

ರೈಲು ಮೂಲಸೌಲಭ್ಯ ಅಭಿವೃದ್ಧಿ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ನಿಯಮಿತ
ರೇಲ ಇನ್‌ಫ್ರಾಸ್ಟ್ರಕ್ಚರ್ ಡೆವಲಪ್‌ಮೆಂಟ್ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ಲಿಮಿಟೆಡ್

Rail Infrastructure Development Company (Karnataka) Limited

BID DOCUMENT

for

Baiyyappanahalli - Hosur: Doubling of track

Earthwork in cutting, embankment and construction of
Major/Minor bridges/RUB's and other miscellaneous works
in Bangalore Division of
South Western Railway, in 3 (three) Packages .
(MULTIPLE PACKAGES)

Dt. 29.07.2020

RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

MSIL House, 7th Floor, #36, Cunningham Road, Bangalore - 560052

Tel +91-80-22370582, Fax +91-80-22370581

Email: md@kride.in



INDEX

		Page No
	Invitation For Bids (IFB)	1-4
PART I: Bidding Procedures		
Section 1.	Instructions to Bidders (ITB)	5-29
Section 2.	Bid Data Sheet (BDS)	30-33
Section 3.	Evaluation Criteria and Qualification Criteria	34-42
Section 4.	Bidding Forms	43-84
PART II : Works Requirements		
Section 5.	Works/Employer's Requirements:	85-149
PART III: Conditions of Contract and Contract Forms		
Section 6.	General Conditions of Contract (GCC)	150-263
Section 7.	Special Conditions of Contract (SCC)	264-268
Section 8.	<i>Contract Forms</i>	269-286
Section 9.	<i>Bill of Quantities (BOQ)</i>	287-401

PART I	Bidding Procedure
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BIDDING DOCUMENTS

for

Execution of

“Baiyyappanahalli – Hosur Doubling of track - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works (excluding station yards)– in Bangalore Division of South Western Railway, in 3 (three) Packages .

IFB No: K RIDE/Projects/52/DBH/1/2020 Date : 29.07.2020

PROJECT:- Doubling of Track between Baiyyappanahalli - Hosur”

Employer: K RIDE (Rail Infrastructure Development Company (Karnataka) Limited)

MSIL House, 7th Floor,

#36, Cunningham Road

Bangalore

Tel – (080) 22370582,

Fax – (080) 22370581

E Mail – md@kride.in

**NOTICE
FOR
INVITATION FOR BIDS
(IFB)**

Rail Infrastructure Development Company (Karnataka) Limited

INVITATION FOR BIDS

Bid Notice No. **K RIDE/Projects/52/DBH/1/2020**

Date : 29.07.2020

RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED (K RIDE), having its Corporate office at MSIL House, 7th Floor, #36, Cunningham Road Bangalore-560052, India which is a Joint Venture of Government of Karnataka and Ministry of Railways set up as a wholly owned Government Company under the provisions of Section 2(45) of Companies Act 2013, invites bids under single stage two packet system for the work of 'Execution of Doubling of track between Baiyyappanahalli - Hosur Section - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works (excluding station yards) in Bangalore Division of South Western Railway, Karnataka, India in 3 (three) Packages.

1. **THE THREE CONTRACT PACKAGES ARE AS UNDER**

Sl. No.	Contract Packages	Estimated Cost of Project (in ₹)	Bid Security (in ₹)	Period of Completion
I	Package- 1 - "Execution of Earthwork in cutting, embankment and construction of Major/Minor bridges, RUB's and other works between Km 174/590 to Km.182/500 - (REACH 3) in Bangalore Division of South Western Railway.	20,83,28,350	11,91,500	18 months
II.	Package- 2 - "Execution of Earthwork in cutting, embankment and construction of Minor bridges, RUB's and other works between Km 165/000 to Km.174/590 - (REACH 4) in Bangalore Division of South Western Railway.	20,20,27,389	11,60,000	18 months
III	Package-3 "Execution of Earthwork in cutting, embankment and construction of Major/Minor bridges, RUB's and other works between Km 158/700 to Km.165/000 - (REACH 5) in Bangalore Division of South Western Railway.	33,18,84,653	18,09,500	18 months

2. Bidders are advised to note the eligibility and minimum qualifying criteria specified in the Instruction to Bidders and Section 3 “ Evaluation and Qualification Criteria” of bid document.
3. Bids must be accompanied by a bid security as mentioned above against each package in any one of the forms as specified in the bidding documents and shall have to be valid for 42 days beyond the validity of the bid.
4. Bidding Documents can be downloaded free of cost from K RIDE website www.kride.in from 29/07/2020 and the bids can be submitted on the downloaded document.

Please note that drawings, if any, referred in the bid document, but not uploaded with the bidding document, can be viewed in this office on any working day. The Tenderer can also have a copy of the same on payment of non-refundable cost of Rs. 11,350/- (Rupees Eleven Thousand Three Hundred and fifty only) for each package by a crossed Demand Draft on any Scheduled bank payable at Bangalore drawn in favour of **Rail Infrastructure Development Company (Karnataka) Limited, Bangalore.**

It will be the responsibility of the bidder who is submitting the bid on downloaded bidding documents to check and see any Addendum/Corrigendum issued in this regard from the website from time to time and ensure submission of bid along with all Addendum/Corrigendum.

In case of any clarification the tenderer can visit the Rail Infrastructure Development Company (Karnataka) limited Corporate Office Bangalore at **MSIL House, 7th Floor, #36, Cunningham Road Bangalore – 560052,**

5. **Purchase Preference:** Shall not apply to Central Public Sector Enterprises, as per extant rules in force.
6. **Date of Receipt and opening of Bids:** The completed Bids must be dropped in the nominated tender box or delivered to the address below not later than 15.00 hrs on- 20/08/2020 and the same shall be opened at 15.30 hrs. in the same day in the presence of Bidders who choose to be present. K RIDE will not be responsible for any delays in receiving the Bidding documents by the Bidder or receipt of Bids by K RIDE.
7. **Address for Communication:** Interested eligible Bidders may obtain further information from the following address:

**General Manager (Civil),
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor, #36, Cunningham Road
Bangalore – 560052**

**Tel: (080)22370582, Fax -22370581
E – Mail: md@kride.in**

Section 1	Instructions to Bidders (ITB)
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ರೈಲು ಮೂಲಸೌಲಭ್ಯ ಅಭಿವೃದ್ಧಿ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ನಿಯಮಿತ

रेल इन्फ्रास्ट्रक्चर डेवलपमेंट कंपनी (कर्नाटक) लिमिटेड

Rail Infrastructure Development Company (Karnataka) Limited
(A Joint Venture of Govt. of Karnataka & Ministry of Railways)

MSIL House, 7th Floor, #36, Cunningham Road, Bangalore – 560052
Tele – 080 22370581, Fax : + 91-80-22370581, web : www.kride.in

Technical Proposal

Baiyyappanahalli - Hosur Doubling of track

**Earthwork in cutting, embankment and construction of
Major/Minor bridges/RUB's and other miscellaneous
works in Bangalore Division of**

South Western Railway, in 3 (three) Packages .

(MULTIPLE PACKAGES)

Section 1	Instructions to Bidders (ITB)
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Reasons for Rejection of Bids

ITB Clause No Section 1	Reason for Summary Rejection
4.4	Non-submission of Affidavit
4.5	Non-submission of immediate information to the Employer in case the Bidder ceases to fulfill eligibility in terms of ITB 4.3 & 4.4
14.2	Quoting more than one percentage for any schedule
14.9	Non-submission of the Letter of Price Bid (LPB) and/or Summary sheet of BOQ
16.4	Non-submission of the Letter of Technical Bid (LTB)
19.3	Bid not accompanied by an enforceable and compliant bid security

Note :

The Bidders are advised to note the above reasons and take care of the same to avoid rejection of their bids.

Important Note:

With regard to the procedure of sealing and submission of bids, please refer to ITB 21

Table of Clauses

	Title	Page No
A.	General	8-11
1.	Scope of Bid	8
2.	Source of Funds	8
3.	Corrupt Practices	8-9
4.	Eligible Bidders	9-11
5.	Eligible Materials, Equipment and Services	11
B.	Contents of Bidding Document	11-14
6.	Sections of Bidding Document	11-12
7.	Clarification of Bidding Document, Site Visit, Pre-Bid Meeting	12-13
8.	Amendment of Bidding Document	13-14
C	Preparation of Bids	14-19
9.	Cost of Bidding	14
10.	Language of Bid	14
11.	Documents Comprising the Bid	14
12.	Letters of Bid and Price Schedules	15
13.	Alternative Bids	15
14.	Bid Prices and Discounts	15-16
15.	Currencies of Bid and Payment	16
16.	Documents Comprising the Technical Bid	17
17.	Documents Establishing the Qualification of the Bidder	17
18.	Period of Validity of Bids	17
19.	Bid Security	17-19
20.	Format and signing of Bid	19

	Title	Page No
D	Submission and Opening of Bids	19-23
21.	Sealing and Marking of Bids	19-20
22.	Deadline for Submission of Bids	20
23.	Late Bids	20
24.	Withdrawal, Substitution, and Modification of Bids	20-21
25.	Bid Opening	21-23
E	Evaluation and Comparison of Bids	23-28
26.	Confidentiality	23
27.	Clarification of Bids	23-24
28.	Deviations, Reservations, and Omissions	24
29.	Determination of Responsiveness	24
30.	Nonconformities, Errors, and Omissions	24-25
31.	Pre-Qualification of the Bidder	25
32.	Correction of Arithmetical Errors	25-26
33.	Conversion to Single Currency	26
34.	Purchase Preference	26
35.	Evaluation of Bids	26-28
36.	Comparison of Bids	28
37.	Employer's Right to Accept Any Bid, and to Reject Any or All Bids	28
F	Award of Contract	28-29
38.	Award Criteria	28
39.	Notification of Award	28-29
40.	Signing of Contract	29
41.	Performance Security	29
42.	Jurisdiction of Courts	29

A. General

1. Scope of Bid

- 1.1 In connection with the Invitation for Bids indicated in the Bid Data Sheet (BDS), Rail Infrastructure Development Company (Karnataka) Limited (K RIDE), a Joint Venture of Govt. of Karnataka & Ministry of Railways, hereinafter referred to as the 'Employer', issues these Bidding Documents for the Procurement of Works as specified in Section 5: Works Requirements. The name, identification, number of contract(s) are provided in the BDS.
- 1.2 Throughout these Bidding Documents:
 - (a) the term "in writing" means communicated in written form and delivered against receipt;
 - (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
 - (c) "day" means calendar day.

2. Source of Funds

- 2.1 The required funds have been sourced by K RIDE, unless otherwise specified in the BDS.

3. Corrupt Practices

- 3.1 The Employer requires that bidders, suppliers, and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Employer:
 - (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any party in the procurement process or the execution of a contract;
 - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - (iii) "collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Employer, designed to influence the action of any party in a procurement process or the execution of a contract;
 - (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;
 - (b) will reject a Bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and
 - (c) will sanction a party or its successor, including declaring ineligible, either indefinitely or for a stated period of time, to participate in Employer's activities, if

it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing a contract of the employer.

4. Eligible Bidders

- 4.1 A Bidder may be a natural person, private entity, government-owned entity, or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture (JV). The bidder must ensure the following:
- (a) In case of Single Entity:
 - (i) Submit Power of Attorney authorizing the signatory of the bid to commit the bidder.
 - (b) In case of Joint Venture:
 - (i) The number of partners in the JV shall not be more than that indicated in the Bid Data Sheet (BDS);
 - (ii) Submit MOU, as per the form given in Section 4.
 - (iii) The JV shall nominate a Representative through Power of Attorney (Form given in Section 4) who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.
 - (iv) Submit Power of Attorney by individual partners to lead partners as per the form given in Section 4.
 - (v) In case a Joint Venture is the successful bidder, the Joint Venture Agreement should be entered by the Joint Venture partners. The duly signed Joint Venture Agreement should be submitted along with the Performance Security to the employer after notification of the award of contract within 28 days.
 - (c) Foreign Firm(s) should be covered under the grant of general permission to establish project offices in India (as per RBI Master Circular No.7/2015-16 updated up to the deadline for submission of bids) on securing the subject project or have already opened project office in India. In case of award of contract to a foreign firm, such foreign firm has to submit proof of having opened project office in India before submitting any interim payment certificate.
- 4.2 Bidders having a conflict of interest shall be disqualified. The conflict of interest is detailed below
- 4.3 A Bidder shall not have conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process, if, including but not limited to:
- (a) they have controlling shareholders in common; or
 - (b) they receive or have received any direct or indirect subsidy from any of them; or
 - (c) they have the same legal representative for purposes of this bid; or

- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or
- (e) any firm, either individually or in Joint Venture (JV), submits more than one offer irrespective of whether the firm is quoting for single package or multiple packages against this bid. The bids submitted by two different bidders, having any common participant in JV formation or any common partner in partnership firms, or an individual whether in the same or different packages will be treated as having conflict of interest or
- (f) a Bidder participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or
- (g) a Bidder was affiliated for any period(s) during last two years before the date of issue of Invitation for Bids with a firm or entity that has been hired (or is proposed to be hired) by the Employer as Engineer for the contract.

4.4 The bidder shall be disqualified if:

- (a) The bidder or any of its constituents has been blacklisted/ banned business dealings for all Government Departments or by Ministry of Railways or by K RIDE at any time till finalization of bids, except in cases where such blacklisting/ banning has been withdrawn by Competent Authority or has ceased on the deadline for submission of the bids, for which satisfactory evidence is to be produced.
- (b) Any previous contract of the bidder or any of its constituents had been terminated for contractor's failure or part terminated for its failure as a JV partner with forfeiture of its full Performance Security, by Rail Infrastructure Development Company (Karnataka) Ltd.(K RIDE) at any time starting from 3 years before the deadline for submission of bids and upto one day before the date of opening of price bids;

Provided, however, there is no stay order or declaration by any Court against such termination of the Contract by Rail Infrastructure Development Company (Karnataka) Ltd. or such termination of the Contract has not been revoked by Rail Infrastructure Development Company (Karnataka) Ltd or competent authority of K RIDE has not passed an order of non-applicability of disqualification of the bidder or any of its constituents despite such termination.

- (c) The bidder or any of its constituents has been imposed delay damages of 5% or more of contract value by K RIDE due to delay in the implementation of any previous contract within the period of last 2 years before the deadline for submission of bids (Period of 2 years shall be reckoned from the date on which the total accrued amount of Delay Damages has reached 5% or more of the contract price) or such accrued delay damages has not been fully recovered before the deadline for submission of bids on account of contractor's request for deferring recovery to maintain cash flow and K RIDE has acceded to the same in the interest of the project or the work under the previous contract in question has not been completed before the deadline for submission of bids, unless imposition of such delay damages has been set aside by the Competent Authority.

(d) The bidder or any of its constituents:

- (i) has suffered bankruptcy/insolvency or
- (ii) has any ongoing case of insolvency before the NCLT/any Court where Interim Resolution Professional (IRP) has been appointed or is at any later stage of the insolvency process

On the deadline of submission of bids or thereafter till finalization of bids.

(e) The bidder is found ineligible by the Employer, in accordance with ITB-3.

(f) The bidder or its constituent(s) has been declared by K RIDE to be a poor performer and the period of poor performance is still in force on the deadline for submission of bids.

OR

The bidder or its constituent(s) has been declared by K RIDE to be a poor performer at any time after the deadline for submission of bids and upto one day before the date of opening of price bids.

(g) The bidder or any of its constituents has changed its name or created a new business entity as covered by the definition of "Allied Firm" under para 1102 (iii) of Chapter XI of Vigilance Manual of Indian Railways (available on website of Indian Railways), consequent to having been banned business dealings or suspended business dealings or having been declared poor performer.

The Bidder shall submit an affidavit stating that they are not liable to be disqualified as per this sub clause using the appropriate Performa given in Section 4. Non-submission of an affidavit by the bidder shall result in summary rejection of his bid.

4.5 Bidders shall immediately inform the Employer in case they cease to fulfill eligibility in terms of ITB 4.3 & 4.4. In case the bidder fails to inform the Employer or submits a false affidavit, his bid shall be summarily rejected and bid security shall be forfeited. The bidder shall also be liable for Banning of Business dealings for a period up to five years.

5 Eligible Materials, Equipment and Services

5.1 The materials, equipment and services to be supplied under the Contract shall be from the approved sources as specified in Section 5: Works Requirements.

B. Contents of Bidding Document

6 Sections of Bidding Document

6.1 The Bidding Document consists of Parts I, II and III, which includes all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART I: Bidding Procedures

Section 1: Instructions to Bidders (ITB)

Section 2: Bid Data Sheet (BDS)

Section 3: Evaluation and Qualification Criteria (EQC)

Section 4: Bidding Forms (BDF)

PART II: Work's Requirements

Section 5: Work's Requirements (WRQ)

PART III: Conditions of Contract and Contract Forms

Section 6: General Conditions of Contract (GCC)

Section 7: Special Conditions of Contract (SCC)

Part A: Contract Data (CD)

Part B: Specific Provisions (SP)

Section 8: Contract Forms (COF) – Annexes to SCC

Section 9: Bill of Quantities (BOQ)

- 6.2 The Invitation for Bids (IFB) issued by the Employer is not part of the Bidding Document.
- 6.3 The Employer is not responsible for the completeness of the Bidding Document and their Addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.

7 Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

- 7.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the BDS or raise his inquiries during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification,

provided that such request is received no later than ten (10) days prior to the deadline for submission of bids. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 22.2.

- 7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the site shall be at the Bidder's own expense.
- 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.4 The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS, either in person or through video conferencing. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer not later than one week before the meeting.
- 7.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting.
- 7.7 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

8 Amendment of Bidding Document

- 8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer.

- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2

C. Preparation of Bids

9 Cost of Bidding

- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10 Language of Bid

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

11 Documents Comprising the Bid

- 11.1 The Bid shall comprise two envelopes submitted simultaneously, one containing the Technical Bid and the other the Price Bid, enclosed together in an outer single envelope.
- 11.2 Initially, only the Technical Bids are opened at the address, date and time specified in ITB Sub-Clause 25.1. The Price Bids remain sealed and are held in custody by the Employer. The Technical Bids are evaluated by the Employer. No amendments or changes to the Technical Bids are permitted. Bids with Technical Bids which do not conform to the specified requirements will be rejected as deficient Bids.
- 11.3 Price Bids of technically compliant Bids are opened in public at a date and time advised by the Employer. The Price Bids are evaluated and the Contract is awarded to the Bidder whose Bid has been determined to be the lowest evaluated substantially responsive Bid.
- 11.4 The Technical Bid shall contain the following :
- (a) Letter of Technical Bid in accordance with ITB 16;
 - (b) Bid Security, in accordance with ITB Clause 19;
 - (c) alternative Technical Bid, if permissible, in accordance with ITB Clause 13;
 - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2;

- (e) documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract; and
- (f) any other document required in the BDS.

11.5 The Price Bid shall contain the following :

- (a) Letter of Price Bid and completed schedules as required including Bill of Quantities in accordance with ITB Clauses 12, and 14;
- (b) alternative Price Bid corresponding to the alternative Technical Bid, if permissible, in accordance with ITB Clause 13; and
- (c) any other document required in the BDS.

12. Bid Letters and Price Schedules

12.1 The Bidder shall submit Technical proposal (common for all Contract Packages) and Separate Price Proposal for each individual contract package using the appropriate Submission Sheets furnished in Section 4: Bidding Forms. These Forms must be completed without any alterations to their format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

12.2 The Bidder shall submit, as part of the Price Bid, the Schedules, including the Bill of Quantities.

13. Alternative Bids

13.1 Unless otherwise indicated in the BDS, alternative bids shall not be considered.

13.2 When alternative periods for completion are explicitly invited, a statement to that effect will be included in the BDS, as will the method of evaluating different periods for completion.

14. Bid Prices and Discounts

14.1 The prices and discounts quoted by the Bidder in the Letter of Price Bid (LPB) and in the Bill of Quantities shall conform to the requirements specified below.

14.2 In the BOQ, quantity and unit rates and thereby the amount against each item have been indicated where rates as percentage are to be quoted. From this, price of such schedules have been worked out and indicated in the summary sheet in BOQ. The Bidder shall quote rates as single percentage above/below/at par in figures and words as per format for such schedule in the summary sheet. **If any bidder quotes more than one percentage for such schedules, its bid shall be summarily rejected.**

- 14.3 The price to be quoted in the Letter of Price Bid, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any unconditional discounts and the methodology for their application (the discounts, and the methodology of their application, should be quoted on prices quoted in the bid so that the discounts can be evaluated by simple arithmetic calculation during financial evaluation of the bids, to arrive at the net total price of the bid. If the net total price cannot be calculated after application of the methodology of the discount(s) quoted, the bid shall be considered as incomplete and will be rejected) in the Letter of Price Bid, in accordance with ITB 12.1. However, any conditional discount if any offered for award of any specific combination of contract package(s) has to be quoted separately for each specific combination and to be submitted in separate envelope(s).
- 14.5 Unless otherwise provided in the BDS and the Contract, the rates and prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the indices and weightings for the price adjustment formulae shall be as specified in the Tables of Adjustment Data included in Contract Data.
- 14.6 If so, indicated in ITB 1.1, bids are being invited for individual contracts or for any combination of contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 14.4, provided the bids for all contracts are submitted and opened at the same time.
- 14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause (including standard specifications), as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.
- 14.8 Bidders should note that during the progress of the works, the foreign currency requirements of the outstanding balance of the Contract Price may be adjusted by agreement between the Employer and the Contractor in order to reflect any changes in foreign currency requirements for the Contract, in accordance with Sub-Clause 14.15 of the Conditions of Contract. Any such adjustment shall be effected by comparing the percentages quoted in the bid with the amounts already used in the Works and the Contractor's future needs for imported items.
- 14.9 Bidder should note that non-submission of the Letter of Price Bid (LPB) and/or Summary sheet of BOQ by the bidder shall result in summary rejection of his bid.

15. Currencies of Bid and Payment

- 15.1 The bidder shall quote the unit rates and the prices entirely in the Indian Rupees.

16. Documents Comprising the Technical Bid

- 16.1 The Bidder shall furnish a commitment in Letter of Technical Bid (LTB) for deployment of equipment and personnel as stipulated in Section 5: Work's Requirement.
- 16.2 The bidder shall furnish commitment in LTB for submitting construction method statement for all major activities of work and get this approved from the engineer prior to the commencement of work on that activity in case of award of contract.
- 16.3 The Bidder shall furnish a commitment in Letter of Technical Bid (LTB) for adhering to mobilisation and construction schedule as stipulated in Section 5: Work's Requirement.
- 16.4 Bidder should note that non-submission of the Letter of Technical Bid (LTB) by the bidder shall result in summary rejection of his bid.

17. Documents Establishing the Qualifications of the Bidder

- 17.1 To establish its qualifications to perform the Contract in accordance with Section 3: Evaluation and Qualification Criteria, the Bidder shall submit as part of its technical Bid the information requested in the corresponding information sheets included in Section 4: Bidding Forms.
- 17.2 Domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility.

18. Period of Validity of Bids

- 18.1 Bids shall remain valid for a period of 120 days after the bid submission deadline date prescribed by the employer. A bid valid for a shorter period shall be rejected by the employer as non-responsive.
- 18.2 In exceptional circumstances, the Employer may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 19, it shall also be extended upto the date mentioned in the letter of request for extension. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid.

19. Bid Security

- 19.1 Unless otherwise specified in the BDS, the Bidder shall furnish as part of its bid, a bid security in original form and for the said amount of Indian Rupees as specified in the BDS.
- 19.2 The bid security shall be, at the Bidder's option, in any of the following forms:

- (a) A Cashiers or Banker's certified cheque or Bank draft drawn on a Scheduled/Nationalized Bank in India in favour of "Rail Infrastructure Development Company (Karnataka) Ltd" payable at Bangalore;

or

- (b) An unconditional bank guarantee using the Form given in Section 4: Bidding Forms. The bank guarantee shall be from a bank having minimum net worth of over INR 500 million from the specified banks as under:
- (i) a Scheduled Bank in India, or
 - (ii) a Foreign Bank having their operations in India, or
 - (iii) a Foreign Bank which do not have operations in India is required to provide a counter-guarantee by State Bank of India,

The bid security shall be valid upto the date as mentioned in BDS, or upto the date mentioned in the letter of request for extension, if any under ITB 18.2.

- 19.3 Any bid not accompanied by an enforceable and compliant bid security, as required in accordance with ITB 19.1, shall be summarily rejected by the Employer as non-responsive.
- 19.4 The bid security of the Bidders who have been determined to be unqualified for opening of their financial bids shall be returned within 3 working days after the opening of financial bids. The Bid Security of unsuccessful bidders shall be returned within 7 working days after issue of LOA to the successful Bidder.
- 19.5 The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.
- 19.6 The bid security may be forfeited:
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bids, except as provided in ITB 18.2 or
 - (b) if a Bidder misrepresents or omits the facts in order to influence the procurement process;
 - (c) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB 40;
 - (ii) furnish a performance security in accordance with ITB 41;
 - (iii) accept the correction of its Bid Price pursuant to ITB 32.2; or
 - (iv) furnish a domestic preference security if so required.
 - (d) if the undertaking of the affidavit submitted by the bidder or its constituents in pursuance to ITB clause 4.4 or any of the declarations of Letter of Technical Bid or Letter of Price Bid submitted by the bidder has been found to be false at any stage during the process of bid evaluation.

- 19.7 The Bid Security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1.

20. Format and Signing of Bid

- 20.1 The Bidder shall prepare one original of the Technical Bid and one original of the Price Bid as described in ITB Clause 11 and clearly mark each "ORIGINAL - TECHNICAL BID" and "ORIGINAL - PRICE BID". In addition, the Bidder shall submit copies of the Technical Bid and the Price Bid, in the number specified in the BDS and clearly mark them "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID". In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid, except for un-amended printed literature, shall be signed or initialed by the person signing the bid.
- 20.3 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

D. Submission and Opening of Bids

21. Sealing and Marking of Bids

- 21.1 The Bidder shall enclose the original of the Technical Proposal which shall be common for all contract packages and marked "ORIGINAL TECHNICAL PROPOSAL". The original of Price Proposal for each individual Contract Package and Conditional Discount(s) if any for award of any of the specific combination(s) of Contract Packages have to be submitted in separate sealed packets and each packet to be marked any of the following:
- (i) Original price proposal for contract package no. 1;
 - (ii) Original price proposal for contract package no. 2;
 - (iii) Original price proposal for contract package no. 3;
 - (iv) Conditional discount for award of contract package no. 1&2 both;
 - (v) Conditional discount for award of contract package no. 1&3 both;
 - (vi) Conditional discount for award of contract package no. 2&3 both;
 - (vii) Conditional discount for award of all contract package i.e. No. 1, 2 & 3 together;

The above separate sealed envelopes should, again be sealed in one bigger envelope and marked **ORIGINAL PRICE PROPOSAL**

- 21.2 The inner and outer envelopes shall:
- (a) bear the name and address of the Bidder;
 - (b) be addressed to the Employer in accordance with BDS 22.1;
 - (c) bear the specific identification of this bidding process indicated in the BDS 1.1; and
 - (d) The outer envelopes and the inner envelopes containing the Technical Bids shall bear a warning not to open before the time and date for the opening of Technical Bids, in accordance with ITB Sub-Clause 25.
 - (e) The inner envelopes containing the Price Bids shall bear a warning not to open until advised by the Employer in accordance with ITB Sub-Clause 25.
- 21.3 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the bid.
- 21.4 In case Price Bid in a bid is received unsealed or Price Proposal Submission Sheet of a particular package is found available in any other package then the bid for that particular package shall be considered as non-responsive and will be returned to the bidder immediately.
- 21.5 Alternative Bids, if permissible in accordance with ITB Clause 13, shall be prepared, sealed, marked, and delivered in accordance with the provisions of ITB Clauses 22 and 23, with the inner envelopes marked in addition "ALTERNATIVE NO...." as appropriate.
- 21.6 No details about price proposal shall be disclosed directly or indirectly in the technical proposal failing which the bid shall be rejected.

