&R Br., jalandhar** to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in Clause 9.2 of "Instructions to Bidder" of bidding document.

Signature of Authorized Officer


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SECTION – 1
INSTRUCTIONS TO BIDDERS

(Please Refer Part – 1)

(ITB)

(to be filled in the employer)



APPENDIX to ITB

Clause Reference
With respect to Section-I

1. Name of the Employer : Chief Engineer (NH), Punjab PWD B&R Branch,
Mini Secretariat, Patiala.
2. The Last five years : 2020-21
2021-22
2022-23
2023-24
2024-25
- 3 This annual financial turn over amount is Rs.135.68 Lacs [Cl. 4.5.3 (a)]
(Rs. One Crore Thirty Five lakhs Sixty Eight Thousand only)
- 4 Value of work is Rs.135.68 Lacs [Cl. 4.5.3(b)]
((Rs. One Crore Thirty Five lakhs Sixty Eight Thousand only)
5. Quantities of work are: (Cl.4.5.A(e))
~~Equal to the BOQ quantities for the contract applied for.~~
6. Liquid assets and/or availability of credit facilities is Rs.33.92 lacs [Cl.4.5.6]
(Rs.Thirty Three lakhs Ninety Two Thousand only)
7. Price Level of the financial year 2024-2025 [Cl.4.5.2]
8. The pre-bid meeting will take place at O/o Executive Engineer,
National Highway Division, Pb. PWD B&R Br., Jalandhar.
(address and venue) on ~~09/07/2026~~ at ~~11:00 AM~~ (Time and
date) [Cl.9.2.1]
9. The Technical Bid will be opened at O/o Executive Engineer,
National Highway Division, Pb. PWD B&R Br., Jalandhar. (Address
and venue) on ~~29/07/2026~~ at ~~11:00 AM~~ (Time and date)
[Cl.9.2.1]
10. Address of the Employer: Chief Engineer (NH)
Punjab PWD (B&R) Branch,
Mini Secretariat, 'C' Block, Patiala


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5. Identification: Bid for DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)
Bid reference No.

Do not open before. _____ at 11.00 AM (time and date)

6. The Bid should be submitted online through e-portal, <http://eprocure.gov.in/eprocure/app> Latest by _____ upto _____
(date and time as per server clock)

[Cl.20.1(a)]

- 13 The Bid will be opened at O/o Executive Engineer, National Highway Division, Pb. PWD B&R Br., Jalandhar
[Cl.23.1]
(Place) Jalandhar on _____ at 11.00 AM (time and date)

14. The Bank draft in favour of Executive Engineer National Highway Division, Pb. PWD B&R Br., Jalandhar payable at Pb. PWD B&R Br., Jalandhar.

[Cl.34.1]

15. The Name of Dispute Review Expert is to be finalized later on

[Cl.36.1]



SECTION – 2

QUALIFICATION INFORMATION

(To be filled by the bidder)


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QUALIFICATION INFORMATION

The Qualification documents as detailed in the following pages should be submitted online scanned copies, will be used for purposes of post qualification as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

1. For individual bidders

Constitution or legal status of bidder

(Attach copy)

Place of registration: _____

Principal place of business _____

Power of attorney of signatory of bid

(Attach)

2020-21

1.2 Total value of Civil Engineering construction

2021-22

2022-23

work performed in the last five years**

2023-24

(in Rs. Million)

2024-25

1.3.1. Work performed as prime contractor, work performed in the past as a nominated subcontractor will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name) on works of a similar nature over the last five years. **

Project Name	Name of the Employer*	Description of work	Contract No.	Value of Contract (Rs crore)	Date of issue of work order	Stipulated period of completion	Actual date of completion*	Remarks explaining reasons for delay & work Completed

*Attach certificate(s) from the Engineers)-in-Charge

** immediately preceding the financial year in which bids are received.

B Attach certificate from Chartered Accountant.

~~#1.3.2. Quantities of work executed as prime contractor, work performed in the past as a nominated sub-contractor will also be considered provided the sub-contract involved execution~~


XEN

of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name and style) in the last five years: **

Year	Name of the work	Name of the Employer*	Quantity of work performed (cum) @						Remarks (indicate contract Ref)
			Cement Concret e (including RCC & PCC)	Masonry	Earth Works	WBM	WMM	Bituminous Work	
20__20__									
20__20__									
20__20__									
20__20__									
20__20__									

1.4. **Information on Bid Capacity** (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works:

Description of works	Place & State	Contract No.	Name & Address of Employer	Value of Contract (Rs Cr)	Stipulated Period of Completion	Value of works* remaining to be completed (Rs Cr)	Anticipated date of completion
1	2	3	4	5	6	7	8

*Attach certificate(s) from the Engineer(s)-in-Charge

@The item of work for which data is requested should tally with that specified in JTB clause 4.5A(c).

** immediately preceding the financial year in which bids are received.

Delete, if prequalification has been carried out

(B) Works for which bids already submitted:

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Description of works	Place & State	Name & Address of Employer *	Estimated value of works (RsCr)	Stipulated period of completion	Date when decision is expected	Remarks, if any
1	2	3	4	5	6	7

1.5. Availability of key items of Contractor's Equipment essential for carrying out the Works [Ref. Clause 4.5.5].

The Bidder should list all the information requested below. Refer also to Sub Clause 4.3 (d) of the Instructions to Bidders.

[illegible]


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1.6. Qualifications and experience of key personnel required for administration and execution of the Contract [Ref. Clause 4.5.4)]. Attach biographical data. Refer also to Sub Clause 4.3 (e) of instructions to Bidders and Sub Clause 9.1 of the Conditions of Contract.

