

Rajasthan State Road Development & Construction Corporation Ltd.

STANDARD BIDDING DOCUMENT FOR WORK

**Construction of ROB with approaches in lieu of level
crossing No. C-27 at PALI including Railway portion
(Excluding cost of cement).**

**RAJASTHAN STATE ROAD DEVELOPMENT & CONSTRUCTION
CORPORATION LTD. (RSRDC)**

COMPETITIVE BIDDING

1. AGREEMENT NO. _____

2. NAME OF WORK : Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement).

3. OFFICER INVITING BID: Managing Director, RSRDCC Ltd.

4. PLACE OF OPENING OF BIDS : Project Director, Unit, Pali
21- Keshav Nagar, National
Highway, New Bus stand, Pali
Tel: 02932-284221

5. IMPORTANT DATES/ TIMES:

S. NO.	ITEM	DATE	TIME HRS
1	LAST DATE OF SALE OF BIDDING DOCUMENT	21.02.2011	18:00
2	TIME AND DATE OF PRE-BID CONFERENCE	15.02.2011	11:00
3	LAST DATE AND TIME FOR RECEIPT OF BIDS	23.02.2011	15:00
4	TIME AND DATE OF OPENING TECHNICAL BIDS	25.02.2011	11:00
5	TIME AND DATE OF FINANCIAL BIDS	TO BE ANNOUNCED	

**RAJASTHAN STATE ROAD DEVELOPMENT & CONSTRUCTION
CORPORATION LTD. (RSRDC)
INVITATION FOR BID (IFB)
WITH CORRIGENDUM**

Bid No.:

Date:

1 The Rajasthan State Road Development & Construction Corporation Ltd (RSRDC) invites bids for the construction of works as below. A bidder may submit bids for any or all of these works.

TABLE

S.No.	Name of work	Approx Length (Km)	Approx Value (Cr.)	Bid Security Rs.(2%) (lacs)	Period of completion	Last Date of sale	Date of receipt	Date of Opening	Date of pre-bid meeting	Place of sale & Submission
1	2	3	4	5	6	7	8	9	10	11
1	Construction of ROB with approaches in lieu of level crossing No.. C-27 at PALI including Railway portion (Excluding cost of cement).		14.00	28.00	24 Month	21.02.2011	23.02.2011	25.02.11	15.02.11	<p>1. Project Director, Unit - Pali 21- Keshav Nagar, National Highway, New Bus stand, Pali Tel: 02932-2842212.</p> <p>2. Project Director, Unit-Ist Head Office RSRDC Jaipur Email ID: re-jaipur@rsrdc.com Tel No. 0141-27111386 – Ext.334</p> <p>3. Project Director, Unit-I,Jodhpur(12-A,Shanti Vihar Colony Panch Batti Circle Gaurav Path, Ratanada Jodhpur) Tel No. 0291-2670677 Email ID – re-jodhpur@rsrdc.com</p>

- 2 The bid documents may be
 - i. downloaded in pdf format from official website of RSRDC www.rsrdc.com free of cost, and the same can be used for bidding purposes.
 - ii. purchased from the office as above for a non-refundable fee of Rs 5000, in the form of Demand Draft on any Nationalized bank/Scheduled bank payable in favour of Project Director (Concerned) at his unit headquarters.
- 3 Interested bidders may obtain further information, if required, from Project Director (concerned).
- 4 Bidder must be registered with Commercial Taxes Department, and must also have a valid PF registration Certificate.
- 5 Bid must be accompanied by security amount specified above, payable in favour of Project Director (Concerned) at his unit headquarters. Bid security shall have to be in any one form as specified in the bidding document and shall have to be valid for 30 days beyond the validity of the bid.
- 6 Bids must be delivered to any address listed above on or before 15:00 hours on dates mentioned above and will be opened at 11:00 hours on dates mentioned above, in the office of the Project Director (Concerned) in the presence of the bidders who wish to attend. If the office happens to be closed on the date of receipt/ opening of the bids as specified, the bids will be received and opened on the next working day at the same time and venue.
- 7 A pre-bid meeting will be held on 04-010-2010 at 11:00 hrs. at the office of Project Director (Concerned) to clarify the issues and to answer questions on any matter that may be raised at that stage, as per Clause 9.2 of 'Instructions to Bidders' of the Bidding documents.
- 8 Any amendment in the IFB shall henceforth be uploaded on website only. Bidders' failure to check the mail & notice the amendments/ modifications/ clarifications issued by the employer shall not be entertained in any way.
- 9 Other details are available in the bidding documents.

General Manager

**SECTION 1
INSTRUCTIONS TO BIDDERS (ITB)**

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A. GENERAL

1 **Scope of Bid**

- 1.1 The Employer (named in Annexure-1 to ITB) invites bids for the construction of works (as defined in these documents and referred to as the 'work') detailed in the table given in Invitation For Bidders (IFB). The bidders may submit bids for any or all of the works detailed in the table given in IFB.
- 1.2 The successful bidder shall have 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/tender, 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 RSRDC

3 **Eligible Bidders**

- 3.1 This Invitation for Bids is open to all bidders having the required qualification.
- 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, or any of its affiliates, shall not be eligible to bid.

4 **Qualification of the Bidder**

- 4.1 In order to justify their capability of execution and completion of work as per technical specifications, within stipulated period of completion, a bidder shall provide, as stated in Section 2,
 - a. Forms of Bid and Qualification Information,
 - b. proposed work method and schedule
 - c. programme of construction,
 - d. equipment planning and deployment,
 - e. quality assurance procedures and
 - f. drawings and charts
- 4.2 Deleted
- 4.3 A bidder shall include the following information and documents with the bid in Section 2;
 - 4.3.1 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;
 - 4.3.2 total monetary value of construction work performed for each of the last five years;
 - 4.3.3 experience in works of a similar nature and required 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;
 - 4.3.4 major items of construction equipment proposed to carry out the Contract;
 - 4.3.5 qualifications and experience of key site management and technical personnel proposed for the Contract;
 - 4.3.6 reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
 - 4.3.7 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).
 - 4.3.8 authority to seek references from the Bidder's bankers;
 - 4.3.9 information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed amount;
 - 4.3.10 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 sub-contractor in the relevant field should be annexed); and
 - 4.3.11 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, including fund flow & cash flow planning & statement, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones.

- 4.4 Bids submitted by a Joint Venture (by maximum of two firms as partners) shall comply with the following requirements:
 - 4.4.1 the bid shall include all the information listed in clause 4.3 above;
 - 4.4.2 the bid and, in case of a successful bid, the Agreement, shall be signed so as to be legally binding on all partners;
 - 4.4.3 one of the partners shall be nominated as being in-charge or lead partner, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
 - 4.4.4 the partner in-charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the Contract, including payment, shall be done exclusively with the partner in charge;
 - 4.4.5 all partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under 4.4.3 above, as well as in the bid and in the Agreement (in case of a successful bid);
 - 4.4.6 the joint venture agreement shall be registered so as to be legally valid and binding on partners; and
 - 4.4.7 a copy of the Joint Venture Agreement entered into by the partners shall be submitted with the bid. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed Agreement.
- 4.5 **To qualify for award of the contract**
 - 4.5.1 A bidder in its name should have (in the last five years as referred to in Annexure-1):
 - 4.5.1.1 achieved a minimum annual financial turnover (in all classes of civil engineering construction works only) amount indicated in Annexure-1 in any one year;
 - 4.5.1.2 Should have satisfactorily completed, (phase /part completion of the scope of work in a contract shall not be considered) there works value of each shall be 40% or two works value of each shall be 50% or one work value of which shall be 80% of estimated cost. .
 - 4.5.2 A bidder should further demonstrate:
 - 4.5.2.1 availability of either owned or leased following key and critical equipment for this work:

Based on the studies, carried out by the Engineer the minimum suggested major equipment to attain the completion of works in accordance with the prescribed construction schedule are shown in the **Annexure-2**.

The bidders shall, however, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with layout and necessary drawings and calculations (detailed) as stated in clause 4.3.11 above to allow the employer to review their proposals. The numbers, types and capacities of each plant/equipment shall be shown in the proposals along with the cycle time for each operation for the given production capacity to match the requirements.
 - 4.5.2.2 availability for this work exclusively of a Project Manager with minimum three years' experience in construction of similar civil engineering works, and other key personnel with adequate experience;
 - 4.5.2.3 liquid assets and/or availability of credit facilities of no less than the amount indicated in Annexure-1
(Credit lines/letter of credit certificates from Banks for meeting the funds requirement etc. - usually the equivalent of the estimated cash flow for 3 months in peak construction period. Such letter of credit can be submitted either severally or jointly)
 - 4.5.2.4 Deleted
- 4.6 The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of clause 4.5, except for clause 4.5.1.2, wherein any one of the partner of Joint Venture may have the required

qualification.

Sub-contractor’s experience and resources will not be taken into account in determining the Bidder’s compliance with the qualifying criteria, except to the extent stated in Clause 4.5.1 above.

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

Assessed Available Bid capacity = (A *N*2 - B)

Where

A = Maximum value of civil engineering works executed in anyone year during the last five years (updated to the price level of the year indicated in Annexure-1) taking into account the completed as well as works in progress.

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

B = Value (updated to the price level of the year indicated in Annexure-1) of existing commitments and on-going works to be completed during the next N years (period of completion of the works for which bids are invited)

Note: *The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in charge, not below the rank of an Executive Engineer or equivalent.*

- 4.8 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
 - 4.8.1 made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
 - 4.8.2 record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion; litigation history, or financial failures etc.; and/or
 - 4.8.3 participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

5 One Bid per Bidder

- 5.1 Each bidder shall submit only one bid for one package either individually or as a partner in a Joint Venture. A bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested by the Employer) 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 his own responsibility, risk, and cost 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 their own.

B. BIDDING DOCUMENTS

8 Content of Bidding Documents

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

Section	Particulars
	Invitation for Bids
	Volume 1
1	Instructions to Bidders
2	Qualification Information, and other forms
3	Conditions of Contract
4	Contract Data
	Volume 2
5	Technical Specifications
	Volume 3

6	Form of bid
7	Bill of Quantities
8	Securities and other forms
	Volume 4
9	Drawings
	Volume 5
10	Documents to be furnished by bidder (Clause 12)

8.2 Three copies of each of the volumes 1 to 4 will be issued to the bidder. Documents to be furnished by the bidder in compliance to section 2 will be prepared by him and furnished as Volume 5 in two parts (refer Clause 12).

8.3 The bidder is expected to examine carefully all instructions, conditions of contract, Contract Data, forms, terms, and 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, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

9 Clarification of Bidding Documents

9.1 A bidder requiring any clarification of the bidding documents may notify the Employer in writing at the Employer's address indicated in the invitation to bid. The Employer will respond to a request for clarification which he received earlier than 15 days prior to the deadline for submission of bids. The description of the enquiry, without identifying its source, and Employer's response will be placed on the website www.rsrdc.com. Any amendment made by the employer at his own in the bid documents will be placed on the website. Bidders are requested to check the website regularly and inform the employer in case of any discrepancy noticed. Bidders' failure to check the mail and to notice the amendments/ modifications/ clarifications issued by the employer shall not be entertained in any way.

9.2 Pre-bid meeting

9.2.1 The bidder or his official representative is invited to attend pre-bid meeting at the address, venue, time and date as indicated in Annexure-1.

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 may submit questions in writing 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 placed on the website www.rsrdc.com. Any modification of the bidding documents listed in Clause 8.1 which may become necessary as a result of the pre-bid meeting will be made by the Employer through the issue of an Addendum pursuant to Clause 10 and placed on the website, 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 placed on the official website of RSRDC. The information placed on the website shall be deemed to have been communicated to all bidders, including the ones who have purchased the bid. Prospective bidders are therefore advised to visit the official website regularly till the deadline for submission of the bid.

10.3 To give prospective bidders reasonable time to take note of the addendum in preparing their bids, the Employer may, at his discretion, extend the deadline for submission of bids, as per Clause 20.2.

C. PREPARATION OF BIDS

11 Language of the Bid

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

12 Documents Comprising the Bid

- 12.1 The bid to be submitted by the bidder as Volume 5 of the bid document (refer Clause 8.1) shall be in three separate parts:
- 12.1.1 **Part I shall be named 'Bid Security' and shall comprise of:**
- a. Bid Security, for the amount & validity as specified in IFB, in the form specified in Section 8
 - b. PF registration certificate.
 - c. Latest Sales Tax Clearance Certificate
- 12.1.2 **Part II shall be named 'Technical Bid' and shall comprise :**
- a. Qualification Information and supporting documents as specified in Section 2
 - b. Certificates, undertakings, affidavits as specified in Section 2
 - c. Undertaking that the bid shall remain valid for the period specified in Clause 15.1
- 12.1.3 **Part III shall be named 'Financial Bid' and shall comprise :**
- a. Form of Bid as specified in Section 6
 - b. Priced Bill of Quantities for items specified in Section 7
 - c. Rate Analysis in support of rate quoted
- 12.2 Each part will be separately sealed and marked in accordance with the Sealing and Marking Instructions in Clause 19.
- 12.3 The bidder shall prepare two copies of the bid, mark them as 'Original' and 'Copy' respectively.
- 12.4 Following documents, if not submitted with the bid, shall be deemed to be part of the bid.

S. No.	Documents
1	Invitation for Bids (IFB)
2	Instructions to Bidders
3	Conditions of Contract
4	Contract Data
5	Specifications
6	Drawings

13 **Bid Prices**

- 13.1 The contract shall be for the whole work as per Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.
- 13.2 The bidder shall fill percentage rate above and below or at par in case of items detailed in schedule G and shall quote individual rates for all items shown in schedule H of the Works described in the Bill of Quantities (both in figures and words) along with total bid price (both in figures and words). Corrections, if any, shall be made by crossing out, rewriting, initialing, and dating.
- 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 are subject to adjustment for the price of Bitumen, Steel and Cement during the performance of the Contract as per Clause 47 of the Conditions of Contract.

14 **Currencies of Bid and Payment**

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

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 12.1.2 (c) 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 additional validity.
- 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. A bidder may refuse the request without forfeiture of his bid security.
- 15.3 Deleted

- 15.4 Deleted
- 16 **Bid Security**
- 16.1 The Bidder shall furnish, as part of his Bid, a Bid security for the amount shown in IFB for this particular work, in favour of Project Director (Concerned), and may be in one of the following forms:
- a. Bank Guarantee from any Nationalised Indian bank/ Scheduled Indian bank, in the format given in Volume 3.
 - b. Fixed Deposit Receipt, issued by any Nationalised Indian Bank/ Scheduled Indian bank.
 - c. Demand Draft.
- 16.2 Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall be valid for 30 days beyond the validity of the bid.
- 16.3 Any bid not accompanied by an acceptable Bid Security and not secured as per Clauses 16.1 and 16.2 shall be rejected by the Employer as non-responsive.
- 16.4 The Bid Security of unsuccessful bidders will be returned within 28 days of issue of letter of acceptance to the successful bidder, or at the end of bid validity period as per Clause 15.1, whichever is earlier.
- 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
- 16.6.1 if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
 - 16.6.2 if the Bidder does not accept the correction of the Bid Price, pursuant to Clause 27; or 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 comply with the requirements of the bidding documents, including the basic technical design as indicated in the drawing and specifications. Alternatives shall not be considered.

18 **Format and Signing of Bid**

- 18.1 The Bidder shall prepare one original and one copy of the documents comprising the bid as described in Clause 12 of these *Instructions to Bidders*. Original documents shall be placed in three separate envelopes namely 'Bid Security', 'Technical Bid' and 'Financial Bid' and then placed in one envelope clearly marked as '**ORIGINAL**'. Similarly, another set shall be marked as '**COPY**'. In the event of discrepancy between them, the original shall prevail.
- 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 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**

- 19.1 The bid shall be prepared in two copies marked as '**ORIGINAL**' and '**COPY**'.
- 19.2 Each copy shall comprise of 'inner envelope' and 'separate envelope'.
- 19.3 The separate envelopes shall comprise of two sets of three envelopes each prepared as explained in clause 18.1.
- 19.4 Each set of the separate envelope marked 'ORIGINAL' and 'COPY' shall be with additional markings as follows
 'Bid Security' and 'Technical Bid':
 'To be opened on 25.02.2011 (date of Technical Bid opening) in the presence of Bid Opening Committee'.
 Financial Bid:
 'Not to be opened except with the approval of Evaluation Committee'.
- 19.5 The inner, outer, and separate envelopes containing Bid Security, Technical and Financial

Bids etc shall

- a be addressed to the Project Director (concerned) at the address given in Annexure 1.
 - b bear the identification as indicated in Annexure 1.
- 19.6 In addition to the identification required in Clauses 19.4 and 19.5, 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 late, pursuant to Clause 21, or the Evaluation Committee declares the bid as non-responsive pursuant to Clause 23.
- 19.7 Each set of separate envelop shall be placed in the respective inner envelop i.e. 'ORIGINAL' and 'COPY' and sealed.
- 19.8 Both inner envelope marked 'ORIGINAL' and 'COPY' shall than be placed and sealed in one outer envelope.
- 19.9 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 received by the Employer at the address specified above not later than the date and time indicated in Annexure-1. In the event of the specified date for the submission of bids declared a holiday for the Employer, the Bids will be received up to the appointed time on the next working day.
- 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, sealed, marked, and delivered in accordance with Clause 18 and 19, with the outer and inner envelopes additionally marked '**MODIFICATION**' or '**WITHDRAWAL**', as 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 of bids and the expiration of the original period of bid validity specified in Clause 15.1 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 (except those received late), including modifications made pursuant to Clause 22, in the presence of the Bidders or their representatives who choose to attend at time, date and place specified in Annexure-1 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 First of all, the envelopes marked '**WITHDRAWAL**' shall be opened and read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 22 shall not be opened.
- 23.3 Subsequently, the envelope containing 'Bid Security' shall be opened. The contents of the envelope shall be verified with respect to clause 12.1.1. In the event of non-confirmation of the information specified in clause 12.1.1, the bid shall be considered as non-responsive and the sealed Technical Bid and the sealed Financial Bid will be returned to the bidder.
- 23.4 Thereafter, the envelope containing technical bid of remaining bidders declared in accordance with clause 23.3 shall be opened. However, validity of opening of technical bid shall be 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 Part II of the bid pursuant to

Clause 12.1.