22. Deadline for Submission of Bids

- 22.1 Bids must be received by the Employer at the address and not later than the date and time indicated in the BDS.
- 22.2 The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders subject to the previous deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

- 23.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

- 24.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and

shall include a copy of the authorization in accordance with ITB 20.2, (except that withdrawal notices do not require copies). The corresponding withdrawal of substitution or modification of the bid must accompany the respective written notice. All notices must be:

- (a) prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL of Package No. 1 OR Package No. 2 OR Package No. 3", "SUBSTITUTION of Package No. 1 OR Package No. 2 OR Package No. 3", "MODIFICATION of Package No. 1 OR Package No. 2, OR Package No. 3", and
- (b) received by the Employer prior to the deadline prescribed for submission of bids, in accordance with ITB 22.

24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25. Bid Opening

25.1 The Employer shall conduct the opening of Technical Bids in the presence of Bidders' representatives who choose to attend, at the address, date and time specified in the BDS.

25.2 The Price Bids will remain unopened and will be held in custody of the Employer until the time of opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer to all the bidders who have been determined qualified in technical evaluation.

25.3 First, envelopes marked "WITHDRAWAL" shall be opened, read out, and recorded, and the envelope containing the corresponding Bid shall not be opened, but returned to the Bidder. No Bid shall be withdrawn unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out and recorded at bid opening.

25.4 Next, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Price Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Price Bids will remain unopened in accordance with ITB Sub-Clause 25.2. No envelope shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.

- 25.5 Next, outer envelopes marked "MODIFICATION" shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original as well as Modification, will remain unopened in accordance with ITB Sub-Clause 25.2.
- 25.6 All other envelopes holding the Technical Bids shall be opened one at a time, and the following read out and recorded :
- (a) the name of the Bidder;
 - (b) whether there is a modification or substitution;
 - (c) the presence of a Bid Security, if required; and
 - (d) any other details as the Employer may consider appropriate.
- Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with ITB Sub-Clause 23.1.
- 25.7 The Employer shall prepare a record of the opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, modification, or alternative offer; and the presence or absence of a Bid Security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 25.8 At the end of the evaluation of the Technical Bids, the Employer will invite bidders who have submitted substantially responsive Technical proposals and who have been determined as being qualified for award of specific packages to attend the opening of the price Proposals. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice of the opening of Price Bids.
- 25.9 The Employer will notify Bidders in writing who have been rejected on the grounds of being substantially non-responsive to the requirements of the Bidding Document and who have been determined as being not qualified as a result of evaluation of technical proposal for individual package and their unopened Price Proposal for that particular package along with bid security shall be returned. Similarly, the conditional discount envelopes, with condition of award of specific combination of packages shall not be opened and returned unopened, if the bidder has been determined as being not qualified as a result of evaluation of technical proposal for that combination of packages.
- 25.10 The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids and who have been determined qualified as a result of technical evaluation, in the presence of Bidders' representatives who choose to attend at the address, date and time

specified by the Employer. The Bidder's representatives who are present shall be requested to sign a register evidencing their attendance.

- 25.11 All envelopes containing Price Proposals of a particular package shall be opened one at a time and the following read out and recorded :

- (a) the name of the Bidder
- (b) whether there is a modification or substitution;
- (c) the Bid Price(s), including any discounts and alternative offers; and
- (d) any other details as the Employer may consider appropriate.

Only Price Bids, discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Price Bids.

- 25.12 The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per contract if applicable), any discounts, and alternative offers. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

26. Confidentiality

- 26.1 Information relating to the examination, evaluation & comparison, pre-qualification of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
- 26.2 Any attempt by a Bidder to influence the Employer in the examination, evaluation & comparison and pre-qualification of the Bids or Contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of opening the Technical Bids to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it should do so in writing.

27. Clarification of Bids

- 27.1 To assist in the examination, evaluation & comparison and pre-qualification of the Bids, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of errors discovered by the Employer in the evaluation of the Price Bids, in accordance with ITB Clause 32.

- 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Employer's request for clarification, its bid may be rejected.

28. Deviations, Reservations, and Omissions

- 28.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

29. Determination of Responsiveness

- 29.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB11.
- 29.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,
- (a) if accepted, would:
 - (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or
 - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.
- 29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB 16, Technical Bid, in particular, to confirm that all requirements of Section 5 (Works Requirements) have been met without any material deviation or reservation.
- 29.4 If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30. Nonconformities, Errors, and Omissions

- 30.1 Provided that a bid is substantially responsive, the Employer may waive any nonconformities in the bid that do not constitute a material deviation, reservation or omission.

- 30.2 Provided that a bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the bid. Failure of the Bidder to comply with the request may result in the rejection of its bid.

31. Pre-Qualification of the Bidder

- 31.1 The Employer shall determine to its satisfaction during the evaluation of Technical Bids whether Bidders are qualified to perform the Contract satisfactorily.
- 31.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 17, to clarifications in accordance with ITB Clause 27 and the qualification criteria indicated in Section 3: Evaluation and Qualification Criteria. Factors not included in Section 3: Evaluation and Qualification Criteria shall not be used in the evaluation of the Bidder's qualification.
- 31.3 An affirmative determination of technical bid shall be a prerequisite for the opening and evaluation of a Bidder's Price Bid. A negative determination shall result into the disqualification of the Bid, in which event the Employer shall return the unopened Price Proposal to the Bidder.

32. Correction of Arithmetical Errors and Omissions in Price Bid and Evaluation of Bid Price

- 32.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors and omissions in the price bid and then arrive at the Evaluated Bid Price on the following basis:
- (a) If there is a discrepancy between the price mentioned in the summary sheet of the BOQ and the price that is obtained by calculation i.e. by taking into account the percentage rate quoted above/below/at par for any bill/schedule in the summary sheet of BOQ, then the quoted percentage rate shall prevail and the price shall be corrected accordingly;
 - (b) if the percentage rate has been quoted both in words and in figures and there is a discrepancy in such rates, then the rate in words shall prevail and shall be considered for evaluation of the price of the schedule/bill;
 - (c) If the percentage rate has been quoted either in words or in figures only, then the same shall be considered for evaluation of the price of the schedule/bill;
 - (d) If no percentage rate has been indicated for any particular schedule/bill in words, as well as in figures, irrespective of the fact whether the bidder has written or not written above/below/at par, in such cases, the rate shall be considered as at par and the price shall be calculated accordingly;
 - (e) If the bidder has indicated a percentage rate other than zero percent without mentioning whether it is above/below or has mentioned it as at par,

in such cases the percentage rate shall be considered as at par and the price shall be calculated accordingly;

- (f) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
- (g) The rate for each item of each schedule/bill shall first be calculated after applying percentage rate and discount(s) to the BOQ rate for that item and the net rate shall be rounded off to 2 decimal places. The net rate so calculated shall then be used for working out the amount for each item of the schedule/bill. Thereafter, evaluated price of a schedule shall be calculated as the sum of amounts of all items of that schedule and sum of evaluated prices of all schedules/bills shall be the overall Evaluated Bid Price.

32.2 If the Bidder that has submitted the lowest evaluated bid does not accept the correction of errors and omissions as per above provisions, its bid shall be disqualified and its bid security shall be forfeited.

33. Conversion to Single Currency

33.1 For evaluation and comparison purposes the currencies of the bid shall be converted into Indian Rupees as stated in BDS.

34. Purchase Preference

34.1 Unless otherwise specified in the BDS the Purchase Preference shall not apply.

34.2 Unless otherwise specified in the BDS the Domestic Preference shall not apply.

35. Evaluation of Bids

35.1 The Employer shall evaluate Price Bids of each Bid for which the Technical Bids have been determined to be substantially responsive. The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

35.2 To evaluate the price Bid of a bid, the Employer shall consider the following:

- (a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including Day Work items, where priced competitively;
- (b) price adjustment for correction of arithmetic errors and omissions in the price bid in accordance with ITB 32.1;
- (c) price adjustment due to discounts offered in accordance with ITB 14.4;
- (d) Application of all the evaluation factors indicated in Section 3 (Evaluation and Qualification Criteria).

- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 35.4 If this Bidding Document allows Bidders to quote separate prices for different contracts, and the award to a single Bidder of multiple contracts, the methodology to determine the lowest evaluated price of the contract combinations, including any discounts offered in the Letter of Price Bid, is specified in Section 3 (Evaluation and Qualification Criteria).
- 35.5 If the bid, which results in the lowest Evaluated Bid Price is substantially on lower side and/or seriously unbalanced in the opinion of the Employer as per criteria defined below, the Employer may require the bidder to submit additional performance security as under:-

- a) If overall price quoted by the L1 bidder is below the engineer's estimated price by more than 10% and the difference between overall price quoted by the L1 and L2 is more than 5% of the estimated price, then the bid price of L1 bidder shall be treated as substantially on lower side and such bidder shall be bound to furnish additional performance security equal to the $(0.9 \times \text{engineer's estimated price} - \text{L1 price})$ or $(0.95 \times \text{L2 price} - \text{L1 price})$ whichever is lower, on this account. Example below demonstrates the method of calculation to arrive at additional performance security:

Suppose overall price quoted by the L1 bidder is 17% below the estimated price and the overall price quoted by L2 bidder is 8% below the estimated price. In this case the overall price quoted by the L1 bidder is lower by more than 10% of the estimated price and also the difference between overall price quoted by the L2 and L1 bidder is more than 5% of the estimated price, hence the L1 bidder shall be required to furnish additional performance security for an amount equal to

$\{0.9 \times \text{engineer's estimated price} - (1-17/100) \times \text{engineer's estimated price}\}$
 $= \{0.07 \times \text{engineer's estimated price}\} = 7\% \text{ of engineer's estimated price or}$
 $\{0.95 \times (1-8/100) \times \text{engineer's estimated price} - (1-17/100) \times \text{engineer's estimated price}\} = \{0.044 \times \text{engineer's estimated price}\} = 4.4\% \text{ of}$
 engineer's estimated price; whichever is lower.

As per the above L1 bidder shall be required to submit additional performance security of 4.4% of engineer's estimated price.

- b) If for any bill/ schedule of quantities % age above or below quoted by the bidder on the estimated price is beyond 15% below the overall % age difference between the quoted contract price and the engineers estimated price, then the price for that particular schedule shall be treated as seriously unbalanced and bidder shall be bound to furnish additional performance security for such unbalanced price. Example below demonstrates the method of calculation to arrive at unbalanced price and additional performance security:

Suppose for the L1 bidder overall % age difference between quoted contract price and the engineers estimated price;

$(\text{Overall contract price} - \text{Overall estimated price}) \times 100 \div \text{overall estimated price} = + 4 \%$

Maximum % age below permitted over estimated price of any bill / schedule in this case = $+4 - 15 = -11\%$

Suppose for the L1 bidder has quoted 20% below estimated price of schedule "A" then the pricing of the schedule A shall be treated as unbalanced and the bidder shall be required to furnish additional performance security for an amount equal to $(20 - 11) \%$ of the estimated price of schedule A.

36. Comparison of Bids

- 36.1 The Employer shall compare all substantially responsive bids to determine the lowest evaluated bid, in accordance with ITB 34 and 35.

37. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

- 37.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

F. Award of Contract

38. Award Criteria

- 38.1 The Employer shall award the Contract to the Bidder whose bid is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily and whose offer has been determined to be the lowest evaluated subject to ITB 38.2 below. In case of more than one bids are evaluated to be lowest, Contract shall be awarded to the bidder having higher average annual construction turnover (calculated as total certified payments received for contracts in progress or completed) in equivalent INR within the last three financial years.
- 38.2 The Employer has the right to review at any time prior to award of contract that the qualification criteria as specified in Section 3: Evaluation and Qualification Criteria are still being met by the Bidder whose offer has been determined to be the lowest evaluated Bid. A Bid shall be rejected if the qualification criteria as specified in Section 3: Evaluation and Qualification Criteria are no longer met by the Bidder whose offer has been determined to be the lowest evaluated Bid. In this event the Employer shall proceed to the next lowest evaluated Bid to make a similar reassessment of that Bidder's capabilities to perform satisfactorily.

39. Notification of Award

- 39.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, that its bid has been accepted by the Competent

Authority at K RIDE's Corporate Office at Bangalore. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price") and the requirement for the Contractor to remedy any defects therein as prescribed by the Contract.

- 39.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

40. Signing of Contract

- 40.1 Promptly after notification, the Employer shall send the successful Bidder the Contract Agreement.
- 40.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

41. Performance Security

- 41.1 On receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, subject to ITB 35.5, using for that purpose the Performance Security Form included in Section 8: Contract Forms, or another form acceptable to the Employer.
- 41.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- 41.3 The above provision shall not apply to the furnishing of a Domestic Preference Security, if so required.

42. Jurisdiction of Courts

The bidding process shall be governed by and construed in accordance with the laws of India and the Courts as indicated in Bid Data Sheet shall have exclusive jurisdiction over all the disputes/issues arising under, pursuant to and/ or in connection with the bidding process.

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Section 2	Bid Data Sheet (BDS)
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Section 2	Bid Data Sheet (BDS)
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This section consists of provisions that are specific to each procurement and supplement the information or requirements included in Section I – Instructions to Bidders.

INDEX

	Title	Page No
A	Introduction	31
B	Bidding Documents	31
C	Preparation of Bids	32
D	Submission and Opening of Bids	33

A. Introduction

ITB 1.1	The number of the Invitation for Bids is: K RIDE/Projects/52/DBH/1/2020 Date : 29.07.2020
ITB 1.1	The Employer is: K RIDE (Rail Infrastructure Development Company (Karnataka) Limited), Bangalore
ITB 1.1	The name of the work is: Baiyyappanahalli (BYPL)– Hosur (HSRA) Doubling of Railway track - Earthwork in cutting/embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works (excluding station yards) in Bangalore Division of South Western Railway in three packages.
ITB 4.1(b)(i)	No. of partners : 2

B. Bidding Documents

ITB 7.1	<p>For <u>clarification purposes</u> only, the Employer's address is General Manager (Civil), K RIDE (Rail Infrastructure Development Company (Karnataka) Limited) MSIL House, 7th Floor, #36, Cunningham Road Bangalore – 560052 Tel - (080) 22370582, Fax - (080) 22370581 E – Mail: md@kride.in</p>
ITB 7.4	<p>A Pre-Bid meeting is schedule on the following date, time and venue:</p> <p>Date: 10/08/2020</p> <p>Time: 11.30 hrs</p> <p>Venue: MSIL House, 7th Floor, #36, Cunningham Road, Bangalore – 560052, India</p> <p>The pre-bid meeting will be held through video Conference. The prospective bidders who wish to attend the meeting shall submit a maximum of two e-mail ids of the persons nominated to attend the meeting to the person nominated to contact at least 2 working days before the pre-bid meeting.</p> <p>Bidders can also attend the pre-bid meeting at K RIDE office at the appointed time, duly following the precautions for COVID-19.</p> <p>Site visit is not proposed to be organized by the Employer. However, the bidders are advised to visit the site before bidding.</p>

C. Preparation of Bids

ITB 10.1	The language of the bid is: English
ITB 11.2	Alternative technical solutions are not permitted.
ITB 11.4 (f)	Checklist as per Form No. 2 given in Section 4: Bidding Forms
ITB 13.1	Alternative bids are not permitted.
ITB 13.2	Alternative times for completion are not permitted.
ITB 14.5	The prices quoted by the Bidder shall be adjustable in accordance with the provisions in Sub Clause 13.8 of GCC, Section 7, Part B; Particular Conditions of Contract.
ITB 15.1	The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees (INR)
ITB 18.1	The bid validity period shall be 120 (One hundred and twenty only) days.
ITB 19.1	The Bidder should submit along with the bid, a bid security as mentioned in the notice for invitation of Bids separately for each package in which bidder wish to bid.
ITB 19.2	The bid security shall be valid up to 42 days beyond the <i>bid validity period</i>
ITB 20.1	In addition to the original of the bid, the number of copies is: NIL
ITB 20.2	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:</p> <p>(a) In case of Companies, a POA from the Director of the Company who has been authorized by the Board of Directors through resolution to sign on behalf of the Company</p> <p>(b) In case of firms, Power of Attorney by the Proprietors.</p> <p>(c) In case of JV, POA by the JV partners.</p>

D. Submission and Opening of Bids

ITB 22.1	<p>For <u>bid submission purposes</u> only, the Employer's address is:</p> <p>General Manager (Civil)/K RIDE, K RID (Rail Infrastructure Development Company (Karnataka) Limited) MSIL House, 7th Floor, #36, Cunningham Road Bangalore – 560052</p> <p>Tel - (080) 22370582, Fax - (080) 22370581 E – Mail: md@kride.in</p> <p>The deadline for bid submission is: Date: 20.08.2020 Time: 15:00 hrs.</p>																
ITB 22.2	Electronic bid submission is not permitted.																
ITB 25.1	<p>The bid opening shall take place at:</p> <p>Rail Infrastructure Development Company (Karnataka) Limited</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td><i>Floor/Room No.</i></td><td>MSIL House, 7th Floor,</td></tr> <tr> <td><i>Street Address</i></td><td>#36, Cunningham Road</td></tr> <tr> <td><i>City</i></td><td>Bangalore</td></tr> <tr> <td><i>Pin Code</i></td><td>560052</td></tr> <tr> <td><i>Country</i></td><td>Indian Republic</td></tr> <tr> <td><i>Tel. No.</i></td><td>(080) - 22370582</td></tr> <tr> <td><i>Fax:</i></td><td>080 - 22370581</td></tr> <tr> <td><i>E – Mail</i></td><td>md@kride.in</td></tr> </table> <p><u>Bid Opening:</u> Date: 20/08/2020 Time: 15:30 hrs.</p>	<i>Floor/Room No.</i>	MSIL House, 7th Floor,	<i>Street Address</i>	#36, Cunningham Road	<i>City</i>	Bangalore	<i>Pin Code</i>	560052	<i>Country</i>	Indian Republic	<i>Tel. No.</i>	(080) - 22370582	<i>Fax:</i>	080 - 22370581	<i>E – Mail</i>	md@kride.in
<i>Floor/Room No.</i>	MSIL House, 7th Floor,																
<i>Street Address</i>	#36, Cunningham Road																
<i>City</i>	Bangalore																
<i>Pin Code</i>	560052																
<i>Country</i>	Indian Republic																
<i>Tel. No.</i>	(080) - 22370582																
<i>Fax:</i>	080 - 22370581																
<i>E – Mail</i>	md@kride.in																
ITB 25.2	Electronic bid opening procedure is Not permitted.																
ITB 42	Bangalore																

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Section 3	Evaluation & Qualification Criteria (EQC)
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Section 3	Evaluation & Qualification Criteria (EQC)
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INDEX

	Title	Page No
1	Evaluation	35-36
2	Eligibility Criteria	37-41
3	Table showing the eligibility criteria limits	41-42

1	Evaluation
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In addition to the criteria listed in ITB 35.2 (a)-(e), the following criteria shall apply:

1.1. Adequacy of Technical Bid

Evaluation of the Bidder's commitment to mobilize key equipment and personnel for the contract consistent with the requirements stipulated in Section 5: Works Requirements regarding work methods, scheduling, and material sourcing.

1.2. Multiple Contracts

The works are grouped into ~~two~~/three contract packages, and bidders are allowed to bid in single/multiple contract package(s) and pursuant to Sub-Clause 35.4 of Instructions to Bidders, evaluation shall be done as under :

In first stage the qualification of the bidder shall be checked separately for each individual package for which the bidder has submitted the substantially responsive proposal.

In the second stage, the bidder whose proposal for more than one package has been determined substantially responsive and meeting the qualification requirements of individual packages, the technical evaluation of such bidder will again be done for the combined requirements as stipulated in this section of document, for all the possible combination(s) of such packages.

After the evaluation of technical proposals as above, the financial offers shall be opened for those specific package(s) of specific bidders who have submitted substantially responsive proposals and who have been determined to meet the qualification requirements.

The offers of bidders which have been rejected on the grounds of being substantially nonresponsive to the requirements of the bidding document and which have been determined as being not qualified as a result of evaluation of technical proposal of individual package, the price proposal of such bidders for that package shall not be opened and returned unopened. Similarly the conditional discount envelopes, with condition of award of specific combination of packages shall not be opened and returned unopened, if the bidder has been determined as being not qualified as a result of evaluation of technical proposal for that combination of packages.

After the bidder is determined to meet qualification requirements for any package or combination of packages, the employer will evaluate and compare financial bids on the basis of a package, or a combination of packages, or as a total of packages **in order to arrive at the least cost combination for the employer by taking into account discounts offered by bidders in case of award of combination of two**

packages. The least cost combination will determine the technically eligible lowest bidder for each package. On the basis of this evaluation, the employer may award any package or combination of packages to the bidder, at his sole discretion.

1.3. Completion Time

Alternative Completion Time is not permitted.

1.4. Technical Alternatives

Technical alternatives are not permitted

1.5. Margin of Preference

1.5.1. Purchase Preference to Central Public Sector Enterprises (CPSEs)

Purchase Preference to CPSEs shall not apply.

1.5.2. Domestic Preference

Domestic Preference is not applicable.

2. Eligibility Criteria:

2.1 Technical Eligibility Criteria:

(a) The tenderer must have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or
- Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or
- One similar work each costing not less than the amount equal to 60% of advertised value of the tender.

(b) (i) In case of tenders for composite works (e.g. works involving more than one distinct component, such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges – substructure, superstructure etc.), tenderer must have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

Three similar works each costing not less than the amount equal to 30% of advertised value of each component of tender, or

Two similar works each costing not less than the amount equal to 40% of advertised value of each component of tender, or

One similar work each costing not less than the amount equal to 60% of advertised

value of each component of tender.

Note for b (i): Separate completed works of minimum required values for each component shall also be considered for fulfillment of technical eligibility criteria.

- (b) (ii) In such cases, what constitutes a component in a composite work shall be clearly predefined with estimated tender cost of it, as part of the tender documents without any ambiguity.
- (b) (iii) To evaluate the technical eligibility of tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be either executed by tenderer himself if he has work experience as mentioned in clause 7 (a) (ii) of Part-II of GCC or through subcontractor fulfilling the requirements as per clause 7 of Part-II of GCC or jointly i.e., partly himself and remaining through subcontractor, with prior approval of Chief Engineer in writing.

However, if required in tender documents by way of Special Conditions, a formal agreement duly notarised, legally enforceable in the court of law, shall be executed by the main contractor with the subcontractor for the component(s) of work proposed to be executed by the subcontractor(s), and shall be submitted along with the offer for considering subletting of that scope of work towards fulfilment of technical eligibility.

In case after award of contract or during execution of work it becomes necessary for contractor to change subcontractor, the same shall be done with subcontractor(s) fulfilling the requirements as per clause 7 of Part-II of GCC, with prior approval of Chief Engineer in writing.

Note for Item 2.1:

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organisation, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

2.2. Financial Eligibility Criteria: The tenderer must have received contractual payments in the previous three financial years and the current financial year up to the date of inviting of tender, at least 150% of the advertised value of the tender. The tenderers shall submit Certificates to this effect which may be an attested Certificate from the concerned department /client or Audited Balance Sheet duly certified by the Chartered Accountant / Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

Note for 2.2: Client certificate from other than Govt Organization should be duly supported by Form 16 A / 26 AS generated through TRACES of Income Tax Department of India.

2.3. Bid Capacity: The tender/technical bid will be evaluated based on bid capacity formula detailed as below:

For tenders costing more than Rs 20 crore wherein eligibility criteria includes bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total bid value of the present tender. The available bid capacity shall be calculated as under:

Available Bid Capacity = $[A \times N \times 2] - B$

Where,

A = Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender), taking into account the completed as well as works in progress.

N= Number of years prescribed for completion of work for which bids has been invited.

B = Value of existing commitments and balance amount of ongoing works with the tenderer to be completed in next 'N' years.

Note:

- (a) The Tenderer(s) shall furnish the details of existing commitments and balance amount of ongoing works with tenderer as per the prescribed proforma of Railway for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender. In case of no works in hand, a 'NIL' statement should be furnished. This statement should be submitted duly verified by Chartered Accountant.
- (b) In case of JV, the tenderer(s) must furnish the details of existing commitments and balance amount of ongoing works with each member of JV as per the prescribed proforma of Railway for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender. In case of no works in hand, a 'NIL' statement should be furnished. This statement should be submitted duly verified by Chartered Accountant.
- (c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above mentioned bid capacity in the tender under consideration.
- (d) The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".

- (e) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected **summarily**.
- (f) The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.

2.4 No Technical and Financial credentials are required for tenders having value up to Rs 50 lakh.

2.5 Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India for the relevant date. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date.

[Explanation for clause 2 including clause 2.1 to 2.5 - Eligibility Criteria:

1. In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfilment of credentials.
2. If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered for fulfilment of credentials.
3. If a part or a component of work is completed but the overall scope of contract is not completed, this work shall not be considered for fulfilment of technical credentials even if the cost of part completed work/component is more than required for fulfilment of credentials.
4. **In case a work is considered similar in nature for fulfilment of technical credentials, the overall cost of that work including PVC amount if any shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.**
5. The value of final bill including PVC amount-if paid, or otherwise in case final bill is pending the contract cost in last approved variation statement plus PVC amount paid or cumulative

amount paid up to last on-account bill including PVC amount and statutory deductions whichever is less, shall be considered as the completion cost of work.

6. In case of newly formed partnership firm, the credentials of individual partners from previous propriety firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in previous entity and his share in present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of 0.3×0.2 * value of the work done in the previous entity. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
7. In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm (e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
8. In case of existing partnership firm if any other partner(s) joins the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.
9. Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or propriety firm without leaving partnership firm of A&B partners.
10. In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
11. If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of partnership firm retires without taking away any credentials from the firm, the credentials of partnership firm shall remain the same as it is without any change in their value.

12. In a partnership firm “AB” of A&B partners, in case A also works as propriety firm “P” or partner in some other partnership firm “AX”, credentials of A in propriety firm “P” or in other partnership firm “AX” earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.
13. In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.
14. In case company A is merged with company B, then company B would get the credentials of company A also.]

3. Table showing the eligibility criteria limits

Rs. in Crores

Sl. No.		Reach 3	Reach 4	Reach 5	Multiple Packages			
		Package 1 (P1)	Package 2 (P2)	Package 3 (P3)	(P1+P2)	P1+P3	P2+P3	P1+P2+P3
	Minimum Value of qualifying criteria	20.83	20.2	33.19	41.03	54.02	53.39	74.22
1	SW1 - 30%	6.25	6.06	9.957	12.31	16.21	16.02	22.27
	SW2 - 40%	8.33	8.08	13.28	16.41	21.61	21.36	29.69
	SW3 - 60%	12.50	12.12	19.91	24.62	32.41	32.03	44.53
2	F E. 150%	31.25	30.3	49.79	61.55	81.03	80.09	111.33
3	Bid Capacity	20.83	20.2	33.19	41.03	54.02	53.39	74.22

Note:

1) Technical Eligibility Criteria: (Clause 2.1 of section 3)

The tenderer must have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

SW1 : Three similar works each costing not less than the amount equal to 30% of advertised value of the tender,

or

SW2 : Two similar works each costing not less than the amount equal to 40% of advertised value of tender,

or

SW3 : One similar work each costing not less than the amount equal to 60% of advertised value of tender.

2) Similar work is defined as below:

Reach 3: Work of execution of earthwork in formation and construction of bridges

Reach 4: Work of execution of earthwork in formation and construction of bridges.

Reach 5: Work of execution of earthwork in formation and construction of bridges

3) Financial Eligibility Criteria: (Clause 2.2 of section 3)

F.E : The tenderer must have received contractual payments in the previous three financial years and the current financial year up to the date of inviting of tender, at least 150% of the advertised value of the tender. The tenderers shall submit Certificates to this effect which may be an attested Certificate from the concerned department /client or Audited Balance Sheet duly certified by the Chartered Accountant / Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

4) Bid Capacity:

Minimum value as per above table is as per reference clause 2.3 of section 3

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Section 4

Bidding Forms

Section 4**Bidding Forms**

This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid .

S.No	Title	Form Number	Page No
1	Letter of Technical Bid (Combined for all packages)	PS 1	45-47
2	Letter of Price Bid (package 1)	PS 2	48-49
3	Letter of Price Bid (package 2)	PS 3	50-51
4	Letter of Price Bid (package 3)	PS 4	52-53
5	Format for Affidavit (along with Bid)	PS 5	54-56

S.No	Title	Form Number	Page No
6	Bid Security Form (For Package - 1, 2 & 3 separately)	BDF/1	57-59
7	Letter of participation from Each partner of joint venture (JV)	JV/1	60-61
8	Power of attorney for authorized signatory Of joint venture (JV) partners	JV/2	62
9	Power of attorney to Lead partner of joint venture (JV)	JV/3	63-64
10	Draft MoU for JV	JV/4	65-69
11	Draft Joint Venture Agreement	JV/5	70-73

S No	Title	Form Number	Page No
	Bidder Qualification		74
12	Bidder's Information Sheet	ELI - 1	75
13	JV Information Sheet	ELI – 2	76
14	Financial Situation	FIN - 1	77-78
15	Average Annual Construction Turnover	FIN – 2	79
16	Current Contract Commitment	FIN - 3	80
17	Specific Construction Experience	EXP – 2(a)	81
18	Specific Construction Experience in Key Activities	EXP – 2(b)	82
19	EQC	Form No 1	83
20	Checklist for clauses pertaining to Summary Rejection of bid	Form No 2	84

Form: PS 1

Letter of Technical Bid

(Combined for all packages)

Date:

Invitation for Bid No.:

To:

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB);
- (b) We offer to execute the Works in conformity with the Bidding Documents ;
- (c) Our bid shall be valid for a period of **120** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
- (e) If our bid is accepted, we commit to deploy key equipment and key personnel consistent with the requirements stipulated in Section 5: Works Requirements;
- (f) If our bid is accepted, we commit to submit work method statements for all major activities and get these approved from the engineer prior to commencing work on such activities. We also understand that the work shall be executed as per the approved method statements without any deviations;

- (g) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3;
- (h) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3, other than alternative offers submitted in accordance with ITB 13;
- (i) We declare that we are not liable to be disqualified in Accordance with ITB 4.4, and we are enclosing the affidavit for the same as per the Performa given in the bid document.
- (j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (k) We have not made any deviations from the requirement of the bidding document and we have also not made any tampering or changes in the bidding documents on which the bid is being submitted and if any tampering or changes are detected at any stage, we understand the bid will invite summary rejection and forfeiture of bid security/the contract will be liable to be terminated along with forfeiture of performance security, even if LOA has been issued.
- (l) We understand that we will be considered to be participating for all the package(s) for which we have submitted the bid security(ies) and we will be considered for award of the following, subject to fulfilling the eligibility criteria as given in bidding document;
 - i. Such individual package(s) for which we have submitted the bid security (ies); and
 - ii. All possible combinations of such individual packages except the following combination(s) of packages for which we are NOT willing to be considered for award;
 - a. -----
 - b. -----
- (m) If our bid is accepted, we opt to take payment into the bank account, nominated by us.

Or

If our bid is accepted, we opt to take payment through Letter of Credit(LC) arrangement as per GCC clause 14.7.1 and we hereby affirm having read over and agreed to the terms and conditions of the LC option. We also understand that the option of taking payment through LC arrangement, shall be final and no change shall be permitted, thereafter, during execution of contract.

[Delete whichever is not applicable. In case the bidder fails to delete one of the two options above, the option of payment into the bank account, nominated by the contractor shall prevail]

- (n) We declare that the submission of this bid confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services or any other item of work related to the award and performance of this contract. We further confirm and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the bid price does not include any such amount. We acknowledge the right of the Employer, if he finds to the contrary, to declare our bid to be noncompliant and if the contract has been awarded to declare the contract null and void
- (o) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Form: PS 2

**Letter of Price Bid
(Package 1)**

Date:

Invitation for Bid No.:

To:

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8;
- (b) We offer to execute the Work in conformity with the Bidding Documents;
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is.....
.....
.....
- (d) The discounts offered and the methodology for their application (see note below) are.....
.....
.....
- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (f) We have not made any deviations from the requirement of the bidding document and we have also not made any tampering or changes in the bidding documents on which the bid is being submitted and if any tampering or changes are detected at any stage, we understand the bid will invite summary rejection and forfeiture of bid security/the contract will be liable to be terminated along with forfeiture of performance security, even if LOA has been issued.
- (g) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name

In the capacity of

Signed

.....

Duly authorized to sign the Bid for and on behalf of

Date

Note: *The discounts, and the methodology of their application, should be quoted on prices quoted in the bid so that the discounts can be evaluated by simple arithmetic calculation during financial evaluation of the bids, to arrive at the net total price of the bid. If the net total price cannot be calculated after application of the methodology of the discount(s) quoted, the bid shall be considered as incomplete and will be rejected.*

K RIDE

Form: PS 3

**Letter of Price Bid
(Package 2)**

Date:

Invitation for Bid No.:

To:

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8;
- (b) We offer to execute the Work in conformity with the Bidding Documents;
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is.....
.....
.....
- (d) The discounts offered and the methodology for their application (see note below) are
.....
.....
.....
.....
- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (f) We have not made any deviations from the requirement of the bidding document and we have also not made any tampering or changes in the bidding documents on which the bid is being submitted and if any tampering or changes are detected at any stage, we understand the bid will invite summary rejection and forfeiture of bid security/the contract will be liable to be terminated along with forfeiture of performance security, even if LOA has been issued.
- (g) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name

In the capacity of

Signed

.....

Duly authorized to sign the Bid for and on behalf of

Date

Note: *The discounts, and the methodology of their application, should be quoted on prices quoted in the bid so that the discounts can be evaluated by simple arithmetic calculation during financial evaluation of the bids, to arrive at the net total price of the bid. If the net total price cannot be calculated after application of the methodology of the discount(s) quoted, the bid shall be considered as incomplete and will be rejected.*

K RIDE

Form: PS 4

**Letter of Price Bid
(Package 3)**

Date:

Invitation for Bid No.:

To:

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8;
- (b) We offer to execute the Work in conformity with the Bidding Documents;
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is.....
.....
.....
- (d) The discounts offered and the methodology for their application (see note below) are.....
.....
.....
- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (f) We have not made any deviations from the requirement of the bidding document and we have also not made any tampering or changes in the bidding documents on which the bid is being submitted and if any tampering or changes are detected at any stage, we understand the bid will invite summary rejection and forfeiture of bid security/the contract will be liable to be terminated along with forfeiture of performance security, even if LOA has been issued.
- (g) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name

In the capacity of

Signed

.....

Duly authorized to sign the Bid for and on behalf of

Date

Note: *The discounts, and the methodology of their application, should be quoted on prices quoted in the bid so that the discounts can be evaluated by simple arithmetic calculation during financial evaluation of the bids, to arrive at the net total price of the bid. If the net total price cannot be calculated after application of the methodology of the discount(s) quoted, the bid shall be considered as incomplete and will be rejected.*

K RIDE

Form: PS 5

FORMAT FOR AFFIDAVIT TO BE SUBMITTED BY BIDDER ALONGWITH THE BID

(To be separately given for each package)

*(To be executed in presence of Public Notary on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper has to be in the name of the bidder)***

I **(Name and designation)****..... appointed as the attorney/authorized signatory of the bidder (including its constituents), M/s. _____ (hereinafter called the bidder) for the purpose of the Bid for the work of _____ as per the bid No. _____ of K RIDE, do hereby solemnly affirm and state on behalf of the bidder including its constituents as under:

- *1. That the bidder or any of its constituents has not been Blacklisted/ banned for business dealings for all Government Departments or by Ministry of Railways or by K RIDE at any time and/or no such blacklisting is in force as on the deadline for submission of bids.
- *2. That none of the previous contracts of the bidder or any of its constituents had been terminated/rescinded for Contractor's failure or part terminated for its failure as a JV partner with forfeiture of its full Performance Security, by Rail Infrastructure Development Company (Karnataka) Ltd. during the period of last 3 years before the deadline for submission of bids.

(Add Proviso of Clause 4.4(b) (ITB) suitably, if any Contract was so terminated).

- *3. The bidder or any of its constituents has not been imposed liquidated damages of 5% or more of contract value by any Government Department or by Ministry of Railways or by K RIDE due to delay in the implementation of any previous contract (either in the capacity of a single entity or as constituent of any other JV) within the period of last 2 years before the deadline for submission of bid [2 years shall be reckoned from the date on which imposed L.D. has exceeded 5% of the contract price]and there are no such accrued delay damages which has not been fully recovered before the deadline for submission of bids on account of contractor's request for deferring recovery to maintain cash flow and K RIDE has acceded to the same in the interest of the project and the work under the previous contract in question has been completed before the deadline for submission of bid, unless imposition of such delay damages has been set aside by the Competent Authority.

4. That the Bidder or any of its constituents is neither Bankrupt/Insolvent nor is in the process of winding-up nor such a case is pending before any Court on the deadline of submission of the bid.
- *5. That the name of the Bidder or any of its constituents is not on the list of "Poor Performer" of any Government Department or by Ministry of Railways or by K RIDE as on the deadline for submission of bid.
6. We declare that the bidder or any of its constituents have not either changed their name or created a new business entity as covered by the definition of "Allied Firm" under para 1102 (iii) of chapter XI of Vigilance manual of Indian Railways with latest amendments and corrections (available on website of Indian Railways), consequent to having been banned business dealings for specified period which is not over or suspended business dealings or having been declared as poor performer.
- 7.# We declare and certify that balance sheets for last three financial years including that for the latest concluded financial year are being submitted.

OR

We declare and certify that balance sheet for the latest concluded financial year has not been finalized till date and that is why we are furnishing financial data for last three financial years ignoring the latest concluded financial year.

*(# - Delete whichever is not applicable)**.*

8. We declare and certify that we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
9. We declare that the information and documents submitted along with the tender by us are correct and we are fully responsible for the correctness of the information and documents, submitted by us.
10. We understand that in case we cease to fulfill the requirements of qualifying and eligibility criteria at any time after opening of bids and till finalization of bids, it will be our bounden duty to inform the Employer of our changed status immediately and in case of our failure to do so, our bid shall be rejected and bid security shall be forfeited. In case such failure comes to the notice of Employer at any time after award of the contract, it will lead to termination of the contract and forfeiture of Bid or Performance Security. We shall also be liable for Banning of Business dealings upto a period of five years.
11. We understand that if the contents of the affidavit are found to be false at any stage during bid evaluation, it will lead to rejection of our bid and forfeiture of the bid security. Further, we ***[insert name of the***

bidder]**_____ and all our constituents understand that we shall be liable for banning of business dealings upto a period of five years.

12. We also understand that if the contents of the affidavit are found to be false at any time after the award of the contract it will lead to termination of the contract, forfeiture of Bid or Performance Security and Banning of Business dealings of the Bidder and all its constituents for a period of upto five years.

(SEAL AND SIGNATURE OF THE BIDDER)

Verification:

Verified on _____ day of _____ at _____ that the contents of the above mentioned affidavit are true and correct and nothing material has been concealed there from.

(SEAL AND SIGNATURE OF THE BIDDER)

**Modify the contents wherever necessary, in terms of sub-clause 4.4 ITB.*

*** The contents in Italics are only for guidance purpose and details as appropriate, are to be filled in suitably by Bidder.*
Attestation before Magistrate/Public Notary

(NOTE: This form need not be filled, This is only for information)

BDF/1

Bid Security
(For Package - 1, 2 & 3 separately)

Bank Guarantee

(On non-judicial stamp paper of the appropriate value in accordance with Stamp Act. The stamp paper should be in the name of the Executing Bank).

From:

.....**[Insert Bank's Name, and Address of Issuing Branch or Office]**

To:

The General Manager, Civil,
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor,
#36, Cunningham Road
Bangalore - 560052

Beneficiary: Rail Infrastructure Development Company (Karnataka) Limited
(hereinafter called "the Employer")

Date:

Bid Security No.:

We have been informed that **[Insert name of the Bidder]**..... (hereinafter called "the Bidder") intends to submit to you its bid (hereinafter called "the Bid") for the execution of **[name of contract]** under Invitation for Bids No. dated..... ("the IFB").

WHEREAS, the Bidder is required to furnish Bid Security for the sum of **[Insert Value of Bid Security required]**, in the form of Bank Guarantee, according to your conditions of Bid.

AND

WHEREAS,**[Insert Name of the Bank]**, with its Branch**[Insert Address]** having its Headquarters office at..... **[Insert Address]**, hereinafter called the **Bank**, acting through**[Insert Name and Designation of the authorised persons of the Bank]**, have, at the request of the Bidder, agreed to give guarantee for Bid security as hereinafter contained, in favour of the Employer:

1. KNOW ALL MEN that by these present that I/We the undersigned ***[Insert name(s) of authorized representatives of the Bank]***, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay to the Employer full amount in the sum of ***[Insert Value of Bid Security required]*** as above stated.
2. The Bank undertakes to immediately pay on presentation of demand by the Employer any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Employer on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.
3. The Bank shall pay the amount as demanded immediately on presentation of the demand by Employer without any reference to the Bidder and without the Employer being required to show grounds or give reasons for its demand of the amount so demanded.
4. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Bidder.
5. The Bank agrees that no change, addition, modifications to the terms of the Bid document or to any documents, which have been or may be made between the Employer and the Bidder, will in any way absolve the Bank from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification made by Employer at any time.
6. This guarantee will remain valid and effective from.....[insert date of issue] till[insert date, which should be minimum 42 days beyond the expiry of bid validity date in the IFB]. Any demand in respect of this Guarantee should reach the Bank within the validity period of Bid Security.
7. The Bank Guarantee is unconditional and irrevocable.
8. The expressions Bank and Employer herein before used shall include their respective successors and assigns.
9. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the Employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC **Publication No.758**.

10. The Guarantee shall be valid in addition to and without prejudice to any other security Guarantee (s) of Bidder in favour of the Employer. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Employer.

Date

Place.....

.....

Bank's Seal and authorized
signature(s)

[Name in Block letters].....

[Designation].....

[P/Attorney] No.

Witness:

- 1 Signature
Name & Address & Seal

- 2 Signature
Name & address & Seal

Bank's Seal
[P/Attorney] No.

Note:

All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.

Form: JV/1

**PRO-FORMA LETTER OF PARTICIPATION FROM
EACH PARTNER OF JOINT VENTURE (JV)**

(On each Firm's Letter Head)

No....

Dated

From:

.....
.....

To,

The General Manager, Civil,
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor,
#36, Cunningham Road
Bangalore - 560052

Gentlemen,

Re: ... "[Insert name of work].....".

Ref: Your notice for Invitation for Bid (IFB)

1. We wish to confirm that our company/firm (delete as appropriate) has formed a Joint Venture by name of with for the purposes associated with IFB referred to above.

(Members who are not the lead partner of the JV should add the following paragraph).*

2. 'The JV is led by ... whom we hereby authorize to act on our behalf for the purposes of submission of Bid for and authorize to incur liabilities and receive instructions for and on behalf of any and all the partners or constituents of the Joint Venture.'

OR

*(Member(s) being the lead member of the group should add the following paragraph)**

2. 'In this group we act as leader and, for the purposes of applying for qualification, represent the Joint Venture.'

3. In the event of our group being awarded the contract, we agree to be jointly with (names of other members of our JV)..... and severally liable to the Rail Infrastructure Development Company (Karnataka) Limited, Bangalore, its successors and assigns for all obligations, duties and responsibilities arising from or imposed by the contract subsequently entered into between Rail Infrastructure Development Company (Karnataka) Limited, Bangalore and our JV.
4. *I/We, further agree that entire execution of the contract shall be carried out exclusively through the lead partner.

Yours faithfully,

(Signature)

(Name of Signatory).....

(Capacity of Signatory).....

Seal

* Delete as applicable

Form: JV/2

**FORMAT FOR POWER OF ATTORNEY FOR AUTHORISED
SIGNATORY OF JOINT VENTURE (JV) PARTNERS**

POWER OF ATTORNEY*

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper to be in the name of the company who is issuing the power of Attorney)

Know all men by these presents, we ... do hereby constitute, appoint and authorize Mr/Ms. who is presently employed with us and holding the position ofas our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the work of ...Including signing and submission of all documents and providing information/responses to Rail Infrastructure Development Company (Karnataka) Limited, Bangalore, representing us in all matters, dealing with Rail Infrastructure Development Company (Karnataka) Limited, Bangalore, in all matters in connection with our bid for the said project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this the day of 20..

(Signature of authorized Signatory)

.....
(Signature and Name in Block letters of Signatory)
Seal of Company

Witness

Witness 1:

Name:

Address:

Occupation:

Witness 2:

Name:

Address:

Occupation:

***Notes:**

- i) To be executed by all the partners individually, in case of a Joint Venture.
- ii) The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Form: JV/3

**FORMAT FOR POWER OF ATTORNEY TO
LEAD PARTNER OF JOINT VENTURE (JV)**

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper to be in the name of the company who is issuing the power of Attorney)

POWER OF ATTORNEY¹

Whereas Rail Infrastructure Development Company (Karnataka) Limited Bangalore, has invited Bids for the work of

Whereas, the members of the Joint Venture comprising of M/s. ..., M/s., and M/s. are interested in submission of bid for the work of ...*[Insert name of work]*... in accordance with the terms and conditions contained in the bidding documents.

Whereas, it is necessary for the members of the Joint Venture to designate one of them as the Lead Partner, with all necessary power and authority to do, for and on behalf of the Joint Venture, all acts, deeds and things as may be necessary in connection with the Joint Venture's bid for the project, as may be necessary in connection the Joint Venture's bid for the project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT:

We, M/s., hereby designate M/s., being one of the partners of the Joint Venture, as the lead partner of the Joint Venture, to do on behalf of the Joint Venture, all or any of the acts, deeds or things necessary or incidental to the Joint Venture's bid for the contract, including submission of bid, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Joint Venture in all its dealings with the Railway or any other Government Agency or any person, in connection with the contract for the said work until culmination of the process of bidding till the contract agreement is entered into with the Rail Infrastructure Development Company (Karnataka) Limited, Bangalore and thereafter till the expiry of the contract agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by lead member, our said attorney, pursuant to this power of attorney and that all acts deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/ Joint Venture.

Dated this the Day of 200..

.....
(Signature)

.....
(Name in Block letters of Executant)
Seal of Company

Witness 1:
Name:
Address:
Occupation:

Witness 2:
Name:
Address:
Occupation:

Notes:

1. To be executed by all the Partners of the JV except the lead Partner.
2. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Form: JV/4

(To be submitted for each package separately)

**DRAFT MEMORANDUM OF UNDERSTANDING (MOU²)
For
JOINT VENTURE PARTICIPATION
BETWEEN**

M/s having its registered office at (Hereinafter referred to as) acting as the Lead Partner of the first part,

And

M/shaving its registered office at (Hereinafter referred to as `.....') in the capacity of a Joint Partner of the other part.

The expressions of and shall wherever the context admits, mean and include their respective legal representatives, successors-in-interest and assigns and shall collectively be referred to as “ the Parties” and individually as “ the Party”

WHEREAS:

Rail Infrastructure Development Company (Karnataka) Limited (K RIDE) [hereinafter referred to as “Employer”] has invited bids for ... “[Insert name of work].....”

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The following documents shall be deemed to form and be read and construed as an integral part of this MOU.

- i) Notice for Bid, and
- ii) Bidding document
- iii) Any Addendum/Corrigendum issued by Rail Infrastructure Development Company (Karnataka) Limited
- iv) The bid submitted on our behalf jointly by the Lead Partner.

2. The `Parties' have studied the documents and have agreed to participate in submitting a `bid' jointly in the name of _____.

²In case of existing joint venture, the certified copy of JV Agreement be furnished.

3. M/sshall be the lead member of the JV for all intents and purpose and shall represent the Joint Venture in its dealing with the Employer. For the purpose of submission of bid proposals, the parties agree to nominate as the leader duly authorized to sign and submit all documents and subsequent clarifications, if any, to the Employer. However M/s shall not submit any such proposals, clarifications or commitments before securing the written clearance of the other partner which shall be expeditiously given by M/s.....to M/s.....
4. The 'Parties' have resolved that the distribution of share and responsibilities between the JV partners (**Bidder shall ensure that the JV partner who is qualifying minimum 70% of the EQC requirement of the key activity under Clause 2.3.1(b)(i), shall be assigned responsibility of execution of atleast 50% of the key activity, duly indicating the Schedule/Bill Number of BOQ for such responsibilities, failing which the bid may be rejected**) is as under:-

(a) Lead Partner Share %

Responsibilities

(I) Key Activities and %age execution assigned

(i)

(II) BOQ Schedule/Bill No. and %age execution assigned

(i)

(ii)

(iii)

(b) Joint Venture Partner Share.....%

Responsibilities

(I) Key Activities and %age execution assigned

(i)

(II) BOQ Schedule/Bill No. and %age execution assigned

(i)

(ii)

(iii)

(c) Joint Venture Partner Share.....%

Responsibilities

(I) Key Activities and %age execution assigned

(i)

(II) BOQ Schedule/Bill No. and %age execution assigned

(i)

(ii)

(iii)

Note: In case any Bill or items of a Bill are proposed to be executed by more than one JV partner then indicate the breakup of that Item/Bill no. for each JV partner.

5. JOINT AND SEVERAL RESPONSIBILITY

The Parties undertake that they shall be jointly and severally liable to the Employer in the discharge of all the obligations and liabilities as per the contract with the Employer and for the performance of contract awarded to their JV.

6. ASSIGNMENT AND THIRD PARTIES

The parties shall co-operate throughout the entire period of this MOU on the basis of exclusivity and neither of the Parties shall make arrangement or enter into agreement either directly or indirectly with any other party or group of parties on matters relating to the Project except with prior written consent of the other party.

7. EXECUTIVE AUTHORITY

The said Joint Venture through its authorized representative shall receive instructions, payments from the Employer. The management structure for the project shall be prepared by mutual consultations to enable completion of project to quality requirements within permitted cost and time.

8. GUARANTEES AND BONDS

The Bid Security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners through which JV is intended to be formed.

9. BID SUBMISSION

Each Party shall bear its own cost and expenses for preparation and submission of the bid and all costs until conclusion of a contract with the Employer for the Project. Common expenses shall be shared by both the parties in the ratio of their actual participation.

10. INDEMNITY

Each party hereto agrees to indemnify the other party against its respective parts in case of breach/default of the respective party of the contract works of any liabilities sustained by the Joint Venture.

11. For the execution of the respective portions of works, the parties shall make their own arrangements to bring the required finance, plants and equipment, materials, manpower and other resources.

12. DOCUMENTS & CONFIDENTIALITY

Each Party shall maintain in confidence and not use for any purpose related to the Project all commercial and technical information received or generated in the course of preparation and submission of the bid.

13. ARBITRATION

Any dispute, controversy or claim arising out of or relating to this MOU shall be settled in the first instance amicably between the parties. If an amicable settlement cannot be reached as above, it will be settled by arbitration in accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Bangalore.

14. VALIDITY

This MOU shall remain in force till the occurrence of the earliest to occur of the following, unless by mutual consent, the Parties agree in writing to extend the validity for a further period.

- a. The bid submitted by the Joint Venture is declared unsuccessful, or
- b. Cancellation/ shelving of the Project by the Employer for any reasons prior to award of work
- c. Execution of detailed JV agreement by the parties, setting out detailed terms after award of work by the Employer.

15. This MOU is drawn in number of copies with equal legal strength and status. One copy is held by M/s and the other by M/s.,M/s& M/s..... and a copy submitted with the bid.

16. This MOU shall be construed under the laws of India.

17. NOTICES BETWEEN JV PARTNERS

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses:

Lead Partner.

Other Partner

.....

.....

.....

.....

(Name & Address)

(Name & Address)

In witness whereof the parties have executed this MOU the day, month and year first before written.

M/s.....

M/s.....

.....

.....

(Seal)

(Seal)

Witness

1..... (Name & Address)

2..... (Name & Address)

Form: JV/5

DRAFT FORMAT OF JOINT VENTURE AGREEMENT

M/s having its registered office at (hereinafter referred to as) acting as the Lead Partner of the first part,

and

M/shaving its registered office at (hereinafter referred to as) in the capacity of a Joint Partner of the other part.

The expressions of and shall wherever the context admits, mean and include their respective legal representatives, successors-in-interest and assigns

and shall collectively be referred to as “ the Parties” and individually as “ the Party”

WHEREAS:

Rail Infrastructure Development Company (Karnataka) Limited (K RIDE) [hereinafter referred to as “Employer”] has invited bids for ... “[Insert name of work].....” Vide LOA No.....awarded contract.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The following documents shall be deemed to form and be read and construed as an integral part of this AGREEMENT.
 - i) Notice for Bid, and
 - ii) Bidding document
 - iii) Any Addendum/Corrigendum issued by Rail Infrastructure Development Company (Karnataka) Limited
 - iv) The bid submitted on our behalf jointly by the Lead Partner.
 - v) Letter of Acceptance issued by Rail Infrastructure Development Company (Karnataka) Ltd.
2. The ‘Parties’ have studied the documents and LOA issued to enter into Joint Venture as under and have agreed to participate.
3. M/sshall be the lead member of the JV for all intents and purpose and shall represent the Joint Venture in its dealing with the Employer. For the purpose of execution, the parties agree to nominate as the leader duly authorized to sign and submit all documents and enter into correspondence with the Employer.
4. The ‘Parties’ have resolved that the distribution of share and responsibilities between the JV partners **(Bidder shall ensure that the JV partner who is qualifying minimum 70% of the EQC requirement of the key activity under Clause 2.3.1(b)(i), shall be assigned responsibility of execution of atleast**

50% of the key activity, duly indicating the Schedule/Bill Number of BOQ for such responsibilities, failing which the bid may be rejected) is as under:-

(a) Lead Partner Share %

Responsibilities

(I) Key Activities and %age execution assigned

(i)

(II) BOQ Schedule/Bill No. and %age execution assigned

(i)

(ii)

(iii)

(b) Joint Venture Partner Share.....%

Responsibilities

(I) Key Activities and %age execution assigned

(i)

(II) BOQ Schedule/Bill No. and %age execution assigned

(i)

(ii)

(iii)

(c) Joint Venture Partner Share.....%

Responsibilities

(I) Key Activities and %age execution assigned

(i)

(II) BOQ Schedule/Bill No. and %age execution assigned

(i)

(ii)

(iii)

Note: In case any Bill or items of a Bill are proposed to be executed by more than one JV partner then indicate the breakup of that Item/Bill no. for each JV partner.

5. JOINT AND SEVERAL RESPONSIBILITIES

The Parties undertake that they shall be jointly and severally liable to the Employer in the discharge of all the obligations and liabilities as per the contract with the Employer and for the performance of contract awarded to their JV.

6. ASSIGNMENT AND THIRD PARTIES

The parties shall co-operate throughout the entire period of this AGREEMENT on the basis of exclusivity and neither of the Parties shall make arrangement or enter into agreement either directly or indirectly with any other party or group of parties on matters relating to the Project except with prior written consent of the other party and the Employer.

7. EXECUTIVE AUTHORITY

The said Joint Venture through its authorized representative shall receive instructions, payments from the Employer. The management structure for the project shall be prepared by mutual consultations to enable completion of project to quality requirements within permitted cost and time.

8. GUARANTEES AND BONDS

The Performance Security and other Securities of a JV shall be in the name of the JV that submits the bid.

9. BID SUBMISSION

Each Party shall bear its own cost and expenses for preparation and submission of the bid and all costs until conclusion of a contract with the Employer for the Project. Common expenses shall be shared by both the parties in the ratio of their actual participation.

10. INDEMNITY

Each party hereto agrees to indemnify the other party against its respective parts in case of breach/default of the respective party of the contract works of any liabilities sustained by the Joint Venture.

11. For the execution of the respective portions of works, the parties shall make their own arrangements to bring the required finance, plants and equipment, materials, manpower and other resources.

12. DOCUMENTS & CONFIDENTIALITY

Each Party shall maintain in confidence and not use for any purpose related to the Project all commercial and technical information received or generated in the course of preparation and submission of the bid.

13. ARBITRATION

Any dispute, controversy or claim arising out of or relating to this agreement shall be settled in the first instance amicably between the parties. If an amicable settlement cannot be reached as above, it will be settled by arbitration in

accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Bangalorei.