Position	Name	Qualification	Year of Experience (General)	Years of experience in the proposed position
Project Manager				
Etc.				

1.7. Proposed sub-contracts and firms involved. [Refer ITB Clause 4.3 (k)]

Sanctions of the works	Value of Sub-contract	Sub-contractor (Name & Address)	Experience in similar work

~~Attach copies of certificates on possession of valid license for executing water supply work /sanitary work / building electrification works [Reference Clause 4.5(d) & Clause 4.5 (e)]~~



***1.8. Financial reports for the last five years:** balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

1.9. Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents.

1.10. Name, address, and telephone, telex, and fax numbers e-mail of the Bidders' bankers who may provide references if contacted by the Employer.

1.11. Information on litigation history in which the Bidder is involved.

Other Party (ies)	Employer	Cause of Dispute	Amount involved	Remarks showing Present Status

1.12. Statement of compliance under the requirements of Sub Clause 3.2 of the instructions to Bidders. (Name of Consultant engaged for project preparation is**)

1.13. Proposed work method and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. [Refer ITB Clause 4.1 & 4.3(1)]

1.14. Programme

1.15. Quality Assurance Programme

2. Deleted

3. Additional Requirements

3.1 Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

(i) Affidavit

(ii) Undertaking

~~*** (iii) Update of original prequalification application~~

~~*** (iv) Copy of original prequalification application~~

~~*** (v) Copy of prequalification letter~~

* Delete, if prequalification has been carried out.

** Fill the Name of Consultant.

*** Delete, if prequalification has not been carried out.



SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY
OF CREDIT FACILITIES
(CLAUSE 4.2 (i) OF ITB)

BANK CERTIFICATE

This is to certify that M/s. _____ is a reputed company
with a good financial standing.

If the contract for the work, namely _____ is awarded to the
above firm, we shall be able to provide overdraft/credit facilities to the extent of
Rs. _____ to meet their working capital requirements for executing the above
contract during the contract period.

(Signature)
Name of Bank
Senior Bank Manager
Address of the Bank


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AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s_____ have abandoned any work on National Highways in India nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorise(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understand and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/ Project implementing agency.

(Signed by an Authorised Officer of the Firm)

Title of Officer

Name of Firm

DATE



UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____
_____ would invest minimum cash up to 25% of the value of the work during
implementation of the Contract.

(Signed by an Authorised Officer of the Firm)

Title of Officer

Name of Firm

DATE



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SECTION – 3

CONDITIONS OF CONTRACT

(PLEASE refer part- 1)

(to be supplied by the Employer)



SECTION – 4

CONTRACT DATA

(to be filled in by the Employer)



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SECTION – 4

CONTRACT DATA

Clause reference
With respect to
Section 3

Items marked "N/A" do not apply in this Contract.

1. The Employer is (Cl.1.1.)

Name: Chief Engineer (NH),

Address: Punjab PWD B&R Br. Mini Secretariat, Patiala

2. The Engineer is

Name: Executive Engineer, National Highway Division, Pb. PWD B&R Br.,
Jalandhar.

The Dispute Review Expert/Board appointed jointly by the Employer

and Contractor is : (Cl.1.1.)

Name: ----- TO BE FINALISED LATER ON-----

Address:

4. The Defect Liability Period is **3** years from the date of completion. (Cl.1.1.&35)

5. The Start Date shall be from the date of issue of the notice to proceed with the work
(Cl.1.1.)

6. The Intended Completion date for the whole of the work is Six **months** after start of
work with the following milestones.

(Cl.1.1.,17&28)

Milestones dates

(Cl.2.2 &49.1)

Physical works to be completed

Period from the start date

Milestone 1. i.e. 30% work completion

2.i.e. 45% -do-

3.i.e. 100% -do-

7. The site is located at Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to
60.860 of Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in
the State of Punjab.

(Cl.1.1)


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8. The name and identification number of the Contract is of DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)
(Cl.1.1)
9. The works consists of : DNIT for Permanent Restoration of damaged portion of stretch from Km.23.00 to 24.00 and Km.44.00 to 45.00 and Km.56.00 to 60.860 and construction of additional culverts in Jalandhar-kapurthala-Sultanpur Lodhi Makhu road section of NH-703A in the State of Punjab. (Job No.NH-703A-PB-2025-26-584)
10. The scope of work envisages reconstruction of 3 existing damaged culverts, providing additional 6 new culverts, construction of aprons, curtain wall and toe walls for MNB at Km 56.250 & 59.650 km 23.00 to 24.00, km 44.00 to 45.00 & km 56.00 to 60.860 of Jalandhar - Kapurthala -Sultanpur Lodhi Makhu road section of NH-703A due to extreme floods in 2025 the State of Punjab. The details are as under:

The works shall, inter alia, include the following as specified or as directed:

Sr No.	Description	Quantity/Location	Width of Structure
1.	Re-construction of existing Box Culvert 6m Span and Vent Height of 3.0m at Km 57.637, Km 58.749 and Km 59.208 along with wing walls	3.0 Nos.	14.0 meters
2.	Additional 6m span Box Culverts with vent height of 3.0 m between Km 56.00 and 60.860 along with wing walls	3.0 Nos.	14.0 meters
3.	Additional 5m span Box Culverts with vent height of 3.0 m at Km 23-24 along with wing walls	2.0 Nos.	12.0 meters
4.	Additional 5m span Box Culverts with vent height of 3.0 m at Km 44-45 along with wing walls	1.0 Nos	12.0 meters
5.	Construction of aprons, curtain walls and toe wall for MNB at Km 56.250 and 59.650	At 2.0 Nos. MNB	-

Road Works

Site clearance; construction of embankment with soil in vicinity of 2 Minor Bridges at Km 56.250 and 59.650, BC on culverts (both reconstruction and new additional) ~~setting-out and layout; widening of existing carriageway and strengthening including camber corrections; constructions of new road/ parallel service road; bituminous pavements remodeling/construction of junctions, intersections, bus bays, laybys; supplying and placing of drainage channels, flumes, guard posts and guard other related items; construction/extension of cross drainage works, bridges, approaches and other related stones; road markings, road signs and kilometer/hectometer stones; protective works for roads/bridges;~~ all aspects of quality assurance of various components of the works; rectification of the defects in the completed works during the Defects Liability Period;


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submission of "As-built" drawings and any other related documents; and other item of work as may be required to be carried out for completing the works in accordance with the drawings and provisions of the contract to ensure safety.