- 23.5 At the time of opening of 'Financial Bid', the names of the bidders found technically qualified in accordance with Clause 26.3 will be announced. The bids of only these bidders will be opened along with their envelope of 'MODIFICATION TO FINANCIAL BID'. The remaining bids will be returned to the bidders unopened. The responsive Bidders' names, Bid prices, total amount of each bid, any discounts, Bid Modifications and withdrawals, 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.
- 23.6 The order of opening of the 'Financial Bid' at a place shall be that in which they appear in the 'Invitation For Bid'.
- 23.7 The Employer shall prepare Statement of the Bid opening, including the information disclosed to those present in accordance with Clause 23.5.
- 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, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause 27.
- 25.2 Subject to 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. If the Bidder wishes to bring additional information to the notice of the Employer, he should do so in writing.
- 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 bid.
- 26 **Examination of Bids**
- 26.1 **For Determination of Responsiveness :** The bid shall be considered responsive if:
- 26.1.1 The contents of the envelope confirms to clause 12.1.1.
- 26.1.2 The Bid Security is confirmed by the respective Bank.
- 26.1.3 All pages of the technical bid have been properly signed by the authorized representative.
- 26.2 **For Determination of Technical Qualification:**
- 26.2.1 During the detailed evaluation of 'Technical Bids', the Employer will determine whether each Bid meets the eligibility criteria defined in Clause 3 and 4. However, following additional steps may be taken by the evaluation committee;
- a. 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.
- b. The bidder 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 21st day of opening of the Technical Bid)
- 26.2.2 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.
- 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 shall be rejected, and the Bid security shall be forfeited in accordance with Clause 16.2.

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 Clause 26.

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
- c making appropriate adjustments to reflect discounts or other price modifications offered in accordance with 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 **Unbalanced Bid:** If the Bid amount of the successful Bidder is lower than the Engineer's Cost (EC) of the work to be performed under the contract, then the bid shall be treated as 'unbalanced bid', and the bid amount minus EC shall be considered as unbalanced amount. In case of unbalanced bid, an 'additional performance security' equal to the unbalanced amount shall be submitted by such successful bidder.

Example:

Rs. crore

	Project cost	Engineer's estimate	Bid amount	Unbalanced amount or Additional Performance Security
1	100	100	85	15
2	100	90	85	5
3	100	90	80	10

To facilitate the bidder, Engineer shall declare and place on website EC, 72 Hrs before the time of submission of bid, failing which the amount mentioned in IFB shall be considered as EC under the Contract.

29.5 Bidder will have to produce detailed rate analyses with justification in support of rate quoted by them.

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 qualified in accordance with the requirement of 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. Thereafter, the next lowest bidder shall be examined on similar conditions for award of contract.

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 in writing (hereinafter and in the *Conditions of Contract* called the 'Letter of Acceptance') stating 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 as per Clause 34.
- 33.3 The Agreement will incorporate all agreements between the Employer and the successful Bidder. The original agreement along with one copy duly wetted by the Employer shall be signed and submitted by the successful bidder within 15 days following the notification of award along with the Letter of Acceptance. Within 21 days of receipt, the Employer will sign the Agreement and deliver a copy to the Bidder.
- 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 15 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer, in any one of the forms given below a Performance Security for an amount equivalent to 5% of the Contract price, and 'additional performance security' for unbalanced Bid as per Clause 29.4 of ITB and Clause 52 of Conditions of Contract:
- a. Bank Guarantee in the form given in Section 8; or
 - b. Bank Draft as indicated in Annexure-1.
- 34.2 If any of the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued by a Nationalized Scheduled Indian bank.
The performance security and additional performance security of a Joint Venture shall be in the name of either partner severally or jointly in the name of the Joint Venture.
- 34.3 Failure of the successful Bidder to comply with the requirements of Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

35 Deleted

36 Deleted

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, or in execution of 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 RSRDC.
- 37.2 Furthermore, Bidders shall be aware of the provision of Clause 23.2 and Clause 59.2 of the Conditions of Contract.

Annexure-1
Clause Reference w.r.t. Section-I

S. No.	Clause		
1	1.1	Name of the Employer Managing Director, RSRDC, Jhalana Doongri, Jaipur, Rajasthan, India 302 004	
2	4.5.1	The last five years 2009 -2010 2008 -2009 2007 -2008 2006 -2007 2005 -2006	
3	4.5.1.1	The Annual Financial turnover amount Rs. 14.00 crore (in words) Fourteen Crores only. <i>(usually not less than the estimated cost of the work)</i>	
4	4.5.1.2	Value of similar work competed i) 3 works of Rs. 560.00 Lacs Or ii) 2 works of Rs. 700.00 lacs Or iii) 1 work of Rs. 1120.00 lacs	
5	4.5.2.3	Liquid assets and/or availability of credit facilities Rs 1.75 Crores (in words) One point Seventy five Crores.	
6	4.7	Price level of the financial year 2009-10	
7	9.2.1	Pre-bid meeting will take place at : Venue and address Project Director, Unit, Pali 21- Keshav Nagar, National Highway, New Bus stand, Pali Tel: 02932-284221 Date 15.02.2011 Time 11am	
8	19.4	The technical bid will be opened Project Director, Unit, Pali 21- Keshav Nagar, National Highway, New Bus stand, Pali Tel: 02932-284221 on 25.02.2011, 11 am.	
9	19.5(a)	Address of the Project Director (concerned) <i>as above</i>	
10		Identification of bid - Bid for (name of work) - Construction of ROB with approaches in lieu of level crossing No. NO. C-27 at PALI including Railway portion (Excluding cost of cement).. - Bid Reference No. – 550/2010-11 - Do not open before 25.02.2011 Time 11am	
11		Bid to be submitted by Date 23-02-2011 Time 3:00 pm	
12	23.1	Bid will be opened at Place Pali Time 11 am. Date 25-02-2011.	
13	34.1	The Bank Draft in favor of payable at Project Director, RSRDC Unit , Pali.	
14		Escalation factors (for the cost of works executed and financial figure to a common base value for works completed)	
		Year before	
		Multiply factor	
		2009-10	1.00
		One	1.10
		Two	1.21
		Three	1.33
		Four	1.46

Key Plant & Equipment to be deployed on Contract Work

[Reference Cl. 4.5 .2.1]

S. No.	Item	Minimum Nos.*			Source (Owned/Leased)
		Building work	Road Work	Bridge work/ ROB	
1	Motor Grader	-	2		Owned/Leased
2	Batch Mix Plant (Bitumen) / or Drum mix plant (80-100 TPH) capacity		1		Owned/Leased
3	Paver finisher with Electric Sensor		1		Owned
4	JCB		6	1	Owned
5	Computerized Batch Mix Plant(Concrete) Capacity 20 cum Per Hour			1	Owned/Leased
6	Transit mixer / miller			2	Owned/Leased
7	Concrete lifting pump			1	Owned/Leased
8	Material lifting Elevator			1	Owned
9	Plate/Needle vibrators			6	Owned
10	Steel Plate shuttering			1000 Sqm	Owned/Leased
11	Steel jacks & tie bars			As per requirement	Owned/Leased
12	Adjustable rafters			As per requirement	Owned/Leased
13	Pipe Scaffolding			As per requirement	Owned
14	Mortar mixing machine (with Hopper)			2	Owned
15	WMM Plant capacity 100-120 tonne per hour		1		Owned/Leased
16	Soil Compacter		2	1	Owned/Leased
17	Vibratory Roller		1	1	Owned/Leased
18	Power roller (8 to 10 tonne capacity)		3	2	Owned/Leased
19	Theodolite, Auto Levels total station equipment			1 each	Owned

* the requirement should be defined as per project specific requirements

SECTION 2

QUALIFICATION INFORMATION

The information to be filled in by the Bidder in the following pages will be used for purposes of post qualification as per Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

1 For Individual Bidder

1.1 Construction or legal status

[Attach copy]

Place of registration: _____

Principal place of business: _____

Power of attorney of signatory of Bid

[Attach]

- 1.2 Total value of work performed in the last five years***
- | |
|-----------|
| 2009-2010 |
| 2008-2009 |
| 2007-2008 |
| 2006-2007 |
| 2005-2006 |
- (in Rs. Lac)

- 1.3 Work performed 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) 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 Engineer (s) -in-Charge

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

B Attach certificate from Chartered Accountant

- 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.

(B) Works for which bids already submitted

Description of works	Place & State	Name & Address of Employer	Estimated value of works (Rs Cr)	Stipulated period of completion	Date when decision 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 4.5.2.1]. The Bidder should list all the information requested below. Refer also to Sub Clause 4.3 .4 of the Instructions to Bidders.

Item of Equipment	Requirement		Availability proposals			Remarks (from whom to be purchased)
	No.	Capacity	Owned/ Leased to be procured	Nos./ Capacity	Age/ Condition	

1.6 Qualifications and experience of key personnel required for administration and execution of the Contract [Ref. Clause 4.5.2.2]. Attach biographical data. Refer also to Sub Clause 4.3 .5 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				

1.7 Proposed sub-contracts and firms involved. [Refer ITB Clause 4.3 .10]

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

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 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 **M/s Caritas Infra Consulting Ltd.**
- 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 & 4.3.11)
- 1.14 Programme
- 1.15 Quality Assurance Programme

2 Joint Ventures

- 2.1 The information listed in 1.1-1.12 above shall be provided for each partner of the joint venture.
- 2.2 The information in 1.13 above shall be provided for the joint venture.
- 2.3 Attach the power of attorney of the signatory [ies] of the bid authorizing signature of the bid on behalf of the joint venture.
- 2.4 Attach the agreement among partners of the joint venture [and which is legally binding on partners], which shows the requirements as indicated in clause 4.4 of the Instructions to Bidders'. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed Agreement

3 Additional Requirements

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

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR
AVAILABILITY OF CREDIT FACILITIES

(CLAUSE 4.5 .2.3 OF ITB)

BANK CRETIFICATE

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

If the contract for 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

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 in RSRDC nor any contract awarded to us for such work have been rescinded, during last 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 RSRDC 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

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CONDITIONS OF CONTRACT

A. GENERAL

1 Definitions

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

SN	Term	
1	Bill of Quantities	Bill of Quantities as specified in schedule G and H of the bid document duly priced and approved by the employer.
2	Compensation Event	As defined in Clause 44.
3	Completion Date	Date of completion of the Works as certified by the Engineer as per Clause 55.1
4	Contract	The contract between the Employer and the Contractor to execute, complete and maintain the subjected Works. It consists of the documents listed in Clause 2.3.
5	Contract Data	The documents and other information which comprise the Contract.
6	Contractor	A person or corporate body whose Bid to carry out the Works has been accepted by the Employer
7	Contractor's Bid	The completed Bidding document submitted by the Contractor to the Employer and includes Technical and Financial bids.
8	Contract Price	The price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
9	Days	Calendar days; months are calendar months.
10	Defect	Any part of the Works not completed in accordance with the Contract
11	Defects Liability Period	The period specified in the Contract Data and calculated from the Completion Date.
12	Employer	The Managing Director, RSRDC, who will employ the Contractor to carry out the Works.
14	Engineer	The person named in the Contract Data (or any other competent person appointed by employer 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.
15	Equipment	The Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
16	Initial Contract Price	The Contract Price listed in the Employer's Letter of Acceptance.
17	Intended Completion Date	The date on which it is intended that the Contractor shall complete the Works as specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.
18	Materials	All supplies, including consumables, used by the contractor for incorporation in the Works.
19	Plant	Any integral part of the Works which is to have a mechanical, electrical, electronic, chemical, or biological function
20	Site	The area defined as such in the Contract Data
21	Site Investigation Reports	Those which were included in the Bidding documents and are factual interpretative reports about the surface and sub-surface conditions at the site.

- 22 **Specification** The Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.
- 23 **Start Date** The date when the Contractor shall commence execution of the works as per Contract Data. It does not necessarily coincide with any of the Site Possession Dates.
- 24 **Subcontractor** 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.
- 25 **Temporary Works** Works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.
- 26 **Variation** An instruction given by the Engineer, which varies the Works.
- 27 **Works** What the Contract requires the Contractor to construct, install, and turnover 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:
- a. Agreement
 - b. Letter of Acceptance/notice to proceed with the works
 - c. Contractor's Bid
 - d. Contract Data
 - e. Conditions of Contract including Special Conditions of Contract
 - f. Specifications
 - g. Drawings
 - h. Bill of Quantities and
 - i. 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.

5 **Delegation**

- 5.1 The Engineer may delegate any of his duties and responsibilities to other people 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.

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. Sub contractors shall have to be got approved from employer after submitting credentials.

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 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 restrict to the Contractor's employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive.

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 affect 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 insurance shall not be made without the approval of the Employer.

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. However, bidders are advised to verify the details at their own level. The Employer will have no responsibility in case any discrepancy is observed.

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.
- 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 Site possession to the Contractor as per the Contract Data. If possession of the Site is not given as per the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be a 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 **Dispute Redressal System**
- 24.1
- i. If any dispute or difference of any kind what-so-ever shall arise in connection with or arising out of this Contract or the execution of works or maintenance of the works there under, whether before its commencement or during the progress of works or after the termination, abandonment or breach of the Contract, it shall, in the first instance, be referred for settlement to the competent authority, described along with their powers in the Contract Data, above the rank of the Engineer.
 - ii. The competent authority shall, within a period of forty-five days after being requested in writing by the Contractor to do so, convey his decision to the Contractor. Such decision in respect of every matter so referred shall, subject to review as hereinafter provided, be final and binding upon the Contractor.
 - iii. In case the Works is already in progress, the Contractor shall proceed with the execution of the Works, including maintenance thereof, pending receipt of the decision of the competent authority as aforesaid, with all due diligence.
- 24.2 Either party will have the right of appeal, against the decision of the competent authority, to the Standing Empowered Committee if the amount appealed against exceeds rupee ten lacs.

- 24.3 The composition of the Standing Empowered Committee will be as follows:
- | | | |
|---|---|----------|
| 1 | One official member, from the Directors on the Board of Employer, preferably Chief Engineer, PWD | Chairman |
| 2 | GM/ CPM of RSRDC, as declared by Managing Director, RSRDC | Member |
| 3 | One non-official member who is technical expert of at least Additional Chief Engineer's level, selected by the Contractor from a panel of three experts given to him by the Employer. | Member |
- 24.4 The Contractor and the Employer or his designated representative will be entitled to present their case in writing duly supported by documents. If so requested, the Standing Empowered Committee may allow one opportunity to the Contractor and the Employer or his designated representative for oral arguments for a specified period. The Empowered Committee shall give its decision within a period of ninety days from the date of appeal, and after this period, the parties will be free to approach the appropriate court of law for the resolution of the dispute.
- 24.5 The decision of the Standing Empowered Committee will be binding on both the Employer and the Contractor for payment of claims up to five percent of the Initial Contract Price. The Contractor can accept and receive payment after signing as 'in full and final settlement of all claims'. If the Contractor or the Employer or both do not accept the decision, they are not barred from approaching the courts.

25 **Arbitration**

- 25.1 In view of the provision of the clause 24 on Dispute Redressal System, it is the condition of the Contract that there will be no arbitration for the settlement of any dispute between the parties.

B. TIME CONTROL

26 Deleted

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. The approval of revised Programme does not entitle the contractor to any extension in execution period. Any extension case will be decided independently on its merit.

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.
- 28.3 The Engineer shall within 14 days of receiving full justification from the contractor in writing for extension of Intended Completion Date refer his recommendations to the Employer. The Employer shall within 21 days communicate to the Engineer the acceptance or otherwise of the Engineer's recommendations. If the Employer fails to give his acceptance, the Engineer shall not grant the extension and the contractor may refer the matter to the Standing Empowered Committee for settlement of disputes under Clause 24.
- 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 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.
- 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.
- 35.3 The contractor will have to maintain the Works for a period specified in the Contract Data. For this maintenance period he will be paid as per the conditions specified in Clause 3 of Special Condition of Contract.
- 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 the actual cost plus 20%. If the contractor does not pay this amount, Engineer shall have the right to recover through any options available to him.

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.

38 The Engineer-in-charge shall have power to make any alterations, omissions or additions to or substitutions for the original specifications, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work which the contractor may be directed to do in the manner above specified, as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work.

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

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

38.1 If the rates for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional altered or substituted work at the same rates as per specified in the contract for the work.

38.2 If the rates for the altered, additional or substituted work not specifically provided in the contract for the work, then such rates will be derived from the rates for a similar class of work as are specified in the contract for the work.

38.3 If the rates for the altered, additional or substituted work can not determined in the manner specified in the clause 38.1 or 38.2, then the rates for such composite work item shall be worked out on the basis of the concerned Schedule or Rates of the District/area specified above minus/ plus the percentage which the total tendered amount bears to the estimated cost of the entire work put on tender.