14. VALIDITY

This Agreement shall remain in force till the defect liability period is over and Securities are released.

15. This AGREEMENT is drawn in number of copies with equal legal strength and status. One copy is held by M/s and the other by M/s. &M/s and a copy submitted with the Bid.

16. This AGREEMENT shall be construed under the laws of India.

17. NOTICES BETWEEN JV PARTNERS

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses:

Lead Partner.

Other Partner

.....

.....

.....

.....

(Name & Address)

(Name & Address)

IN WITNESS WHEREOF THE PARTIES, have executed this AGREEMENT the day, month and year first before written.

M/s.....

M/s.....

.....

.....

(Seal)

(Seal)

Witness

1.....(Name & Address)

2..... (Name & Address)

Bidders Qualification

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Form ELI - 1: Bidder's Information Sheet

Bidder's Information	
Bidder's legal name	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address in country of constitution	
Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	

The bidder shall attach copies of the following original documents with the form:

1. In case of single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2.
2. Authorization to represent the firm or JV named in above, in accordance with ITB 20.2.
3. In case of JV, MOU to form JV or JV agreement, in accordance with ITB 4.1.

SEAL AND SIGNATURE

Form ELI - 2: JV Information Sheet

Each member of a JV must fill in this form separately

JV / Specialist Subcontractor Information	
Bidder's legal name	
JV Partner's or Subcontractor's legal name	
JV Partner's or Subcontractor's country of constitution	
JV Partner's or Subcontractor's year of constitution	
JV Partner's or Subcontractor's legal address in country of constitution	
JV Partner's or Subcontractor's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)	

The bidder shall attach copies of the following original documents with the form:

1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2.
2. Authorization to represent the firm named above, in accordance with ITB 20.2.

SEAL AND SIGNATURE

Form FIN-1: Financial Situation

(Each Bidder or each member of a JV must fill in this form separately)

NAME OF BIDDER/JV PARTNER:

	Financial Data for Last 5 Years [Indian National Rupees]				
	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:
1. Total Assets					
2. Current Assets					
3. Total Liabilities					
4. Current Liabilities					
5. Net Worth [= 1 – 3]					
6. Working Capital [= 2 - 4]					
7. Profit Before Tax (PBT)					

SEAL AND SIGNATURE OF THE BIDDER

Certified that all figures and facts submitted in this form have been furnished after full consideration of all observations/notes in Auditor's reports.

(Signature of CA/Auditor)

Name of CA/Auditor: _____

Registration No: _____

(Seal)

1. The bidder shall attach copies of the following original documents with the form:

Copies of the audited balance sheets, including all related notes, and income statements for the last five years, as indicated above, complying with the following conditions.

- All such documents reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies.
- Historic financial statements must be audited by a certified accountant.
- Historic financial statements must be complete, including all notes to the financial statements.
- Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

2. Contents of this form should be certified by a Chartered Accountant/Auditor.

- 3.** In the event that the audited accounts for the latest concluded Financial Year are not available, the Bidder shall furnish information pertaining to the last five financial years after ignoring the latest concluded financial year. In case, the bidder submits audited financial information for the last six or more years, only the figures for the latest five years shall be considered for evaluation.

Form FIN-2: Annual Construction Turnover for the last 5 years

Each Bidder or each member of a JV must fill in this form separately:

NAME OF BIDDER/JV PARTNER:

Annual Turnover Data for the Last 5Years (Construction only)			
Year	Amount Currency	Exchange Rate	Indian National Rupees Equivalent
Average Annual Construction Turnover for last 3 years			

1. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years and submitted as attachments to form Fin-1 in respect of the bidder or all partners constituting the bidder.
2. Contents of this form should be certified by a Chartered Accountant/Auditor.
3. In the event that the audited accounts for the latest Financial Year are not available, the Bidder shall furnish information pertaining to last three financial years after ignoring the latest financial year. In case the bidder submits audited financial information for the last four or more years, only the figures for the latest three years shall be considered for evaluation.

SEAL AND SIGNATURE

Form FIN-3: Current Contract Commitments / Works in Progress

Bidders and each partner to a JV should provide information on their current commitments on all contract that have been awarded, or which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Contract Commitments

SN	Des- crip- tion of work	Contra- ct No. & date	Name & address of Employer, Tel./Fax/ Email	Value of Con- tract in INR	Stipulated Period of completion	Value of Balanc e work	Anti- cipa- ted date of Com- ple- tion
1							
2							
Total							


Note: Enclose Certificate(s) from Engineer(s) Incharge (not below the rank of Executive Engineer) for Value of outstanding work. In case it is not feasible to furnish certificate from all the units the bidder should record the following certificate on Fin 3:

"Certified that current commitments on all the contracts that have been awarded or for which a letter of intent or acceptance has been received or for the works in progress or the works approaching completion, value of outstanding work has been indicated in the above table correctly. It is further certified that if later on the employer discovers that information provided in the table is incorrect then the employer will treat our bid invalid and it will be liable for rejection"

SEAL AND SIGNATURE

Form EXP-2(a): Specific Construction Experience

Fill up one form per contract

Contract of Similar Size and Nature			
Contract No.		Contract Identification	
Award Date		Completion Date	
Role in Contract	<input type="checkbox"/> Contractor <input type="checkbox"/> Subcontractor		
Total Contract Amount	INR		
If partner in a JV or subcontractor, specify participation in total contract amount	Percent of Total:	Amount: INR	
Employer's Name, Current Address and Current Telephone/Fax Number, E-mail			
Description of the similarity in accordance with Criteria 2.3.1 (a) of Section 3			
			

The bidder shall attach a copy of the Certificate(s) issued by the employer in support of the information being furnished in each Exp (2a) form, failing which the claim of the bidder shall be liable to be rejected (in case of experience as a sub-contractor, the employer shall be the owner of the Project who has engaged the main Contractor).

SEAL AND SIGNATURE

Form EXP-2(b): Specific Construction Experience

Contract of Similar Size and Nature			
Contract No.		Contract Identification	
Award Date		Completion Date	
Role in Contract	<input type="checkbox"/> Contractor <input type="checkbox"/> Subcontractor		
Total Contract Amount	INR		
If partner in a JV or subcontractor, specify participation in total contract amount	Percent of Total:	Amount: INR	
Employer's Name, Current Address and Current Telephone/Fax Number, E-mail			
Description, quantity & period of execution of the key activities in accordance with Criteria 2.3.1 (b) of Section 3			

Fill up one form per contract

Copy of Certificate(s) issued by the employer in support of the information being furnished above, shall be attached with each respective Exp (2b) form, as per detailed requirements indicated in note 6 below clause 2.3.1 of Section 3 failing which the claim of the bidder shall be liable to be rejected (in case of experience as a sub-contractor, the employer shall be the owner of the Project who has engaged the main Contractor).

SEAL AND SIGNATURE

EQC FORM NO.1

Clause No & Clause heading of Section 3	Details of value of work/quantity of activity and References (Folio No.) of Documents through which criteria against each item is being met.						
	Package 1	Package 2	Package 3	Combined Package 1&2	Combined Package 1&3	Combined Package 2&3	Combined Package 1,2&3
2 Qualification							
2.1.1 Conflict of Interest mentioned in ITB 4.3							
2.1.2 Share of partners							
2.1.3 Disqualification of Bidder							
2.2 Financial Status							
2.2.1 Historical Financial Performance							
2.2.2 Average Annual Construction Turnover							
2.2.3 Net Worth							
2.2.4 Bid Capacity							
2.3 Experience							
2.3.1 Specific Construction Experience (a) Contracts of Similar Size and Nature (I) Single Contract (II) Two Contracts (III) Three Contracts (b) Construction Experience in Key Activities (i) (a) Earth work - if applicable (b) Bridge work - if applicable							
2.4 Personnel Undertaking submitted							
2.5 Equipment Undertaking submitted							
2.6 Specialist sub-contractor undertaking submitted 1) General Electrical works - if applicable 2) SCADA- if applicable 3) TSS - if applicable							

FORM NO. 2

**CHECKLIST FOR CLAUSES PERTAINING TO SUMMARY
REJECTION OF BID**

We, the undersigned, declare that we have read and understood the content of ITB clauses mentioned below. We also understand that our bid shall be summarily rejected in case we fail to comply the requirements of undermentioned clauses:

ITB Clause No Section 1	Reason for Summary Rejection
4.4	Non-submission of Affidavit
4.5	Non-submission of immediate information to the Employer in case Bidder ceases to fulfill eligibility in terms of ITB 4.3 & 4.4
14.2	Quoting more than one percentage for any schedule
14.9	Non-submission of the Letter of Price Bid (LPB) and/or Summary sheet of BOQ
16.4	Non-submission of the Letter of Technical Bid (LTB)
19.3	Bid not accompanied by an enforceable and compliant bid security

SEAL AND SIGNATURE OF THE BIDDER

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PART II	Work's Requirements
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Section 5	Works/Employer's Requirements
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Section 5	Works/Employers Requirements
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This Section contains the specifications, the safety precautions and supplementary information that describe the Work to be executed.

I N D E X

	Description	Pages
1	Safety and Security	86-99
2	General Information and Scope of work	100-113
3	Site Facilities for the Employer and the Engineer	114-134
4	Specifications	135-136
5	Personnel	137-143
6	Equipment	144-149

Safety and Security at work

- 1.1 The works included in this contract are to be carried out close to the running tracks and public utilities, therefore, safety of running trains and the public is paramount. Therefore, all activities undertaken by the Contractor/his Sub-contractors shall ensure safety at all times. The contractor shall comply with the instructions issued by the Railway/ Engineer/Employer from time to time to ensure safe running of trains while carrying out works. The rates quoted by the Contractor shall be deemed to include all expenditure incurred in compliance with the same.
- 1.2 Before starting any excavation work adjacent to existing track, the contractor shall ensure that necessary permissions has been obtained and required precautions have been taken for doing such work in terms Joint Procedure Order (JPO). The penalties mentioned in the following JPO shall be levied on the contractor if such event occur. The JPO is reproduced below:

“JOINT PROCEDURE ORDER FOR UNDERTAKING DIGGING WORK IN THE VICINITY OF UNDERGROUND SIGNALING, ELECTRICAL AND TELECOMMUNICATION CABLES”

A) A number of Engineering works in connection with gauge conversion/doubling/third line are in progress on various railways, which require extensive digging work near the running track, in close vicinity of the working S&T cables carrying vital safety circuits as well as electrical cables feeding the power supply to cabins. ASM room, RRI Cabin, Intermediate Block Huts (IBH) etc. Similarly, S&T organization under open line or construction units under CAO/C, are executing various Signaling and Telecom works requiring digging of earth for laying of cables or casting of foundations for the erection of signal posts etc. RailTel is also executing the work of laying of quad cable and OFC on various Railways as a part of sanctioned works for exclusive use of Railways for carrying voice and data i.e. administrative and control communication, PRS, FOIS etc. or shared by RailTel Corporation of India Ltd. On certain sections digging is also required for laying of electrical cable and casting of foundation for the erection of OHE masts by Electrical Dept. Generally, these works are executed by contractors employed by these organizations.

B) However, while carrying out these works in the vicinity of working signaling, telecommunication and electrical cables, at times, cable cuts take place due to JCB machines working along the track or during the digging work being done by contractors carrying out the Civil Engineering Works. Similarly, such cable cuts are also resulting due to works undertaken by S&T or Electrical departments. Such cable faults results in the failure of vital signaling and telecommunication circuits & electrical installations.

C) Henceforth, the following joint procedure shall be followed by Engineering, Electrical and S&T (and RailTel organisation, wherever such works are being done by them) officers of the respective divisions and by the construction organisation, while carrying out any digging work near to existing signaling & telecommunication and electrical cables, so that the instances of cable cut due to execution of works, can be controlled and minimized.

1. S&T Department (and RailTel, where they have laid the cables) and Electrical department shall provide a detailed cable route plan showing exact location of cable at an interval of 200m or wherever there is change in alignment so that the same is located easily by the Engineering official/contractor. In addition, S&T department and Electrical department shall also provide cable markers along the alignment of the cable. These cable route plans shall be made available to the Sr.DEN/DEN or Dy.CE/C, as the case may be, by Sr. DSTE/DSTE or Sr. DEE/DEE of the divisions or Dy.CSTE/C or Dy.CEE/C within 15 days in duplicate. Sr.DEN/DEN or Dy.CE/C will send copies to their field unit i.e. AEN/SE/P.Way & Works.
2. Before taking up any digging activity on a particular work by any agency, Sr.DSTE/DSTE or Sr.DEE/DEE of the section shall be approached in writing by the concerned Engg. or S&T or Electrical officer for permitting to undertake the work. Sr.DSTE/DSTE or Sr.DEE/DEE, after ensuring that the concerned executing agencies including the contractor have fully understood the S&T and Electrical cable route plan shall permit the work in writing within 7 days of the request by concerned department.
3. After getting the permission from S&T or Electrical department as the case may be, the relevant portion of the cable route plan shall be attached to the letter through which permission is issued to the contractor by concerned Engg. official for commencement of work and ensuring that the contractors have fully understood the cable route plan and precautions to be taken to prevent damage to the underground cables. The contractor shall be asked to study the cable plan and follow it meticulously to ensure that the safety of the cable is not endangered. Such a provision, including any penalty for default, should form part of agreement also. It is advisable that a suitable post of SE/Sig or SE/Tele or SE/Electrical(TRD or G) shall be created chargeable to the estimates of doubling/gauge conversion, who can help Engg. agencies in the execution of the work. However basic responsibility will be of the department executing the work and the Contractor. Creation of posts is not mandatory.
4. The SE/P.Way or SE/Works shall pass on the information to the concerned SE/Sig SE/Tele or SE/Electrical(TRD or G) about the works being taken up by the contractors in their sections at least 3 days in advance of the day of the

work. In addition Engineering control shall also be informed by SE/P.Way or SE/Works, who in turn shall pass on the information to the test room/network operation centre of RailTel/TPC/Electrical control.

5. On receiving the above information, SE/Sig or SE/Tele or SE/Electrical (TRD or G) shall visit the site on or before the date of taking up the work and issue permission to the contractor to commence the work after checking that adequate precautions have been taken to avoid the damage to the cables. The permission shall be granted within 3 days of submission of such requests.
6. The name of the contractor, his contact telephone number, the nature of the work shall be notified in the Engineering control as soon as the concerned Engineering officials issue the letter authorizing commencement of work to the contractor. Test room shall be given copies. Test room shall collect any further details from the Engineering Control and shall pass it on to S&T/RailTel & Electrical officials regularly. In case the supervisors of concerned departments do not turn up on the day as advised in terms of para 4 and 5 above, the works of contractor should not be stopped on this account.
7. In case of works being taken up by the State Government, National Highway Authority etc., the details of the permission given i.e. the nature the work, kilometer etc. be given to the Engineering control including the contact person's number so that the work can be done in a planned manner. The permission letter shall indicate the contact numbers of Test room/network Operating Centre of RailTel/TPC/Elect. Control.
8. Where the nature of the work taken up by the Engineering department is such that the OFC or other S&T cables or Electrical cables is to be shifted and relocated, notice of minimum one week shall be given so that the Division/RailTel/Construction can plan the works properly for shifting. Such shifting works shall in addition, for security and integrity of the cables, be supervised by S&T supervisors/RailTel supervisors/Electrical Supervisors.
9. The concerned SE/P.Way/SE/Works/SE/Sig/SE/Tele/SE/Electrical (TRD or G) or RailTel supervisors supervising the work of the contractor shall ensure that the existing emergency sockets are not damaged in view of their importance in providing communication during accident/emergency.
10. In case of minor nature of works where shifting of cable is not required, in order to prevent damage to the cable, the Engineering contractor shall take out the S&T or optical fibre cable or Electrical cable carefully from the trench and place it properly alongside at a safe location before starting the earthwork under the supervision of SE/Sig or SE/Tele or SE/Electrical (TRD or G). The cable shall be reburied soon after completion of excavation with proper care including placement of the brick over the cable under the supervision of S&T or Electrical supervisors. However, the work will be charged to the concerned

engineering works. The responsibility for ensuring availability of SE (Signal), SE (Electrical) as per para 4 and 5 above lies with the respective department. The contractor will go ahead with the shifting of cables as per the program decided and he will not be held responsible for any cable cut.

11. In all the sections where major project are to be taken up/going on RailTel/S&T department shall deploy their official to take preventive/corrective action at site of work. As regards Electrical Department, the official may be deputed on need basis.
12. No new OFC or quad cable shall be laid close to existing track. It shall be laid close to the Railway boundary on one side of the Railway track to the extent possible to avoid any interference with the future works (doubling etc.). It shall be ensured in the new works of cable laying that the cable route is properly identified with electronic or concrete markers. Wherever multiple cables are laid in a trench, RFID markers may be provided for easy identification of the cable. Henceforth, wherever cable laying is planned, before undertaking the cable laying work, the cable route plan of the same shall be prepared by the Dy.CSTE/A or Dy.CEE/C and shall be got approved from the concerned Sr. DSTE/DSTE or Sr.DEE/DEE and also from the concerned Dy. CE/C for new lines and from the concerned Sr.DEN for all other projects including GC etc., to avoid possible damages in future. Such approvals shall be granted within 15 days of the submission of the request.
13. The works of excavating the trench and laying of the cable should proceed in quick succession, leaving a minimum time between the two activities.
14. In case damage caused to OFC/Quad cable or Electrical cable during execution of the work, the contractor is liable to pay a penalty for damaging the cable. Penalty shall not be levied in case of the following:-
 - i). Detailed cable route plan as per clause C-1 not provided by concerned department or cable is not protected as per laid down procedures.
 - ii). The alignment of the cable does not tally with the information provided to the contractor.
 - iii). The cable depth is found to be less than 800 mm from normal ground level.
 - iv). No representative of S&T department/RailTel was available at site guarding the cables on the fixed pre determined date and time.

15. Penalty to be imposed for damages to cable shall be as under:-

Cable damaged	Penalty per location
Only Quad cable or Signalling cable	Rs.1.0 Lakh
Only OFC	Rs.1.25 Lakh
Both OFC & Quad	Rs.1.5 Lakh
Electrical Cable	Rs.1.0 Lakh

Necessary debit in this regard shall be raised on the department undertaking the work who shall in turn levy the penalty on the defaulting contractor. S&T department shall raise the debits in case of damage to OFC or Quad or Signaling cable and Electrical department shall raise the debits in case of damage to Electrical cable.

16. Railways will not lodge FIR with RPF in case of works being executed by authorized contractors of Railways who have been duly permitted to execute the works in accordance with this JPO. Joint note by the supervisors of the concerned department shall be prepared and the responsibility of the cable cut should be decided without involving RPF. The joint note deciding the fact whether the contractor should be penalized shall be completed in a day's time from the occurrence of cable cut.
- In all other cases, when the cable is cut by an agency that was not permitted to execute any work, FIR should be lodged with RPF.
17. While giving permission for taking up the works, concerned departments may note that earthwork by engineering contractors will normally be done by machines except in a few isolated locations where the quantity of earth work is very less.
18. Railways shall make necessary correction in their future contract so that this JPO can also be enforced contractually.
19. In case of damages to OFC, RailTel should be paid 5/6th of the penalty recovered. RailTel shall raise demands on the S&T department in this regard.
20. All types of signaling & OHE bonds i.e. rail bond, cross bond and structure bond shall be restored by the contractor with a view to keep rail voltage low to ensure safety of personnel.
21. Above joint circular shall be applicable for construction as well as open line organization of Engineering, S&T and Electrical.
22. S&T cable and electrical cable route plan should be prepared by the concerned S&T and Electrical officers respectively and got approved as stipulated in para C-12 before undertaking the work. The completion cable route plan should be finalized block section by block section as soon as the work is completed.

23. All cable laying works shall be executed as per laid down technical specifications, such as protection measures/protective cover, compaction of refilled material etc.

1.3. Working near running line

1.3.1 The contractor shall not allow any road vehicle belonging to him or his suppliers etc. to ply in railway land next to the running line. If for execution of certain works viz. earth work for parallel railway line and supply of ballast for new or existing rail line, gauge conversion etc, road vehicles are necessary to be used in railway land next to the railway line, the contractor shall apply to the Engineer for permission giving the type & no. of individual vehicles, names & license particulars of the drivers, location, duration & timings for such work/movement. The Railways/Employer/Engineer or his authorized representative will personally counsel, examine & certify, the road vehicle drivers, contractor's flag men & supervisor and will give written permission giving names of road vehicle drivers, contractor's flag men and supervisor to be deployed on the work, location, period and timing of the work. This permission will be subject to the following obligatory conditions:

- 1.3.2 Road vehicles can ply along the track after suitable cordoning of track with minimum distance of 6 meters from the centre of the nearest track. For working of machinery close to the running tracks or plying of road vehicles during night hours, the contractor shall apply to the Engineer in writing for permission, duly indicating the site details in a neat sketch and safety measures proposed to be taken. Subject to the approval of concerned Railway authorities, the Engineer or his authorized representative will communicate permission to the contractor/contractor's representative. The contractor and his men shall strictly adhere to the instructions given along with such permissions.
- 1.3.3 Nominated vehicles and drivers shall be utilized for work in the presence of at least one flag man and one supervisor certified for such work. In order to monitor the activities during night hours, additional staff may have to be posted based on the need of the individual site.
- 1.3.4. The Contractor' machinery, equipment and vehicles shall normally operate 6 m clear of track. Any movement/work at less than 6m and upto a minimum of 3.5m clear of track centre, shall be carried out only in the presence of a person (including any railway employee) authorized by the Engineer. No part of the road vehicle shall be allowed at less than 3.5m from track centre. Cost of such railway employee shall be borne by the Employer.
- 1.3.5 The Contractor's machinery and equipment like Cranes, Flash Butt Welders, Ballasting machinery, Compactors, Track Laying Systems etc. are required to operate close to the existing line carrying traffic. Contractor is fully responsible for operating these machineries without endangering the safety of the running line and traffic

1.3.6 Safety Fencing :

- (i)** Before commencing any work close to the running track, the Contractor shall provide safety fencing and obtain the specific permission of Engineer to commence the work in that stretch.
- (ii)** The fencing shall be for a as per relevant BOQ item.
- (iii)** The Contractor shall maintain the safety fencing in good working condition throughout the period till the work in a given stretch is completed.
- (iv)** The Contractor will be paid for providing safety fencing along the track as per the relevant item in the BOQ.

1.4. The contractor's special attention is drawn to Para 826 of Indian Railways Permanent Way Manual introduced under Advance Correction Slip no. 69 dated 23.05.2001, reproduced below which should invariably be complied with.

"826 Safe working of Contractors -- A large number of men and machinery are deployed by the contractors for track renewals, gauge conversions, doublings, bridge rebuilding etc. It is therefore essential that adequate safety measures are taken for safety of the trains as well as the work force.

The following measures should invariably be adopted:

- (a)** The contractor shall not start any work without the presence of Railway supervisor at site.
- (b)** Wherever the road vehicles and/or machinery are required to work in the close vicinity of railway line, the work shall be so carried out that there is no infringement to the railway's schedule of dimensions. For this purpose the area where road vehicles and/or Machinery are required to ply, shall be demarcated and acknowledged by the contractor. Special care shall be taken for turning/reversal of road vehicles/machinery without infringing the running track. Barricading shall be provided wherever justified and feasible as per site conditions.
- (c)** The "look out and whistle" caution orders shall be issued to the trains and speed restrictions imposed where considered necessary. Suitable flag men/detonators shall be provided where necessary for protection of trains.
- (d)** The supervisors/workmen should be counseled about safety measures. A competency certificate to the contractor's supervisor as per proforma annexed shall be issued by AEN which will be valid only for the work for which it has been issued.
- (e)** The unloaded ballast/rails/sleepers/other P.Way materials after unloading along track should be kept clear off moving dimensions and stacked as per the specified heights and distance from the running track.
- (f)** Supplementary site-specific instructions, wherever considered necessary, shall be issued by the Engineer.

COMPETENCY CERTIFICATE

“Certified that Shri _____ P. Way supervisor of M/S _____ has been examined regarding P. Way working on _____ work. His knowledge has been found satisfactory and he is capable of supervising the work safely.

Authorized Representative / K RIDE

- 1.5.** The work of formation in banks and cuttings throughout the length of doubling is adjacent to track under running traffic. Many of the bridges on the proposed double line are to be constructed either as extensions or just adjacent to the existing bridges under running traffic. The work of Installation of Track throughout the length of doubling is adjacent to track under running traffic. The work of Installation of Track and Signals in the Station yards including alterations to the existing Track and Signals has to be done adjacent to or in replacement of the existing Track and Signals which are under running traffic. The contractor shall ensure that the safety of the running lines and running traffic is not endangered, because of his work.
- 1.6.** Any traffic/traction blocks, temporary speed restrictions and caution orders required in this connection shall also be got sanctioned from the Railway authorities well in advance, through the Engineer. The Railways may sanction the same for specific sites within the overall recovery time available in the Railway's time table. The contractor shall have to schedule his programme according to the convenience of the Railways. No claim from the contractor for any delay/inconvenience/loss on this account shall be entertained by the Employer.
- 1.7** The contractor shall provide at site at his own cost, all protection measures including exhibition and lighting of all Temporary Engineering Signals as per Railway rules, instructions and norms. All lights provided by the contractor shall be screened so as not to interfere with any signal light on the Railways or with any traffic or signal lights of any local or other authority.
- 1.8.** **Ancillary and Temporary works**
- (a)** The Contractor's proposals for erection of all ancillary and temporary works shall be in conformity with the proposals submitted along with the tender and modifications thereto as approved by the Engineer.
- (b)** The Contractor shall submit drawings, supporting design calculations where called for by the Engineer and other relevant details of all such works to the Engineer for approval at least one month before he desires to commence such works. Approval by the Engineer of any such proposal shall not relieve the contractor of his responsibility for the sufficiency of such works.

- (c)** The contractor shall, at his own cost, design and provide any temporary arrangements including relieving/service girders required in connection with the above said works and remove the same, when no longer required. These arrangements shall conform to Railway norms. The contractor shall obtain all necessary approvals and sanctions of the concerned Railway authorities including Commissioner of Railway Safety through the Engineer/Employer in advance and well in time.
- (d)** The contractor shall ensure and be entirely responsible for proper design, fabrication, provision and upkeep of all temporary arrangements and all associated activities so as not to endanger safety of any assets, running track, traffic and traveling public and for following all extent instructions, norms, practice and procedures laid down by Railway authorities in this respect, which may be ascertained from the Railways through the Engineer.
- (e)** If required, Railways may, in order to ensure the safety of the running track, post at site Regular Railway staff to watch the efficacy and safety of temporary arrangements and protection measures round the clock for the period the same exist in the running line and till the running line is restored back to normal. Railways may also supervise the insertion, maintenance and removal of the temporary arrangements. The cost of such staff shall be borne by the Employer.
- (f)** Notwithstanding the above, the contractor shall not, however, be relieved of his responsibility and obligation as aforesaid.
- (g)** Save as provided in Para 7 (e) above, the contractor shall bear the cost of complying with all safety requirements. No extra payment will be made for complying with the safety provisions under this chapter and the cost of all such elements to meet the safety requirements shall be deemed to be included in the Bill of Quantities.

1.9. The contractor remains fully responsible for ensuring safety. In case of any accident, the Contractor shall bear cost of all damages to his equipment and men and also damages to Railway and its passengers.

1.10 Suitable barricading to forewarn road vehicle driver shall be provided by the contractor. The luminous tape, strung on bamboo or steel poles can be considered for such barricading. Barricading arrangement should be got approved by the Engineer.

1.11 Indemnity by Contractor

The Contractor shall indemnify and save harmless the Railway/Employer/Engineer from and against all actions, suit proceedings, losses, costs, damages, claims, and demands of every nature and description brought or recovered against the Railways/Employer/Engineer by reason of any act or omission of the contractor, his agents or employees, in the execution of the works or in his guarding the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

1.12. Damage to Railway Property or Life or Private Property

The contractor shall be responsible for all risks to the works and for the trespass and shall make good at his own expense all loss or damage whether to the works themselves or to any other property of the Railway or the lives of persons or property of others from whatsoever cause in connection with the works until they are taken over by the Employer and this although all reasonable and proper precautions may have been taken by the Contractor, and in case the Railway/Employer/Engineer shall be called upon to make good any costs, loss or damages, or to pay any compensation, including that payable under the provisions of Workmen's compensation act or any statutory amendments thereof to any person or persons sustaining damages as aforesaid, by reason of any act, or any negligence or any omissions on the part of the contractor, the amount of any costs or charges including costs and charges in connection with legal proceedings, which the Railway/Employer/Engineer may incur in reference thereto, shall be charged to the contractor. The Railway/Employer/Engineer shall have the power and right to pay or to defend or compromise any claim of threatened legal proceedings or in anticipation of legal proceedings being instituted consequent on the action or default of the contractor, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to Contractor, as aforesaid, any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expense shall not be called in question by the Contractor.