Culvert/Bridge Works

- ✓ Site clearance; dismantling of existing RCC structures, setting out, provision of foundations, walls; prestressed/reinforced cement concrete superstructure; wearing coat, parapets, approach slabs, drainage spouts/down take pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; backfilling behind abutment, flooring, providing wing/return walls; painting on concrete surface, curtain walls, aprons, pitching of stone in slopes etc.; all aspects of quality assurance; clearing the site and handing over the works on completion; rectification of the defects during the Defects Liability Period and submission of "As- built" drawings and other related documents; and other items of work as may be required to be carried out for completing the works in accordance with the drawings and the provisions of the contract and to Insure safety.

(A)

(B) Other Items.

Any other items as required to fulfill all contractual obligations as per the Bid documents.

- | | | |
|-----|--|-------------|
| 10. | The following documents also form part of the Contract: | (Cl.2.3(9)) |
| 11. | The law which applies to the Contract is the law of Union of India | (Cl. 3.1) |
| 12. | The language of the Contract documents is English | (Cl.3.1) |
| 13. | Limit of Sub-contracting – 50% of the Initial Contract Price | (Cl. 7.1) |
| 14. | The Schedule of Other Contractors | (Cl. 8) |
| 15. | The Schedule of personnel – As per Annex. I to Section I | (Cl. 9) |

16. The minimum insurance cover for physical property, injury and death is Rs. 5 lakhs per occurrence with the number of occurrences limited to four. After each occurrence, contractor will pay additional premium necessary to make insurance valid for four occurrences always.

(C. 13)

17. Site investigation report (Cl. 14)
18. The Site Possession Dates shall be Date of issue of letter of acceptance. (Cl. 21)
19. Fees and types of reimbursable expenses to be paid to the Dispute Review Expert (To be inserted later) (Cl. 25)
20. Appointing Authority for the Dispute Review Expert – Council, Indian Roads Congress, New Delhi. (Cl. 26)
21. The Period for submission of the programme for approval of Engineer shall be 21 days from the issue of Letter of Acceptance. (Cl. 27.1)
22. The period between programme updates shall be days. (Cl. 27.3)
23. The amount to be withheld for late submission of an updated programme shall be Rs. 2.00 lakhs. (Cl. 27.3)
24. The following events shall also be Compensation Events: (Cl. 44)
- Substantially adverse ground conditions encountered during the course of execution of work not provided for in the bidding document.
- (i) Removal of underground utilities detected subsequently
 - (ii) Significant change in classification of soil requiring additional mobilization by the contractor, e.g. ordinary soil to rock excavation,
 - (iii) Removal of unsuitable material like marsh, debris dumps, etc not caused by the contractor
 - (iv) Artesian conditions
 - (v) Seepage, erosion, landslide
 - (vi) River training requiring protection of permanent work
 - (vii) Presence of historical, archeological or religious structures,
 - (viii) monuments interfering with the works
 - (ix) Restriction of access to ground imposed by civil, judicial, or military authority
25. The currency of the Contract is Indian Rupees. (Cl. 46)

26. The formula (e) for adjustment of prices are: (Cl. 47)
- $R = \text{Value of work as defined in Clause 47.1 of Conditions of Contract}$

Adjustment for labour component

- (i) Price adjustment for increase or decrease in the cost of labour shall be paid in accordance with the following formula:

$$VL = 0.85 \times PI / 100 \times R \times (Li - Lo) / Lo$$

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

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


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Li = the consumer price index for industrial workers for the State for the under consideration as published by Labour Bureau, Ministry of Labour, Government of India.
Pl = Percentage of labour component of the work.

Adjustment for Grey cement component

- (ii) Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:

$$V_c = 0.85 \times P_c / 100 \times R \times (C_i - C_o) / C_o$$

Vc = increase or decrease in the cost of work during the month under consideration due to changes in rates for cement.

C_o = The all India wholesale price index for grey cement on 28 days preceding the date of opening of Bids as published by O/o Economic Advisor, Ministry of Commerce and Industry

C_i = The all India average wholesale price index for cement for the month under consideration as published by O/o Economic Advisor, Ministry of Commerce and Industry

P_c = Percentage of cement component of the work.

Adjustment for steel component

- (iii) Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s / 100 \times R \times (S_i - S_o) / S_o$$

V_s = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel

S_o = The all India wholesale price index for steel (Rebars) on 28 days preceding the date of opening of Bids as published by the O/o Economic Advisor, Ministry of Commerce and Industry

S_i = The all India average wholesale price index for steel (Bars and Rods) for the month under consideration as published by Ministry of Industrial Development, New Delhi.

P_s = Percentage of steel component of the work.

Note : For the application of this clause, index of Rebars has been chosen to represent steel group.

Adjustment of bitumen component

- (iv) Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b / 100 \times R \times (B_i - B_o) / B_o$$

V_b = Increase or decrease in the cost of work during the month under consideration due to changes in rates for bitumen.