Provided always that if the rate for a particular part or parts of the item is not in the Schedule of Rates, the rate for such part or parts will be determined by the Engineer on the basis of the prevailing market rates when the work was done.

38.4 If the rates for the altered, additional or substituted work item can not be determined in the manner specified in clauses 38.1 or 38.3, then the contractor shall within 7 days of the date of receipt or order to carry out the work, inform the Engineer of the rate which it is his intention to charge for such class of work supported by analysis of the rate or rates on the basis of prevailing market rates and got approval from employer and mean while the contractor is paid at provisional rate decided by Engineer. However, the Engineer by the notice in writing will be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner, as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea non-settlement of rates on items falling under the clause.

38.5 Except in case of items relating to foundations, clauses 38.1 to 38.4 shall not apply to contract or substituted items if individually exceed the percentages set out in the tender documents under clause 38.7.1.

38.6 For the purpose of operation of clause 38.5 the following works shall be treated as work relating to foundations:-

38.6.1 For buildings, compound wall, plinth level or 1.2 meters (4 ft.) above ground level whichever is lower, excluding items above flooring and D.P.C. but including base concrete below the floors.

38.6.2 For abutments, piers, retaining wall of culverts and bridges, wall of water reservoir and the bed of floor level.

38.6.3 For retaining walls, where floor levels is not determinate 1.2 meters above the average ground level or bed level.

- 38.6.4 For roads, all items or excavation and filling including treatment of sub base and soling work.
- 38.6.5 For water supply lines, sewer lines under ground storms water drains and similar work. all items of work below ground level except items of pipe work for proper masonry work.
- 38.6.6 For open storm water drains, all items of work except lining of drains.
- 38.6.7 Any other items of similar nature which Engineer may decide relating to foundation
- 38.7 The rate of any such work, except the items relating to foundations, which is in excess of the deviation limit, shall be determined as per Clause 38.7.1.
- 38.7.1 The quantum of additional work for each item shall not exceed 50% of the original quantity given in the agreement and the total value of additional work shall not exceed 20% of the total contract value, unless otherwise mutually agreed by the Engineer and the contractor. This limit shall not be applicable on items relating to foundation work which shall be executed as per original rates or provision of clause 38.1 to 38.4.
- 38.7.2 In case of contract substituted items or additions items, which results in exceeding the deviation limit laid down in this clause except items relating to foundation work, which the contractor is required to do under clause 38 above, the contractor shall within 7 days from the receipt of order, claim revision of the rate supported by proper analysis in respect of such items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exist in the tender for the main work or can be derived as per clause 38.2 and the Engineer, may revised their rates having regard to the prevailing market rates and got approved from employer the contractor shall be paid at provisional rate decided by Engineer to final approval of rates by employer. The Engineer shall however, be at liberty to cancel his order to carry out such increased quantities of work by giving notice in writing to the contractor and arrange to carry it out in such manner as he may consider advisable. But under no circumstance, the contractor shall suspend the work on the plea of non-settlement of rates of items failing under this Clause.
- 38.7.3 All the provisions of the preceding paragraph shall equally apply to the decrease in rates of items for quantities in excess of he deviation limit notwithstanding the fact that the rates for such items exist in the tender for the main work or can be derived as per clause 38.2 and the Engineer may revise such rates having regard to the prevailing market rates unless otherwise mutually agreed by the Employer and the Contractor.
- 39 **Variations**
- 39.1 All Variation shall be included in updated Programms produced by the Contractor.
- 40 Deleted
- 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 minus the cumulative amount certified previously.
- 42.2 The Engineer shall check the Contractor's monthly statement preferably within 14 days and certify the amount to be paid to the Contractor.
- 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 retention, other recoveries in terms of the contract and taxes at source, as applicable under the law. The Employer shall preferably pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate.

43.2 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 to be 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 90 percent 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 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
 - f The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
 - g 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.
 - h The effect on the Contractor of any of the Employer's Risks.
 - i The Engineer unreasonably delays issuing a Certificate of Completion.
 - j Removal of underground utilities detected subsequently
 - k Significant change in classification of soil requiring additional mobilization by the contractor, e.g. ordinary soil to rock excavation,
 - l Removal of unsuitable material like marsh, debris dumps, etc not caused by the contractor
 - m Artesian conditions
 - n Seepage, erosion, landslide
 - o River training requiring protection of permanent work
 - p Presence of historical, archeological or religious structures, monuments interfering with the works
 - q Restriction of access to ground imposed by civil, judicial, or military authority
- Other Compensation Events listed in the Contract Data or mentioned in the Contract

44.2 In case of a Compensation Event, the Engineer shall decide whether and by how much the Intended Completion Date shall be extended.

44.3 Deleted

44.4 The Contractor shall not be entitled to time extension 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 National Rupees.

47 **Price Adjustment**

47.1 Contract price shall be adjusted for increase or decrease in rates and price of Bitumen, Steel, and Cement as per the following principles and procedures and as per formula given in the Contract Data:

47.1.1 The price adjustment shall apply for the work done from the start date given in the Contract Data up to end of the initial intended completion date or extensions granted by the Engineer

and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.

47.1.2 The price adjustment shall be determined during each month from the formula given in the Contract Data.

47.1.3 Following expressions and meanings are assigned to the work done during each month:

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

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 prices 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.

48.3 On completion of the whole works, the contractor may substitute retention money with an 'on demand' Bank guarantee.

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 the Contractor's liabilities.

49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any over-payment of liquidated damages by the Contractor by adjusting the next payment certificate.

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 Contract Data.

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 or 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 Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

50 Deleted

51 Deleted

52 **Securities**

52.1 The Performance Security (including additional performance security for unbalanced bid)

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 from 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 Maintenance Period and the additional performance security for unbalanced bids shall be valid until a date 28 days from the date of issue of the certificate of completion.

‘The performance security and additional performance security of a Joint Venture shall be in the name of either partner severally or jointly in the name of the Joint Venture.’

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 preferably within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue preferably 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, preferably 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.

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 Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation
- c 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;
- d the Contractor does not maintain a security which is required;
- e 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
- f if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- g ‘The contractor (in case of joint venture) has modified the composition of the joint

venture and/or the responsibility of each member of the joint venture from what is stated in joint venture agreement without prior approval of the Employer’.

For the purpose of this clause, ‘corrupt practice’ means the offering, giving, receiving or soliciting of anything 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,

i. the Engineer shall issue a certificate for

a. the value of the work done,

b. less advance payments received up to the date of the issue of the certificate,

c. less other recoveries due in terms of the contract,

d. less taxes due to be deducted at source as per applicable laws.

ii. If the total amount due to the Contractor is lower than the payment due to the Employer, the difference shall be a debt payable by the contractor to the Employer. If the total amount due to the Contractor is higher than the payment due to the Employer, the difference shall be payable by the Employer to the contractor.

iii. The performance security in full and the additional performance security, if any, shall be forfeited in the ratio in which the work remains incomplete.

iv. Additional Liquidated Damages shall not apply.

60.2 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 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:**

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

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

2

COMPLIANCE WITH LABOUR REGULATIONS:

2.1

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

2.2

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.

2.3

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

2.3.1

Workmen Compensation Act 1923 :- The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

2.3.2

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.

2.3.3

Employees P.F. and Miscellaneous Provision Act 1952 : The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :

a Pension or family pension on retirement or death, as the case may be.

b Deposit linked insurance on the death in harness of the worker.

c Payment of P.P. accumulation on retirement/death etc

2.3.4

Maternity Benefit Act 1951 :- The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

2.3.5

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.

2.3.6

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.

2.3.7

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.

2.3.8

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.

2.3.9

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.

- 2.3.10 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.
- 2.3.11 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.
- 2.3.12 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.
- 2.3.13 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.
- 2.3.14 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 inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment at 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, traveling expenses from home upto the establishment and back, etc.
- 2.3.15 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.
- 2.3.16 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 **Payment during Maintenance Period (In addition to clause 35)**

- 3.1 The contractor will have to maintain the road/ building/ bridge for six years after issuance of completion certificate. For maintaining the road/ building/ bridge during this period the contractor shall be paid as per as per the rate mentioned in Contract Data.
- 3.2 The payment for maintenance will be made to contractor at the end of each quarter proportionately on successful maintenance of the road/ building/ bridge during that quarter. The contractor shall be fully liable for the expenses made towards the maintenance. He shall not be entitled for any extra expenditure incurred. The Engineer shall keep watch on the maintenance and shall issue certificate at the end of each quarter which shall entitle contractor to claim for maintenance charges.
- 3.3 In case contractor fails to maintain the road in any quarter during maintenance period, a sum equivalent to twice the sum payable during that quarter or actual expenditure plus 20% done to correct the defect, whichever is higher, shall be recovered from his Performance Security.

- 3.4 The Performance Security will be refunded after expiry of maintenance period.
- 3.5 During the maintenance period the contractor shall be liable to attend all construction defects left by him. In case of failure to attend such defects, the same shall be got rectified by the Employer and cost recovered as per clause 3.4.

SECTION 4

CONTRACT DATA

S N	Cl. No.	Items marked 'N/A' do not apply in the Contract Data.	
1	1.1	Employer Name : Address : Name of authorized Representative	Managing Director Setu Bhawan, Opposite Jhalana Doongari, Jaipur- Agra Bypass, Jaipur- 302004 Project Director (Concerned) Project Director (Concerned)
2	1.1	The Engineer is : Name of authorized Representative	Project Officer (Concerned)
3	1.1 & 35	The Defects Liability Period	6 Year from the date of completion.
4	1.1	Start Date	21 days form issue of LOA
5	1.1, 17 & 28 2.2 & 49.	Intended Completion Date for the Whole of the Work Milestones: Physical works to be completed Milestone 1 i.e. 15% of initial contract price Milestone 2 i.e. 40% of initial contract price Milestone 3 i.e. 70% of initial contract price	Twenty four months after start date of work Period from the start date 1/4 th of completion period 1/2 nd of completion period 3/4 th of completion period
6	1.1	Location of site	Name of Work - Construction of ROB with approaches in lieu of level crossing No. NO. C-27 at PALI including Railway portion (Excluding cost of cement) 550/2010-11
7	1.1	The name and identification number of the Contract	
8	1.1	The works shall, inter alia, include the following, as specified or as directed : (A) Road Works Site clearance; setting-out and layout; widening of existing carriageway and strengthening including camber corrections; construction of new road/ parallel service road; bituminous pavements remodeling/construction of junctions, intersections, bus bays, lay byes; 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) Bridge Works

Site clearance; setting out, provision of foundations, piers abutments and bearings; prestressed/reinforced cement concrete superstructure; wearing coat, hand railings, expansion joints, approach slabs, drainage spouts/ down take pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; providing wing/return walls; provision of road markings, road signs 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) Building Works

Site clearance; setting out, provision of foundations, walls (stone/ brick masonry); reinforced cement concrete structures like column, beams etc; roofing, flooring, plaster, pointing, white/colour wash, wood work, steel work, water supply and sanitary; 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.

(D) Other Items

1.1	Any other items as required to fulfill all contractual obligations as per the Bid documents.	
9	2.3	The following documents also form part of the Contract: 1 2 3
10	3.1	The law which applies to the Contract the law of Union of India
11	3.1	The language of the Contract documents English and Hindi
12	7.1	Limit of subcontracting Only labour contract or Supply of material.
13	8	The Schedule of Other Contractors
14	9	The Schedule of Key Personnel
15	13	The minimum insurance cover for physical property, injury and death Rs.5 lac 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.	
16	14	Site investigation report	Enclosed
17	21	The Site Possession Dates	
		50% length of work site	On start date
		75% length of work site	After 25% completion period
		99% length of work site	After 50% completion period
18	24.1	Competent authority	Dy General Manager, RSRDC with powers up to 0.5% of initial contract price.
19	27.1	The period for submission of the programme for approval of Engineer	21 days from the issue of Letter of Acceptance.
20	27.2	The period between programme updates	60 days
21	27.3	The amount to be withheld for late submission of an updated programme	Rs. 1 lac.
22	44	The following events shall also be Compensation Events	

23 The currency of the Contract Indian National Rupee

24 47 The formula (e) for adjustment of prices are:

$$R = \text{Value of work as defined in Clause 47.1 of Conditions of Contract}$$

a Adjustment for cement component

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

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

V_c = 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 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

b Adjustment for steel component

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 (Bars and Rods) on 28 days preceding the date

of opening of Bids as published by the Ministry of Industrial Development, Government of India, New 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 Bars and Rods has been chosen to represent steel group.

c Adjustment of bitumen component

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.

B₀ = 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

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

S. No.	Material	Percentage*		
		For Road Work*	For Bridge Work*	For Building Work*
1	Cement - P _c	5%	15%	15%
2	Steel - P _s	5%	15%	10%
3	Bitumen - P _b	30%	-	-

* percentage for different materials are to be calculated and mentioned for project specific.

25	48	The proportion of payments retained (retention money)	6% from each bill subject to a maximum of 5% of initial contract price
26	49	Amount of liquidated damages for delay in completion of works <u>For Whole of work</u> <u>For non-achievement of milestone</u>	0.05% of the Initial Contract Price, rounded off to the nearest Thousand, per day. 0.05% of price as specified in mile stone, rounded off to the nearest thousand per day.
27	49	Maximum limit of liquidated damages for delay in completion of work.	10 per cent of the Initial Contract Price rounded off to the nearest thousand.
28	3 of	Applicable payment during maintenance period.	Percentage of completion

	SCC		cost*
		1 st Year	NIL
		2 nd Year	0.50%
		3 rd Year	0.75%
		4 th Year	1.00%
		5 th Year	1.25%
		6 th Year	1.50%
		* the rate is to be specified for specific project i.e road / building/ bridge/ ROB/ others	
29	52	The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price:	Performance Security for 5 per cent of contract price plus Rs. _____ as additional performance security in terms of ITB Clause 29.5
		The standard form of Performance Security and Additional Performance Security acceptable to the Employer shall be an <u>unconditional Bank Guarantee</u> of the type as in Section 8 of the Bidding Documents.	
30	58	The Schedule of Operating and Maintenance Manuals	Enclosed
31	58	The date by which 'as-built' drawings (in scale as directed) in 2 sets are required	within 28 days of issue of certificate of completion
32	58	The amount to be withheld for failing to supply 'as built' drawings by the date required	Rs 5 Lacs.
33	59.2	The events shall also be fundamental breach of contract	The Contractor has contravened clause 7.1 and Clause 9 of GCC.

SECTION 5

TECHNICAL SPECIFICATIONS

A. For Road & Bridge/ROB works:

All the items of work included in the scope of work will be executed as per MoRTH specifications for road and bridge work (4th revision-2001) and relevant IRC & I.S. Codes and as per circulars/guide lines issued by the MoRTH from time to time & amended by respective body time to time till 30 days before opening of tender.

B. For Building works:

All the items of work included in the scope of work will be executed as per relevant PWD & I.S. Codes and as per circulars/guide lines issued by the PWD/ RSRDC from time to time & amended by respective body time to time till 30 days before opening of tender.

TECHNICAL SPECIFICATIONS

A. STANDARD SPECIFICATIONS

A.1 Standard Specifications

The "Standard Specification for Road and Bridge work with latest revision issued by IRC/MoRTH, set out the specifications that shall be followed for construction of general civil works. Specifications for additional specialized items of civil works shall be as set out in Part-B, Particular Specifications, of this Section.

In the even of any discrepancy between the provisions of the Standard Specifications and the Particular Specifications, then the provisions of the Particular Specifications will prevail.

B. PARTICULARS SPECIFICATIONS

(B.1) PARTICULAR SPECIFICATIONS FOR ROBS (CIVIL WORKS):

1. Reinforced Earth Retaining Wall:

The work of reinforced Earth retaining walls proposed in approaches to ROB as per drawings shall be carried out as per Clause 3100 of Ministry of Road Transport and Highways "Specifications for Road & Bridge Works" (Fourth Revision).

Specific requirement of 'fill material' as stipulated under clause 3103, which shall be strictly met with. The design and drawings of reinforced Earth Retaining wall shall be submitted by the contracting agency for approval of Engineer-in-Charge.

(a) Scope of works

The work includes detailed design for the entire reinforced earth structure for different sectional heights, supply and erection of reinforcing elements, supply & placement of facia panels/blocks and all associated components as per the requirement of the proposed technology and approved design and supervision including supervision of earthwork and pavement works for effectiveness of RET. The design shall take into account the Earthquake/seismic factor for relevant Zone. The work also includes preparing, submitting & getting approval to all the designs & method statement along with programme to match with over all completion of the work.

The reinforced Earth retaining walls shall be designed to cater for all the design loads of National Highway traffic and other design criteria specified in IRC codes. The design of reinforced earth retaining wall shall be based on the actual site conditions and shall match with the approved construction drawings of flyovers/ROB.

Interested bidders are requested to visit the project site and carryout necessary geo-technical investigation and submit a realistic design for approval.

(b) Technology of the reinforced soil structure

The RE wall proposed is of M-35 concrete panel/blocks with minimum thickness 200 mm. Reinforcing materials such as knitted and PVC Coated Polyester Geogrids (LDPE Coated, Latex coated, Extruded PP/ HDPE geogrids) may be used for reinforcing the select fill. The source from which the geogrids are procured must have ISO 9002. The reinforcement has to be in the form geogrids in case of polymeric geosynthetic reinforcement. The selection of suitable reinforcing element shall be as per specifications of relevant Indian code and relevant BS code (in case of non existence of IS code) and shall be approved by the Engineer. The Engineer – In Charge reserves the right to inspect and verify the manufacturing facility of geogrids before approving the source.