1.13. Safety of Public

- (i)** The Contractor shall be responsible to take all precautions to ensure the safety of the Public whether on Public or Railway property and shall post such look out men as may in the opinion of the Engineer be required to comply with regulations pertaining to the work.
- (ii)** The Contractor shall provide effective barricading using G.I. corrugated sheets around foundation pits, trenches, erection sites, demolition sites etc., to prevent accidents and injuries to the public. He shall erect barricading duly leaving safe passage for the movement of the public as per the directions of Engineer.
- (iii)** No payment will be made for providing such barricading and the rates quoted by the Contractor shall be inclusive of such safety measures.

1.14. Reporting of Accidents

The Contractor shall report to the Engineer details of any accidents as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer and the Employer immediately by the quickest available means.

- 1.15** Life-saving Appliances and First-aid Equipment: The Contractor shall provide and maintain upon the Works sufficient, proper and efficient life-saving appliances and first-aid equipment to the approval of the Engineer and in accordance with the requirements of ILO Convention No. 62. The appliances and equipment shall be

available for use at all time

1.16 Security Measure

- (a)** Security arrangements for the work shall be in accordance with general requirements and the contractor shall conform to such requirements and shall be held responsible for the action or inaction on the part of his staff, employees and the staff and employees of his subcontractors.
- (b)** Contractor's as well as Sub Contractor's employees and representatives shall wear identification Badges (cards), uniforms, helmets, gum boots and other safety/protection gadgets/accessories provided by the Contractor. Badges shall identify the Contractor and show the employee's name and number and shall be worn at all times while at site.
- (c)** All vehicles used by the contractor shall be clearly marked with the Contractor's name or identification mark.
- (d)** The contractor shall be responsible for security of works for the duration of the contract and shall provide and maintain continuously adequate security personnel to fulfill these obligations. The requirements of security measures shall include, but not be limited to, maintenance of Law and Order at site, provision of all lighting, guard, flagmen, and all other measures necessary for protection of works within the colonies, camps and elsewhere at site, all materials delivered to the site and all persons employed in connection with the works continuously throughout working and non-working periods including nights, Sundays and holidays, for the duration of the contract. However, at work sites in close proximity of traffic corridors where public and traffic are likely to come close to the work area, suitable barricading as proposed by contractor and approved by Engineer shall be provided.
- (e)** No separate payment will be made for providing security measures and will be deemed to be included in the rates quoted by the contractor.

- 1.17 Contractor will have to comply the instructions circulated for Safety on Worksites Specially Doubling Works being implemented on Indian Railways as per relevant letters and any subsequent instructions on this issue.

It is presumed that bidders have gone through the Indian Railway's policies including any subsequent instructions on this issue if any, before quoting the rates.

1.18 Ensuring Safety at work site

Ensuring safety at work site while carrying out of doubling works is of paramount importance.

Following measures must be ensured: -

1. Fencing as per specification laid down along the track at specified distance from centre line of existing track. The fencing should be maintained till the

track is handed over to Railways. Accordingly, at locations where it has been broken/stolen away, the same should be restored expeditiously.

2. Contractors to ensure patrolling by Cycle/ Motor Cycle to prevent damage to fencing and to rectify as soon as it is detected.
3. In the stretch where new formation is likely to be used by unauthorized vehicles and likely to create potential unsafe condition, lifting barriers under lock & key at points where contractor's vehicles are required to enter should be provided and the same should be manned to allow entry to only contractor's vehicles and prevent entry of unauthorized vehicles.
4. Other likely entry points on the new formation must be suitably blocked by providing physical obstructions by stacking sleepers or by cross trenches or by erecting fence to prevent entry of unauthorized vehicles. Frequent check should be exercised to ensure that unauthorized vehicles do not ply.
5. Reducing number and length of such stretches by providing cross barricades should be done.
6. PMC should be advised to educate his supervisor for each stretch to ensure Safety who should be well conversant safety instructions and should see that the same are not violated. PMC has to be made accountable for lapses on the safety aspects.
7. Periodical formal counseling of all contractor's staff and PMC officials regarding safety instructions and review violations coming to light and taking appropriate action.
8. Counseling of drivers and operators of machinery regarding safety aspect during routine inspection of PMC officials contractors Engineers.
9. All the drivers/machine operators should have competency certificate issued by PMC after examining their knowledge about safety. Only authorized drivers can ply within 6.6 m of the existing track will have to be proposed as found necessary.
10. Necessary caution orders to Drivers of trains wherever required in terms of Railway Board's instructions/PCE circulars.
11. In case work is required to be carried out within 3.5 M of existing running line, K RIDE should be advised well in time and requested to provide look out men

and Railway Supervisors for the site. At such locations close supervision must be ensured.

In terms of contract conditions, preventing entry of outsiders at the worksites is the responsibility of contractor and this has to be ensured.

1.19 Additional Conditions to Safety at Work Spot

To ensure safety at all the work sites all the time, a dedicated Safety officer duly trained as per the provisions of the contract shall be posted by the contractor for each project. Following works will in general be assigned to safety officer.

1. The Safety officer (in charge) shall be from the permanent rolls of the contractor. He will work under the administrative control of the Project Manager of the contractor.
2. The person from any sub-contractor deputed by the main contractor shall not be designated as Safety officer.
3. The Safety officer shall be overall in charge of the safety methods being undertaken at various work sites. He shall not be given any other task related to the project planning and execution.
4. The Safety officer should be well versed with the safety aspects related to worksites in the vicinity of running railway lines and should impart training to the officials assisting him.
5. The Safety officer shall be given suitable means of transport (depending on the requirement) by the contractor to approach all the work sites frequently and ensure that adequate precautions to ensure safety have been taken. Following items shall be specifically done by the Safety officer.
 - a) Ensuring the provision of the safety fencing. Any shortfall shall be made good immediately.
 - b) Availability of suitable lookout men at each working site. The lookout men shall be in possession of hooters, safety helmet and retro-reflective jacket to warn the site engineer/supervisor and operators/drivers of the equipments/vehicles working near the running track.
 - c) Arranging issuance of competency certificates by Employer/Engineer with the operator/driver of each equipment/vehicle before deputing for work.
 - d) Take assurance from the contractor officials at regular interval of complying with the safety instructions.

- e) Any safety violation to be advised to all concerned and remedial action taken thereof.
- 6. The Safety officer will frequently counsel the contractor engineers/supervisors/ operators/drivers/lookout men about safety provisions during his day to day inspections and keep a record of the same. The Safety officer will prepare a monthly report of the safety inspections carried out and remedial action taken thereof and send it to the Project Manager of the contractor and the employer/engineer.
- 7. The contractor should open new sites only after discussing the safety measures to be undertaken with his Safety officer and obtaining the permission from Employer/ Engineer.
- 8. It shall be the duty of the Project Manager and Safety officer of the contractor that the instructions contained in the agreement related to safety and the same issued by the Railway/Employer/Engineer from time to time are strictly complied with.

Based on the above, it is advised that a thorough review of the safety provisions may be undertaken and it should be ensured that competent safety officers are available at all the work spots.

GENERAL INFORMATION AND SCOPE OF WORK

2.0 SCOPE OF WORK

The proposed work is in connection with the doubling of track between Baiyyappanahalli and Hosur from Km 158/700 to 182/500 (excluding yards) in 3 packages

Package No. 1 – Baiyyappanahalli - Hosur section : Km 174/590 to Km.182/500-REACH 3

Baiyyappanahalli (BYPL)– Hosur (HSRA) Doubling of Railway track: Execution of earthwork in cutting/embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works (excluding station yards) in Bangalore Division of South Western Railway.

Package No. 2 – Baiyyappanahalli – Hosur section : Km 165/000 to Km.174/590-REACH 4

Baiyyappanahalli (BYPL)– Hosur (HSRA) Doubling of Railway track: Execution of earthwork in cutting/embankment and construction of Minor bridges/RUB's and other miscellaneous works (excluding station yards) in Bangalore Division of South Western Railway.

Package No. 3 – Baiyyappanahalli – Hosur section : Km 158/700 to Km.165/000 - REACH 5

Baiyyappanahalli (BYPL)– Hosur (HSRA) Doubling of Railway track: Execution of earthwork in cutting/embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works (excluding station yards) in Bangalore Division of South Western Railway.

2.1 Introduction

2.1.1 These works are a part of the project of doubling of railway track in Baiyyappanahalli – Hosur section of South Western Railway

2.1.2 CLIMATIC CONDITIONS : Monsoon period in the area:

Normally, Monsoon period in the project area is from July to October months. It is desirable that the contractor plans his works accordingly.

2.1.3 Introduction of contract packages

A. Package 1

- i) The tendered work is part of the project for doubling of existing railway line between Baiyyappanahalli to Hosur from Km 174/590 to 182/500 (excluding yards) of South Western Railway. The bridges and track for doubling are proposed parallel to the existing track on the left/right side of existing single line.

It is proposed to take up this work as it is important from the point of view of both passenger and freight traffic.

This work can be started immediately as major portion of land is available for execution of work.

The scope of work includes earthwork in formation, bridge works, and miscellaneous works, transportation and launching of precast boxes, supply of cement & steel and provision of site facility. Total length of the proposed new line is 7.91 Km.

ii) **Availability of Land :**

The major portion of the required land for the execution of works is available along the alignment. However, the contractor may have to take lease of the land temporarily for installation of his facilities like batching plant/ Casting Yard/ Site Work Shop etc. The bidders are advised to make detailed study and cater for such expenditure in the bid.

- i) **Approaches to the project site:** The land acquired for the project caters for construction and operation of the proposed line. The contractor shall plan for approach roads to various sites of work conducting detailed survey and should include the cost of inputs for any such approach roads in his bid for the work. However, in case any existing road outside railway land has to be utilized for transportation of materials to the site of work and in the process the road gets damaged or needs to be strengthened and the authority owning the said road submits demand to GM(Civil)/K RIDE to carry out some specific works in order to strengthen/repair the road, GM(Civil)/K RIDE shall get such works executed through the existing contractor or any other agency and make payment for such work.

Bidders should find out the capacity of the quarries and accordingly plan procurement of coarse/fine aggregates either from the existing quarries or establish their own quarries and crushing arrangements

B Package 2

- i) The tendered work is part of the project for doubling of existing railway line between Baiyyappanahalli to Hosur from Km 165/000 to 174/590 (excluding yards) of South Western Railway. The bridges and track for doubling are proposed parallel to the existing track on the left/right side of existing single line.

It is proposed to take up this work as it is important from the point of view of both passenger and freight traffic.

This work can be started immediately as major portion of land is available for execution of work.

The scope of work includes earthwork in formation, bridge works, and miscellaneous works, transportation and launching of precast boxes, supply of cement & steel and provision of site facility. Total length of the proposed new line is 9.59 Km.

ii) Availability of Land :

The major portion of the required land for the execution of works is available along the alignment. However, the contractor may have to take lease of the land temporarily for installation of his facilities like batching plant/ Casting Yard/ Site Work Shop etc. The bidders are advised to make detailed study and cater for such expenditure in the bid.

- iii) **Approaches to the project site:** The land acquired for the project caters for construction and operation of the proposed line. The contractor shall plan for approach roads to various sites of work conducting detailed survey and should include the cost of inputs for any such approach roads in his bid for the work. However, in case any existing road outside railway land has to be utilized for transportation of materials to the site of work and in the process the road gets damaged or needs to be strengthened and the authority owning the said road submits demand to GM(Civil)/K RIDE to carry out some specific works in order to strengthen/repair the road, GM(Civil)/K RIDE shall get such works executed through the existing contractor or any other agency and make payment for such work.

Bidders should find out the capacity of the quarries and accordingly plan procurement of coarse/fine aggregates either from the existing quarries or establish their own quarries and crushing arrangements

C. Package 3

- i) The tendered work is part of the project for doubling of existing railway line between Baiyyappanahalli to Hosur from Km 158/700 to 165/000 (excluding yards) of South Western Railway. The bridges and track for doubling are proposed parallel to the existing track on the left/right side of existing single line.

It is proposed to take up this work as it is important from the point of view of both passenger and freight traffic.

This work can be started immediately as major portion of land is available for execution of work.

The scope of work includes earthwork in formation, bridge works, and miscellaneous works, transportation and launching of precast boxes, supply of cement & steel and provision of site facility. Total length of the proposed new line is 6.30 Km.

ii) Availability of Land :

The major portion of the required land for the execution of works is available along the alignment. However, the contractor may have to take lease of the land temporarily for installation of his facilities like batching plant/ Casting Yard/ Site Work Shop etc. The bidders are advised to make detailed study and cater for such expenditure in the bid.

- iii) **Approaches to the project site:** The land acquired for the project caters for construction and operation of the proposed line. The contractor shall plan for approach roads to various sites of work conducting detailed survey and should include the cost of inputs for any such approach roads in his bid for the work. However, in case any existing road outside railway land has to be utilized for transportation of materials to the site of work and in the process the road gets damaged or needs to be strengthened and the authority owning the said road submits demand to GM(Civil)/K RIDE to carry out some specific works in order to strengthen/repair the road, GM(Civil)/K RIDE shall get such works executed through the existing contractor or any other agency and make payment for such work.

Bidders should find out the capacity of the quarries and accordingly plan procurement of coarse/fine aggregates either from the existing quarries or establish their own quarries and crushing arrangements.

- 2.2** It is the responsibility of the contractor to thoroughly examine the site of work and all constraints before submitting the bid(s).

2.3 The Nature of Work :

The works to be executed can broadly be grouped as under:

2.3.1 Civil

A. Formation

Earthwork in formation and cuttings for the full length, laying of a blanket layer as per RDSO guidelines with suitable materials as approved by Engineer.

The top width of the proposed new alignment for bank shall normally be 7.85 m and 8.00 m on curves with 2(H):1(V) side slopes. For cutting width of formation in the proposed line excluding side drain shall be 6.25m on straight and 6.55m on curves, side slopes for cutting shall be as under:

		H : V
(i)	Hard rock	¼ : 1
(ii)	Soft rock	¼ : 1
(iii)	Moorum/Hard soil/Ordinary soil	1 : 1

Formation in embankment shall be provided with side slopes of 2:1 or flatter as required. Side slopes shall be turfed. Bank of height more than 6 m shall be designed for slope stability and the slope shall be adopted accordingly. Earthwork shall be provided with contractor's own earth.

B. Other Activities:

1. Providing and maintaining office accommodation, equipment and vehicles for the use of the Employer and their Assistants and Staff during the contract and defect liability periods.
2. Setting out the line and level of alignment for the proposed doubling and establishing working bench marks and alignment references, taking the details from bench marks and alignment references established by the Employer/ other designated contractors.
3. For carrying out accurate survey work, survey control points shall be established along the railway line using high end survey equipment such as DGPS or Total Station connected with nearest GTS Bench Mark. Also reference pillars are to be established for relocation. This work is meant for maintaining & checking proper alignment of mid-section & bridges for which the contractor is solely responsible.
4. Every precaution has to be taken such that there shall be least disturbance to road traffic during transportation of construction materials to the site of work.
5. Making and supply of 'As Built' drawings for the new assets created.

2.4 Special stipulations/features:

Civil Work

- 2.4.1 While planning for the work of transportation of bridge construction materials to the bridge site., the finished formation of earth work in banks and cuttings with or without blanket layer should not be used for plying of trucks or other vehicles used for transportation. This restriction has specially been imposed to save the top surface of the formed formation from forming pits and ruts, which later are likely to accumulate water and pose problems for maintenance.
- 2.4.2 The mechanical means required to meet the stipulations mentioned in the above sub Para should be arranged by the Contractor.
- 2.4.3 Railway land, if available and spareable, shall be provided for the purpose of stacking of material and setting up of concrete batching plant, etc. However, the Contractor shall be responsible for arranging any such requirement of land and arranging/developing any required approach to site of work, etc at his own cost.
- 2.4.4 The Contractor shall be required to mobilise resources for taking up work at a number of locations simultaneously. The planning of resources may be done at least to meet these requirements.
- 2.4.5 The bidder may ascertain availability of suitable/preferred type of soil for embankment and lead/lift involved before quoting his rates.

2.4.6 Power & Traffic Block:

- (i) Track occupation may be granted at any time during day or night to suit convenience of traffic operations and will ordinarily be granted over a distance covered by one or two consecutive block sections. Work trains will normally be allowed to take advantage of block shadows. Normally the total durations of block on any section will be max. of 1.5 to 2.5 hours at a stretch in a day, once or more than once. Block provided may be utilized for one or more work trains or track lorries or ladder trolleys to suit convenience of work.
- (ii) Blocks will not ordinarily be given for laying the feeders except where crossing of track is involved, which will have to be laid manually in general.
- (iii) Any traffic / power blocks, temporary speed restrictions and caution orders required in connection with execution of works by the contractor, shall be got sanctioned from the Railway authorities well in advance, through the Engineer. The Railways may sanction the same for specific sites within the overall recovery time available in the Railway time table. The contractor shall have to schedule his programme according to the convenience of the Railways. No claim from the contractor for any delay / inconvenience / loss on this account shall be entertained by the Employer / Engineer.

- (iv) The contractor shall undertake the work involving Railway track, Railway Electrification installations in co-ordination with the Engineer and Railways in accordance with the programme of work. Where traffic / power blocks are involved, the Contractor shall ensure that interruption to Railway operations, if any, is kept to the bare minimum level.
- (v) In order to minimize blocking of the track for work/material trains, the contractor shall consider the working conditions on the section and assess use of alternative method of construction on a part or whole of the work. He should submit clear proposal along with financial implication if any to the purchaser for such special method of saving of blocks that could be obtained along with reduction / redundancy of the facilities being provided by the Railway / K RIDE.
- (vi) The protection required for block working i.e. flagmen, flags etc. shall be provided by the contractor. Competency for the above shall, however, be given by the Railway authority. Protection of track by banner flags etc shall be done in accordance with General Rules of Indian Railway and Subsidiary Rules of the concerned zonal Railway where work is being carried out. Contractor shall provide Safety helmet, Safety belt and Safety Shoes to their staff while working at site.
- (vii) In case of theft/breakdown, the contractor shall restore the traffic in minimum possible time. Failure to do so shall attract suitable penalty.

2.4.7 Provisional Acceptance:

- i) Immediately after completion of works/such part of works, the Contractor shall certify and advise the Engineer in writing that the works are (i) complete (ii) ready for satisfactory commercial service and (iii) ready to be handed over. He will also place at the disposal of the Engineer the required staff for checking it and putting it into operation.
- ii) The test or tests as stipulated in approved Technical Specifications shall be carried out jointly by the Railway / Engineer and the contractor within a month after the receipt of the Contractor's notification as stated in sub-Para above.
- iii) The provisions contained in the sub clause 10 of GCC shall be followed for taking over of the installations.

2.4.8 Use of Rejected/Sub Standard Items/ Equipment:

In the event of such rejection as aforesaid, the Engineer shall, without prejudice to his other rights and remedies and in particular without prejudice to his rights under the clause just preceding, be entitled to the use of the rejected/substandard equipment/item for a time reasonably sufficient to enable him to obtain other replacement. During such period, if the rejected/substandard equipment/item is used commercially the Contractor

shall not be entitled to the payment on energisation until such rejected equipment is rectified and/or replaced, but the Engineer shall not be entitled to claim any damages arising out of rejected/ substandard equipment/item in respect of such period.

2.4.9 Guarantee

- (i) The Contractor shall guarantee satisfactory working of the installations erected by him, for a period of 12 (Twelve) months from the date of commercial operation or from the date of Provisional Acceptance by the Engineer whichever is earlier. The guarantee for spares (if any) should be coincident with the guarantee for erected equipment. The provisions contained in the sub-clause 11. "Defects Liability" of GCC shall be followed for rectification of defects
- (ii) During the defect liability period the Contractor shall keep available an experienced engineer and necessary equipment to attend to any defective installations resulting from defective erection and / or defects in the equipment supplied by the Contractor. The Contractor shall bear the cost of all modifications, additions or substitutions that may be considered necessary due to faulty materials, design or workmanship for the satisfactory working of the equipment. The final decision shall rest with the Engineer/Employer.
- (iii) During the defect liability period the Contractor shall be liable for the replacement at site of any parts which may be found defective in the equipment whether such equipment be of his own manufacture or those of his sub-contractor whether arising from faulty design, materials, workmanship or negligence in any manner on the part of the Contractor provided always that such defective parts as are not repairable at site are promptly returned to the contractor if so required by him at his (Contractor's) own expenses. In case of type defects in Contractor's equipment and components detected during guarantee period, Contractor should replace all such items irrespective of the fact whether all such items have failed or not. The contractor shall bear the cost of repairs carried out on his behalf by the Engineer at site. In such a case, the Contractor shall be informed about the works proposed to be carried out by the Engineer/Employer.
- (iv) If it becomes necessary for the Contractor to replace or renew any defective portion of the equipment under the Para aforesaid then the provision of the said Para shall also apply to the portions of the equipment so replaced or renewed until the expiration of six months from the date of such replacement or renewal or until the end of the above mentioned period whichever is later. Such extension shall not apply in case of defects of a minor nature, the decision of the Engineer or his nominee being final in the matter. If any defect be not remedied within a reasonable time during the aforesaid period, the Engineer may proceed to do work at the Contractor's risk and expense, but without prejudice to any other rights and remedies which the Engineer may have against the Contractor in respect of such defects or faults.

- (v) The repaired or renewed parts shall be delivered and erected on site free of charge to the satisfaction of Engineer/Employer.

2.4.10 Accountal and disposal of released materials:

- (i) The Contractor shall liaison with the Engineer to finalize the procedure for taking over of the whole or part of the section and for disposal of the released materials.
- (ii) All released materials shall be handed over to the authorized Railway Representative through the Engineer at the nearest OHE/PSI depot or places nominated by Railway/K RIDE.
- (iii) The material released on account of modifications/alterations shall be accounted by the contractor in the presence of the Engineer and the Railway Representative, except for the material permitted to be re-used by the Engineer. For this material, only erection cost shall be paid, under the appropriate item of the Schedule.
- (iv) If any shortfall of released material is noticed at the time of completion of the work, the contractor shall be liable to pay for the shortfall as per the prevailing rates or the same shall be recovered from the final bill of the contractor as per the extant policy of K RIDE.

2.5 CODES & SPECIFICATIONS

The works shall be carried out as per Standard Specifications of Indian Railways/South Western Railway/ K RIDE (as detailed by K RIDE), which can be obtained on payment. Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished and work performed or tested the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards which ensure an equal or higher quality than the standards and codes specified will be accepted subject to the Engineer's prior review and written approval. Differences between the standards specified and the proposed alternative standards must be fully described in writing by the Contractor and submitted to the Engineer at least 28 days prior to the date when the Contractor desires the Engineer's approval. In the event the Engineer determines that such proposed deviations do not ensure equal or higher quality, the Contractor shall comply with the standards specified in the documents.

All goods and materials to be incorporated in the goods be new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided for otherwise in the contract.

- (a) The Standard Specifications of Indian Railways/South Western Railway/K RIDE and the list of codes and manuals given in the annexure thereof shall be prime governing.
- (b) Where there is conflict between provisions in IRS & IS specifications, provisions in IRS specifications shall prevail.
- (c) Where there is no provision of specifications in IRS, provisions in IS specifications should be adopted. Where there are no provisions in IRS and IS Specifications, provisions in IRC Specifications should be followed.
- (d) For items not covered in IRS/IS/IRC specifications, BS-5400 Part 1 to 10 may also be considered.
- (e) The decision of Engineer shall be final and binding in the interpretation of the clause of the codes of practice and specifications of this tender and no claim whatsoever shall be entertained on this account from the Contractor.

2.6 SURVEY AND FIXING WORKING BENCH MARKS AND ALIGNMENT MARKERS.

- 2.6.1 The work of conducting survey and fixing bench marks and alignment markers before the start of any work on this tender is included in the works covered by the present Tender.

2.7 Bench marks :

- 2.7.1 All along the length of the proposed double line benchmarks have been set up by the Employer at intervals of about a kilometer. The details of these bench marks along with their reduced levels have been marked on the design drawings indicating the plan and 'L' section which form a part of the tender. The contractor along with the Engineer should verify the details of these bench marks in the first instance, soon after taking possession of the site. If any mistakes are detected in these details of these bench marks the same should be indicated to the Engineer. The mistakes detected should be corrected in consultation with the Engineer. These corrections should be got approved by the Engineer before starting of any other work.
- 2.7.2 The contractor shall then in presence of the Engineer establish working bench marks at short intervals, adequately connecting them to the reference bench marks set up by the Employer in the Project length. The working bench mark levels should be got approved from the Engineer. An up to date record of all bench marks including approved corrections if any, shall be maintained by the contractor and also the Engineer.

2.7.3 All levels taken for making out the longitudinal section and cross section should be related only to these working bench marks.

2.7.4 While doing the above mentioned work, the fact that similar work will have to be done once again on the completed earth work in formation for fixing up the longitudinal levels of the installed P. Way should be kept in view.

2.8 Alignment :

2.8.1 All along the length of the proposed double line at intervals of about half a kilometer, alignment reference pillars have been set up by the Employer; in addition five reference pillars have been erected for each of the curves to indicate the start & end of the over all length of the curve and its circular portion and apex, by the Employer. In the design drawings showing the plan and 'L' section, which forms part of the tender, the co-ordinates for these pillars have also been given. This has been done to facilitate setting of the alignment of the proposed line. The contractor along with the Engineer should verify the details of these alignment pillars, soon after taking possession of the site. If any mistakes are detected in these details, the same should be indicated to the Engineer before starting any other work. These detected mistakes should be corrected by the Contractor in consultation with the Engineer. These corrections should be got approved from the Engineer.

2.8.2 The contractor shall then, in presence of the Engineer, establish working alignment reference markers at shorter intervals, adequately connecting them to the reference pillars set up by the Employer in the Project length. The location of these subsidiary alignment markers should be got approved from the Engineer. An up to date record of all alignment pillars, and corrections, if any done, shall be maintained by the contractor and also the Engineer.

2.8.3 The alignment for the double line should be related only to these working bench marks.

2.8.4 While doing the above-mentioned work, the fact that similar work will have to be done once again on the completed earth work in formation for fixing up the alignment of the installed P. Way should be kept in view.

2.8.5 After the formation has been constructed, the centre line of track both in Block Sections and Yards should be re-fixed taking guidance from already set up alignment references. Similarly, the rail levels of track both in the block sections and the yards should also be fixed with reference markers. These will be used for installation of track.

2.9 Responsibility for establishing and maintaining working bench marks and alignment markers

2.9.1 The Engineer when necessary will provide the contractor with the data necessary for setting out of the centerline. All dimensions and levels shown on

the drawing or mentioned in the documents forming part of or issued under the contract shall be verified by the contractor on the site; he shall immediately inform the Engineer of any apparent errors or discrepancies noticed in such dimensions or levels. In consultation with the Engineer, the noticed mistakes should be corrected. These corrections should have the approval of the Engineer.

- 2.9.2 The contractor will be entirely responsible for accurate setting out of the works and safeguarding all survey monuments, bench marks, alignment references etc. The work of setting out shall be deemed to be a part of the general works preparatory to the execution of work and no separate payment shall be made for the same
- 2.9.3 The above-mentioned points have been repeated in the respective sections dealing with specifications for different works for laying emphasis on these items.
- 2.9.4 The contractor will be entirely responsible for accurate setting out of the works and safeguarding all survey monuments, bench marks, alignment references etc. The work of setting out shall be deemed to be a part of the general works preparatory to the execution of work and no separate payment shall be made for the same.