B_o = The official retail price of bitumen at the IOC depot at nearest center on the day 28 days prior to date of opening of Bids.

B_i = The official retail price of bitumen of IOC depot at nearest center for the 15th day of the month under consideration.

P_b = Percentage of bitumen component of the work.

Adjustment of POL (fuel and lubricant) component

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

$$V_f = 0.85 \times P_f / 100 \times R \times (F_i - F_o) / F_o$$

V_f = Increase or decrease in the cost of work during the month under consideration due to changes in rates for fuel and lubricants.

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

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

P_f = Percentage of fuel and lubricants component of the work.

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

Adjustment for Plant and Machinery Spares Component

- (vi) Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the Contractor shall be paid in accordance with the following formula:

$$V_p = 0.85 \times P_p / 100 \times R \times (P_i - P_o) / P_o \quad [C1.49]$$

V_p = Increase or decrease in the cost of work during the month under consideration due to changes in rates for plant and machinery spares.

P_o = The all India wholesale price index for construction machinery on 28 days preceding the date of opening of Bids as published by the O/o Economic Advisor, Ministry of Commerce and Industry

P_i = The all India average wholesale price index for heavy machinery for the month under consideration as published by the O/o Economic Advisor, Ministry of Commerce and Industry

P_p = Percentage of plant and machinery spares component of the work.

Note: For the application of this clause, index of Construction Machinery has been chosen to represent Plant and Machinery Spares group.

Adjustment of Other materials Component

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

$$V_m = 0.85 \times P_m / 100 \times R \times (M_i - M_o) / M_o \quad [C1.50]$$

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

M_o = The all India wholesale price index (all commodities) on 28 days preceding the date of opening of Bids as published by the O/o Economic Advisor, Ministry of Commerce and Industry

M_i = The all India average wholesale price index (all commodities) for the month under consideration as published by the O/o Economic Advisor, Ministry of Commerce and Industry

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

The following percentages will govern the price adjustment for the entire contract:

1. Labour — P_l	25%
2. Cement — P_c	5%
3. Steel — P_s	5%
4. Bitumen — P_b	10%
5. POL — P_f	5%
6. Plant & Machinery Spares — P_p	5%
7. Other Materials — P_m	15%

— Total 100%

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- ✓ 27. The proportion of payments retained (retention money) shall be 6% from each bill subject to a maximum of 5% of final contract price.

(Cl. 48)

28. Amount of liquidated damages for delay in completion of works

(Cl. 49)

For whole of work: (1/2000)th of the Initial Contract Price, rounded off to the nearest thousand per day.

For sectional completion (wherever specified in item 6 of Contract Date): (1/200)th of Initial Contract Price for 5 Km section, rounded off to the nearest thousand per day.

(Cl. 49)

29. Maximum limit of liquidated damages for delay in completion of works:

10 percent of the Initial Contract Price, rounded off to the nearest thousand per day.

30. 30.

Amount of bonus for early completion of whole of the works

1 percent of the Initial Contract Price (part of a month to be excluded), rounded off to the nearest thousand, per month

[Cl. 50]

31. 31.

Maximum limit of bonus for early completion of work

6 percent of the Contract Price rounded off to the nearest thousand

[Cl. 50]

32. Deleted (i) & (ii)

The amount of the Advance payment are:

[Cl. 51 & 52]

Nature of Advance

i. Mobilization 10% of the Contract price

Amount (Rs. Conditions to be fulfilled

On submission of unconditional Bank Guarantee (to be drawn before the end of 20% of Contract period). The contractor may furnish four bank guarantees of 2.5% each, valid for full period.

ii. Equipment 90% for new and 50% of depreciated value for equipment. Total amount will be subject to a maximum of 5% of the Contract price.

After equipment is brought to site (provided the Engineer is satisfied that the equipment is required for performance of the contract) and on submission of unconditional Bank Guarantee for amount of advance.

iii. Secured advance for non perishable 75% of Invoice value

- a) The materials are in accordance with the specification for Works.
b) Such materials have been delivered to site,

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materials
brought to site

and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks.;

- c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;
- d) The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;
- e) Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and
- f) The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.

(The advance payment will be paid to the Contractor no later than 28 days after fulfillment of the above conditions).

33. 33.

~~Repayment of advance payment for mobilization and equipment~~

[Cl. 51.3]

~~The advance loan shall be repaid with percentage deduction from the interim payments certified by the Engineer under the Contract. Deductions shall commence in the next Interim Payment Certificate showing that in which the total of all such payments to the Contractor has reached not less than 20 per cent of the Contract Price or 6 (six) months from the date of payment of first installment of advance, whichever period concludes earlier, and shall be made at the rate of 20 percent of the amount of all Interim Payment Certificates until such time as the loan has been repaid, always provided that the loan shall be completely repaid prior to the expiry of the original time for the completion pursuant to Clauses 17 & 26.~~

34. **Repayment of secured advance:**

(Cl. 51.4)

The advance shall be repaid from each succeeding monthly payments to the extent materials [for which advance was previously paid pursuant to Clause 51.4 of G.C.C.] have been incorporated into the Works.

35. The Securities shall be for the following minimum amounts

(Cl. 52)

equivalent as a percentage of the Contract Price:


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Performance Security for 5 percent of contract price plus Rs. _____ (to be decided after evaluation of the bid) as additional security in terms of ITB Clause 29.5.

The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type presented in Section 8 of the Bidding Documents.