The proposed material must have been used and the structure performed successfully in India for at least one project with height over 10 mtrs.

The agency shall submit details of technology, its design principles, durability and details of its adoption on at least one Project in India. The detailed design has to be got approved from the MNIT/IIT before the execution of this work. In absence of the relevant Indian standards, the design shall confirm to relevant British Standards. The design shall take into account the Earthquake/seismic factor. The design and execution of RE work shall generally confirm to specifications and criteria laid down in Ministry of Surface Transport, specifications for road and bridge works (4th revision, 2001) and special report No. 15, state of the Art: Reinforced soil structures applicable to road design and construction published by IRC in 1996.

Material Specifications:

The material proposed to be used in this work shall meet the requirement of the patented reinforced soil technology to be adopted by the agency for this work. However the material shall also meet the following broad specifications.

Reinforcing Elements:

Soil reinforcing element in structure, shall be manufactured from select grades of high tenacity polyester yarn to ensure high strengths, low creep and excellent durability. The yarns shall be formed into a dimensionally stable grid structure with uniform apertures, using an advanced weft insertion warp knitting process and shall be then given a tough and durable polymeric coating to enhance dimensional stability, resistance to installation damage and durability.

Facia Material

The facing shall be precast reinforced concrete panels/blocks M-35 grade with aesthetic finish as per approved drawing. The panels shall be machine finished and shall be manufactured by the approved sub-contractor who will be supplying reinforcing element and has successfully completed at least one project of construction of retaining walls of height not less than 10m for flyovers/ROBs in India. The facing should be designed to cater to maximum transversal, vertical and longitudinal flexibility to cater to seismic and ground movements Clause 3100.4.

The fascia units, which help maintain a vertical face of the reinforced soil/ earth structure, control erosion of the fill and provide aesthetic appearance to the reinforced soil/ earth structure, shall be of the pre-cast reinforced concrete blocks/panels as indicated in the drawings.

Pre-cast Reinforced Concrete Panels/ Slabs

Pre-cast concrete facing elements shall conform to the details and dimensions shown on the approved drawing. Concrete shall be of grade M-35 (minimum) shown on the drawings and shall conform to the requirements as specified in section 1700 "Structural Concrete" of MoRT&H Specifications. The joints of the segmental panels / discrete panels shall be sealed by using geotextile the joints and pasted on the fill side before placing the filter media.

Casting

The elements shall be cast on a flat area. Tie-strips connecting pins, PVC pipes (as and where applicable) and lifting anchors shall be set in place to the dimensions and tolerances shown on the drawing and reinforcing elements guides shall be set on the rear face, prior to casting. The concrete in each unit shall be placed without interruption and shall be compacted by the use of an approved vibrator supplemented by such hand-tamping as may be necessary to ensure that the concrete reaches into the corners of the forms and prevent formation of stone pockets or cleavage plans. Clear form oil shall be used throughout the casting operations.

Curing

The precast elements shall be cured for a sufficient length of time as approved by Engineer so that the concrete develops the required compressive strength. Only fresh potable water shall be used for curing. After removal of shutter from the moulds, they shall be stacked in position in accordance to approved Agency's construction manual. The fascia units shall be covered with hessian cloth for 14 days and sprinkled with running water at least 06 times a day. The frequency of wetting the hessian cloth may be increased when the ambient temperature is high at the discretion of Engineer In-charge.

Removal of Forms

The forms shall remain in place until they can be removed without damaging the elements. The scheme of removal of formwork shall be as per relevant MoRT&H Specifications.

Scribing

The date of manufacture and unit designation shall be clearly scribed on the rear face of each unit.

Concrete Finish

The front (exposed) face of the elements shall have the finish approved by the Engineer and painted with cement based waterproof paint or as decided by the Engineer. The rear face shall have the finish of unformed surface and shall be roughly screened to eliminate open pockets of aggregates.

Tolerances

All elements shall be manufactured within the following tolerances:

- All dimensions within: 5mm
- Evenness of the front face: ± 5 mm over 1500mm
- Difference between lengths of two diagonals: maximum 5 mm.
- Thickness: ± 05 mm

Handling Storage and Transporting

All elements shall be handled, stored and transported in such manner as to eliminate the danger of chipping, cracks, fracture and excessive bending stresses. Elements in storage shall be supported on firm blocks to be located adjacent to the reinforcing elements to avoid bending.

Acceptability

Acceptability of the precast elements shall be determined on the basis of compression tests, as per MoRT&H Specifications.

Rejection

Elements shall be subject to rejection in case of failure to meet any of the requirements specified above. In addition, defects, which indicate imperfect molding, or defects indicating honeycombed or open textured concrete, shall be sufficient cause for rejection.

Earth Fill

The fill material for reinforced earth structures shall have an angle of interface friction between the compacted fill and the reinforcing element of not less than 30° , measured in accordance with IS : 13326 (Part 1). The soil should be predominantly coarse grained; not more than 10 percent of the particles shall pass 75-micron sieve. The soil should have properties such that the salts in the soil should not react chemically or electrically with the reinforcing elements in adverse manner Clause 3100.5 .

I. Main fill material to build up the geogrid reinforced gravity body

- II. Fill material at the slope front as a basis for successful long-term vegetation
- III. Fill material for drainage layer below/behind the reinforced zone

I. Main Fill Material: The properties of structure fill, subsoil and the retained fill and their interface media shall be based on assumed representative soil data at the design stage, but the values shall be verified at the time of the construction.

Fill in structure or slope shall either be wholly frictional or cohesive-frictional. Stratified layers of combined frictional and cohesive-frictional fill shall not be used without specific design check. The use of soft chalk, un-burnt colliery shale and unsuitable material shall not be permitted and got removed from the site.

Fill for reinforced soil structure shall be site-own granular fill, allowing dissipation of pore pressure by designing the same with free draining characteristics or by providing vertical & horizontal drainage provisions in the reinforced soil volume. The association of drainage bay or interface drains shall be connected properly to the gradient required and shall be maintained during compaction in layers.

Backfill material used in reinforced soil volume shall be free from organic or otherwise deleterious materials and shall conform to the following mechanical & physico-chemical requirements:

Sieve size	Percent passing
1.00mm	100%
0.425 mm	0 to 60%
0.075 mm	≤ 15%
Coefficient of uniformity $C_u =$	$(D_{60} / D_{10}) \geq 2$

Acceptance limits for materials with more than 15% passing 75 micron are related to the percentage of particles smaller than 15 microns as follows:

- Materials with more than 15% passing 75 microns sieve but less than 10% of particles smaller than 15 microns are acceptable.
- Materials with more than 15% passing 75 microns sieve and more then 20% of particles smaller than 15 microns are inadequate and shall not be used except as specified below.
- Materials with more than 15% passing 75 microns sieve and 10 to 20 % of particles smaller than 15 microns are acceptable provided that the internal friction angle is not smaller than 30°.

Initially at approval of source and subsequent at each change of source, backfill is to be checked for sieve analysis, a/m above; pH for range of 5 to 10; and angle of internal friction for minimum 30°. The results will indicate what further tests are required, if any.

Materials not conforming to above requirements may be used with the written consent of engineer in charge after carrying out test. Such materials shall be tested for their functional properties to assure that they are consistent with the parameters used in the design calculations.

II. Fill material for drainage layer below/behind the reinforced zone: The design & construction of the reinforced soil structures shall ensure that there is no build up of excess pore-pressures or hydrostatic pressures within the fill. When clean granular fill materials are used, the reinforced soil structures may be considered to be free draining. In such cases elaborate drainage provisions may not be required. However, when there is a possibility of significant ingress of moisture within the fill and in case of fills materials with inadequate permeability, the design should incorporate adequate provisions for drainage.

The material used in drainage layers shall be a natural gravel, natural sand, crushed gravel, crushed rock or any combination thereof and shall conform to the following gradation limits.

<i>IS Sieve Size</i>	<i>% Passing</i>
20 mm	100
4.75 mm	60 – 100
1.18 mm	15 – 45
0.600 mm	0 – 25
0.150 mm	0 – 5

In addition, the drainage material shall satisfy the electro-chemical requirements as specified for main fill material.

The drainage collection pipe shall be a perforated/slotted PVC or corrugated HDPE pipe of 150mm diameter.

Construction Requirements

The construction of Reinforced Soil/ Earth Structures shall be carried out in accordance with the specifications and in conformity with the lines, grades, design and dimensions shown on the approved drawings.

Excavation

The Plan area of Reinforced Soil/ Earth Structures shall be excavated in accordance with the requirements of General and Special Specifications and in reasonably close conformity to the limits and to the lines and grades during construction stages as shown on the approved drawings. The contractor shall take precautions to minimise over- excavation. Excavation support, if required shall be designed by the Contractor.

Foundation Preparation

The foundation for Reinforced Soil/ Earth Structures shall be graded level for width equal to or exceeding the length of reinforcing geosynthetics. Prior to wall construction, if required by the Engineer, the foundation shall be compacted with a smooth wheeled roller.

Ground Improvement

Where foundation soil is found to be unsuitable, either removal and replacement technique or ground improvement is required to be carried out, as required by the Engineer. The need for ground improvement, design and ground improvement methodology shall be verified and approved by the Engineer prior to construction.

Suitable ground improvement technique shall be identified and submitted to the Engineer – In – charge. The Engineer – In charge shall approve the methodology as per his discretion.

Foundation preparatory works and foundation treatment/ improvement shall be treated as integral part of the reinforced soil /earth structure and accordingly Contractor shall arrange for detailed sub-soil investigation works and employ his resources to design and construct the foundation/ ground improvement treatment, wherever necessary to satisfy the requirements of reinforced soil structure. The design check and validation for foundation treatment/ ground improvement and the methodology shall be verified and approved by the Engineer prior to construction.

Leveling Concrete

A leveling concrete pad shall be provided under the walls and seat beams (for - Bridges /Flyover/ROB abutments). Concrete shall have a minimum grade M-15. Maximum size of aggregates shall be 20mm and the pad shall be cured for at least 48 hours before placement of panels.

Batter

The reinforced earth/ soil wall face may be provided with an initial inward batter specified by the system supplier or as given in the drawings. Initial inward batter is required to counter the outward tilt that will occur as the wall height is built up and also due to construction process. As a guideline the initial batter is generally in the range of 40 to 60.

Erection

All reinforcements shall be installed at the proper elevation and orientation as shown in the wall details of approved drawings or as directed by the Engineer. The reinforcement strips shall be placed normal to the face of the wall unless otherwise shown on the drawings.

Pre-cast Concrete Facia Panels

Pre-cast concrete blocks/ panels shall be placed vertically with the aid of a light crane. For erection, panels are handled by means of lifting devices set into the upper edge of the panels. Panels shall be placed in successive horizontal lifts in the sequence shown on the drawings as backfill placement proceeds. As fill materials is placed behind a panel, the panels shall be maintained in vertical positions by means of temporary wooden wedges placed in the joint at the junction of the two adjacent top rows of panels during construction. As construction proceeds, and a fourth row is erected, the lowest row of wedges can be removed and so on.

External bracing may also be needed for the initial lift. However, bracings shall be placed in an area not more than 1.5m wide beyond the outer face of panels. Vertical tolerances

(plumbness) and horizontal alignment tolerance shall not exceed 25mm when measured along a 3 m straight edge. The maximum allowable offset in any panel joint shall be 25mm.

Joint Fillers

Fillers of vertical joints between panels shall be flexible open / close cell polyurethane foam strips or nonwoven fabric strips (the latter used as joint cover instead of filter) as approved by Engineer. Bearing pads for horizontal joints between panels shall be made of elastomer with vulcanised EPDM.

Reinforced Earth Backfill Placement

The reinforcing elements shall be laid free from all kinks, damage and displacement during deposition, spreading, leveling and compaction of the fill. The programme of filling shall be such that no construction plant runs directly on the reinforcement. It shall be ensured that the exposure of soil reinforcement to ultraviolet rays is minimal and should be covered with earth within one day of placement.

All construction plant having a mass exceeding 1000 kg shall be kept at least 1.5m away from the face of slope or wall. In this area (upto 1.5m from the face of slope or wall), the following compaction plant shall be used.

Vibratory roller having a weight per meter width of roll not exceeding 1300 kg with total weight not exceeding 1000 kg.

Vibratory plate compactor of maximum weight 1000 kg.

Vibro tamper having a weight not exceeding 75 kg.

During construction of reinforced backfill, the retained material beyond the reinforcement at the rear of the structure shall be maintained at the same level as reinforced fill. The entire works relating to compaction should be carried out generally in a direction parallel to the facing. Fill placement methods near the facing shall ensure that no voids exist below the reinforcing elements.

In case of Discrete Panels , temporary formwork shall be used to support the construction as per specified details given in the drawing. The forms, scaffolding and props shall be sufficient in numbers to allow taking up of a sectoral construction schedule as specified in the design.

At the end of each day's operations, the contractor shall shape the last level of backfill as to permit run-off rainwater away from the wall face.

Drainage Fill Placement

Drainage fill shall be placed to the minimum finished thickness and widths shown on the construction plans or as modified by the Engineer. During placement and compaction of drainage material, care must be taken to ensure that there is no contamination with undesirable materials. Vertical layers of drainage layer material shall be brought up at the same rate as the adjoining fill material.

Drainage collection pipes shall be installed to maintain gravity flow of water outside of the reinforced soil zone. The drainage collection pipe should discharge into a storm sewer, manhole or along a slope at an elevation lower than the lowest point of the pipe within the aggregate drain.

The main collection drainpipe just behind the precast facing, if used, shall be a minimum of 150mm in diameter. The secondary collection drain pipes should be sloped a minimum of two percent to provide gravity flow into the main collection drainpipe. Drainage laterals shall be spaced at a maximum 25 meters spacing along the wall face. The drainage collection pipe shall be a perforated or slotted, PVC or corrugated HDPE pipe.

The pipe and drainage aggregate shall be wrapped with a geotextile that will function as a filter. More efficient drainage system, if possible, may be suggested by the proprietary Supplier/ Contractor for the review and approval of Engineer.

Cap Block Placement/ Capping Beam

The cap block and or top concrete block unit shall be bonded to the fascia units below using cap adhesive.

Design, Working Drawing, Detailing and Supervision

The scope of work will also cover the supply of detailed design, engineering submission of working drawings by the specialized agency for reinforced soil/ earth works. The designs and drawings shall be got approved from the Engineer and/or its representative before execution of work.

Inspection

Engineer and/or the representative shall verify the materials supplied by the contractor to ensure that all the requirements of the specifications are satisfactorily met with. This includes all submittals and proper installation of the system.

The reinforced soil/ earth structure system supplier shall provide one qualified and experienced representative at site on full time basis during the entire working phase to ensure that the quality of the works performed by the Contractor is in accordance with the specifications and to assist the Contractor regarding proper wall installation.

The Contractor's field construction supervisor shall have demonstrated experience and should be qualified to direct all work at the site. All expenses relating to this presence on site shall be deemed to have been included in the rate and no extra claim on this account shall be admissible.

Testing of Materials

Testing shall be done as stated elsewhere in this specification on all materials required for reinforced soil/ earth structure construction. The tests shall be done from a reputed independent agency as approved by Engineer as and when required. Tests on materials and during construction shall not be limited to the following types:

Testing of soils for evaluating their index and engineering properties. Soil report may be consulted with regard to this requirement.

Testing of friction angle between the reinforcement and soil using direct shear test.

Testing of Reinforcements For design of reinforced soil/ earth structure, tensile strength, yield stress, elongation and modulus of elasticity of the reinforcement material are required. All these properties for the steel reinforcement can be obtained from standard tensile test.

For connection strength between geogrid and facing where connection strength should have appropriate factor of safety against the connection load from reputed institutions like IIT's/MNIT.

Testing of Geotextile/ Geogrid shall be done as per ASTM Specification satisfying the criterion laid by IRC or MoRTH

Measurement and Payment

The measurement for Reinforced Earth Structures, Reinforced soil, Mechanically Stabilized Earth or similar soil reinforcing system of Reinforced Soil Retaining wall shall be measured as follows:

- I. Measurement for facia material (Panel or Blocks) shall be in vertical Sq. meters. This shall be measured on each face of the ramp and closing wall from top of the levelling concrete to bottom of the crash barrier.
- II. Measurement of backfill placement and compacting for the reinforced soil/ earth wall shall be in cubic meters for compacted soil. This shall be measured separately by taking cross sections at intervals in the original position before the work starts and after its completion.
- III. The payment for excavation, foundation concrete, reinforcing element, fastners, filter media, drainage layer, drainpipe, coping beam and other accessories shall not be measured separately. It is deemed to have been included in the facia material rates for the project.

2. Expansion Joints:

Strip seal expansion joints shall be provided as per stipulation laid out in Clause 2607 of MORT & H Specification (Fourth Revision).

3. Bearings:

Elastomeric Bearings proposed for ROB shall conform to clause 2005 of MoRTH Specification (Fourth Revision). Pedestal height should be kept considering ease for replacement of bearing in future.

In railway portion neoprene elastomeric bearings be in conformity with draft specification for elastomeric bearing for Railway bridges issued by RDSO Lucknow and relevant IRC codes.

All test shall be conducted on test bearings chosen at random from the lot under acceptance testing at IIT or in other approved laboratory in the presence of Railways & RSRDCC Ltd representative.

Bearings shall be transported to bridge site after final acceptance by the Engineer.