2.10 Issue of materials by Employer :

- 2.10.1 The issue of materials by the Employer to contractor shall be governed by the following change.
- 2.10.2 The rails and other materials to be issued by the Employer to Contractor will be handed over at any convenient locations within Railway Land in the contract section. The contractor should collect the same from these locations and transport them to the work site as found necessary. He shall use only mechanical means for handling of rails during all stages of work to avoid any damages to the rails. Leading will be paid separately as per relevant item of BOQ.

2.11 to 2.19 These provisions shall not apply

2.20 Interfacing And Integrations of Works :

- 2.20.1 As a part of provision of this tendered work providing of road bed viz., earthwork & bridges, are to be executed by one Agency only. The interfacing for the purpose of integration of works between the partners of JV, in case the work is awarded to a JV or between the Contractor and his sub-contractors, (if permitted) will arise. This has to be kept in view.
- 2.20.2 Land is available throughout the section for carrying out the works. However, if additional land is required in yards/mid-section, necessary arrangements will be made for acquiring the land without affecting the progress of work

- 2.20.3 This provisions shall not apply
- 2.20.4 The contractor shall take full responsibility in terms of organizing, managing, coordinating and administrating the interfacing of all components of works including all issues related to and arising out of such tasks and responsibility. The contractor shall interface with all concerned authorities and other contractors as required to complete the work satisfactorily within the stipulated period.
- 2.20.5 Under consideration and application of the above clause, the contractor shall and has also the obligation to liaise with the other contractors and Authorities to obtain all necessary technical information, all necessary information concerning organization of works, coordinating the works etc. which are necessary to assess, mitigate, take care of contractual obligations, risks, liabilities and whatsoever arising out of interfacing, engineering issues, organization of the works etc. The employer/engineer shall not be held liable in any way, throughout the preparation of the offer and/or execution of the works and/or maintenance period and/or defects liability period for any omissions, misunderstanding, negligence etc. arising out of interfacing, coordinating, organizing etc. of the works. The employer will not entertain any claim arising out of misunderstanding, miscommunication, omission, withholding of necessary/required information or whatsoever between the concerned contractors/Authorities concerning interfacing, organizing etc. of works. In case of any claim arising from any of the contractors, as aforesaid, referring to interfacing and/or interfacing related issues, the Employer will hold the concerned contractors liable for not taking care of their contractual obligation concerning interfacing, organizing, co-ordination etc. of the related works.
- 2.20.6 This provision shall not apply.
- 2.20.7 Needless to say that commissioning of this double line project requires close coordination among various agencies executing the works in this section, Engineer, Employer and the Railway authorities. The contractor shall therefore plan all his works requiring interfacing, like works in mid-section, station yards, with other agencies, meticulously, in consultation and coordination with all concerned parties, in advance, for expeditious execution, without causing any delay either to his works or those of others.
- 2.20.8 The contractor shall strictly adhere to the work plan made for works requiring interfacing. Any delay either on his part or on the part of other agencies and other bottlenecks that could affect the pace of works shall be informed to the Engineer in time so as to enable him to take corrective steps.
- 2.20.9 If, in the opinion of Engineer, any delay in execution of any part of the Project requiring interfacing is attributable to the failures of the contractor to take adequate steps for smooth execution of such works, then the Engineer shall have the right to take necessary steps to organize and streamline such works, including excluding the requisite portion of work from the scope of the

Contractor and getting the same executed by other agencies, at the risk and cost of the contractor.

- 2.21 Damage to property :** The contractor shall organize all his activities so as not to cause any damage to the property of Railway or that of other agencies or any third party. In spite of taking all precautions, in the unfortunate event of any damage to the property, then the contractor shall not only indemnify the Employer of the claims made by the affected parties but also settle the matters with the affected parties as per law. If the nature of damage is one of that affecting the train movements or causing a safety hazard to the public, then the situation will be treated as an emergency and the Engineer reserves the right to take all necessary steps as deemed necessary to restore train operations or to remove the hazardous situation or to mitigate the damage, at the risk and cost of the contractor.
- 2.22 Survey Equipment :** The contractor should provide the survey equipment and other accessories as per the instructions of Engineer as and when required. He should also provide all necessary help as required by the Engineer for checking the works, whenever required.
- 2.23 Power Line Crossing :** This provision shall not apply
- 2.24** All power requirements for execution of works shall be arranged by the Contractor from his own resources. Subject to availability of power, the Employer/Engineer will recommend to the Railway Authorities for providing power connection. The Contractor shall bear the cost of installation and payment of necessary charges for providing such power connections as per the Terms and Conditions of the Railway.

SITE FACILITIES FOR THE EMPLOYER AND THE ENGINEER
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3.0 FOR PACKAGE 1 - Baiyyappanahalli - Hosur section : REACH 3 : Km 174/590 to Km.182/500 (Earth work in cutting/embankment, construction of major/minor bridge/ RUBs and other misc. works)

3.1 GENERAL

The Contractor shall provide for the use of the Employer/Engineer office accommodation, equipment, communication & drawing facilities throughout the course of the work and for such period of time during the defects liability period as the employer & Engineer may require, The details of the accommodation & the other facilities are detailed below:

All the facilities under this clause will continue to be maintained by the Contractor free of cost till the defect liability period is over. Thereafter the Contractor shall dismantle the building and take away all the materials, office furniture, & equipment etc which will be the property of the Contractor. The provisions of the site facilities will be paid for separately.

3.2 SITE OFFICES

3.2.1 Accommodation for the Employer/Engineer shall consist of one site office to be constructed by the Contractor at a place decided by the Employer, within Two months from the date of commencement of the works. In case of delay beyond Two months in provision of the accommodation either through construction or hire, penalty @ Rs 25000/- Per week or part thereof will be imposed."

3.2.2 The site office should remain open for 24 hours a day and 7 days a week i.e. round the clock till the defect liability period is over.

3.2.3

Each Site Office will provide for the following rooms: SITE OFFICE for Engineer/Employer to be constructed by Contractor	Area required (Sq. m)
Project Director of K RIDE	12
Project Manager of PMC	9
Conference/Visitor Room	16
Computer/Drawing Office	9
Pantry & Kitchen area	6
File and Documents & Instruments Storage	7
Toilets	3
Total "A"	62

- 3.2.4 Materials used for the construction of the offices shall be new and of good quality. Materials shall be chosen such that the buildings when erected shall give good ventilation, heat and sound insulation.
- 3.2.5 All buildings shall be supplied with continuous (24 hour) running potable cold water to the kitchens and wash rooms. The toilets may use raw water for flushing. The Contractor shall also arrange for the constant and hygienic disposal of all effluent, sewage and rubbish from the buildings.
- 3.2.6 All buildings shall be supplied with electricity, AC 240 Voltage 50 Hz that shall be distributed to each room in accordance with the Regulations. Lighting and electrical power points shall be provided in each room. The disposition and location of light and power points will be as directed by the Engineer. 24 hours power supply is to be arranged by contractor to meet full power load. Fans and coolers etc will be provided as decided by the engineer. Rooms for (i) Project Director of Employer (ii) Project Manager (iii) Conference/Visitor Room shall be provided with Air Conditioners of appropriate capacity.
- 3.2.7 This provision shall not apply
- 3.2.8 Fire fighting equipment shall be provided in accordance with the local recommendations.
- 3.2.9 This provision shall not apply

3.3 FURNITURE AND OTHER OFFICE EQUIPMENT

- 3.3.1 The Contractor shall supply and maintain the following new furniture and equipment to the Engineer's offices within two months of the date of commencement of the works until the defect liability period is over:

Description of Item	Nos.
Conference table (2000mm x 1500mm)	1
Conference chairs	8
Glass-fronted lockable bookcase	1
1500mm x 900mm double pedestal desk	1
1200mm x 900mm single pedestal desks	1
Swivel office chair with armrests	4
Swivel office chair without armrests	4
Typist chair	2
Visitors chair	6
4-drawer filing cabinet	2
Plan chest (A 0 size)	1

1500mm x 900mm tables	4
Steel lockable cupboard 6ft high with internal shelves	2
Heavy Duty Paper Shredders	1
First aid kits for up to 36 persons	1
Safety helmets, safety shoes, reflective jackets	For all the men working at site
Safety harness	10
Day-glow waistcoat	For all the men working at site
Pairs industrial safety goggles	6 pairs
5 L kettles	1
2 L kettles	2
Potable water dispenser with hot/cold Taps	1
Cups and plates	20
Fire extinguisher	(As required confirming to the stipulations of Local authorities).
Silent DG set of minimum power of 5 KVA	1

Note: In case of failure to provide the equipments within Two months, penalty @ Rs 10000/- Per week or part thereof will be imposed.

3.4 TRANSPORT

3.4.1 General

The Contractor shall provide road transport (for the use of the Employer and the Engineer within one month from the date of commencement of the works) and the Payment for the same shall be covered in relevant schedule of the BOQ

3.4.2 Road Transport

3.4.2.1 Road Vehicle (4 wheeler)

- a) The vehicles shall be new and delivered and maintained by the Contractor in good roadworthy condition including daily cleaning. The vehicle shall be replaced with a new vehicle after a maximum run of 75000 Km or three years whichever is earlier.

- (b) The Contractor shall employ and make available competent drivers fully licensed to operate the vehicles as and when required by the Engineer/Employer. The Contractor shall replace drivers at the request of the Engineer/Employer.
- (c) The vehicles shall be registered and insured for use on the public roads and shall have comprehensive insurance cover for any qualified driver authorised by the Engineer together with any authorised passengers and the carriage of goods or samples.
- (d) The Contractor shall provide fuel, oil for running of each vehicle for 3000 kms monthly and ensure maintenance in conformity with the vehicle manufacturer's recommendations and all relevant toll and parking charges incurred in connection with the Works. The vehicle shall be provided day and night as required by the Engineer/Employer. If any vehicle is allowed, with the prior approval of Project Director, to run beyond 3000 Kms in a month the charges for running of the additional kilometres shall be paid separately under relevant schedule.
- (e) A suitable replacement shall be provided by the contractor for any vehicle out of service for more than 24 hours. If the contractor, at any time, fails to provide vehicle(s) or substitute vehicle(s) as specified, an amount of Rs.3000 per day for each vehicle (that the Contractor failed to provide) shall be recovered from the Contractor.

3.4.2.2 **Motor Bike**

- (a) The Motor Bike shall be new and delivered and maintained by the Contractor in good roadworthy condition. A new helmet shall also be provided along with the bike. The motor bike shall be washed and cleaned once in a month. The bike shall be replaced with a new Motor Bike after a maximum run of 90000 Kms or three years whichever is earlier.
- (b) The Motor Bike shall be registered and insured for use on the public roads and shall have comprehensive insurance cover for any rider having valid driving license and authorised by the Engineer.
- (c) The Contractor shall provide fuel, lubricants and other oils for running of the Motor Bike for 3000 Kms monthly and ensure maintenance in conformity with the vehicle manufacturer's recommendations and all relevant toll and parking charges incurred in connection with the works shall be borne by the Contractor. The motor bike shall be provided day and night as required by the Engineer/Employer. If any motor bike is allowed to run beyond 3000 Kms in a month, the charges for running of the additional kilometres shall be paid separately under relevant item.
- (d) A suitable replacement shall be provided by the contractor for any motor bike out of service for more than 24 hours. If the contractor at

any time fails to provide motor bike as specified, an amount of Rs.500 per day for each motor bike (that the Contractor failed to provide) shall be recovered from the Contractor.

3.4.3 Number of Vehicles (4 wheelers) and Motor Bikes

- 3.4.3.1 The Contractor shall provide the following type of vehicles as per requirement indicated by the Project Director within one month of the date of commencement.

Type	Numbers
Toyota Innova Crysta / Toyota Corolla Altis / Honda Civic or similar approved road vehicle(s)	2
Toyota Yaris G CVT / Honda City 2020 / Hyundai Verna 1.6 CRDI SX(O) / Skoda Rapid 1.5 TDI CR Ambition AT or similar approved road vehicle(s)	1
Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	1
Motor Bike 150CC or more, Bajaj Pulsar/HondaCB Hornet 160R/ Hero Xtreme Sorts/ Suzuki Gixxer or Similar	4

- 3.4.3.2 The vehicle requirement given in para 3.4.3.1 above is the maximum requirement of the vehicles at a time. However, requirement in a particular period will be intimated by the project director to the contractor on programme basis at least 7 days before the actual date of requirement after approval of the distribution by the Project Director. The Contractor shall withdraw particular vehicle(s) if the same is not further required by the Engineer/Employer if so directed by the Project Director. In such cases the instructions shall be given in writing 7 days in advance. The requirement during the Defect Liability Period will be quite less than the maximum requirement mentioned above.

3.4.3.3 Duration of Transport Requirements

Transport for the Engineer / Employer shall be provided so as to cover the entire completion period(s) and defect liability period(s). The transport so provided, as per Para 3.4.2 & 3.4.3, shall continue to be the property of the Contractor.

3.5 OFFICE MAINTENANCE

3.5.1 The contractor is required to maintain the offices throughout the contract period and defect liability period and provide the following, but not limited to:

- i. Pay all electricity charges.
- ii. Pay all water charges.
- iii. Carry out necessary repairs to office and equipment as and when required.
- iv. Day - to - Day cleaning and maintenance and watch & ward etc

3.5.2 The contractor shall provide within Two months from the Date of Commencement following personnel in the office as required for watch and ward of the site office.

Watchmen / Security (3 shifts of 1 men in a shift, till the defect Liability period is over)

Note: In case of delay beyond two months, penalty @ Rs 5000/- Per week or part thereof will be imposed.

3.6 EQUIPMENT FOR USE AT SITE OFFICE.

The Contractor shall provide new equipment and software as listed below and maintain them for the exclusive use of the Employer and the Engineer. The Contractor shall provide and maintain the following equipment for the use of the Engineer and the Employer within one month from the date of commencement of the works until the defect liability period is over. The payment for the same shall be made separately under relevant BOQ item. On completion of defect liability period, the equipment shall be property of the Contractor.

(a)	Desktop Computer nos. two	With minimum specification of Intel Core i7/i9, 3.4 GHz, 3 MB Cache, 8 GB DDR3 RAM, 500 GB Hard Disk Drive, 21" colour TFT monitor, 10/100 LAN Card, Modem Card, Operating System - Windows 10 Professional or higher preloaded with media and documentation and certificate of authenticity and Microsoft Security Essentials preloaded antivirus software.
(b)	Laptop rugged – two Nos.	With minimum specification of Intel Core i7/i9, 8 GB RAM, 500 GB Hard Disk Drive, 15" color display, 2xUSB-2.0, standard keyboard Battery backup - minimum 4 hrs Operating System - Windows 10 or higher preloaded with media and documentation and certificate of

		<p>authenticity and Microsoft Security Essentials preloaded antivirus software.</p> <p>A laptop bag and Adapter/Battery charger shall also be provided with the laptop.</p>
(c)	Printers – 2 nos. (A4 size – 1 No. and A3 size – 1 No.)	The A4 size colour printer cum scanner cum copier shall be all in one officejet having features of Fax, Scanner and Printer, A3 size printer cum scanner cum copier shall be Colour Officejet with a print speed of up to 8 pages at 800 dpi or More.
(d)	Application software	<p>(i) Microsoft office latest release (2016 of latest).</p> <p>(ii) AUTOCAD 3D latest</p> <p>(iii) M S Project/ Sure Track.</p> <p>(iv) PDF Converter/Professional</p>
(e)	UPS system with sufficient power backup (with minimum backup time of 30 minute) to meet the sufficient power load in case of power disruption.	
(f)	Surge Protection Devices (one for each computer and printer as given above)	
(g)	Power supply for the systems is to be AC 240 volts, 50 Hz from normal building wiring circuit mains, power regulator, stabilizer or transformer should be supplied by the Contractor for the computer systems such that the systems can function efficiently.	
(h)	At least 20 MBPS internet connection with wifi facility so that multiple devices can be connected.	
(i)	50 MBPS wifi HotSpot/USB Dongle with 4 GB data connection and minimum monthly download limit of 50 GB for use with laptops – two nos.	

Note: In case of failure to provide the equipment including original software & internet connectivity within one month, penalty @ Rs 25000/- Per week or part thereof will be imposed

3.7 Documentation:

A complete set of documentation will be supplied with each System. The documentation should be self-tutorial in nature and be readily understood by non-computer personnel. The following manuals will be supplied with the system:

- (a) Manual on how to operate the equipment; and
- (b) Manual on how to use the facilities and software provided by the supplier (including languages and utilities).

3.0 FOR PACKAGE 2 - Baiyyappanahalli - Hosur section : REACH 4 : Km 165/000 to Km.174/590 (Earth work in cutting/embankment, construction of minor bridge/ RUBs and other misc. works)

3.1 GENERAL

The Contractor shall provide for the use of the Employer/Engineer office accommodation, equipment, communication & drawing facilities throughout the course of the work and for such period of time during the defects liability period as the employer & Engineer may require, The details of the accommodation & the other facilities are detailed below:

All the facilities under this clause will continue to be maintained by the Contractor free of cost till the defect liability period is over. Thereafter the Contractor shall dismantle the building and take away all the materials, office furniture, & equipment etc which will be the property of the Contractor. The provisions of the site facilities will be paid for separately.

3.2 SITE OFFICES

3.2.1 Accommodation for the Employer/Engineer shall consist of one site office to be constructed by the Contractor at a place decided by the Employer, within Two months from the date of commencement of the works. In case of delay beyond Two months in provision of the accommodation either through construction or hire, penalty @ Rs 25000/- Per week or part thereof will be imposed."

3.2.2 The site office should remain open for 24 hours a day and 7 days a week i.e. round the clock till the defect liability period is over.

3.2.3

Each Site Office will provide for the following rooms: SITE OFFICE for Engineer/Employer to be constructed by Contractor	Area required (Sq. m)
Project Director of K RIDE	12
Project Manager of PMC	9
Conference/Visitor Room	16
Computer/Drawing Office	9
Pantry & Kitchen area	6
File and Documents & Instruments Storage	7
Toilets	3
Total "A"	62

3.2.4 Materials used for the construction of the offices shall be new and of good quality. Materials shall be chosen such that the buildings when erected shall give good ventilation, heat and sound insulation.

3.2.5 All buildings shall be supplied with continuous (24 hour) running potable cold water to the kitchens and wash rooms. The toilets may

use raw water for flushing. The Contractor shall also arrange for the constant and hygienic disposal of all effluent, sewage and rubbish from the buildings.

- 3.2.6 All buildings shall be supplied with electricity, AC 240 Voltage 50 Hz that shall be distributed to each room in accordance with the Regulations. Lighting and electrical power points shall be provided in each room. The disposition and location of light and power points will be as directed by the Engineer. 24 hours power supply is to be arranged by contractor to meet full power load. Fans and coolers etc will be provided as decided by the engineer. Rooms for (i) Project Director of Employer (ii) Project Manager (iii) Conference/Visitor Room shall be provided with Air Conditioners of appropriate capacity.
- 3.2.7 This provision shall not apply.
- 3.2.8 Fire fighting equipment shall be provided in accordance with the local recommendations.
- 3.2.9 This provision shall not apply.

3.3 FURNITURE AND OTHER OFFICE EQUIPMENT

- 3.3.1 The Contractor shall supply and maintain the following new furniture and equipment to the Engineer's offices within two months of the date of commencement of the works until the defect liability period is over:

Description of Item	Nos.
Conference table (2000mm x 1500mm)	1
Conference chairs	8
Glass-fronted lockable bookcase	1
1500mm x 900mm double pedestal desk	1
1200mm x 900mm single pedestal desks	1
Swivel office chair with armrests	4
Swivel office chair without armrests	4
Typist chair	2
Visitors chair	6
4-drawer filing cabinet	2
Plan chest (A 0 size)	1
1500mm x 900mm tables	4
Steel lockable cupboard 6ft high with internal shelves	2
Heavy Duty Paper Shredders	1
First aid kits for up to 36 persons	1
Safety helmets safety shoes, reflective jackets	For all the men

	working at site
Safety harness	10
Day-glow waistcoat	For all the men working at site
Pairs industrial safety goggles	6 pairs
5 L kettles	1
2 L kettles	2
Potable water dispenser with hot/cold Taps	1
Cups and plates	20
Fire extinguisher	(As required confirming to the stipulations of Local authorities).
Silent DG set of minimum power of 5 KVA	1

Note: In case of failure to provide the equipments within two months, penalty @ Rs 10000/- per week or part thereof will be imposed.

3.4 TRANSPORT

3.4.1 General

The Contractor shall provide road transport (for the use of the Employer and the Engineer within one month from the date of commencement of the works) and the Payment for the same shall be covered in relevant schedule of the BOQ

3.4.2 Road Transport

3.4.2.1 Road Vehicle (4 wheeler)

- a) The vehicles shall be new and delivered and maintained by the Contractor in good roadworthy condition including daily cleaning. The vehicle shall be replaced with a new vehicle after a maximum run of 75000 Km or three years whichever is earlier.
- b) The Contractor shall employ and make available competent drivers fully licensed to operate the vehicles as and when required by the Engineer/Employer. The Contractor shall replace drivers at the request of the Engineer/Employer.
- (c) The vehicles shall be registered and insured for use on the public roads and shall have comprehensive insurance cover for any qualified driver

authorised by the Engineer together with any authorised passengers and the carriage of goods or samples.

- (d) The Contractor shall provide fuel, oil for running of each vehicle for 3000 kms monthly and ensure maintenance in conformity with the vehicle manufacturer's recommendations and all relevant toll and parking charges incurred in connection with the Works. The vehicle shall be provided day and night as required by the Engineer/Employer. If any vehicle is allowed, with the prior approval of Project Director, to run beyond 3000 Kms in a month the charges for running of the additional kilometres shall be paid separately under relevant schedule.
- (e) A suitable replacement shall be provided by the contractor for any vehicle out of service for more than 24 hours. If the contractor at any time fails to provide vehicle(s) or substitute vehicle(s) as specified, an amount of Rs.3000 per month for each vehicle (that the Contractor failed to provide) shall be recovered from the Contractor.

3.4.2.2 Motor Bike

- (a) The Motor Bike shall be new and delivered and maintained by the Contractor in good roadworthy condition. A new helmet shall also be provided along with the bike. The motor bike shall be washed and cleaned once in a month. The bike shall be replaced with a new Motor Bike after a maximum run of 90000 Kms or three years whichever is earlier.
- (b) The Motor Bike shall be registered and insured for use on the public roads and shall have comprehensive insurance cover for any rider having valid driving license and authorised by the Engineer.
- (c) The Contractor shall provide fuel, lubricants and other oils for running of the Motor Bike for 3000 Kms monthly and ensure maintenance in conformity with the vehicle manufacturer's recommendations and all relevant toll and parking charges incurred in connection with the works shall be borne by the Contractor. The motor bike shall be provided day and night as required by the Engineer/Employer. If any motor bike is allowed to run beyond 3000 Kms in a month, the charges for running of the additional kilometres shall be paid separately under relevant item.
- (d) A suitable replacement shall be provided by the contractor for any motor bike out of service for more than 24 hours. If the contractor at any time fails to provide motor bike as specified, an amount of Rs.500 per day for each motor bike (that the Contractor failed to provide) shall be recovered from the Contractor.

3.4.3 Number of Vehicles (4 wheelers) and Motor Bikes

3.4.3.1 The Contractor shall provide the following type of vehicles as per requirement indicated by the Project Director within one month of the date of commencement.

Type	Numbers
Toyota Innova Crysta / Toyota Corolla Altis / Honda Civic or similar approved road vehicle(s)	2
Toyota Yaris G CVT / Honda City 2020 / Hyundai Verna 1.6 CRDI SX(O) / Skoda Rapid 1.5 TDI CR Ambition AT or similar approved road vehicle(s)	1
Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	1
Motor Bike 150CC or more, Bajaj Pulsar/HondaCB Hornet 160R/ Hero Xtreme Sorts/ Suzuki Gixxer or Similar	4

3.4.3.2 The vehicle requirement given in para 3.4.3.1 above is the maximum requirement of the vehicles at a time. However requirement in a particular period will be intimated by the project director to the contractor on programme basis at least 7 days before the actual date of requirement after approval of the distribution by the Project Director. The Contractor shall withdraw particular vehicle(s) if the same is not further required by the Engineer/Employer if so directed by the Project Director. In such cases the instructions shall be given in writing 7 days in advance. The requirement during the Defect Liability Period will be quite less than the maximum requirement mentioned above.

3.4.3.3 Duration of Transport Requirements

Transport for the Engineer / Employer shall be provided so as to cover the entire completion period(s) and defect liability period(s). The transport so provided, as per Para 3.4.2 & 3.4.3, shall continue to be the property of the Contractor.

3.5 OFFICE MAINTENANCE

3.5.1 The contractor is required to maintain the offices throughout the contract period and defect liability period and provide the following, but not limited to:

- i. Pay all electricity charges.
- ii. Pay all water charges.
- iii. Carry out necessary repairs to office and equipment as and when required.
- iv. Day - to - Day cleaning and maintenance and watch & ward etc

- 3.5.2 The contractor shall provide within Two months from the Date of Commencement following personnel in the office as required for watch and ward of the site office.

Watchmen / Security (3 shifts of 1 men in a shift, till the defect Liability period is over)

Note: In case of delay beyond Two month, penalty @ Rs 5000/- Per week or part thereof will be imposed.

3.6 EQUIPMENT FOR USE OF SITE OFFICE.

The Contractor shall provide new equipment and software as listed below and maintain them for the exclusive use of the Employer and the Engineer. The Contractor shall provide and maintain the following equipment for the use of the Engineer and the Employer within one month from the date of commencement of the works until the defect liability period is over. The payment for the same shall be made separately under relevant BOQ item. On completion of defect liability period, the equipment shall be property of the Contractor.

(a)	Desktop Computer two nos.	With minimum specification of Intel Core i7/i9, 3.4 GHz, 3 MB Cache, 8 GB DDR3 RAM, 500 GB Hard Disk Drive, 21" colour TFT monitor, 10/100 LAN Card, Modem Card, Operating System - Windows 10 Professional or higher preloaded with media and documentation and certificate of authenticity and Microsoft Security Essentials preloaded antivirus software.
(b)	Laptop rugged – two Nos.	With minimum specification of Intel Core i7/i9, 8 GB RAM, 500 GB Hard Disk Drive, 15" color display, 2xUSB-2.0, standard keyboard Battery backup - minimum 4 hrs Operating System - Windows 10 or higher preloaded with media and documentation and certificate of authenticity and Microsoft Security Essentials preloaded antivirus software. A laptop bag and Adapter/Battery charger shall also be provided with the laptop.

(c)	Printers – 2 nos. (A4 size – 1 No. and A3 size – 1 No.)	The A4 size colour printer cum scanner cum copier shall be all in one office set having features of Fax, Scanner and Printer, A3 size printer cum scanner cum copier shall be Colour Officejet with a print speed of up to 8 pages at 800 dpi or More.
(d)	Application software	(i) Microsoft office latest release (2016 of latest). (ii) AUTOCAD 3D latest (iii) M S Project/ Sure Track. (iv) PDF Converter/Professional
(e)	UPS system with sufficient power backup (with minimum backup time of 30 minute) to meet the sufficient power load in case of power disruption.	
(f)	Surge Protection Devices (one for each computer and printer as given above)	
(g)	Power supply for the systems is to be AC 240 volts, 50 Hz from normal building wiring circuit mains, power regulator, stabilizer or transformer should be supplied by the Contractor for the computer systems such that the systems can function efficiently.	
(h)	At least 20 MBPS internet connection with wifi facility so that multiple devices can be connected.	
(i)	50 MBPS wifi HotSpot/USB Dongle with 4 GB data connection and minimum monthly download limit of 50 GB for use with laptops – two nos.	

Note: In case of failure to provide the equipment including original software & internet connectivity within one month, penalty @ Rs 25000/- per week or part thereof will be imposed.