36. The Schedule of Operating and Maintenance Manuals _____ N/A [Cl. 58].
37. The date by which "as built" drawings (in scale as directed) in 2 sets are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be. (Cl. 58)
38. The total amount to be withheld for failing to supply "as built" drawing by the date required is Rs. _____ lakh. (Cl. 58)
39. The following events shall also be fundamental breach of contract:
"The Contractor has contravened Sub Clause 7.1 & 9 of GCC" (Cl. 59.2)
40. The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 20 percent. (3, Cl. 60)



SECTION – 5
TECHNICAL SPECIFICATIONS

(Attached)


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SECTION – 6

FORM OF BID

(to be filled in by Bidder)



FORM OF BID

Description of the Works:

BID
To

Address

1. We offer to execute the Works described above and remedy any defects therein in conformity with the conditions of Contract, specification, drawings, Bill of Quantities and Addenda for the sum(s) of

2. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the document.
3. We agree to abide by this Bid for the period of * _____ days from the date fixed For receiving the same, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.


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6. We accept the appointment of Shri _____ as the
Dispute Review Expert.

(OR)

We do not accept the appointment of Shri _____
as the Dispute Review Expert and propose instead that Shri. _____
be appointed as
Dispute Review Expert, whose BIO-DATA is attached.

Dated this _____ day of _____ 20

Signature _____ in the capacity of duly authorized to sign bids for
and on behalf of _____
(in block capitals or typed)

Address

Witness Address Occupation

Address

Witness Address Occupation



SECTION - 7
BILL OF QUANTITIES
(attached)



BILL OF QUANTITIES

Preamble

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The rates and prices shall be quoted entirely in Indian Currency.
5. A rate or price shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
6. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items of Work.
7. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
8. The method of measurement of completed work for payment shall be in accordance with the specification for Road and Bridge Works published by the Ministry of Surface Transport (edition).
9. Errors will be corrected by the Employer for any arithmetic errors pursuant to Clause 29 of the Instructions to Bidders.
10. Rock is defined as all materials which, in the opinion of the Engineer, require blasting, or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 kw with a single rear mounted heavy duty ripper.
11. The rates are inclusive of cost of traffic management during construction. Contractor shall provide road signage, bollards, Boards, gunny Bags sheet etc. for safety of traffic during construction period which will be incidental to work. Complete as per IRC:SP:SS-2001 "Guideline on safety in Construction zone "



SECTION – 8

SECURITIES AND OTHER FORMS

(to be filled by Bidder/Employer)


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BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the construction of _____ [name of Contract hereinafter called "the Bid"].

KNOW ALL PEOPLE by these presents that We _____ [name of Bank] of _____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____ * for which payment well and truly to be made to the said Employer the Bank itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____, 20____

THE CONDITIONS of this obligation are :

(1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;

OR

- (2) If the Bidder having been notified to the acceptance of his bid by the Employer during the period of Bid validity :
- (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders; or
 - (c) does not accept the correction of the Bid Price pursuant to Clause 27.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions. This Guarantee will remain in force up to and including the date _____ ** days after the deadline for submission of Bids as such dead-line is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____

SIGNATURE _____

WITNESS _____
[Signature, name and address]

SEAL _____



* The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.

** 45 days after the end of the validity period of the Bid. Date should be inserted by the Employer before the Bidding documents are issued.



PERFORMANCE BANK GUARANTEE

To

_____[name of Employer]
_____[address of Employer]

WHEREAS _____[name and address of Contractor] (hereafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____[name of Contract and brief description of Works] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee :

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____[amount of guarantee]*
_____(in words), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____[amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 28 days from the date of expiry of the Defect Liability Period.

Signature and Seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

* An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.



BANK GUARANTEE FOR ADVANCE PAYMENT

To

_____[name of Employer]
_____[address of Employer]
_____[name of Contractor]

Gentlemen :

In accordance with the provisions of the Conditions of Contract, sub-clause 51.1 ("Advance Payment¹") of the above-mentioned Contract, _____[name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____[name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____[amount of Guarantee]* _____[in words].

We, the _____[bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____[name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding _____[amount of guarantee]* _____[in words].

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed thereunder or of any of the Contract documents which may be made between _____[name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____[name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal : _____
Name of Bank / Financial Institution : _____
Address : _____
Date : _____

- An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.


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INDENTURE FOR SECURED ADVANCES
FORM 31

(for use in cases in which the contract is for finished work and the contractor has entered into an agreement for the execution of a certain specified quantity of work in a given time)

This indenture made the _____ day of _____, 20 ____
BETWEEN _____ (hereinafter called the contractor which expression shall where the context so admits or implies be deemed to include his executors, administrators and assigns) or the one part and the Employer of the other part.

Whereas by an agreement dated _____ (hereinafter called the said agreement) the contractor has agreed.

AND WHEREAS the contractor has applied to the Employer that he may be allowed advanced on the security of materials absolutely belonging to him and brought by him to the site of the works the subject of the said agreement for use in the construction of such of me works as he has undertaken to executive at rates fixed for the finished work (inclusive of the cost of materials and labour and other charges)

AND WHEREAS the Employer has agreed to advance to the Contractor the sum of Rupees _____ on the security of materials the quantities and other particulars of which are detailed in Accounts of Secured Advances attached to the Running Account bill for the said works signed by the Contractor on _____ and the Employer has reserved to himself the option of making any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

Now THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees _____ on or before the execution of these presents paid to the Contractor by the Employer (the receipt where of the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as a for said the Contractor doth hereby covenant and agree with the President and declare as follows:

- (1) That the said sum of Rupees _____ so advanced by the Employer to the Contractor as aforesaid and all or any further sum of sums advanced as aforesaid shall be employed by the Contractor in or towards expending the execution of the said works and for no other purpose whatsoever.