4. Wearing coat:

Wearing coat over bridge decks & via- duct spans shall comprise of 40 mm thick bituminous concrete over lay with 25mm thick bitumen mastic layer. The work of B.C. and mastic asphalt shall be done in conformity with Clauses 2702.2, 509 and 515 respectively of MORT & H Specification (Fourth Revision).

5. Pile Foundation:

Friction Piles have been proposed under piers and abutments. The diameter of piles proposed is 1200 mm in approaches work and 1000 mm diameter in Railway portion with provisional length of 20m. The construction of piles and testing would be as per IS:2911- Part I and IRC-78 and MoRTH section 1100. The contractor has to arrange all necessary equipments, machinery and labours to cast in situ bored piles and subsequent test as per codal requirement. The contractor have to arrange for low strain non destructive tests on piles and also carry out pile load test on single pile in accordance with IS:2911, the initial and routine vertical load test and lateral load test to be made on single vertical piles in accordance with IS:2911 (Part IV) including installation of loading platform and preparation of piles head or construction of test cap and dismantling of test cap after test etc complete as per clause 100 of MoRTH specification, further the contractor will provide equipments for SPT during drilling of piles as per direction of Engineer-in-charge.

The basic material shall confirm to the specification for material given in section 1000.

Test Pile:- Test piles have to be installed by the contractor on his own. The pile shall be loaded and tested in accordance with provisions laid down in MoRTH specifications. Removal of surplus length of pile shall be according to MoRTH clause 1106.4 and clause 7.7.1 of IS:2911 (Part I section 3). Driving equipments and procedure shall be as per MoRTH specifications 110 and 1111 respectively.

6. Sub-Structures & Super structures:

The work pertaining to sub structures and super structures of grade M-30 and M-40 in approaches work respectively where as M-30, M-35 & M-45 in substructure and superstructure of Railway portion respectively, shall conform to guide line given under Clauses 2200 and 2300 respectively of MoRTH Specification (Fourth Revision). Requirement of structural concrete shall conform to Clause 1700.

7. Steel Reinforcement (Un-tensioned):

HYSD steel Fe-500 for super structure and fe-415 for sub structure have been taken in design and Wastage, overlap, couplings, welded joints, spacer bars, chairs, stays, hangers and annealed steel wire or other methods of binding and placing shall not be measured and cost of these items shall be deemed to be included in the rates for reinforcement as clarified in Clause 1608 of MORT & H Specifications (Fourth Revision).

High strength deformed steel TMT bar of TATA TISCON/ISPAT /SAIL/RINL only be used and shall comply with the provisions of IS 1786 and shall be procured from primary producer of steel. Apart from the manufacture's test certificate, every lot of material shall be tested in Govt. Laboratory / Engineering College in presence of representative of Engineer in charge.

High Tensile steel

High tensile steel should confirm to IS 1785 /6003/6006/14268 & other relevant IS Code & other specifications.

Only TATA /USHA MARTIN make High Tensile strands shall be accepted.

The pre stressing system only allowed after submitting detail methodology of pre stressing.

8. Materials:

The cement shall be supplied by RSRDC free of cost except for precast RE panel work, kilometer stones, boundary stones and pillars, interlocking tiles, vibropressed drains and ferro cement work. Materials for structures shall conform to Clause 1000 of MoRTH Specifications (Fourth Revision).

9. Weep Holes:

For earth retaining structures weep holes shall be deemed to be included in the item of retaining wall work and shall not be measured separately as specified in Clause 2708 (v) of MoRT &H Specification (Fourth Revision).

10. Approaches:

The work of laying hard crust and earth work in embankment shall be carried out as per relevant Clauses 305 of MoRTH Specification (Fourth Revision).

11. Repairs:

Repairs to existing structures shall conform to Clause 2800 of MORTH Specification (Fourth Revision).

12. Miscellaneous Items:

For items not covered in the above specifications / MORT H / IRC / specification for civil works, the provisions of following standards shall be followed in the given order to priority.

- (a) Provisions of IS Codes of practices.
- (b) Provisions of IRC Codes of practices.
- (c) Relevant provisions of B.S. Codes of practices.
- (d) Sound Engineering practice, Technical literature/Papers and provisions of relevant Codes of other Nations.

Signature of Contractor

Date :

Name / Address:

ROB LC-C27 at Pali 57/103

Project Director,

RSRDC Ltd.

Unit-Pali

SECTION 6
FORM OF BID

Description of the
Works: _____

BID To _____ :
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.

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 _____

SECTION 7

BILL OF QUANTITIES

Preamble

- 1 The Bill of Quantities shall be read in conjunction with the instruction to bidders, conditions of contract specifications & drawings.
- 2 For the construction of works, the quantities given in the bill of quantities are estimated, 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.
 - a. All the rates and prices tendered in the bill of quantities in the case of item rate tenders and
 - b. All percentage rate above and below or at par of the schedule of rates as tendered by the contractor
- 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, erections, maintenance, insurance, profit, taxes and duties together with all general risks, liabilities and obligations set out in the contract.
- 4 Arithmetic errors will be corrected by the employers pursuant to clause 27 of the instructions of bidders
- 5 When percentage rate tenders are invited, the bill of quantities will show in the bidding documents the rate used for different items. In case of typographical error in the rate given, the rate for the item of concern BSR specified in schedule G, as amended till the date of bidding, will prevail.



Rajasthan State Road Development & Construction Corporation Ltd.

(A GOVERNMENT OF RAJASTHAN UNDERTAKING)

Unit Office:- 21, Keshav Nagar, Near New Bus Stand Sumerpur Road Pali

TENDER DOCUMENT

FOR

**Construction of ROB with Approaches in lieu of level crossing No. C-27 at Pali
including Railway portion (Excluding cost of cement)**

Estimated Cost	:	Rs. 14.00 Crore
Earnest Money	:	Rs. 28.00 Lacs
Tender Cost	:	Rs. 5000.00
Last Date of sale of Tender	:	21-02-2011 Upto 6.00 P.M.
Date of Receipt of Tender	:	23-02-2011 Upto 3.00 P.M.
Date of Opening of Tender	:	25-02-2011 At 3.30 P.M.
Period of completion	:	24 Months
B.S.R.	:	PWD NH Circle & Building Jodhpur, 2008
NIT No.	:	550/2010-11

**Project Director,
RSRDC Ltd, Unit -Pali**



**OFFICE OF THE PROJECT DIRECTOR, R.R.S.R.D.C. LTD. UNIT-
PALI**

Reqd. Office : Setu Bhawan, Opposite Jhalana Doongri, Agra Bye Pass Road, Jaipur - 302004

Unit Office- 21, Keshav Nagar Near new Bus Stand N.H. 14 Pali Sirohi Road Pali Rajasthan 02932-284221

General Abstract

NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement)

Particulars	Amount
(Part A) Approaches Work Schedule- G	-
(a) BRIDGE PROPER (Viaducts)	Rs. 1,51,61,059.00
(b) ABUTMENTS & APPROACHES	Rs. 2,41,81,233.00
(c) SERVICES ROAD & DRAINS	Rs. 32,95,231.00
(d) ROAD USER SAFETY AND SIGNAGES	Rs. 1,67,481.00
TOTAL OF SCHEDULE -G	Rs. 4,28,05,004.00

Tender Premium % :% Below /Above

Amount of Tender Premium Rs.

Total (G-schedule) Rs.

Schedule -H Rs.

Total Schedule -G+H Rs.

(Part II) Railway Portion Schedule- G	
Part (a) -Railway Portion	Rs. 3,89,70,556.00

Tender Premium % :% Below /Above

Amount of Tender Premium Rs.

Total (G-schedule) Rs.

Schedule -H Rs.

Total Schedule -G+H Rs.

Grand Total

Signature of Contractor with seal

**Project Director
RSRDC Ltd, Unit-Pali**

NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement)

(Part I) Approaches work

G-Schedule Items

(a) BRIDGE PROPER (Viaducts)

S. No	ITEMS	Unit	Qty	Rate	Amount
	Girder and slab superstructure (Voided slab)				
1	Furnishing and placing reinforced/ prestressed cement concrete in superstructure as per drawing and MoRTH specifications section 1500, 1600, 1700.				
	M-40 grade Using Batching Plant, Transit Mixer and Concrete Pump.				
	Cast in situ box girder,segmental construction & balanced cantilever	cum	1174.00	2539.00	29,80,786
(Rs. Two thousand five hundred thirty nine only)					
2	Supplying, fitting and placing HYSD bar reinforcement in superstructure complete as per drawing and MoRTH specification section 1600.	MT	170.72	44793.00	76,47,061
(Rs. Forty four thousand seven hundred Ninety three only)					
3	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 Cm above road/ ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre- to- centre, 2 m high with 1.15 m below ground level , all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS: 1367 and IS: 1364 , metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm , 546 mm long complete as per Clause 810.	Rmt.	812.00	2145.00	17,41,740
(Rs. Two thousand one hundred forty five only)					
4	PCC M-15 grade levelling course below approach slab complete as per drawing and MoRTH specifications clause 14.10.	Cum	98.00	951.00	93,198
(Rs. Nine hundred fifty one only)					
5	Bearing				
	Supplying , fitting and fixing bearings in position true to line and level complete, Elastomeric bearing conforming to IRC : 83 (Part II section IX) including all accessories as per drawing & technical sp. [MoRTH Specification : Clause 2000(N)]	Cucm	258048.00	0.65	1,67,731
(Rs. Point six five only)					

6	Expansion Joint Slab seal type of expansion joint complete as per drawing and technical sp. Including acceptance testing as specified, to be installed under supervision of a specialist manufacture (MoRTH sp. Cl. 2600(n))]	Rmt	144.00	12717.00	18,31,248
(Rs. Twelve thousand seven hundred seventeen only)					
7	Bitumen mastic wearing coat				
	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen (PMB - 40) 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 anti- skid surface with bitumen precoated 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 surfaces is not less than 100 ⁰ C, protruding 1 mm to 4 mm over mastic surface, all complete as per MORTH specification Clause 515.	Sq.m	900.00	387.00	3,48,300
(Rs. Three hundred Eighty seven only)					
8	Bituminous concrete wearing coat				
	Providing and laying bituminous concrete as per design mix on prepared surface with specified graded stone as per table 500-18 for wearing course including loading of aggregate with F.E loader and hot mixing of binder and 2% cement filler with aggregates in approved hot mix plant as per clause 6.5 of manual Transporting the mix material with tipper to paver and laying with sensor paver finisher (as per clouse 507.3.5) to the required level , grades and rolling with vibratory compactor and pneumatic tyred roller 150-250 KN,TP=0.7 Mpa, to achieve the desired density (approved by the department) excluding cost of primer/tack coat (MORTH Specification : Clause - 509,112)				
	Bitumen @ minimum 5.5 % of mix with all lead 60/70 grade	cum	36.00	6111.85	2,20,027
(Rs. Six thousand one hundred eleven point eight five only)					
9	P& F GI pipes (External work) with GI fittings (IS: 1239 Mark) including trenching and refilling earth etc. 100mm dia nominal bores class B	mtr	204.00	642.00	1,30,968
(Rs. Six hundred fourty two only)					
	TOTAL				1,51,61,059

Project Director
RSRDC Ltd, Unit-Pali

NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement)

(Part I) Approaches work

G-Schedule Items

(b) ABUTMENTS & APPROACHES

S.No.	ITEMS	UNIT	Qty.	Rate	Amount
1	Earth work in excavation for foundation of structure complete with all lift, dewatering shoring and shuttering etc.including refilling of trenches in 25.mm layers, ramming, watering and disposal of surplus soil within a lead of 1000 metres, as per drawing and technical specification.[MoRTH Specification : Clause : 304]. In hard soil (MORTH Specification : clause 301) above 3m to 6m depth	CUM	1665.11	77.00	1,28,213
(Rs. Seventy seven only)					
2	Cement concrete for plain/reinforced concrete in open foundation,any level,complete as per drawing and technical specification (MoRTH Specification section 1700 & 1500) PCC M-15 grade.	CUM	114.40	949.00	1,08,566
(Rs. Nine Hundred forty nine only)					
3	Broad / cast in situ RCC pile complete as per drawing and technical specification(MORTH Specification section 1100,1600 & 1700(N) (M-30)	Mtr.	714.00	3747.00	26,75,358
(Rs. Three thousand Seven hundred forty seven only)					
4	Load testing of piles. Initial and routine test for vertical load testing.	Tonne load	2000.00	200.00	4,00,000
(Rs. Two hundred only)					
5	Load testing of piles. For lateral load testing of pile.	Each pile	54.00	13000.00	7,02,000
(Rs. Thirteen thousand only)					
6	Structural concrete (MoRTH Specification 1100,1500,1700) M-30 grade	CUM	466.56	1327.00	6,19,125
(Rs. One thousand three hundred twenty seven only)					
7	Plain/reinforced cement concrete in substructure complete as per drawing and technical specification MoRTH Section 1500,1700,2200 Height up to 5.0 mtrs RCC GRADE M-30	CUM	594.00	1491.00	8,85,654
(Rs. One thousand four hundred ninety one only)					

8	Plain/reinforced cement concrete in substructure complete as per drawing and technical specification MoRTH Section 1500,1700,2200 Height above 5.0 mtrs and up to 10.0 mtrs RCC GRADE M-30	CUM	415.80	1578.00	6,56,132
(Rs. One thousand five hundred Seventy eight only)					
9	Plain/reinforced cement concrete in substructure complete as per drawing and technical specification MoRTH Section 1500,1700,2200 Height up to 5.0 mtrs RCC GRADE M-20	CUM	54.00	1439.00	77,706
(Rs. One thousand four hundred thirty nine only)					
10	P & L steel reinforcement at any level in foundation complete as per drawing and technical specification, [MoRTH Specification : Clause 1600 N] HYSD bar reinforcement Fe-500	MT	310.68	44363.00	1,37,82,697
(Rs. Forty four thousand three hundred sixty three only)					
11	Back filling behind abutment, wing wall and return wall complete as per drawing and technical specification clause 710.1.4 of IRC 78 & MoRTH section 2200) Sandy material.	CUM	765.00	546.00	4,17,690
(Rs. Five hundred forty six only)					
12	Providing and laying of filter media with granular materials/ stone crushed aggregates satisfying the requirements laid down in Clause 2504.2. Of MORT&H 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 specifications clause 710.1.4 of IRC 78 & MoRTH section 2200.	CUM	1480.80	266.00	3,93,893
(Rs. Two hundred sixty six only)					
13	Providing AC pipe weep holes 150 mm dia in masonry/Plain concrete/Reinforced concrete abutment, wing wall/return wall complete as per drawing and technical specification (MoRTH Specification Clause 2205)	mtrs	769.00	32.17	24,739
(Rs. Thirty two point one seven only)					
14	Dressing of earth work including cutting and filling up to 150 cm (MoRTH specification Clause 301 to 305)	cum	321.76	11.33	3,646
(Rs. Eleven point three three only)					
15	Extra for watering the earth to bring the earth up to required OMC excluding rolling.	cum	321.76	4.12	1,326
(Rs. Four point one two only)					

16	Extra for rolling to specification with power roller,8-10 tonne when earth is at suitable moisture content dry field density not less than 95% of maximum dry density (Modify Heavy proctor test) excluding watering.	cum	321.76	4.16	1,339
(Rs. Four point one six only)					
17	Providing and laying granular sub-base material having P.I.not more than 6, including spreading in layers not exceeding 150 mm compacted thickness and consolidation by 8-10 tonne power roller to required camber and grade including cost of water and hire charges of machinery, including T&P with all lead (Compacted thickness to be measured).as per MORTH specification table 400-1, 400-2 :	cum	557.70	249.00	1,38,867
(Rs. Two hundred forty nine only)					
18	Providing, laying, spreading and compacting stone aggregate of as per table 400-10 and 400-11 Wet Mix Macadam specification including premixing the material with water to OMC in wet mix plant as per approved design mix, carriage of mixed material by Tipper to site laying in uniform layers with motor grader/F.E.Loader/paver finisher, in sub base/ base course on a well prepared under base and compacting with vibro roller to achieve the desired density including lighting, guarding, barricading and maintenance of diversion etc. (MORTH specification : Clause 406) by mechanical means with lead up to 1 Km.	cum	697.13	795.85	5,54,811
(Rs. Seven hundred ninety five point eight five only)					
19	Providing and applying primer coat over prepared surface or granular base with bitumen emulsion as per IS: 8887 & manufacturer's specifications @ 7.5kg/10 sqm with a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI 502,112 (Including cleaning of road surface)	Sqm	3958.50	22.05	87,285
(Rs. Twenty two point zero five only)					
20	Providing and applying tack coat on prepared surface with bitumen emulsion as per IS:8887 & @ 2.25 kg/ 10 sqm with a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rate and temperatures (including cleaning of Road Surface)	Sqm	3958.50	7.35	29,095
(Rs. Seven point three five only)					