3.7 Documentation:

A complete set of documentation will be supplied with each System. The documentation should be self tutorial in nature and be readily understood by non-computer personnel. The following manuals will be supplied with the system:

- (a) Manual on how to operate the equipment; and
- (b) Manual on how to use the facilities and software provided by the supplier (including languages and utilities)

**3.0 PACKAGE 3- Baiyyappanahalli - Hosur section : REACH 5 :
Km 158/700 to Km.165/000 (Earth work in cutting/embankment,
construction of major/minor bridge/ RUBs and other misc. works)**

3.1 GENERAL

The Contractor shall provide for the use of the Employer/Engineer office accommodation, equipment, communication & drawing facilities throughout the course of the work and for such period of time during the defects liability period as the employer & Engineer may require, The details of the accommodation & the other facilities are detailed below:

All the facilities under this clause will continue to be maintained by the Contractor free of cost till the defect liability period is over. Thereafter the Contractor shall dismantle the building and take away all the materials, office furniture, & equipment etc which will be the property of the Contractor. The provisions of the site facilities will be paid for separately.

3.2 SITE OFFICES

3.2.1 Accommodation for the Employer/Engineer shall consist of one site office to be constructed by the Contractor at a place decided by the Employer, within Two months from the date of commencement of the works. In case of delay beyond Two months in provision of the accommodation either through construction or hire, penalty @ Rs 25000/- Per week or part thereof will be imposed."

3.2.2 The site office should remain open for 24 hours a day and 7 days a week i.e. round the clock till the defect liability period is over.

3.2.3

Each Site Office will provide for the following rooms: SITE OFFICE for Engineer/Employer to be constructed by Contractor	Area required (Sq. m)
Project Director of K RIDE	12
Project Manager of PMC	9
Conference/Visitor Room	16
Computer/Drawing Office	9
Pantry & Kitchen area	6
File and Documents & Instruments Storage	7
Toilets	3
Total "A"	62

3.2.4 Materials used for the construction of the offices shall be new and of good quality. Materials shall be chosen such that the buildings when erected shall give good ventilation, heat and sound insulation.

- 3.2.5 All buildings shall be supplied with continuous (24 hour) running potable cold water to the kitchens and wash rooms. The toilets may use raw water for flushing. The Contractor shall also arrange for the constant and hygienic disposal of all effluent, sewage and rubbish from the buildings.
- 3.2.6 All buildings shall be supplied with electricity, AC 240 Voltage 50 Hz that shall be distributed to each room in accordance with the Regulations. Lighting and electrical power points shall be provided in each room. The disposition and location of light and power points will be as directed by the Engineer. 24 hours power supply is to be arranged by contractor to meet full power load. Fans and coolers etc will be provided as decided by the engineer. Rooms for (i) Project Director of Employer (ii) Project Manager (iii) Conference/Visitor Room shall be provided with Air Conditioners of appropriate capacity.
- 3.2.7 This provision shall not apply
- 3.2.8 Fire fighting equipment shall be provided in accordance with the local recommendations.
- 3.2.9 This provision shall not apply

3.3 FURNITURE AND OTHER OFFICE EQUIPMENT

- 3.3.1 The Contractor shall supply and maintain the following new furniture and equipment to the Engineer's offices within two months of the date of commencement of the works until the defect liability period is over:

Description of Item	Nos.
Conference table (2000mm x 1500mm)	1
Conference chairs	8
Glass-fronted lockable bookcase	1
1500mm x 900mm double pedestal desk	1
1200mm x 900mm single pedestal desks	1
Swivel office chair with armrests	4
Swivel office chair without armrests	4
Typist chair	2
Visitors chair	6
4-drawer filing cabinet	2
Plan chest (A 0 size)	1
1500mm x 900mm tables	4
Steel lockable cupboard 6ft high with internal shelves	2
Heavy Duty Paper Shredders	1

First aid kits for up to 36 person	1
Safety helmets, safety shoes, reflective jackets	For all the men working at site
Safety harness	1
Day-glow waistcoat	For all the men working at site
Pairs industrial safety goggles	6 pairs
5 L kettles	1
2 L kettles	2
Potable water dispenser with hot/cold Taps	1
Cups and plates	20
Fire extinguisher	(As required confirming to the stipulations of Local authorities).
Silent DG set of minimum power of 5 KVA	1

Note: In case of failure to provide the equipment's within Two months, penalty @ Rs 10000/- Per week or part thereof will be imposed.

3.4 TRANSPORT

3.4.1 General

The Contractor shall provide road transport (for the use of the Employer and the Engineer within one month from the date of commencement of the works) and the Payment for the same shall be covered in relevant schedule of the BOQ

3.4.2 Road Transport

3.4.2.1 Road Vehicle (4 wheeler)

- a) The vehicles shall be new and delivered and maintained by the Contractor in good roadworthy condition including daily cleaning. The vehicle shall be replaced with a new vehicle after a maximum run of 75000 Km or three years whichever is earlier.
- b) The Contractor shall employ and make available competent drivers fully licensed to operate the vehicles as and when required by the Engineer/Employer. The Contractor shall replace drivers at the request of the Engineer/Employer.

- c) The vehicles shall be registered and insured for use on the public roads and shall have comprehensive insurance cover for any qualified driver authorised by the Engineer together with any authorised passengers and the carriage of goods or samples.
- d) The Contractor shall provide fuel, oil for running of each vehicle for 3000 kms monthly and ensure maintenance in conformity with the vehicle manufacturer's recommendations and all relevant toll and parking charges incurred in connection with the Works. The vehicle shall be provided day and night as required by the Engineer/Employer. If any vehicle is allowed, with the prior approval of Project Director, to run beyond 3000 Kms in a month the charges for running of the additional kilometres shall be paid separately under relevant schedule.
- e) A suitable replacement shall be provided by the contractor for any vehicle out of service for more than 24 hours. If the contractor at any time fails to provide vehicle(s) or substitute vehicle(s) as specified, an amount of Rs.3000 per month for each vehicle (that the Contractor failed to provide) shall be recovered from the Contractor.

3.4.2.2 Motor Bike

- (a) The Motor Bike shall be new and delivered and maintained by the Contractor in good roadworthy condition. A new helmet shall also be provided along with the bike. The motor bike shall be washed and cleaned once in a month. The bike shall be replaced with a new Motor Bike after a maximum run of 90000 Kms or three years whichever is earlier.
- (b) The Motor Bike shall be registered and insured for use on the public roads and shall have comprehensive insurance cover for any rider having valid driving license and authorised by the Engineer.
- (c) The Contractor shall provide fuel, lubricants and other oils for running of the Motor Bike for 3000 Kms monthly and ensure maintenance in conformity with the vehicle manufacturer's recommendations and all relevant toll and parking charges incurred in connection with the works shall be borne by the Contractor. The motor bike shall be provided day and night as required by the Engineer/Employer. If any motor bike is allowed to run beyond 3000 Kms in a month, the charges for running of the additional kilometres shall be paid separately under relevant item.
- (d) A suitable replacement shall be provided by the contractor for any motor bike out of service for more than 24 hours. If the contractor at any time fails to provide motor bike as specified, an amount of Rs.500 per day for each motor bike (that the Contractor failed to provide) shall be recovered from the Contractor.

3.4.3 Number of Vehicles (4 wheelers) and Motor Bikes

- 3.4.3.1 The Contractor shall provide the following type of vehicles as per requirement indicated by the Project Director within one month of the date of commencement.

Type	Numbers
Toyota Innova Crysta / Toyota Corolla Altis / Honda Civic or similar approved road vehicle(s)	2
Toyota Yaris G CVT / Honda City 2020 / Hyundai Verna 1.6 CRDI SX(O) / Skoda Rapid 1.5 TDI CR Ambition AT or similar approved road vehicle(s)	1
Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	1
Motor Bike 150CC or more, Bajaj Pulsar/HondaCB Hornet 160R/ Hero Xtreme Sorts/ Suzuki Gixxer or Similar	4

- 3.4.3.2 The vehicle requirement given in para 3.4.3.1 above is the maximum requirement of the vehicles at a time. However requirement in a particular period will be intimated by the project director to the contractor on programme basis at least 7 days before the actual date of requirement after approval of the distribution by the Project Director. The Contractor shall withdraw particular vehicle(s) if the same is not further required by the Engineer/Employer if so directed by the Project Director. In such cases the instructions shall be given in writing 7 days in advance. The requirement during the Defect Liability Period will be quite less than the maximum requirement mentioned above.

3.4.3.3 Duration of Transport Requirements

Transport for the Engineer / Employer shall be provided so as to cover the entire completion period(s) and defect liability period(s). The transport so provided, as per Para 3.4.2 & 3.4.3, shall continue to be the property of the Contractor.

3.5 OFFICE MAINTENANCE

- 3.5.1 The contractor is required to maintain the offices throughout the contract period and defect liability period and provide the following, but not limited to:
- Pay all electricity charges.
 - Pay all water charges.
 - Carry out necessary repairs to office and equipment as and when required.
 - Day - to - Day cleaning and maintenance and watch & ward etc

- 3.5.2 The contractor shall provide within Two months from the Date of Commencement following personnel in the office as required for watch and ward of the site office.

Watchmen / Security (3 shifts of 1 men in a shift, till the defect Liability period is over)

Note: In case of delay beyond Two month, penalty @ Rs 5000/- Per week or part thereof will be imposed.

3.6 EQUIPMENT FOR USE AT SITE OFFICE.

The Contractor shall provide new equipment and software as listed below and maintain them for the exclusive use of the Employer and the Engineer. The Contractor shall provide and maintain the following equipment for the use of the Engineer and the Employer within one month from the date of commencement of the works until the defect liability period is over. The payment for the same shall be made separately under relevant BOQ item. On completion of defect liability period, the equipment shall be property of the Contractor.

(a)	Desktop Computer two nos.	With minimum specification of Intel Core i7/i9, 3.4 GHz, 3 MB Cache, 8 GB DDR3 RAM, 500 GB Hard Disk Drive, 21" colour TFT monitor, 10/100 LAN Card, Modem Card, Operating System - Windows 10 Professional or higher preloaded with media and documentation and certificate of authenticity and Microsoft Security Essentials preloaded antivirus software.
(b)	Laptop rugged – two Nos.	With minimum specification of Intel Core i7/i9, 8 GB RAM, 500 GB Hard Disk Drive, 15" color display, 2xUSB-2.0, standard keyboard Battery backup - minimum 4 hrs Operating System - Windows 10 or higher preloaded with media and documentation and certificate of authenticity and Microsoft Security Essentials preloaded antivirus software. A laptop bag and Adapter/Battery charger shall also be provided with the laptop.

(c)	Printers – 2 nos. (A4 size – 1 No. and A3 size – 1 No.)	The A4 size colour printer cum scanner cum copier shall be all in one officejet having features of Fax, Scanner and Printer, A3 size printer cum scanner cum copier shall be Colour Officejet with a print speed of up to 8 pages at 800 dpi or More.
(d)	Application software	(i) Microsoft office latest release (2016 of latest). (ii) AUTOCAD 3D latest (iii) M S Project/ Sure Track. (iv) PDF Converter/Professional
(e)	UPS system with sufficient power backup (with minimum backup time of 30 minute) to meet the sufficient power load in case of power disruption.	
(f)	Surge Protection Devices (one for each computer and printer as given above)	
(g)	Power supply for the systems is to be AC 240 volts, 50 Hz from normal building wiring circuit mains, power regulator, stabilizer or transformer should be supplied by the Contractor for the computer systems such that the systems can function efficiently.	
(h)	At least 20 MBPS internet connection with wifi facility so that multiple devices can be connected.	
(i)	50 MBPS wifi HotSpot/USB Dongle with 4 GB data connection and minimum monthly download limit of 50 GB for use with laptops – two nos.	

Note: In case of failure to provide the equipment including original software & internet connectivity within one month, penalty @ Rs 25000/- Per week or part thereof will be imposed.

3.7 Documentation:

A complete set of documentation will be supplied with each System. The documentation should be self tutorial in nature and be readily understood by non-computer personnel. The following manuals will be supplied with the system:

(a) Manual on how to operate the equipment; and

(b) Manual on how to use the facilities and software provided by the supplier (including languages and utilities).

SPECIFICATIONS

- 4.1** Separate priced booklet containing Indian Railway/South Western Railway Standard Specifications for Materials and Works Civil, Electrical and Signalling and Telecommunication) are available in K RIDE office. These specifications shall be applicable for all works covered in this contract.

It is presumed that bidders have gone through the above (including latest correction slips issued up to the date 28 days prior to the deadline for submission of bids) before quoting the rates.

4.2 TECHNICAL SPECIFICATION FOR CONSTRUCTION OF SERVICE & RESIDENTIAL BUILDINGS

4.2.1 Technical Specifications common to all type of buildings :

- 4.2.1.2 General Arrangement Drawings (GAD) provided in the bidding documents are sample drawings for the guidance of bidders and are indicative of type of buildings to be constructed. However, particular GAD to be adopted at particular locations of the project shall be made available to the contractor during the currency of the contract. The buildings may also be required to be constructed in continuation of the existing building, in such a case the new structure is to be constructed by proper joints and connections, the design and detailed drawings shall have to be made accordingly and cost of which is deemed to be included in plinth area rates.

- 4.2.1.3 Suitable economical structural and architectural design for foundation and super structure consisting of masonry walls, reinforced columns/beams/slabs shall be done by the Contractor as per site conditions for the service building and others structures including all detailed designs of RCC works i.e. columns, beams stair case, balcony, slabs etc. keeping in view the relevant seismic zone & making the building earthquake resistant Working drawings will have to be prepared by the contractor for each activity of work, giving details of reinforcement, water arrangements, drainage, sewerage, floorings, fittings etc. and got approved from the Engineer. The construction will be done with approved drawings.

4.2.1.4 Deleted

- 4.2.1.5 If any activity of the work is essential for completion of the building but is not mentioned specifically in these specifications or elsewhere in the bidding documents, the same shall be deemed to be included in the rates and shall be executed by the Contractor as per specifications decided by the Engineer and the building shall be handed over in functional manner, complete in all respects.

- 4.2.1.6 Water & electricity shall be arranged by the Contractor at his own cost for execution of works.

- 4.2.1.7 Contractor has to make arrangements for approach to site, stacking of materials and all temporary works necessary for the execution of work at his own cost.
- 4.2.1.8 Contractor will have to make arrangements for required tests (as directed by the Engineer) for testing the soundness of the work or any of the materials at Contractor's own cost.
- 4.2.1.9 Sampling and testing of work/material at site/laboratory shall be as per the relevant Indian Standard Specifications, with up to date corrections.
- 4.2.1.10 If any work is found unsatisfactory or under specification the same will have to be redone by the Contractor at Contractor's own cost. In case, the Contractor fails to do so, the same will be got done by Engineer at the Contractor's cost.
- 4.2.1.11 The Engineer will be at liberty to get any work or material dismantled/removed by any other means at Contractor's cost if it is found unsatisfactory or under specification, and the contractor fails to rectify the same within specified time.
- 4.2.1.12 The site shall be cleared of all debris etc. before commissioning of work.
- 4.2.1.13 The contractor shall take all necessary safety precautions during fabrication, launching, of members, casting of RCC slabs etc. He shall also ensure safety of railway track if the work is required to be done near the track or above railway tracks.
- 4.2.1.14 In case there is any damage to road, drain or other structure during construction of the work by the contractor, the damages will have to be rectified by the contractor at his own cost.
- 4.2.1.15 Earth work: Earthwork in filling in plinth and floors including for plinth protection, if required shall be done by contractor with Contractor's own self compacting material which shall be payable separately under the foundation and plinth items. Item for supply and filling of self compacting material is to be included in foundation item as per note at the end of bill no.6 and payment is to be made accordingly.
- 4.2.1.16 Concrete work: All plain and reinforced concrete work to be done as per IS: 456 Code of Practice. Design mix concrete as approved by Engineer shall only be used. Nominal mix can be permitted by the Engineer only in exceptional circumstances. The cement concrete flooring, roof and other RCC/Concrete structures are to be leveled and compacted with vibrator of suitable size and specification.
- 4.2.1.22 to 4.2.1.23 These provisions shall not apply
- 4.2.2 to 4.2.3** These provisions shall not apply

5.0 Personnel

PACKAGE 1 - Baiyyappanahalli - Hosur section : **REACH 3 : Km 174/590 to Km.182/500**

The Bidder shall deploy, as per the programme, the minimum number of personnel for the key positions with requisite qualification and experience as mentioned hereunder:-

S. No.	Position	Minimum No. of Personnel	Qualification	Minimum Experience In Similar Work [years]
1	Project Manager	1	Graduate/ Diploma in Civil Engineering	10 years, out of which 3 years in-charge of road/ Railway project (for Graduate). 16 years, out of which 3 years in-charge of road/ Railway project (for Diploma).
2	Sr. Engineers i) for Earth work & Bridges	1	Graduate/ Diploma in Civil Engg.	5 Years (for Graduate) 10 years for Diploma
3	Technicians/Supervisors			
	(a) Earthwork	2	Minimum Diploma in Civil Engineering	5 years
	(b) Bridges	2	Minimum Diploma in Civil/Mechanical Engineering	5 years
4	Surveyor for setting out Lines and levels periodically.	1	Minimum Diploma in Civil Engg.	5 years

5	Material Testing Engineer	1	Minimum Diploma in Civil Engg.	5 years
6	Draftsman with knowledge of AutoCAD			
	(a) Civil Engineering	1	Minimum Diploma in Civil Engineering	3 years
7	Safety Officer	1	Preferably Graduate on any discipline. But have completed Diploma in Industrial safety management Or construction management	5 years

Note:

- (1) Project Manager is to be deployed within 30 days of issue of Letter of Acceptance. The programme for deployment of other personnel shall be conveyed by PMC/Employer and personnel shall be deployed within 30 days of the stated requirement. In case of failure to deploy any personnel within 30 days of the stated requirement, a penalty shall be imposed for each day of delay as under:
 - (a) Rs 2000/- per person per day for Project Manager.
 - (b) Rs 1000/- per person per day for Sr. Engineers; Quality Assurance Specialist/ Quality Officer
 - (c) Rs 500/- per person per day for other personnel.
- (2) On completion/likely completion of activities concerned to a particular personnel, demobilization of that personnel shall be requested by the Contractor at least 30 days in advance and demobilization shall be done with the approval of PMC/Employer only. In case demobilization is done without approval of PMC/Employer, the penalty mentioned in note (1) above, as relevant, shall be imposed for each day of absence of the personnel.
- (3) The professional qualification requirement can be relaxed by the concerned GM (Civil)/K RIDE in case of ex-Railwayman who has worked in Engineering department of Railway in a position of Gazetted officer for Sr Engineer (P Way) / Junior Engineer or above for Supervisor (P Way) and has relevant experience not less than that prescribed for minimum professional qualification.

- (4) The experience requirement can be relaxed by the concerned GM (Civil)/ K RIDE if he is satisfied with reasons put forth by the contractor for failure to deploy personnel with requisite qualification and experience and he also finds the proposed personnel otherwise suitable for the job.

K RIDE

PACKAGE 2 – Baiyyappanahalli - Hosur section :
REACH 4 : Km 165/000 to Km.174/590

The Bidder shall deploy, as per the programme, the minimum number of personnel for the key positions with requisite qualification and experience as mentioned hereunder:-

S. No.	Position	Minimum No. of Personnel	Qualification	Minimum Experience In Similar Work [years]
1	Project Manager	1	Graduate/ Diploma in Civil Engineering	10 years, out of which 3 years in-charge of road/ Railway project (for Graduate). 16 years, out of which 3 years in-charge of road/ Railway project (for Diploma).
2	Sr. Engineers i) for Earth work	1	Graduate/ Diploma in Civil Engg.	5 Years (for Graduate) 10 years for Diploma
3	Technicians/Supervisors			
	(a) Earthwork	2	Minimum Diploma in Civil Engineering	5 years
	(b) Bridges	2	Minimum Diploma in Civil/Mechanical Engineering	5 years
4	Surveyor for setting out Lines and levels periodically.	1	Minimum Diploma in Civil Engg.	5 years
5	Material Testing Engineer	1	Minimum Diploma in Civil Engg.	5 years

6	Draftsman with knowledge of AutoCAD			
	(a) Civil Engineering	1	Minimum Diploma in Civil Engineering	3 years
7	Safety Officer	1	Preferably Graduate on any discipline. But have completed Diploma in Industrial safety management Or construction management	5 years

Note:

- (1) Project Manager is to be deployed within 30 days of issue of Letter of Acceptance. The programme for deployment of other personnel shall be conveyed by PMC/Employer and personnel shall be deployed within 30 days of the stated requirement. In case of failure to deploy any personnel within 30 days of the stated requirement, a penalty shall be imposed for each day of delay as under:
 - (a) Rs 2000/- per person per day for Project Manager.
 - (b) (Rs 1000/- per person per day for Sr. Engineers; Quality Assurance Specialist/ Quality Officer
 - (c) Rs 500/- per person per day for other personnel.
- (2) On completion/likely completion of activities concerned to a particular personnel, demobilization of that personnel shall be requested by the Contractor at least 30 days in advance and demobilization shall be done with the approval of PMC/Employer only. In case demobilization is done without approval of PMC/Employer, the penalty mentioned in note (1) above, as relevant, shall be imposed for each day of absence of the personnel.
- (3) The professional qualification requirement can be relaxed by the concerned GM (Civil)/K RIDE in case of ex-Railwayman who has worked in Engineering department of Railway in a position of Gazetted officer for Sr Engineer (P Way) / Junior Engineer or above for Supervisor (P Way) and has relevant experience not less than that prescribed for minimum professional qualification.
- (4) The experience requirement can be relaxed by the concerned GM (Civil)/K RIDE if he is satisfied with reasons put forth by the contractor for failure to deploy personnel with requisite qualification and experience and he also finds the proposed personnel otherwise suitable for the job.

PACKAGE 3 - Baiyyappanahalli - Hosur :
REACH 5: Km 158/700 to Km.165/000

The Bidder shall deploy, as per the programme, the minimum number of personnel for the key positions with requisite qualification and experience as mentioned hereunder:-

S. No.	Position	Minimum No. of Personnel	Qualification	Minimum Experience In Similar Work [years]
1	Project Manager	1	Graduate/ Diploma in Civil Engineering	10 years, out of which 3 years in-charge of road/ Railway project (for Graduate). 16 years, out of which 3 years in-charge of road/ Railway project (for Diploma).
2	Sr. Engineers i) for Earth work	1	Graduate/ Diploma in Civil Engg.	5 Years (for Graduate) 10 years for Diploma
3	Technicians/Supervisors			
	(a) Earthwork	2	Minimum Diploma in Civil Engineering	5 years
	(b) Bridges	2	Minimum Diploma in Civil/Mechanical Engineering	5 years
4	Surveyor for setting out Lines and levels periodically.	1	Minimum Diploma in Civil Engg.	5 years
5	Material Testing Engineer	1	Minimum Diploma in Civil Engg.	5 years

6	Draftsman with knowledge of AutoCAD			
	(a) Civil Engineering	1	Minimum Diploma in Civil Engineering	3 years
7	Safety Officer	1	Preferably Graduate on any discipline. But have completed Diploma in Industrial safety management Or construction management	5 years

Note:

- (1) Project Manager is to be deployed within 30 days of issue of Letter of Acceptance. The programme for deployment of other personnel shall be conveyed by PMC/Employer and personnel shall be deployed within 30 days of the stated requirement. In case of failure to deploy any personnel within 30 days of the stated requirement, a penalty shall be imposed for each day of delay as under:
 - (a) Rs 2000/- per person per day for Project Manager.
 - (b) Rs1000/- per person per day for Sr. Engineers; Quality Assurance Specialist/ Quality Officer
 - (c) Rs 500/- per person per day for other personnel.
- (2) On completion/likely completion of activities concerned to a particular personnel, demobilization of that personnel shall be requested by the Contractor at least 30 days in advance and demobilization shall be done with the approval of PMC/Employer only. In case demobilization is done without approval of PMC/Employer, the penalty mentioned in note (1) above, as relevant, shall be imposed for each day of absence of the personnel.
- (3) The professional qualification requirement can be relaxed by the concerned GM (Civil)/K RIDE in case of ex-Railwayman who has worked in Engineering department of Railway in a position of Gazetted officer for Sr Engineer (P Way) / Junior Engineer or above for Supervisor (P Way) and has relevant experience not less than that prescribed for minimum professional qualification.
- (4) The experience requirement can be relaxed by the concerned GM (Civil)/K RIDE if he is satisfied with reasons put forth by the contractor for failure to deploy personnel with requisite qualification and experience and he also finds the proposed personnel otherwise suitable for the job.

EQUIPMENT

PACKAGE 1 - Baiyyappanahalli – Hosur :
REACH 3: Km 174/590 to Km.182/500

The Bidder shall deploy, the minimum number of equipment for execution of the work as per the mutually agreed programme as mentioned hereunder:

S.No.	Equipment Type and Characteristics	Min. Number Required
Equipment type and characteristics for Civil work		
1	Earth excavation and loading equipment (Excavator)	2 sets
2	Earth moving equipment (Dumper)	8 Nos.
3	Earth leveling and grading equipment (Grader)	1 Nos.
4	Earth compaction equipment(10 Ton Vibratory Rollers)	1 nos.
5	Truck mounted water tank/sprinklers	2 nos.
6	Concrete Vibrating equipment	3 Sets
7	Total stations	1 No.
8	Auto levels	2 Nos.
9	Fully equipped soil, aggregate and concrete testing laboratory	1 set
10	Mechanized portal equipment or Sleeper laying equipment	1 no
11	Weigh batchers and concrete mixers	1 sets
12	Mini Vibrating road roller of 1 Tonne Capacity	1 no

Note:

- Any equipment not required further can be demobilized with the prior approval of the Engineer.

The records of mutually agreed programme of deployment as well as request for demobilisation of any equipment/plant and approval of the same should be maintained in a register.

- Failure to deploy the above equipment as per mutually agreed programme shall attract penalty @ Rs.20,000/- per day of delay for each equipment at S.No. 1, 3, 4, 9 & 12.

3. The type of equipment specified can be changed by the Engineer depending upon suitability of the equipment as per site conditions with the approval of GM(Civil)/K RIDE concerned subject to the following;
- (i) The total rate of production/output of proposed number and type of equipment should be equal to or more than that of the number and type of equipment stipulated in the contract agreement and quality of work is not compromised in any way;
 - (ii) Eligibility and Qualification Criteria (EQC) in the bid document did not include any past experience criteria of execution of a key activity with the use of particular type of equipment proposed to be changed;
 - (iii) Higher rates for works were not justified in the estimate or BOQ on account of use of particular type of equipment proposed to be changed;
 - (iv) Financial implications due to change in type and number of equipment shall be prepared and signed by both the parties and placed on record. If any financial benefit is found to accrue to the contractor, the same shall be recoverable from the contractor's bills.
 - (v) If the equipment proposed to be changed is covered under penalty clause specified in note above then the applicable rate of penalty per equipment shall be modified in proportion to increase/decrease in number of equipment.

PACKAGE 2 - Baiyyappanahalli – Hosur section :
REACH 4: Km 165/000 to Km.174/590-

The Bidder shall deploy, the minimum number of equipment for execution of the work as per the mutually agreed programme as mentioned hereunder:

S.No.	Equipment Type and Characteristics	Min. Number Required
Equipment type and characteristics for Civil work		
1	Earth excavation and loading equipment (Excavator)	2 sets
2	Earth moving equipment (Dumper)	8 Nos.
3	Earth leveling and grading equipment (Grader)	1 Nos.
4	Earth compaction equipment(10 Ton Vibratory Rollers)	1 nos.
5	Truck mounted water tank/sprinklers	2 nos.
6	Concrete Vibrating equipment	3 Sets
7	Total stations	1 No.
8	Auto levels	2 Nos.
9	Fully equipped soil, aggregate and concrete testing laboratory	1 set
10	Mechanized portal equipment or Sleeper laying equipment	1 no
11	Weigh batchers and concrete mixers	1 sets
12	Mini Vibrating road roller of 1 Tonne Capacity	1 no

Note:

- Any equipment not required further can be demobilized with the prior approval of the Engineer.

The records of mutually agreed programme of deployment as well as request for demobilisation of any equipment/plant and approval of the same should be maintained in a register.