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- (2) That the materials details in the said Account of Secured Advances which have been offered to and accepted by the Employer as security are absolutely the Contractor's own propriety and free from encumbrances of any kind and the contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnified the Employer against all claims to any materials in respect of which an advance has be made to him as aforesaid.
- (3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.
- (4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same required by the Engineer.
- (5) That the said materials shall not be any account be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.
- (6) That the advances shall be repayable in full when or before the Contractor receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.
- (7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default be repayable by the Contractor to be the Employer together with interest thereon at twelve per cent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Employer in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of

the Contractor and the Contractor hereby covenants and agrees with the **Employer** to reply and pay the same respectively to him accordingly.

- (8) That the Contractor hereby charges all the said materials with the repayment to the Employer of the said sum of Rupees _____ and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment here-in-before contained shall become enforceable and the money owing shall not be paid in accordance there with the Employer may at any time thereafter adopt all or any of the following courses as he may deem best:
- (a) Seize and utilise the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance with the provisions in that behalf contained in the said agreement debiting the contractor with the actual cost of effecting such completion and the amount due to the contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the contractor, he is to pay same to the Employer on demand.
 - (b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable or payable to the Employer under these presents and pay over the surplus (if any) to the Contractor.
 - (c) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.
- (9) That except in the event of such default on the part of the contractor as aforesaid interest on the said advance shall not be payable.
- (10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here-in-before expressly provided for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.



Letter of Acceptance
(Letterhead paper of the Employer)

(Date)

To

_____ (Name and address of the Contractor)

Dear Sirs,

This is to notify you that your Bid dated _____ for execution of the
(name of the contract and identification number, as given in the Instructions to Bidders)
for the Contract Price of Rupees _____
(_____) (amount in words and figures), as corrected and modified in
accordance with the Instructions to Bidders¹ is hereby accepted by our agency.

We accept / do not accept that _____ be appointed as the Adjudicator²
. You are hereby requested to furnish Performance Security, in the form detailed in Para 34.1 of
ITB for an amount equivalent to Rs. _____ within 21 days of the receipt of this letter of
acceptance valid up to 28 days from the date of expiry of defects Liability Period i.e. up to
_____ and sign the contract, failing
which action as stated in Para 34.3 of ITB will be taken.

Yours faithfully,

Authorized Signature Name and
title of Signatory Name of Agency

Delete "corrected and" or "and modified" if only one of these actions applies. Delete as corrected and modified in accordance with the Instructions to Bidders, if corrections or modifications have not been affected.

To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the Employer in the "Instructions to Bidders".


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Issue of Notice to proceed with the work
(Letterhead of the Employer)

_____ (Date)

To

(Name and address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite security as stipulated in ITB Clause 34.1 and signing of the Contract for the construction of _____

a Bid Price of Rs. _____ at

You are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory authorized to
sign on behalf of Employer)



Agreement Form

Agreement

This agreement, made the _____ day of _____ between _____ (name and address of Employer) [hereinafter called "the Employer"] and _____ (name and address of contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute _____ (name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein , at a cost of Rs. _____

NOW THIS AGREEMENT WITNESSETH as follows :

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
 - i) Letter of Acceptance
 - ii) Notice to proceed with the works;
 - iii) Contractor's Bid
 - iv) Condition of Contract: General and Special
 - v) Contract Data
 - vi) Additional condition
 - vii) Drawings
 - viii) Bill of Quantities and
 - ix) Any other documents listed in the Contract Data as forming part of the Contract.


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In witnessed whereof the parties there to have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____
was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____

in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____


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UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____ agree to abide by this bid for a period _____ days for the date fixed for receiving the same and it shall be binding on us and may be accepted at any time before the expiration of that period.

(Signed by an Authorised Officer of the Firm)

Title of Officer

Name of Firm

DATE



Section - 9
DRAWINGS
(attached)

JB

File No. RW/NH-35072/05/2018-S&R (P&B) (E165688)
Government of India
Ministry of Road Transport & Highways
(S&R (P&B/New Technology) Zone)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 23rd August, 2023

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, PTI Building, New Delhi-110001.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. All CE-ROs, ROs and ELOs of the Ministry.

Subject:-Use of Bitumen: Demand-Supply, Type & Grade, Specifications, Source of Procurement and Quality in Construction of National Highways Projects- Reg.

Reference: Ministry's Circular No. RW/NH-35072/05/2018-S&R (P&B) dated 24.08.2018

Madam/Sir,

Bituminous binder is one of the most important ingredient which influences the performance of bituminous mixes. Selection of appropriate grade of bituminous binder for a particular section of National Highway based on prevailing loading, ambient temperature & rainfall and ensuring quality of bituminous binder during construction is indispensable to have durable flexible pavement.

2. Keeping in view the above requirements, following have been decided in supersession to provisions contained in Ministry's circular cited above:

2.1 Selection of Appropriate Grade of Bituminous Binder: Bituminous binder for conventional pavement courses shall be in accordance with IRC: 37 "Guidelines for the Design of Flexible Pavements". However, provisions contained in relevant IRC Guidelines/Standards shall be applicable for selection of binder grade for pavement courses such as Stone Matrix Asphalt (SMA), Gap-graded Rubberised Bituminous Mixes (GGRB), High Performance Mixes (HIPER) and Cement Grouted Bituminous Macadam (CGBM).

2.2 Specification of Bituminous Binder:

2.2.1 Viscosity Grade Bitumen: Viscosity Grade Bitumen shall comply the requirements of quality characteristics specified in IS: 73 "Paving Bitumen -Specification" except that

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minimum Viscosity at 60°C for VG-40 grade bitumen shall be 3600 Poise as recommended in IRC: 37. In addition to these, bitumen shall also be tested for Wax Content as per IS: 10512 and Wax Content shall not be more than 4.5 per cent.