21	Providing and laying Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per table 510 and design mix for base/binder course including loading of material with F.E loader heating of binder aggregate and filler in approved hot mix plant as per clause 6.5 of manual transporting the mixed material by tippers and laying with sensor paver finisher as per clause 507.3.5 to the required level and grade rolling by self propelled power rollers and vibratory rollers or pneumatic tyred roller 150-250KN. TP=0.7MPa to achieve the desired density (approved by the department) but excluding cost of primer/tack coat. [MoRTH Specification : Clause 507,112] with all lead	cum	278.86	4609.85	12,85,503
(Rs. Four thousand six hundred nine point eight five only)					
22	Providing and laying bituminous concrete as per design mix on prepared surface with specified graded stone as per table 500-18 for wearing course including loading of aggregate with F.E loader and hot mixing of binder and 2% cement filler with aggregates in approved hot mix plant as per clause 6.5 of manual Transporting the mix material with tipper to paver and laying with sensor paver finisher (as per clouse 507.3.5) to the required level , grades and rolling with vibratory compactor and pneumatic tyred roller 150-250 KN,TP=0.7 Mpa, to achieve the desired density (approved by the department) excluding cost of primer/tack coat (MORTH Specification : Clause - 509,112) Grade-I Bitumen @ minimum 5.5 % of mix with all lead 60/70 grade	cum	160.29	6111.85	9,79,668
(Rs. Six thousand one hundred eleven point eight five only)					
23	Cost of bitumen to be added / subtracted when it varies from job mix formula adopted in any of the above items.				
	60/70	tons	7.00	32560.00	2,27,920
(Rs. Thirty two thousand five hundred sixty only)					
	Total				2,41,81,233

Project Director
RSRDC Ltd, Unit-Pali

**NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing
No. C-27 at PALI including Railway portion (Excluding cost of cement)**

**(Part I) Approaches work
G-Schedule Items
(c) SERVICES ROAD & DRAINS**

S. No	ITEMS	Unit	Qty	Rate	Amount
1	Earthwork in excavation in foundation trenches etc. not exceeding 2 metres depth including dressing of bottom and sides of trenches, stacking the excavated soil 3m. clear from the edge of excavation and subsequent filling around hume pipes/masonry in 15cm. Layers with compaction including disposal of all surplus soil, as directed within a lead of 1000 metres.[MoRTH Specification : Clause 301,304]. Hard soil (Pick work) 80% of item no. R3 - 8.2)	cum	2323.00	73.39	1,70,485
(Rs. Seventy three point three nine only)					
2	providing and laying mechanically mixed and vibrated cement concrete in foundation upto a depth of 1.5 metres below ground level and 1.50 metres above ground /Bed level (MORTH specification : clause 1000/1700) cement concrete 1:4:8 mix with stone aggregate 40mm crusher broken	cum	530.00	1000.00	5,30,000
(Rs. One thousand only)					
3	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub-base with 43 grade cement @ 400 Kg per cum , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per MoRTH specification clause 602.(Excluding cost of cement)	Cum	609.00	2031.00	12,36,879
(Rs. two thousand thirty one only)					

4	Construction of cement concrete kerb with channel with top and bottom width 115 and 165 mm respectively , 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, kerb channel 300 mm wide, 50 mm thick in PCC M-20 grade, sloped towards the kerb, kerb stone with channel laid with kerb laying machine, foundation concrete laid manually, all complete as per MORTH specification Clause 408. Using concrete batching and mixing plant	Mtr	1624.00	134.72	2,18,785
(Rs. One hundred thirty four point seven two only)					
5	Random Rubble Stone masonry for foundation and plinth in cement mortar 1:3 for above 30 cm thick wall in cement Mortar 1:3 (1cement :3 Sand)	Cum	555.40	677.00	3,76,006
(Rs. Six hundred seventy seven only)					
6	Plaster on new surface on wall in cement sand mortar 1:3 including raking of joints etc complete fine finish 20 mm thick.	Sqm	1218.00	32.00	38,976
(Rs. Thirty two only)					
7	Providing and Fixing of reinforced Ferro-Cement Drain cover designed for class A& AA loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm, anti-corrosive bitumen painted MS plate Rim and on M S lifting hooks, admix. Span 451 to 700mm, class AA loading Standard size of cover 1000x 800 mm	sqm	569.00	1100.00	6,25,900
(Rs. One thousand one hundred only)					
8	Providing and fixing of Precast concrete interlocking blocks of manufactured from fully computerized automatic stationery hydraulic vibro pressed machine & full computerized automatic batching plant of class A-1 as per BS : 6717-2001. The C.C. interlocking paving blocks be laid on average 25 mm thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub base as defined. Complete job is to be executed as per the instructions of Engineer-in-charge. The rates to be inclusive of all lead, lift, lifts & taxes general specifications of blocks. (including cost of cement) 1. Shape : As specified by Engineer-in-charge. 2. Tensile splitting strength and breaking load as per BS : 6717-2001 3. Colour : Grey cement natural colour 4. Variation in Dimension : Less than 1.6mm. 5. Variation in thickness : Less than 3.2mm	sqm	200.00	491.00	98,200
(Rs. Four hundred ninety one only)					
Total					32,95,231

Project Director
RSRDC Ltd, Unit-Pali

**NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing
No.C-27 at PALI including Railway portion (Excluding cost of cement)**

(Part I) Approaches work

G-Schedule Items

(d) ROAD USER SAFETY AND SIGNAGES

S. No	ITEMS	Unit	Qty.	Rate	Amount
1	Providing and laying of hot applied thermoplastic compound inclusive type I reflectorsing glass beads as per table 800-3, 800-4 applied in uniform thickness of at least 2.5 mm and spread uniformly with reflectorising glass beads type II in addition @ 250 gms per Sqm with a road marking machine as per IRC: 35 complete with traffic diversion arrangement as per MORTH specification clause 803.4.	sqm	225.00	541.00	1,21,725
(Rs. Five hundred fourty one only)					
2	Providing and erecting direction and place identification retro - reflectorised sign as per IRC:67 made of high intensity grade sheeting exclusive of lettering, border & signs fixed over aluminium sheeting, 2 mm thick fixed on a mild steel angle iron frame 50mmx50mmx6mm supported on mild steel angle iron post 75 x 75 x 6 mm upto the top of sign board, length of post from bottom of sign board is 2.85 m. upto foundation level post duly painted in black and white synthetic enamel alternate ship 30cm. wide fixed to the ground by means properly designed foundation with M-15 grade cement concrete 45cm x 45cm x 60 Cm , 60 Cm below ground level as per approved drawing & as per MORTH specifications clause 801. Double angle post 180 cm. X 120 cm.	nos.	2.00	17172.00	34,344
(Rs. Seventeen thousand one hundred seventy two only)					
3	Providing and fixing of retro- reflectorised inclusive cautionary, mandatory and informatory sign as per IRC-67 made of high intensity grade sheeting lettering, border & signs fixed over aluminium sheeting, 1.5 mm thick, fixed on mild steel angle iron frame 50mmx50mmx6mm supported on a mild steel angle iron post 75mmx75mmx6mm upto the top of sign board, length of post from bottom of sign board is 2.85m. upto foundation level post duly painted in black & white synthetic enamel. fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45 Cm x 45 Cm x 60Cm, 60 cm below ground level as per approved drawing & as per MORTH specification Cl. 801. 80 cm x 60 cm rectangular	nos.	2.00	4176.00	8,352
(Rs. Four thousand one hundred seventy six only)					

4	Supplying and fixing delineators with 15cm. dia cement concrete M-15 solid block with nominal reinforcement 80-100 cm. long embedded in cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 coarse aggregate 20mm nominal size (45cm. x 45cm.x 60cm.) painted 15 cm. wide alternate strips black /white with enamel paint (black strip at top) with white round reflector 7.5 cm. dia at top on side facing the traffic and opposite side (as per IRC-79).	each	10.00	306.00	3,060
(Rs. Three hundred six only)					
	Total				1,67,481

**Project Director
RSRDC Ltd, Unit-Pali**

NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement)

(Part I) Approaches work

"H" Schedule Items

S. No	ITEMS	Unit	Qty	Rate	Amount
1	Construction of Reinforced Earth Wall with valid certification for specific purpose with drawing and design of precast RE panels minimum M-35 grade & thickness 200 mm The construction included supply & installation of reinforcing element, EPDM,tail piece of special type consisting of high density polythene sheet Geogrid material and all assossery as per technical specification including testing at Peak load. (scope of work includes designing, proof checking, approval, casting in yard, curing, storing, transporting, lifting, placing, in position, erection with all necessary fasteners etc, complete including cost of all necessary accessories) NOTE:- APPROXIMATE 500 SQM PANELS ARE READLY AVAILABLE AT SITE OF DIFFERENT SIZES. CONTRACTOR IS BOUND TO US THEM, COST OF PANELS @ RS 1250 P.SQM WILL BE DEDUCTED.	Sqm	3069		
2	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing of reinforced fill portion and random fill portion in the approaches between the reinforced soil (RS) Wall panel as per approved drawing as per clause 3103 of MoRTH Specification.The soil should be predominately coarsed grained not more than 10% of particle should be pass 75 micron sieve.The item shall be measured and paid for the finished volume of backfill and sub grade placed in position excluding the volume of backfill and sub grade placed in position excluding the volume of filter media at base and behind the RS wall	CUM	9481		
3	Providing and erecting Drainage spout with 0.15 m long GI pipe 150 mm dia and GI bolt 10mm dia with Galavanised MS flats clamp complete as per drawing and Technical specification as per claused 2705 of MoRTH specification including all material labour etc.	mtrs	24		
4	construction of standard penetration tests in soil weathered rock soft rock and hard rock during only for such piles as directed at 1.5,3.0,4.5,6.5,7.5,9.0, 10.5, 12.0, 13.5, 16.0 and 17.5 mtrs and recording accurately the penetration correspondng to 100 blows at each test using a new shoe for each test on pile	nos	66		
5	P & L corrugated spiral tubes of galvanied steel for voided slab as per drawing and specification (700 mmdia)	mtrs	120		

6	Supplying & applying epoxy paint of approved quality on exposed surface of PSC Girders, Deck Slab Parapet, wall super structure and substructure etc. complete as per specification special conditions and detailed scope of work furnished in the tender and as directed by Engineer in charges by Integrated four coat system developed by CECRI Karikadi.	Sqm	7000		
7	Providing arranging and conducting sonic logging test on RC bored piles using cross holes sonic logging analyzer and submission of report	each	20		
8	Non destructive integrated testing of cast in situ pile using pile deriving analyzer or equivalent as detailed in specification and as approved by Engineer.	each	54		
Total					

Project Director
RSRDC Ltd., Unit-Pali

Name of Work:- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement)

Part II -Railway Portion

(a) G-Schedule Items

S.No.	Description of ITEM	Qty.	Unit	Rate	Amount
1	Earth work in excavation for foundation of structure complete with all lift, dewatering shoring and shuttering etc.including refilling of trenches in 25.mm layers, ramming, watering and disposal of surplus soil within a lead of 1000 metres, as per drawing and technical specification.[MoRTH Specification : Clause : 304]Above 3m to 6m depth.	700	Cum	77	53,900
(Rs. Seventy seven only)					
2	Earth work in excavation for foundation of structure complete with all lift, dewatering shoring and shuttering etc.including refilling of trenches in 25.mm layers, ramming, watering and disposal of surplus soil within a lead of 1000 metres, as per drawing and technical specification.[MoRTH Specification : Clause : 304] In Hard rock (blasting prohibited) [MoRTH Specification : Clause :303]	100	Cum	615	61,500
(Rs. Six hundred fifteen only)					
3	Cement Concrete for plain/reinforced concrete in open foundation, any level, complete as per drawing and technical specifications. [MoRTH Specification Section 1700&1500]In R.C.C.Grade 20	75	Cum	1416	1,06,200
(Rs. One thousand four hundred sixteen only)					
4	Plain/reinforced cement concrete in substructure complete as per drawing and technical specifications MoRTH Section 1500,1700, 2200. RCC Grade M-35 Height upto 5.00m.	625	Cum	1573	9,83,125
(Rs. One thousand five hundred seventy three only)					
5	Plain/reinforced cement concrete in substructure complete as per drawing and technical specifications MoRTH Section 1500,1700, 2200. RCC Grade M-35 Height above 5.00m. Upto 10m.	350	Cum	1643	5,75,050
(Rs. One thousand six hundred fourty three only)					

6	Furnishing and placing reinforced/ prestressed cement concrete in superstructure as per drawing and MoRTH specifications section 1500, 1600, 1700. RCC/PSC Grade M-35 Using concrete mixer For Solid Slab Superstructure Height 5m. To 10 m.	275	Cum	1958	5,38,450
(Rs. One thousand nine hundred fifty eight only)					
7	Furnishing and placing reinforced/ prestressed cement concrete in superstructure as per drawing and MoRTH specifications section 1500, 1600, 1700. PSC Grade M 45 Using concrete mixer Cast in situ box, girder, segmental construction & balanced cantilever Height 5m. To 10 m.	975	Cum	2731	26,62,725
(Rs. two thousand seven hundred thirty one only)					
8	Supplying, fitting and placing HYSD bar reinforcement in superstructure complete as per drawing and MoRTH specification section 1600.	575	MT	44793	2,57,55,975
(Rs. Fourty four thousand seven hundred ninty three only)					
9	High tensile steelwires/ strands including all accessories for stressing, stressing operations and grouting complete as per drawing and MoRTH specification section 1800.	33	MT	59721	19,70,793
(Rs. Fifty nine thousand seven hundred twenty one only)					
10	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) , Section IX and Clause 2005 of MORT&H specifications complete including all accessories as per drawing and Technical specification .	54000	Cu Cm	0.65	35,100
(Rs. Point six five only)					
11	Providing A.C pipe Weep holes 150mm dia in Masonry/Plain Concrete/.Reinforced Concrete abutment, wing wall/return wall complete as per drawing and technical specification.[MoRTH Specification Clause 2205]	20	mtr.	32.17	643
(Rs. Thirty two point one seven only)					
12	Providing and laying Expansion Joint complete as per drawing and technical specification With corrugated copper plate compressible fibre board pre mouldede joint filter and joint sealing compound (MORTH Specification section 2600) Providing and fixing 2mm thick corrugted copper plate in expansion joint complete. 250mm deep	200	mtr.	2510	5,02,000

(Rs. Two thousand five hundred ten only)					
13	Providing and laying bituminous concrete as per design mix on prepared surface with specified graded stone as per table 500-18 for wearing course including loading of aggregate with F.E loader and hot mixing of binder and 2% cement filler with aggregates in approved hot mix plant as per clause 6.5 of manual Transporting the mix material with tipper to paver and laying with sensor paver finisher (as per clouse 507.3.5) to the required level , grades and rolling with vibratory compactor and pneumatic tyred roller 150-250 KN,TP=0.7 Mpa, to achieve the desired density (approved by the department) excluding cost of primer/tack coat (MORTH Specification : Clause -509,112)60/70 grade	27	cum	6111.85	1,65,020
(Rs. Six thousand one hundred eleven point eight five only)					
14	Slab seal type of expansion joint complete as per drawing and technical specification including acceptance testing as specified to be installed under supervision of a specialist manufacture (MORTH specification 2600)	200	mtr.	12712	25,42,400
(Rs. Twelve thousand seven hundred twelve only)					
15	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen (PMB - 40) 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 anti- skid surface with bitumen precoated 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 surfaces is not less than 100 ⁰ C, protruding 1 mm to 4 mm over mastic surface, all complete as per MORTH specification Clause 515.	675	sqm	387	2,61,225
(Rs. Three hundred eighty seven only)					
16	Board/cast-in-situ R.C.C piles complete as per drawing and technical specification. [MoRTH Specification : Section 1100,1600&1700(N)] Concrete M35 in R.C.C design mix	650	RM	3213	20,88,450
(Rs. Three thousand two hundred thirteen only)					

17	Load testing of piles. Initial and routine test for vertical load testing .	1000	Tonne Load	200	2,00,000
(Rs. Two hundred only)					
18	Load testing of piles For lateral load testing of pile.	36	Each Pile	13000	4,68,000
(Rs.Thirteen thousand only)					
	Total				3,89,70,556

**Project Director
RSRDC Ltd., Unit-Pali**

NAME OF WORK:- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement)

(Part II) Railway Portion

"H" Schedule Items

S. No	ITEMS	Unit	Qty	Rate	Amount
1	Designing foudation, substructure, super structure including preparation of drawings and working out schedule of quantities, marking of layout by total station instrument maching with approchese work at ground, as per direction of Engineer in charge for ROB to be constructed in lieu of LC C-27 at Pali to suit Railways GAD Design is to be based on the Geotechnical result. Payments of Geo Technical investigation shall be maid Under H/4. Rates shall also be inclusive of submitting drawings schedule of quantities design of any other parts of the ROB as directed by Engineer in charge. Scop of work also includes Staging arrangment drawing prepration and approval from competant Railway authority	each	1		
2	Extra over above item of this schedule for proof checking and approval of structural design & drawings of foundation, substructure and super structure of ROB from any Indian Institute of Technology /Malviya National Institute of Technology Jaipur.	each	1		
3	Providing and placing of POT PTFE Bearings of specified copacity as per MORTH specification and as per details given in the approved drawings. Item to also including testing of all the bearings to the satisfaction of Engineer. Entire installation is to be carried out strictly in the presence of manufacturer's representative only at all times.				
	POT cum PTFE bearings fixed in both horizontal directions designed for loads as shown in approved drawings.	each	4		
	POT bearing sliding in both directions and designed for loads as shown in approved drawings.	each	8		
	POT bearing sliding in longitudinal direction and designed for loads as shown in approved drawings.	each	4		
	POT bearing sliding in transverse direction and designed for loads as shown in approved drawings.	each	8		

4	Providing drainage spouts of dia 150 mm including fabrication, galvanizing, applying bituminous painting 2 coats, placing in position as shown in drawing with necessary cut outs in the thuttering for deck slab and sealing shrinkage cracks around assembly with poly sulphide sealant as per MORTH specification clause 2705 section 2700. The cost includes the Cost of providing & fixing 10 m long GI pipe of 150 mm dia to discharge the water collected by spouts including the cost of pipes fixtures such as clamps bends sockets etc. complete.	each	70		
5	Supplying & applying epoxy paint of approved quality on exposed surface of PSC Girders, Deck Slab Parapet wall etc. complete as per specification special conditions and detailed scope of work furnished in the tender and as directed by Engineer in charges by Integrated four coat system developed by CECRI Karikadi. (The rate inclusive of contractor's own epoxy paints materials surface preparation, equipments machineries labours supervisors taxes scaffolding staging all lead & lift etc. complete as required for successful completion of the item.)	sqm	4000		
6	Providing trial boring to carry out soil investigation at bridge site by drilling 100mm diameter bore holes upto required depth as directed by Engineer in charge below ground level in all types of soil including rock and clearing the bore by washing and collecting disturbed / undistrubed samples and conducting standard penetration test extracting undisturbed soil samples at every 2m depth or change of strata as directed by Engineer in charge including sealing numbering and preserving as per direction of the Engineer in charge and carrying out the following tests on soil specimens.				

	<p>i- Sieve analysis and work out the coefficient of curvature and uniformity coefficient.</p> <p>ii- Hydrometer analysis.</p> <p>iii- Natural moisture content by oven drying method.</p> <p>iv- Natural density.</p> <p>v- Specific gravity by density bottle method.</p> <p>vi- Atterberg's limits i.e. liquid limit plastic limit and shrinkage limit.</p> <p>vii- consolidation tests and determination of void ratio and coefficient of volume change, coefficient of consolidation, coefficient of permeability and compression index.</p> <p>viii- Triaxial compression test under all the three drainage conditions i.e. (undrained consolidated undrained and drained) and determination of following parameters.</p> <p>(a) Shear strength of undisturbed soil specimen.</p> <p>(b) Shear parameters i.e. coefficient of cohesion and angle of shearing resistance.</p> <p>ix- Triaxial relative density UCC compression test under all the three conditions i.e. (undrained consolidated undrained and drained) and determination of shear strength parameters i.e. coefficient of cohesion and angle of internal friction.</p> <p>x-Chemical analysis of:-</p> <p>(a) Soil</p> <p>(b) Ground water and its PH value</p> <p>xi- Preparing and submitting technical report of the bridge on sub surface working investigation in 3 (three) copies including logging of the bore hole and necessary drawings.</p>	each	1		
7	Carrying out load test as required on super structure of ROB as per IRC codes /IS specification and as per direction of Engineer with contractor's labour tools plants machinery etc. complete.	each	5		
8	Initial vertical load testing of piles for 2.5 times the working load capacity of pile as per IS : 2911. the item includes the cost of test pile including all materials except cement, pile of head all arrangements like load frame and kentledge reaction piles or other as direction of Engineer in charge to mobilize the required (1.25 times the test load) reaction test apparatus etc. complete all test procedures and equipment shall be subject to the approval of Engineer in charge.				
	The rates of exclusive the cost of cement which will be supplied by department.	each	1		
9	Initial lateral load testing of piles as per IS : 2911. the item includes all arrangements to mobilize the required reaction and test apparatus etc. all complete. All test procedures and equipment shall be subject to approval of the Engineer in charge	each	1		

10	Non-destructive integrated testing of cast in situ piles using pile deriving analysis or equivalent as detailed in specification and as approved by Engineer.	each	36		
11	Providing arraanging and conducting sonic logging test on RC bored piles using cross holes sonic logging analyzer and submission of report	each	6		
	Total				

**Project Director
RSRDC Ltd., Unit-Pali**



Rajasthan State Road Development & Construction Corporation Ltd.

(A Government of Rajasthan undertaking)

Unit Office - 21, Keshav Nagar Near New Bus Stand N.H. 14 Pali-Sirohi Road, Pali Rajasthan 02932-284221

Head Office - Setu Bhawan, Opp.Jhalana Doongari, Jaipur Agra ByPass , Jaipur Phone – 0141-2711386

NIT No. 550 /2010-11

Name of work :- Construction of ROB with approaches in lieu of level crossing No. C-27 at PALI including Railway portion (Excluding cost of cement).

- 1. Additional information to ITB clause 29.4:** The Engineer Cost (EC) of the work be treated as Rs. 14.00 Crores (Rupees Fourteen Crores only) as spelt in clause 29.4 of the Bid Documents for the purpose of calculating the unbalanced Bid Amount or Additional Performance Security.

Project Director
RSRDC Ltd. Unit-Pali

SPECIAL CONDITIONS OF THE CONTRACT

The following special conditions will be a part of the contract agreement & have overriding effect on other conditions of the contract on similar issues. All other conditions of the contract will be applicable as originals.

1. The contractor will submit an execution programme on MS Project, bar and CPM network, to complete the works in the stipulated period along with proactive responses from the RSRDC. This programme will be updated every month and the delays if any will be attributed to the contractor.
2. **Variations:** The BOQ is based on the PWD NH Jodhpur BSR 2008 & building BSR of Jodhpur 2008, and all items of variation will be evaluated on the basis of this BSR 2008 + the tender premium approved for the contractor.
3. **Scaffolding and form work:** The job requires a properly designed steel scaffolding and steel formwork. The contractor should submit the design of scaffolding and form work for approval by the RSRDC at least a month before it is to be fabricated.
4. **Insurance:** The contractor shall indemnify RSRDC, against all claims likely to arise due to accidents, negligence, failure / malfunctioning of the machinery / equipment etc. and some other unforeseen reasons, causing loss of life / property etc. He is therefore to procure a suitable insurance cover in the joint name of the RSRDC the contractor for a value equal to the value of works awarded to him. The insurance cover will also cover man, material and machinery / equipment belonging to the RSRDC. The cost of this premium will be borne by the contractor.
5. **Water, Power and land for casting/material/works Yard:-**The Contractor will himself arrange, at his cost, the required power connection, constructional and drinking water of a potable quality, and any land, temporarily required for yard to store materials, casting, labour camps (as per prevalent labour laws), site office and QA laboratory etc. All materials to be used in the work shall be tested and duly approved by the authorized engineer.
6. **Non eligibility:-**The contractor must not have debarred from tendering, or black listed, or de-enlisted by any Department/Corporation/Authority of the Govt. of Rajasthan, any other State/UT or the Govt. of India.

7. **Tender Drawings:-**The tender drawings appended to the bid document are the ones most likely to be adopted for execution. However, there could be variations in sizes and quantities as per site requirements. The contractor will not be entitled to any compensation on a/c of the variations.
8. **Essential equipment:-**The contractor should possess the necessary equipment as owned or assured lease for the work.

Contractor to engage Technical staff, as follows on this contract work:

Civil Engineer Contractor has to engage one civil engineer(Graduate) having three years experience of similar nature of work.

Testing Officer (Min. B.Sc./DCE) with 5 years experience for such Quality assurance.

8. **Certificate on site visit and confidence on site conditions: Knowledge of site conditions:-**The bidder should visit the site, study and fully acquaint himself with the local construction materials, working conditions at the site and submit a certificate to this effect along with his bid.

"Certified that we have visited the site and we are satisfied about the work site for the work of Construction of Approaches, Service Roads & Drains on Both side of ROB at Pali LC No. C-27 on Near Pali (Rly Km 697/100-200) (Excluding cost of cement), being bided by us. We are satisfied that there is no hindrance to the execution of the work in the given time / bid cost."

Name / Signature
Authorised signatory to the bid.
Dated

9. The contractor shall abide by the condition of the contract agreement.
10. The rates for supply of materials are inclusive of all leads kutchha and pucca and stacking at site of work from approved quarries/source specified in Schedule-G or decided by Engineer-in-charge.
11. The work shall be carried out strictly as per PWD/MoRTH specification, Indian standards specification & provisions made in various IRC codes & Railway guideline in Railway portion.

12. Contractor at his own cost shall arrange all T&P and machines such as mixture, vibrator, welding machine and their accessories. If the RSRDC supplies any machinery, the POL, hire charges for running hours and transportation shall be borne by the contractor.
13. Contractor at his cost shall arrange all the steel shuttering, scaffolding and staging material.
14. All equipment deployed on the project shall be of proven efficiency and shall be operated and maintained at all times in a manner acceptable to the engineer in charge.
15. No equipment or personnel will be removed from the site without the permission of engineer-in-charge.
16. Any damage done/caused to the structure shall be borne by the contractor.
17. Contractor at his own cost will arrange electricity and water for construction.
18. The contractor shall be fully responsible for compliance of labour laws, PF contribution towards labour as well as himself and insurance etc. for the workers engaged by him on work.
19. Conditional tender shall not be considered and are liable to be rejected without taking any cognisance thereof.
20. Contractor's Signature on Schedule-G and Schedule-H shall be treated as agreement between the RSRDC and the bidder and would mean enforcement of standard agreement, terms & conditions applicable in the RSRDC.
21. In case of any typing error in Schedule-G, the rates in the relevant BSR on which Schedule-G has been framed shall be taken as correct for BSR items.
22. The contractor shall not work after sunset and before sunrise without specific permission of the authorized engineer.
23. The contractor shall furnish construction programme within 10 days from the date of issue of work order to the engineer in charge.
24. Work on Sundays and holiday will only be carried out with the permission of engineer-in-charge.

25. Quantities of any item may be increased, decreased or deleted as per site conditions and as per instructions of Engineer in charge. Nothing can be claimed extra from such changes in the item and also in the variation of quantities.
26. All the instructions / specification issued by RSRDC authorities from time to time regarding construction, addition or alternation shall be binding upon the contractor.
27. The contractor shall take all the necessary measures and will be responsible for the safety of the labour at work and existing structure etc.
28. Curing on cement works shall be done as per I.S. codes and complete to the satisfaction of Engineer-in-charge. If Engineer-in-Charge feels that curing is insufficient, he shall have full power to employ labour for curing at the cost of contractor. Recovery of man-days engaged for curing shall be recovered from the bill of contractor.
29. Contractor is abiding by the instructions issued by the Engineer- in-charge regarding collection/ storage of material at site.
30. All scaffolding / safety measures to be taken by the contractor at his own cost, nothing extra will be paid for this.
31. All grades of Cement concrete to be used in the construction shall be mixed by using weigh batcher / Automatic batch mix plant only.
32. All service lines i.e. water supply, sewer, telephone; electricity etc. at the site shall have to be taken care of by the contractor during execution. Any damage to these services shall have to be repaired by the contractor at his own cost.
33. All hidden work shall be got checked necessarily from the Engineer-in-charge.
34. Contractor shall provide fully equipped laboratory for all necessary quality control tests to be conducted for work as specified in MoRTH specifications.
35. Contractor shall provide an independent site office with attached lat bath for RSRDC officers & Railway Officers within site premises of an area of 500 sqft. with furniture. (Six chairs, one table, one almirah).
36. The contractor shall provide store/yard for cement and steel storage near site. Adequate for two thousand cement bags and lot of steel.

37. The contractor at his own cost shall arrange Electricity & suitable Potable water required for the work. Test Certificate of water after every month has to be submitted. by contractor at his own cost.
38. The final bill of the work shall be paid to contractor only after satisfactory taking over of work by client department & till the handing over of work to the client the watch & ward shall be carried out by the contractor at his own cost.
39. Any price Escalation is not applicable under this contract agreement.
40. After completion of work contractor will submit. as built Drawing (in Three (03) copies) with one soft copy in pen drive to RSRDC at his own cost.
41. After completion of work, contractor has to clear the site as per direction of Engineer-in-charge within 15 days. Otherwise department at contractor's cost shall do it without issuing any notice. He shall also be responsible to rectify all defects as pointed by RSRDC & client department failing which the cost of rectification of it shall be recovered from the contractor.
42. The validity period of tender shall be 90 days from the date of opening of tender.
43. The contractor will have to submit the Job Mix Composition of the relevant item of CC and Bituminous work from Govt Engineering college or Public Works Department, 15 days prior to start the relevant item for the approval of Engineer-in-charge.
44. The contractor will have to submit the bar bending schedule as per clause 1604 of MoRTH.
45. The design and drawings for the staging and form work will be submitted to Engineer-in-charge prior by 15 days of starting the work for approval.
46. The contractor will have to get the work inspected by the competent authority at each stage and submit the relevant stage completion certificate and permission to start the next stage of the work.
47. The contractor will arrange the testing of bearings and expansion joints in presence of representative of Engineer-in-charge.
48. The contractor is bound to execute the item related to this work but not included in schedules as per direction of Engineer-in-charge.

49. All Safety arrangement during work is responsibility of contractor like cautionary board, diversion board, Safety ribbon, safety cone etc.
50. The contractor shall follow the contract labour (regulation) Act and rules amended from time to time.
51. Any material not confirming to the specification collected at site shall have to be removed by the contractor within a period of three days of the instructions issued by the Engineer-In-Charge in writing, failing which, such material shall be removed by the department at risk and cost of the contractor after expiry of three days period.
52. The work should be got executed with the equipments, as per MoRTH. specifications. Wherein the details of the type of equipments are given for various specifications and /or policy circulars on the subject issued from time to time.
53. The contractor will establish a field testing laboratory at the site of work & will provide all the equipment to the field staff required for various quality control tests. He will also ensure that the quality control tests as conducted are conducted and entered in the register as per the norms fixed by MORT&H.
54. The materials collected at site and paid provisionally shall remain under the watch and ward of the contractor till it is consumed fully on the work.
55. No work of the permanent nature shall be carried out during nights or on Sundays or any authorised holidays without permission of Engineer – in – charge .
56. All the amendment made in rules of PW GF & AR b the Rajasthan State Finance Department w.e.f. 01.07.99 vide order No. P. 2/3 Fin./Exp. III/99 dated 19.03.2001 & 23.03.2003 will be applicable in this contract.
57. The local unskilled labour should be engaged on the work and generally labour from outside the State would not be engaged.
58. The contractor will procure bitumen emulsion required for the execution of work from authorized refinery at his level and furnish the bitumen testing certificate from Government agency / Regional Laboratory / Engineering College.
59. Testing of bitumen shall be done as per norms, for which equipment shall be made available at site by contractor in a laboratory, to be established at plant site by contractor.

60. Bitumen record should also, be furnished by the contractor as per the Performa given in circular No. 7/2001 dated 17.07.2001 issued by the Chief Engineer, PWD, Rajasthan, Jaipur.
61. In case of contractors do not submit the bill within time fixed, the Engineer - in - charge may prepare the bill as per provision of clause 8 of the conditions of contract but deduction @ 0.5% of about of such a bill shall be made.
62. During execution of work bidder is fully responsible for repairing of all public utility services like water supply line, electric & telephone cable etc. with immediate effect.
63. Written permission from the competent authority is required before the execution of Extra / Excess items otherwise the financial liabilities will be borne by the bidder.
64. The defect liability period and maintenance period for this work shall be Six years. In case any defect, whatsoever, is noticed within a period of Six years after completion date, the same shall be rectified by the contractor at his own cost. The security deposit will be refunded only after Six years from the actual date of completion provided that the final bill has been passed and paid.
65. The contractor shall do the routine maintenance of work during entire defect liability period and keep the entire road surface and structures in defect free condition during the entire maintenance and defect liability period which begins at completion of work and ends after six years.
66. The Engineer In-Charge may issue notice to the contractor to carry out maintenance of defects if any during defect liability period. The contractor shall remove the defect within the period specified in the notice failing in which the Engineer In-charge will be free to carry out to routine maintenance work and the amount required for this work will be recovered from the amount of security deposit available and/or from any amounts of the contractor whatever is due.
67. During continuance of the contract, the contractor and his sub-contractor shall abide at all times by all existing enactments on environment protection and rules made there under regulations, notifications and by-laws of the State or Central Government, or local authorities and any other law, bye-law, regulation that may be passes or notification that may be issued in this respect in future by the State or Central Government or the local authorities.

68. In Railway Portion staging arrangement drawing has to be submit by contractor duly approved by competent railway authorities. The contractor is fully responsible for any delay in submission & approval of the same. No payment will be made for staging
69. TMT bar of TATA -TISCON/ISPAT/SAIL/RINL only be accepted. No other type arrangement of steel will be accepted.
70. Any temporary diversion if required is responsibility of contractor & for which no extra payment will be made to contractor.
71. Contractor shall provide proper barricading arrangement as per direction of Engineer in charge. Other wise same will be provided by department & cost will be deducted from running bills of contractor.
72. Arrangement of submission of duly proof checked design of RE wall is responsibility of contractor and No extra payment will be made on account of preparation of design and proof checking of design.
73. The contractor after completion of the work shall clear the site of work and tidy up the area and remove left over materials, debris etc. In case of the contractor fails to do so the same will be removed at the cost of the contractor.

74. **NON COMPLIANCE WITH THE INSTRUCTIONS/DIRECTIVES OF THE ENGINEER'S REPRESENTATIVE**

The contractor shall always comply with the instructions /directives issued by the Engineer's representative from the time to time. In the event of any non –compliance Such instructions/directives the Engineer's representative may employ at the works other work men with necessary equipment for safe and unhampered movement of Railway traffic or other. Recovery of such expenditure will be made from contractor's running bills.

75. **PHOTOGRAPHS SITE RECORD OF WORK DURING EXECUTION OF WORKS.**

The contractor shall arrange to furnish a video film of different important stages during execution of work as decided by the Engineer with minimum 50 Nos photographs of size specified by Engineer during execution of works.

76. The cost of video graphy & photographs is to be borne by contractor. In case contractor does not comply the provision, deptt is free to recover the amount of video and photographs from running bill.