2.2.2 Polymer Modified Bitumen (PMB): Polymer Modified Bitumen shall comply the requirements specified in IRC: SP: 53 "Guidelines on Use of Modified Bitumen in Road Construction". In addition, PMB shall comply the requirements specified in IS: 15462 "Polymer Modified Bitumen (PMB)-Specification" for Multiple Stress Creep Recovery (MSCR) Test.

2.2.3 Rubber Modified Bitumen (RMB): Rubber Modified Bitumen shall comply the requirements specified in IRC: SP: 53 "Guidelines on Use of Modified Bitumen in Road Construction".

2.3 Source of Procurement of Bituminous Binder:

2.3.1 Viscosity Grade Bitumen: Considering the shortfall of domestic production vis-a-vis demand, use of imported bitumen may be accepted. Traceability of imported bitumen shall be ensured. Along with each tanker load, Manufacturer's Test Certificate (MTC) shall be provided. MTC will also have the details such as name of origin country, name of refinery, GPS co-ordinates of loading & unloading ports, adopted refining process, etc.

2.3.2 Modified Bitumen: To minimise separation issue, modified bitumen (PMB, CRMB & NRMB) shall be procured from domestic sources only. Further, as all refineries do not produce modified bitumen themselves, modified bitumen may be procured from domestic refineries or private producers.

2.4 Quality Assurance & Quality Control of Bituminous Binder:

2.4 Laboratory for Testing of Bituminous Binder: Refineries/Producer's/Manufacturer's/supplier's own laboratory as well as third party laboratory shall have ISO: 17025 "General requirements for the competence of testing and calibration laboratories" certification granted by NABL. Each equipment shall have valid calibration certificate.

2.4.2 Quality Assurance & Quality Control of Bituminous Binder: A Standard Operating Procedure (SoP) having details of internal quality control by refinery/supplier/producer, repeatability & reproducibility of test results, responsibilities of departmental officers (PD/EE), responsibilities of AE/IE, mandatory testing of sample taken from tankers before unloading, etc. is given in Annexure-1, 2, 3 & 4 respectively for Domestically Procured Viscosity Grade Bitumen, Imported Viscosity Grade Bitumen, Polymer Modified Bitumen Domestically Procured and Rubber Modified Bitumen Domestically Procured. The SoP shall be scrupulously followed to ensure quality of bitumen/modified bitumen.

3. It is requested that the contents of the circular may be brought into the notice of all concerned for immediate needful compliance.

4. This issues with the approval of Competent Authority.

Yours sincerely,
Bidur Kant Jha
23/08/2023
(Bidur Kant Jha)

Director
(New Technology for Highway Development)
For Director General (Road Development) & Special Secretary

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Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. The Secretary General, Indian Roads Congress
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new"

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H, MS&ME)
2. PS to Hon'ble MOS (RT&H)
3. Sr. PPS to Secretary (RT&H)
4. PPS to DG (RD) & SS
5. Sr. PPS/ PPS to Addl. Secretary (Road Safety)/ Addl. Secretary (RT&H & LA)
6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to ADG (SKN) / ADG (RP)/ ADG(DS)
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Annexure-1

SoP for QA/ & QC of Domestically Procured Viscosity Grade Bitumen

- i. Refinery shall have ISO: 17025 certified well-equipped laboratory at refinery itself for internal quality control.
- ii. Along with each tanker load, Manufacturer's Test Certificate shall be provided. MTC also have the details such as GPS co-ordinates of loading & unloading locations.
- iii. Contractor shall have well-equipped laboratory at Project site. All the equipment in the laboratory shall have valid calibration certificate. Before unloading of Bitumen into the storage tank of Hot Mix Plant, it shall be tested for properties such as Viscosity at 60°C, Penetration & Softening Point Test. After satisfactory test results, bitumen shall be allowed for unloading. Other properties test shall be carried out as per frequency specified in Section 900 of Ministry's Specifications for Road and Bridge Works. As establishment of site laboratory for carrying out all tests on bitumen may be difficult in projects costing less than Rs 25 Crore (Civil Works Cost), option to use a nearby established reputed laboratory can be given to the contractor in which case such laboratory details should be intimated to RO / EE NH PWD to plan their random checks.
- iv. Every bitumen storage tank of Hot Mix Plant should be clearly labelled with the grade of bitumen it contains. When the grade of bitumen in a tank is changed, it is important to ensure that the tank is emptied and relabelled before the new grade is delivered.
- v. Before approval of mix design, Project Director (PD)/Executive Engineer (EE) shall visit the site laboratory (other identified laboratory for projects costing less than Rs. 25 Crore) and ensure that the laboratory is well equipped as per IRC: SP: 112. Twice in a month, PD/EE shall witness tests on quality characteristics such as Viscosity at 60°C, Penetration, Softening Point and Purity Test in her/his presence from random samples. In case of NH projects costing Rs. 100 Crore and more (Civil Works Cost) executed through State PWDs, RO (MoRTH) or his authorized officer should witness the tests on bitumen at least once and preferably twice during the

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construction. This is to be recorded before passing of the final bill. To facilitate such random checking EPC contractor shall intimate EE NH PWD & RO MORTH, the details of arrival of Bitumen tankers to site including the date & time of arrival / nos. of tankers arriving at the site etc., to enable RO / EE NH PWD to plan their random checks.