Signature of Contractor

Date :

Name / Address:

Project Director,

RSRDC Ltd.

Unit -Pali

NOTE :- SIGNATURE OF CONTRACTOR SHALL BE ON EVERY PAGE OF TENDER DOCUMENT SPECIALLY ON TECHNICAL SPECIFICATION AND SPECIAL CONDITION.



Rajasthan State Road Development & Construction Corporation Ltd.
(Formerly RSBCC Ltd.)

(A GOVERNMENT OF RAJASTHAN UNDERTAKING)

Regd. Office : Setu Bhawan, Opposite Jhalana Doongari, Jaipur-Agra Bypass, Jaipur-302004

Phones : EPBX - 2711386-90

Fax : 0141-2711178

No. B-2(1)SBD/ 15561-600

Date : 15-12-10

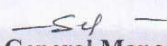
CIRCULAR

The following amendment in clause no. 4.5.1.2- "Value of work" of SBD is hereby made as under :-

"Should have satisfactorily completed (Phase/Part completion of the scope of work in a contract shall not be considered) three works, value of each shall be 40%, ~~of~~ two works value of each shall be 50% or one work value of which shall be 80% of estimated cost."

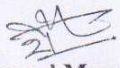
All Project Directors/Managers are directed to insert the above amendment in the Standard Bid Document.

This bears the approval of the Managing Director, RSRDC Ltd.


General Manager

Copy to :-

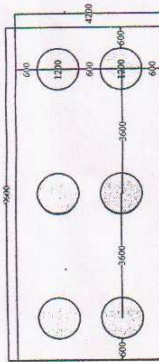
1. PS to MD/GM/CPM, RSRDC Ltd., Jaipur.
2. The Financial Advisor, RSRDC Ltd., Jaipur.
3. The DGM, RSRDDC LTd., Unit.....(All)
4. The Managers, RSRDC Ltd., Jaipur.....(All)
5. The PD, RSRDDC LTd., Unit. *pali*.....(All)
6. GF


General Manager

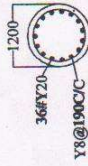
Acts
Pr. d. serv. la. SPB document
22/12

FOR TENDER PURPOSE ONLY

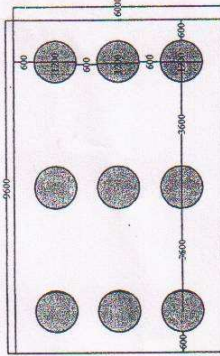
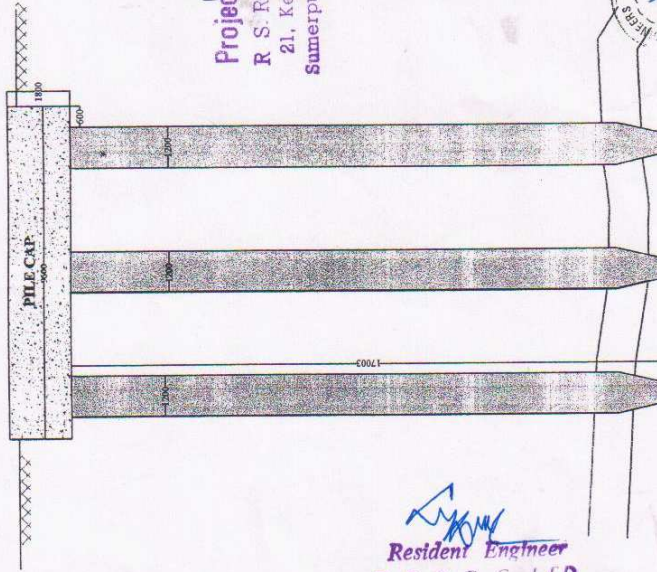
IN APPROACHES DIAMETER 1200MM
RAILWAY 1000MM



PILE CONFIGURATION FOR PIERS



SECTION OF PILE



PILE CONFIGURATION FOR ABUTMENT

Project Director
R.S.R.D.C. Ltd.
 21, Keshav Nagar
 Sumerpur-Sirohi Road
 PALI

Resident Engineer
R. S. R. D. C. LTD.
 UNIT-II, JODHPUR

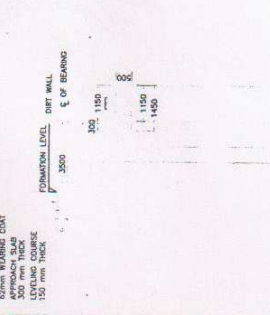
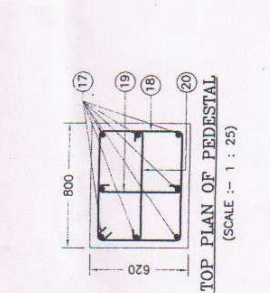
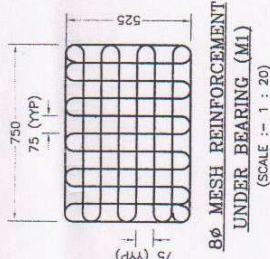
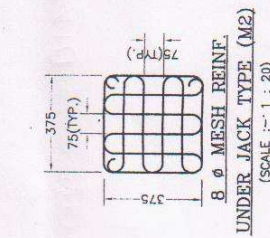


ENGINEERS ASSOCIATES		PROPOSED DETAIL OF STRUCTURAL DESIGN OF ROB PALI IN LIEU OF C-27 RLY LM 697/100-200	
CONSULTANT - ENGINEERS ASSOCIATES TEL. NO. 0291-2516423		PROJECT - TENTATIVE PILE ARRANGEMENT AT ROB PALI	
DRAWN BY:-	DATE - AUGUST 2008	SCALE - 1 : 100	APP. BY :-
CHD :-	DGN BY :-	REVISION :-	

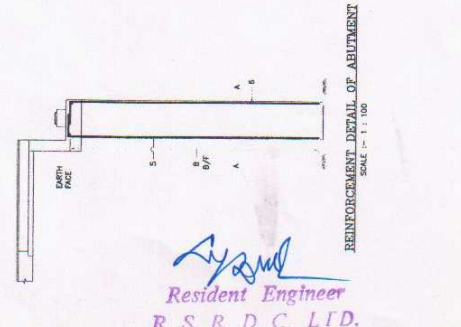
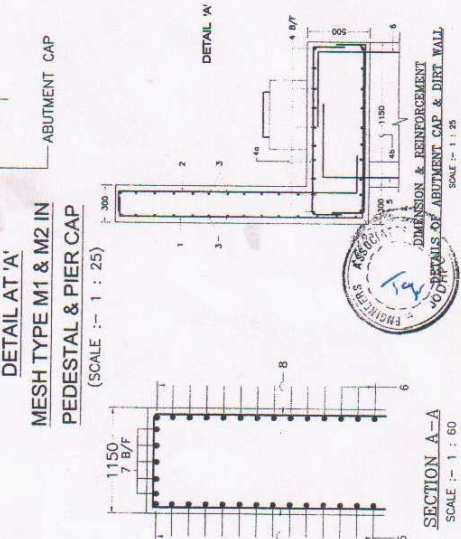
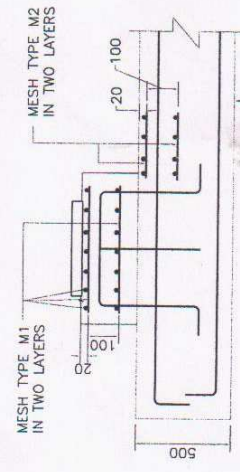
R.S.R.D.C. PALI

FOR TENDER ONLY

BAR No.	Ø	SPACING/Nos	SHAPE
1	12	150 c/c	□
2	10	150 c/c	□
3	10	200 c/c	□
4	12	10 Nos.	□
4a	16	150 c/c	□
4b	12	150 c/c	□
5	20	85 Nos.	□
6	20	85 Nos.	□
7	16	5+2 Nos.	□
8	16	120 c/c	□
9	12	150 c/c	□
10	16	150 c/c	□
11	16	150 c/c	□
12	25	150 c/c	□
13	16	150 c/c	□
14	25	155 c/c	□
15	25	120 c/c	□
16	12	200 c/c	□
17	16	8 NOS.	□
18	10	150 c/c	□
19	10	150 c/c	□
20	10	150 c/c	□



Project Director
R. S. R. D. L.I.D.
21, Keshav Nagar
Sumerpur-Strohi Road
PALI



LEGENDS:
 — BAR ON TOP/
 EARTH RETAINING FACE
 — BAR ON BOTTOM/
 OTHER FACE
 — BAR ON BOTH FACES
 STIRRUPS
 B/F
 STP

R.S.R.D.C. **PALI**

PROPOSED DETAIL OF STRUCTURAL
DESIGN OF ROB PALI IN LIEU OF C-27 RLY
LM 697/100-200

ENGINEERS
E.A.

CONSULTANT :-
ENGINEERS ASSOCIATES
TEL. NO. 0291 - 2516423

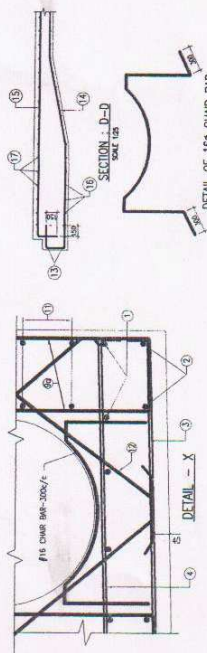
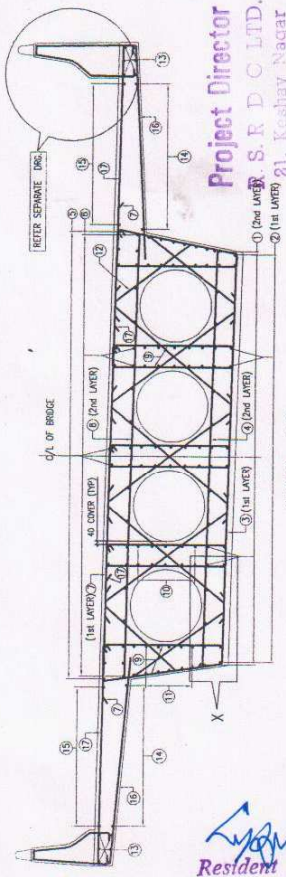
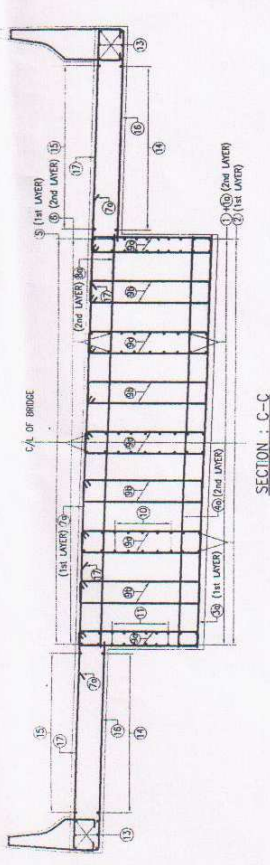
PROJECT :-
DATE :- AUGUST 2008
SCALE :- 1 : 100

DRAWN BY :-
DGN BY :-
APP. BY :-
REVISION :-

[Signature]
Resident Engineer
R. S. R. D. C. L.I.D.
UNIT-II, JODHPUR

FOR TENDER ONLY

REINFORCEMENT DETAILS			
BAR NO.	BAR DIA. (mm)	BAR SPACING/NO. (mm)	SHAPE
1	32	48 Nos.	—
1a	10	48 Nos.	—
2	32	48 Nos.	—
3	20	140 c/c	—
3a	20	180 c/c	—
4	20	140 c/c	—
4a	20	180 c/c	—
5	10	48 Nos.	—
6	10	48 Nos.	—
7	20	140 c/c	—
7a	20	180 c/c	—
8	20	140 c/c	—
8a	20	180 c/c	—
9	12	200 c/c	2 LUGGED
9a	12	200 c/c	2 LUGGED
9b	10	200 c/c	2 LUGGED
10	10	5x5 Nos.	—
11	10	6x6 Nos.	—
12	10	300 c/c	—
13	16	6x6 Nos.	—
14	10	150 c/c	—
15	12	150 c/c	—
16	12	150 c/c	—
17	20	150 c/c	—
18	12	100 c/c	—
19	12	100 c/c	—
20	20	5x5 Nos.	—
21	32	5x5 Nos.	—
22	10	10 Nos.	—



17A111

Project Director
S.K.D.C. LTD.
21, Keshav Nagar
Samerpur-Sirohi Road
PALI

Resident Engineer
R.S.R.D.C. LID.
UNIT-II, JODHPUR

R.S.R.D.C. PALI

ENGINEERS E.A.	PROPOSED DETAIL OF STRUCTURAL DESIGN OF ROB PALI IN LIEU OF C-27 RLY KM 697/100-200
CONSULTANT ENGINEERS ASSOCIATES TEL. NO. 0291- 2516423	PROJECT ROB PALI
DRAWN BY:-	DATE: AUGUST 2008
CHD :-	DGN BY:-
	SCALE: 1 : 100
	APP. BY:-
	REVISION:-



DATE	10/10/2010
PROJECT	ROB PALLI
CLIENT	ROB PALLI
SCALE	AS SHOWN
BY	[Signature]
CHECKED	[Signature]
DATE	10/10/2010

CONSTRUCTION OF RETAIN WALL

Project Engineer
R. S. R. D. C. E. PALLI
 21, Keshav Nagar
 Sumerpur-Sirohi Road
 PALLI



R.S.R.D.C.E PALLI

NO. OF REINFORCEMENT BARS	10
SPACING	200
LENGTH	10
AREA	15708

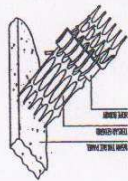
SOIL PROPERTIES

WATER CONTENT	18.5
FLUIDITY	15
UNSATURATED WATER CONTENT	18.5
PLASTICITY INDEX	15
LIQUIDITY INDEX	15
GROUP SYMBOL	CL-15
UNSATURATED SHRINKAGE RATIO	0.52
SHRINKAGE RATIO	0.52
SHRINKAGE LIMIT	15
SHRINKAGE RATIO	0.52
SHRINKAGE LIMIT	15

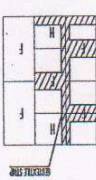
SPECIFICATIONS

FILTER MEDIA

CONNECTION DETAILS



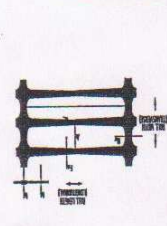
GEOMETRIC DETAILS



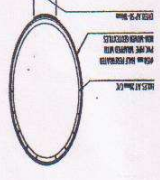
NO. OF REINFORCEMENT BARS	10
SPACING	200
LENGTH	10
AREA	15708

CHARACTERISTICS AND DIMENSIONS

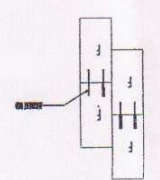
UNUSUAL GEOMETRIC TYPICAL



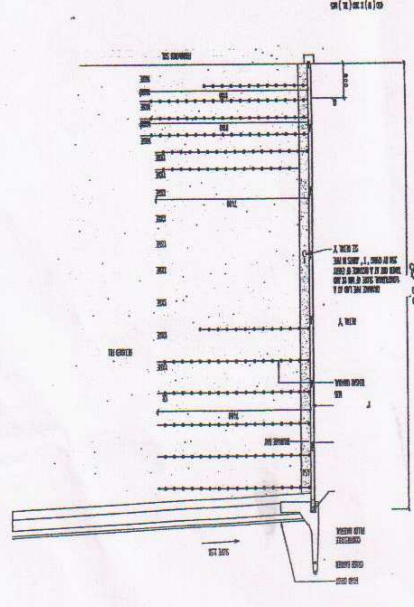
DETAIL X



ALIGNMENT AND DETAILS

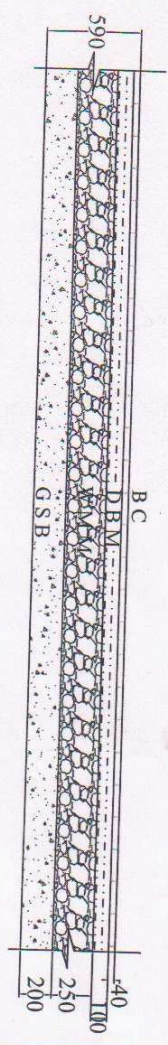


CROSS SECTION OF REINFORCED SOIL WALL



ONLY FOR TENDER

R.S.R.D.C.C PALLI



SECTION OF ROAD

TITLE :- SECTION OF ROAD FOR APPROACH ROAD AT ROB PALLI		
CONSULTANT:- ENGINEER'S ASSOCIATES JODHPUR (RAJ.)		
AGENCY:- R.S.R.D.C. RAJASTHAN		
DRAWN BY :- K.K. SHARMA	APP. BY :-	CHD. BY :-
DGN. BY :-	SCALE :-	

Project Handout
R.S.R.D.C.
 21, Keshav Nagar
 Sumerpur-Sirohi Road
 PALLI



[Signature]
 Resident Engineer
S.R.D.C. LTD.
 NIT-II, JODHPUR

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 deadline is stated in the Instructions to Bidders or as it may be extended by the Employer's Representative, 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 _____ SEAL _____

[Signature, name and address]

* 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.

** 30 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 there under 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 Maintenance 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 performance security for unbalanced Bids, if any and denominated in Indian Rupees.

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 Bidders) is hereby accepted by our agency.

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 15 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

-
1. 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.
 2. To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the Employer in the 'Instructions to Bidders'.

Agreement Form

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.
 - (x) Joint Venture Agreement.

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 _____