Annexure-2
SoP for QA & QC of Imported Viscosity Grade Bitumen

In addition to QA & QC SoP detailed in Annexure-1, following shall be followed:

- i. The supplier importing bitumen shall preferably have its own vessel to ship bitumen. The supplier shall have adequate number of bitumen storage tanks at port of discharge. There shall be no intermingling of bitumen from different vessels in the storage tank.
- ii. Supplier shall have ISO: 17025 certified well-equipped laboratory at location of storage for internal quality control.
- iii. No mixing of bitumen imported and procured from domestic refineries shall be done in the storage tank of contractor at hot mix plant.
- iv. The supplier of imported bitumen shall be held accountable if bitumen fails to meet acceptance tests either in contractor's site laboratory or any third party ISO: 17025 certified laboratory.

Annexure-3
SoP for QA/QC of Polymer Modified Bitumen Domestically Procured

In addition to QA&QC SoP given in Annexure-1 & 2 for base bitumen used for production of PMB, following shall also be followed:

- i. No project-site blending/production of PMB shall be allowed.
- ii. Producers shall have ISO: 17025 certified well-equipped laboratory including apparatus for Multiple Stress Creep Recovery (MSCR) at production plant itself for internal quality control.
- iii. Along with each tanker load, Manufacturer's Test Certificate shall be provided. MTC also have the details such as GPS co-ordinates of loading & unloading locations, source of base bitumen & its grade, rpm of High Shear Mill, blending temperature, duration of blending, generic name of modifier, source of modifier, % content of modifier etc.
- iv. Contractor shall have well-equipped laboratory with valid calibration certificate for all equipment at project site. Contractor's laboratory must have DSR equipment and qualified personnel to conduct MSCR test on PMB drawn from tanker on arrival at site.
- v. Before unloading of PMB into the storage tank at Hot Mix Plant, it shall be tested for properties such as MSCR, Elastic Recovery, Penetration, Softening Point and Separation Test. After satisfactory results, PMB shall be allowed for unloading. Other properties shall be carried out as per frequency specified in Section 900 of Ministry's Specifications for Road and Bridge Works or IRC: SP: 53.
- vi. PMB storage tank at Hot Mix Plant shall have stirrer arrangement.
- vii. Before approval of mix design, PD/EE shall visit the site laboratory and ensure that the laboratory is well equipped as per IRC: SP: 112. Twice in a month, PD/EE shall witness tests on quality characteristics such as MSCR, Elastic Recovery, Penetration, Softening Point and Separation Test in her/his presence. In case of NH projects costing Rs. 100 Crore and more (Civil Works Cost) executed through State

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PWDs, RO (MoRTH) or his authorized officer should witness the tests on bitumen at least once and preferably twice during the construction. This is to be recorded before passing of the final bill. To facilitate such random checking EPC contractor shall intimate EE NH PWD & RO MORTH, the details of arrival of Bitumen tankers to site including the date & time of arrival / nos. of tankers arriving at the site etc., to enable RO / EE NH PWD to plan their random checks.

Annexure-4

SoP for QA/QC of Rubber Modified Bitumen Domestically Procured

In addition to QA&QC SoP given in Annexure-1 & 2 for base bitumen used for production of CRMB/NRMB, following shall also be followed:

- i. No project-site blending/production of modified bitumen shall be allowed.
- ii. Producers shall have ISO: 17025 certified well-equipped laboratory including apparatus for Rubber Content of Crumb Rubber Modified Bitumen (Soxhlet Method as per Austroads Test Method AGPT/T142) at processing plant itself for internal quality control.
- iii. Along with each tanker load, Manufacturer's Test Certificate shall be provided. MTC also have the details such as GPS co-ordinates of loading & unloading locations, source of base bitumen & its grade, rpm of High Shear Mill, blending temperature, duration of blending, generic name of modifier, source of modifier including whether it is of truck tyre or car tyre, % content of modifier etc.
- iv. Crumb Rubber shall be of truck tyre only and it shall be 100.0% passing through 600 micron sieve.
- v. Contractor shall have well-equipped laboratory with valid calibration certificate for all equipment at project site. Contractor's laboratory must have Rubber Content of Crumb Rubber Modified Bitumen (Soxhlet Method as per Austroads Test Method AGPT/T142) and qualified personnel to conduct Rubber Content test on RMB drawn from tanker on arrival at site.
- vi. Before unloading of CRMB/NRMB into the storage tank at Hot Mix Plant, it shall be tested for properties such as Elastic Recovery, Penetration, Softening Point and Separation Test. After satisfactory results, CRMB/NRMB shall be allowed for unloading. Other properties shall be carried out as per frequency specified in Section 900 of Ministry's Specifications for Road and Bridge Works or IRC: SP: 53. As establishment of site laboratory for carrying out all tests on bitumen may be difficult in projects costing less than Rs 25 Crore (Civil Works Cost), option to use a nearby established reputed laboratory can be given to the contractor in which case such laboratory details should be intimated to RO / EE NH PWD to plan their random checks.
- vii. RMB Storage Tank at Hot Mix Plant shall have stirrer arrangement.
- viii. Before approval of mix design, PD/EE shall visit the site laboratory and ensure that the laboratory is well equipped as per IRC: SP: 112. Twice in a month, PD/EE shall witness tests on quality characteristics such as Elastic Recovery, Penetration, Softening Point and Separation Test in her/his presence. In case of NH projects costing Rs. 100 Crore and more (Civil Works Cost) executed through State PWDs, RO (MoRTH) or his authorized officer should witness the tests on bitumen at least once and preferably twice during the construction. This is to be recorded before passing of the final bill. To facilitate such random checking EPC contractor shall intimate EE NH PWD & RO MORTH, the details of arrival of Bitumen tankers to site including the date & time of arrival / nos. of tankers arriving at the site etc., to enable RO / EE NH PWD to plan their random checks.

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