- Failure to deploy the above equipment as per mutually agreed programme shall attract penalty @ Rs.20,000/- per day of delay for each equipment at S.No.1, 3, 4, 9 &12.
- The type of equipment specified can be changed by the Engineer depending upon suitability of the equipment as per site conditions with the approval of GM(Civil)/K RIDE concerned subject to the following;

- (5) The total rate of production/output of proposed number and type of equipment should be equal to or more than that of the number and type of equipment stipulated in the contract agreement and quality of work is not compromised in any way;
- (i) Eligibility and Qualification Criteria (EQC) in the bid document did not include any past experience criteria of execution of a key activity with the use of particular type of equipment proposed to be changed;
- (ii) Higher rates for works were not justified in the estimate or BOQ on account of use of particular type of equipment proposed to be changed;
- (iii) Financial implications due to change in type and number of equipment shall be prepared and signed by both the parties and placed on record. If any financial benefit is found to accrue to the contractor, the same shall be recoverable from the contractor's bills.
- (iv) If the equipment proposed to be changed is covered under penalty clause specified in note above then the applicable rate of penalty per equipment shall be modified in proportion to increase/decrease in number of equipment.

PACKAGE 3 – Baiyyappanahalli - Hosur Section :

REACH 5: Km 158/700 to Km.165/000

The Bidder shall deploy, the minimum number of equipment for execution of the work as per the mutually agreed programme as mentioned hereunder:

S.No.	Equipment Type and Characteristics	Min. Number Required
Equipment type and characteristics for Civil work		
1	Earth excavation and loading equipment (Excavator)	2 sets
2	Earth moving equipment (Dumper)	8 Nos.
3	Earth leveling and grading equipment (Grader)	1 Nos.
4	Earth compaction equipment(10 Ton Vibratory Rollers)	1 nos.
5	Truck mounted water tank/sprinklers	2 nos.
6	Concrete Vibrating equipment	3 Sets
7	Total stations	1 No.
8	Auto levels	2 Nos.
9	Fully equipped soil, aggregate and concrete testing laboratory	1 set
10	Mechanized portal equipment or Sleeper laying equipment	1 no
11	Weigh batchers and concrete mixers	1 sets
12	Mini Vibrating road roller of 1 Tonne Capacity	1 no

Note:

1. Any equipment not required further can be demobilized with the prior approval of the Engineer.

The records of mutually agreed programme of deployment as well as request for demobilisation of any equipment/plant and approval of the same should be maintained in a register.

2. Failure to deploy the above equipment as per mutually agreed programme shall attract penalty @ Rs.20,000/- per day of delay for each equipment at S.No.1, 3, 4, 9 &12.
3. The type of equipment specified can be changed by the Engineer depending upon suitability of the equipment as per site conditions with the approval of GM(Civil)/K

RIDE concerned subject to the following;

- (i) The total rate of production/output of proposed number and type of equipment should be equal to or more than that of the number and type of equipment stipulated in the contract agreement and quality of work is not compromised in any way;
- (ii) Eligibility and Qualification Criteria (EQC) in the bid document did not include any past experience criteria of execution of a key activity with the use of particular type of equipment proposed to be changed;
- (iii) Higher rates for works were not justified in the estimate or BOQ on account of use of particular type of equipment proposed to be changed;
- (iv) Financial implications due to change in type and number of equipment shall be prepared and signed by both the parties and placed on record. If any financial benefit is found to accrue to the contractor, the same shall be recoverable from the contractor's bills.
- (v) If the equipment proposed to be changed is covered under penalty clause specified in note above then the applicable rate of penalty per equipment shall be modified in proportion to increase/decrease in number of equipment.

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PART III	Conditions of Contract and Contract Forms
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Section 6	General Conditions of Contract (GCC)
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Section 6	General Conditions of Contract (GCC)
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Table of Contents

	Title	Page No
1	General Provisions	156-165
1.1	Definitions	156-160
1.2	Interpretation	160-161
1.3	Communications	161
1.4	Law and Language	161
1.5	Priority of Documents	161-162
1.6	Contract Agreement	162
1.7	Assignment	162
1.8	Care and Supply of Documents	162
1.9	Delayed Drawings or Instructions	163
1.10	Employer's Use of Contractor's Documents	163
1.11	Contractor's Use of Employer's Documents	164
1.12	Confidential Details	164
1.13	Compliance with Laws	164
1.14	Joint and Several Liability	164-165
1.15	Inspections by the Employer	165
2	The Employer	166-167
2.1	Right of Access to the Site	166
2.2	Permits, Licences or Approvals	166
2.3	Employer's Personnel	167
2.4	Employer's Financial Arrangements	167
2.5	Employer's Claims	167
3	The Engineer	168-170
3.1	Engineer's Duties and Authority	168-169
3.2	Delegation by the Engineer	169
3.3	Instructions of the Engineer	169-170
3.4	Replacement of the Engineer	170
3.5	Determinations	170

	Title	Page No
4	Contractor	171-190
4.1	Contractor's General Obligations	171-172
4.2	Performance Security	172-175
4.3	Contractor's Representative	175
4.4	Subcontractors	175-177
4.5	Assignment of Benefit of Subcontract	177
4.6	Co-operation	177
4.7	Setting Out	178
4.8	Safety Procedures	178-182
4.9	Quality Assurance	183
4.10	Site Data	183
4.11	Sufficiency of the Accepted Contract Amount	183-184
4.12	Unforeseeable Physical Conditions	184
4.13	Rights of Way and Facilities	185
4.14	Avoidance of Interference	185
4.15	Access Route	185
4.16	Transport of Goods	186
4.17	Contractor's Equipment	186-187
4.18	Protection of the Environment	187
4.19	Electricity, Water and Gas	187-188
4.20	Employer's Equipment and free issue material	188
4.21	Progress Report	188-189
4.22	Security of the Site	189
4.23	Contractor's Operations on Site	189-190
4.24	Fossils	190
5	Nominated Subcontractors	191-192
5.1	Definition of "nominated Subcontractor"	191
5.2	Objection to Nomination	191
5.3	Payments to nominated Subcontractors	191
5.4	Evidence of Payments	191-192
6	Staff and Labour	193-200
6.1	Engagement of Staff and Labour	193
6.2	Rates of Wages and Conditions of Labour	193-194
6.3	Persons in the Service of Employer	194

	Title	Page No
6.4	Labour Laws	194
6.5	Working Hours	194-195
6.6	Facilities for Staff and Labour	195
6.7	Health and Safety	195-196
6.8	Contractor's Superintendence	196-197
6.9	Contractor's Personnel	197
6.10	Records of Contractor's Personnel and Equipment	197
6.11	Disorderly Conduct	197
6.12	Foreign Personnel	197-198
6.13	Supply of Foodstuffs	198
6.14	Supply of Water	198
6.15	Measures against Insect and Pest Nuisance	198
6.16	Alcoholic Liquor or Drugs	198
6.17	Arms and Ammunition	198
6.18	Festivals and Religious Customs	199
6.19	Funeral Arrangements	199
6.20	Prohibition of Forced or Compulsory Labour	199
6.21	Prohibition of Harmful Child Labou	199
6.22	Employment Records of Workers	199-200
7	Plant, Materials and Workmanship	201-203
7.1	Manner of Execution	201
7.2	Samples	201
7.3	Inspection	201
7.4	Testing	202
7.5	Rejection	202
7.6	Remedial Work	202
7.7	Ownership of Plant and Materials	203
7.8	Royalties	203
8	Commencement, Delays and Suspension	204-209
8.1	Commencement of Works	204
8.2	Time for Completion	204
8.3	Programme	204-205
8.4	Extension of Time for Completion	205-206
8.5	Delays Caused by Authorities	206

	Title	Page No
8.6	Rate of Progress	206
8.7	Delay Damages	206-207
8.8	Suspension of Work	207
8.9	Consequences of Suspension	207
8.10	Payment for Plant and Materials in Event of Suspension	208
8.11	Prolonged Suspension	208
8.12	Resumption of Work	208
8.13	Bonus for early completion	208-209
9	Tests on Completion	210-211
9.1	Contractor's Obligations	210
9.2	Delayed Tests	210
9.3	Retesting	210
9.4	Failure to Pass Tests on Completion	210-211
9.5	Contractor's obligation	211
10	Employer's Taking Over	212-214
10.1	Taking Over of the Works and Sections	212
10.2	Taking Over of Parts of the Works	212-213
10.3	Interference with Tests on Completion	213-214
10.4	Surfaces requiring Reinstatement	214
11	Defects Liability	215-217
11.1	Completion of Outstanding Work and Remedying Defects	215
11.2	Cost of Remedying Defects	215
11.3	Extension of Defects Notification Period	215
11.4	Failure to Remedy Defects	216
11.5	Removal of Defective Work	216
11.6	Further Tests	216
11.7	Right of Access	216
11.8	Contractor to Search	217
11.9	Performance Certificate	217
11.10	Unfulfilled Obligations	217
11.11	Clearance of Site	217
12	Measurement and Evaluation	218-221
12.1	Works to be Measured	218
12.2	Method of Measurement	218

	Title	Page No
12.3	Evaluation	218-220
12.4	Omissions	221
13	Variations and Adjustments	222-230
13.1	Right to Vary	222
13.2	Value Engineering	222-223
13.3	Variation Procedure	223
13.4	Payment in Applicable Currencies	223
13.5	Provisional Sums	223-224
13.6	Day work	224
13.7	Adjustments for Changes in Legislation	224-225
13.8	Adjustments for Changes in Cost	225-230
14	Contract Price and Payment	231-241
14.1	The Contract Price	231
14.2	Advance Payment	231-233
14.3	Application for Interim Payment Certificates	233-234
14.4	Schedule of Payments	234
14.5	Plant and Materials intended for the Works	234-236
14.6	Issue of Interim Payment Certificates	236
14.7	Payment	236-239
14.8	Delayed Payment	239
14.9	Payment of Retention Money	239-240
14.10	Statement at Completion	240
14.11	Application for Final Payment Certificate	240
14.12	Discharge	241
14.13	Issue of Final Payment Certificate	241
14.14	Cessation of Employer's Liability	241
14.15	Currencies of Payment	241
15	Termination by Employer	242-246
15.1	Notice to Correct	242-243
15.2	Termination by Employer	243-244
15.3	Valuation at date of Termination	244
15.4	Payment after Termination	245
15.5	Employer's Entitlement to Termination for Convenience	245
15.6	Corrupt or Fraudulent Practices	246

	Title	Page No
16	DELETED	246
17	Risk and Responsibility	247-250
17.1	Indemnities	247
17.2	Contractor's Care of the Works	247-248
17.3	Employer's Risks	248
17.4	Consequences of Employer's Risks	248
17.5	Intellectual and Industrial Property Rights	249
17.6	Limitation of Liability	249-250
17.7	Use of Employer's Accommodation/Facilities	250
18	Insurance	251-255
18.1	General Requirements for Insurances	251-252
18.2	Insurance for Works and Contractor's Equipment	252-253
18.3	Insurance against Injury to Persons and Damage to Property	253-254
18.4	Insurance for Contractor's Personnel	254
19	Force Majeure	255
19.1	Payment and release in case of Optional Termination	255
20	Claims, Disputes and Arbitration	256-260
20.1	Contractor's Claims	256-257
20.2	Amicable Settlement	257-258
20.3	Arbitration	258-260
21	Jurisdiction of Courts	260
Appendix 1		261-263

General Conditions

1.	General Provisions
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1.1 Definitions

In the Conditions of Contract (“these Conditions”), which include Special Conditions of Contract, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

1.1.1 The Contract

- 1.1.1.1 “**Contract**” means the Contract Agreement, the Letter of Acceptance, the Letter of Bid, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.
- 1.1.1.2 “**Contract Agreement**” means the contract agreement (*if any*) **referred** to in Sub-Clause 1.6 [Contract Agreement].
- 1.1.1.3 “**Letter of Acceptance**” means the letter of formal acceptance, signed by the Employer, of the Letter of Bid, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression “Letter of Acceptance” means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.
- 1.1.1.4 “**Letter of Bid**” means the document entitled letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.
- 1.1.1.5 “**Specification**” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.
- 1.1.1.6 “**Drawings**” means the drawings of the Works, as included in the **Contract**, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.
- 1.1.1.7 “**Schedules**” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Bid, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.
- 1.1.1.8 “**Bid/Tender**” means the Letter of Technical Bid **and** Letter of Price Bid and all other documents which the Contractor submitted with the Letter of Technical Bid and Letter of Price Bid , as included in the Contract.
- 1.1.1.9 “**Bill of Quantities**” and “**Daywork Schedule**” and “Schedule of Payment Currencies” mean the documents so named (if any) which are comprised in the Schedules.

- 1.1.1.10 **“Contract Data”** means the pages completed by the Employer entitled contract data which constitute Part A of the Special Conditions of Contract.
- 1.1.1.11 **“Employer’s Requirements”** means the document entitled ‘Employer’s Requirements’ as part of Works Requirements and as included in the Contract, and any additions and modifications to such document in accordance with the Contract. Such document specifies the purpose, scope, and/or design and/or other technical criteria, for the works.

1.1.2 Parties and Persons

- 1.1.2.1 **“Party”** means the Employer or the Contractor, as the context requires.
- 1.1.2.2 **“Employer”** means the person named as employer in the Contract Data and the legal successors in title to this person.
- 1.1.2.3 **“Contractor”** means the person(s) named as contractor in the Letter of Bid accepted by the Employer and the legal successors in title to this person(s).
- 1.1.2.4 **“Engineer”** means the person nominated by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [Replacement of the Engineer]. The person nominated to act as an engineer may be an employee of Rail Infrastructure Development Company (Karnataka) Ltd (K RIDE) or an employee of a Project Management Consultancy firm engaged by K RIDE for project management as per the discretion of the Employer.
- 1.1.2.5 **“Contractor’s Representative”** means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under Sub-Clause 4.3 [Contractor’s Representative], who acts on behalf of the Contractor.
- 1.1.2.6 **“Employer’s Representative”** means the person named by the Employer in the Contract or appointed from time to time by the Employer who acts on behalf of the Employer.
- 1.1.2.7 **“Employer’s Personnel”** means the Engineer, the assistants referred to in Sub-Clause 3.2 [Delegation by the Engineer] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer’s Personnel.
- 1.1.2.8 **“Contractor’s Personnel”** means the Contractor’s Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.
- 1.1.2.9 **“Subcontractor”** means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

1.1.3 Dates, Tests, Periods and Completion

- 1.1.3.1 **“Base Date”** means the date 28 days prior to the deadline for submission of bids.

- 1.1.3.2 “Commencement **Date**” means the date notified under Sub-Clause 8.1 [Commencement of Works].
- 1.1.3.3 “**Time for Completion**” means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [Time for Completion], as stated in the Contract Data (with any extension under Sub-Clause 8.4 [Extension of Time for Completion]), calculated from the Commencement Date.
- 1.1.3.4 “**Tests on Completion**” means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Employer.
- 1.1.3.5 “**Taking-Over Certificate**” means a certificate issued under Clause 10 [Employer’s Taking Over].
- 1.1.3.6 “**Tests after Completion**” means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Employer.
- 1.1.3.7 “**Defects Notification Period**” means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], as stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [Taking Over of the Works and Sections].
- 1.1.3.8 “**Performance Certificate**” means the certificate issued under Sub-Clause 11.9 [Performance Certificate].
- 1.1.3.9 “**Day**” means any (working or non-working) calendar day from 00:00 hrs. to 24:00 hrs.
- 1.1.3.10 “**Months**” means any calendar month of the Gregorian calendar year.
- 1.1.3.11 “**Year**” means 365 days
- 1.1.3.12 “**Time Periods**” Any reference to time period commencing “from” the specified day or date “till” or “until” a specified day shall include both such days.
- 1.1.3.13 Any reference to “**Time**” shall be according to Indian Standard Time (IST).

1.1.4 Money and Payments

- 1.1.4.1 “**Accepted Contract Amount**” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects. In the Letter of Acceptance, the Accepted Contract Amount shall have two components i.e. (i) the base amount excluding GST (ii) GST component (calculated at the rate for works contract service as per GST Laws).
- 1.1.4.2 “**Contract Price**” means the price defined in Sub-Clause 14.1 [The Contract Price], and includes adjustments in accordance with the Contract.
- 1.1.4.3 “**Cost**” means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

- 1.1.4.4 **“Final Payment Certificate”** means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].
- 1.1.4.5 **“Final Statement”** means the statement defined in Sub-Clause 14.11 [Application for Final Payment Certificate].
- 1.1.4.6 **“Foreign Currency”** means a currency in which part (or all) of the Contract Price is payable, but not the Local Currency.
- 1.1.4.7 **“Interim Payment Certificate”** means a payment certificate issued under Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.
- 1.1.4.8 **“Local Currency”** means the currency in Indian Rupees.
- 1.1.4.9 **“Payment Certificate”** means a payment certificate issued under Clause 14 [Contract Price and Payment].
- 1.1.4.10 **“Provisional Sum”** means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [Provisional Sums].
- 1.1.4.11 **“Retention Money”** means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [Application for Interim Payment Certificates] and pays under Sub-Clause 14.9 [Payment of Retention Money].
- 1.1.4.12 **“Statement”** means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

1.1.5 Works and Goods

- 1.1.5.1 **“Contractor’s Equipment”** means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor’s Equipment excludes Temporary Works, Employer’s Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.
- 1.1.5.2 **“Goods”** means Contractor’s Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.
- 1.1.5.3 **“Materials”** means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.
- 1.1.5.4 **“Permanent Works”** means the permanent works to be executed by the Contractor under the Contract.
- 1.1.5.5 **“Plant”** means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works.
- 1.1.5.6 **“Section”** means a part of the Works specified in the Contract Data as a Section (if any).
- 1.1.5.7 **“Temporary Works”** means all temporary works of every kind (other than Contractor’s Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

- 1.1.5.8 **“Works”** mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.1.6 Other Definitions

- 1.1.6.1 **“Contractor’s Documents”** means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.
- 1.1.6.2 **“Country”** means India, the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.
- 1.1.6.3 **“Employer’s Equipment”** means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.
- 1.1.6.4 **“Force Majeure”** is defined in Clause 19 [Force Majeure].
- 1.1.6.5 **“Laws”** means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.
- 1.1.6.6 **“Performance Security”** means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security].
- 1.1.6.7 **“Site”** means the places where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.
- 1.1.6.8 **“Unforeseeable”** means not reasonably foreseeable and against which adequate preventive precautions could not reasonably be taken by an experienced contractor by the date for submission of the Bid.
- 1.1.6.9 **“Variation”** means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].
- 1.1.6.10 **“Railway”** means a railway, or any portion of a railway for public carriage of passengers and goods as defined in the Railways ACT 1989. Any reference to railway means the Indian Railways and the respective Zonal Railway

1.2 Interpretation

In the Contract, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word “agree,” “agreed” or “agreement” require the agreement to be recorded in writing;
- (d) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and

- (e) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder” and the words “tender documents” with “bidding documents”

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

In these Conditions, provisions including the expression "Cost plus profit" require this profit to be one twentieth (5%) of this Cost unless otherwise indicated in the Contract Data.

1.3 Communications

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and
- (b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract Data. However:
 - (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

1.4 Law and Language

The Contract shall be governed by the law of the country or other jurisdiction stated in the Contract Data.

The ruling language of the Contract shall be that stated in the Contract Data.

The language for communications shall be that stated in the Contract Data. If no language is stated there, the language for communications shall be the ruling language of the Contract.

1.5 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (a) the Contract Agreement (if any),
- (b) the Letter of Acceptance,
- (c) the Letter of bid,

- (d) the Schedules (including Priced Bill of Quantities),
- (e) Special Conditions of Contract:
 - (i) Part A – Contract Data
 - (ii) Part B - Specific Provisions
- (f) the General Conditions of Contract
- (g) Works/Employer's Requirements,
- (h) the Drawings,
- (i) any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

1.6 Contract Agreement

The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless they agree otherwise. The Contract Agreement shall be based upon the form annexed to the Special Conditions of Contract. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.

1.7 Assignment

Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:

- (a) may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and
- (b) may, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.

1.8 Care and Supply of Documents

The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.

The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.

If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Delayed Drawings or Instructions

The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the

necessary drawing or instruction, details of why and by when it should be issued, and details of the nature and amount of the delay or disruption likely to be suffered if it is late.

If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit

1.10 Employer's Use of Contractor's Documents

As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

The Contractor shall be deemed (by signing the Contract) to give to the Employer a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This licence shall:

- (a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- (b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
- (c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.

1.11 Contractor's Use of Employer's Documents

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

1.12 Confidential Details

The Contractor shall disclose all such confidential and other information as the Engineer may reasonably require in order to verify the Contractor's compliance with the Contract.

The Contractor shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out the Contractor's obligations under the Contract or to comply with applicable Laws. The Contractor shall not publish or disclose any particulars of the Works without the previous agreement of the Employer. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

1.13 Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Special Conditions of Contract:

- (a) the Employer shall have obtained (or shall obtain) the planning, zoning or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or being) obtained by the Employer; and the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and
- (b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so.

1.14 Joint and Several Liability

If the Contractor constitutes (under applicable Laws) a joint venture of two or more persons/firms:

- (a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract;
- (b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and
- (c) the Contractor shall not alter its composition or legal status without the prior consent of the Employer.

- (d) In the event of default by any partner of joint venture, on or after achieving 25% of the financial progress (excluding advance if any) the lead partner or remaining partner(s), in case the defaulting partner is the lead partner, shall notify the Employer within twenty eight (28) days of the occurrence and within Fifty six (56) days of the said notification, the lead partner or remaining partner(s), who are not the defaulting partner, shall assign the works of the defaulting partner, to equally competent party with prior consent of the Employer. For this purpose the term “equally competent party” shall mean as under:

“The new JV partner replacing the defaulting partner should meet the EQC requirement of package/combination of packages which was met by the defaulting partner on the basis of which the original tender was awarded.”

The replacement of any defaulting partner, with the new partner shall be subject to the condition that the new partner has to submit additional performance security equal to 10% of balance cost of work of the JV partner being replaced. The performance security submitted by the defaulting partner shall also continue with K RIDE till satisfactory completion of the work.

- e) Notwithstanding the consent of the Employer for change in composition or legal status of the joint venture the partners shall continue to be jointly and severally liable to the Employer.
- f) The joint venture shall enter into a joint venture agreement incorporating the provisions of sub-paras (a) to (e) based upon the form annexed to the Conditions of Contract. The JV agreement shall indicate precisely the specific role of all members of the JV in respect of planning, design, construction equipment, key personnel, work execution, and financing of the project. The authority to sign the agreement shall be evidenced by approved legal instruments.

Notwithstanding the contents of the sub-clauses above, if the performance of any JV partner is not found satisfactory by the Employer, in respect of the responsibilities assigned to him as per JV agreement which is a part of this agreement, the Employer may issue notice of such default to the said JV partner or the JV (depending upon reasons of default) and declare the said JV partner or the JV as Poor Performer. The issue of such notice shall automatically debar the JV partner or JV as the case may be from participating in any K RIDE tender from the date of issue of notice of default.

1.15 Inspections by the Employer

The Contractor shall permit the Employer and/or persons appointed by the Employer to inspect the Site and/or the Contractor's records relating to the performance of the Contract.

2	The Employer
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2.1 Right of Access to the Site

The Employer shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Contract Data. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification. However, the Employer may withhold any such right or possession until the Performance Security has been received.

If no such time is stated in the Contract Data, the Employer shall give the Contractor right of access to, and possession of, the Site within such times as may be required to enable the Contractor to proceed in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

If the Contractor suffers delay as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) new rates in terms of clause 12.3.1 (c) .

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

However, if and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time or new rates.

2.2 Permits, Licenses or Approvals

The Employer shall (where he is in a position to do so) provide reasonable assistance to the Contractor at the request of the Contractor:

- (a) by obtaining copies of the Laws of the Country which are relevant to the Contract but are not readily available, and
- (b) for the Contractor's applications for any permits, licences or approvals required by the Laws of the Country:
 - (i) which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],
 - (ii) for the delivery of Goods, including clearance through customs, and
 - (iii) for the export of Contractor's Equipment when it is removed from the Site.

2.3 Employer's Personnel

The Employer shall be responsible for ensuring that the Employer's Personnel and the Employer's other contractors on the Site:

- (a) co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation], and
- (b) take actions similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

2.4 Employer's Financial Arrangements

The Employer has sourced the funds to finance the project

2.5 Employer's Claims

If the Employer considers himself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Employer or the Engineer shall give notice and particulars to the Contractor. However, notice is not required for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Employer's Equipment and Free-Issue Material], or for other services requested by the Contractor.

The notice shall be given as soon as practicable after the Employer became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

The particulars shall specify the Clause or other basis of the claim, and shall include substantiation of the amount and/or extension to which the Employer considers himself to be entitled in connection with the Contract. The Engineer shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Employer is entitled to be paid by the Contractor, and/or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].

This amount may be included as a deduction in the Contract Price and Payment Certificates. The Employer shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

3	The Engineer
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3.1 Engineer's Duties and Authority

The Employer shall appoint the Engineer who shall carry out the duties assigned to him in the Contract. The Engineer's staff shall include suitably qualified engineers and other professionals who are competent to carry out these duties.

The Engineer shall have no authority to amend the Contract.

The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract.

However, the Engineer shall obtain the specific approval of the Employer before taking action under the following Sub-Clauses of these Conditions:

- (a) Sub-Clause 4.12-Unforeseeable Physical Conditions: Agreeing or determining an extension of time and/or additional cost.
- (b) Sub-Clause 8.4-Extension of Time for Completion: Agreeing or determining extension of time.
- (c) Sub-Clause 11.9-Performance Certificate: Issue of Performance Certificate.
- (d) Sub-Clause 13.1-Instructing a Variation: Except,
 - i) in an emergency situation as determined by the Engineer and as amplified in sub-paras (h) and (i) below, or
 - ii) for other situations, if the variation in quantity of any item does not exceed 25% of the stipulated quantity in the agreement, the variation in quantity in such item does not result in increase in excess of 0.1% of contract price and variation in quantity in such item does not result in cumulative variation in contract price in excess of 2%.
- (e) Sub-Clause 13.3-Variation Procedure: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2.
- (f) Sub-Clause 13.4-Payment in applicable Currencies: Specifying the amount payable in each of the applicable currencies for a Variation.
- (g) Clause 20.1: Contractor Claims for extension of time and/or additional payment.
- (h) Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Employer.
- (i) In case the emergency mentioned in above Sub-paras occurs on account of failure of Contractor, by way of not adhering to the approved scheme of work or not taking adequate safety precautions or by any other reason attributable to the contractor, then

no additional amounts shall be paid to the Contractor for attending to such emergencies and the Contractor shall be liable for Employer's claims.

- (j) Sub-clause 4.4 regarding deployment of Sub-Contractors.

3.2 Delegation by the Engineer

The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These assistants may include a resident engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties.

However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].

Assistants shall be suitably qualified persons, who are competent to carry out these duties and exercise this authority, and who are fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language].

Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorised to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

- (a) any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;
- (b) if the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under this Clause. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

The Contractor shall comply with the instructions given by the Engineer or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Engineer or a delegated assistant,

- (a) gives an oral instruction and
- (b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
- (c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,

- (d) then the confirmation shall constitute the written instruction of the Engineer or delegated assistant (as the case may be).

3.4 Replacement of the Engineer

Notwithstanding Sub-Clause 3.1, if the Employer intends to replace the Engineer, the Employer shall, not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the replacement Engineer.

3.5 Determinations

Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Engineer shall consult with each Party in an endeavour to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.

The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

4	The Contractor
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4.1 Contractor's General Obligations

The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.

The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

All equipment, and material, to be incorporated in or required for the Works shall be procured from approved sources as stipulated in the Contract.

The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.

The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.

On completion of the works, the contractor shall arrange to furnish to the Employer two (2) bound sets of all "As Built" drawings for every component of the Works at his own cost, all such copies being on Polyester film of quality to be approved by the Engineer or his Representative. The Taking – over Certificate of the Works, as per the provisions of Clause 10.1 herein, shall not be issued by the Engineer in the event of the Contractor's failure to furnish the aforesaid "As Built" drawings for the entire works.

If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Special Conditions of Contract:

- (a) the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;
- (b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;
- (c) the Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and

- (d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the “as-built” documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

The Contractor shall obtain (at his cost) a Performance Security and an additional Performance Security, if any in terms of ITB 35.5, for proper performance of the contract, for the amount, currencies and validity period for Performance Security stated in the Contract Data. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

The Contractor shall deliver the Performance Security and additional Performance Security, if any, to the Employer within 28 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security/additional Performance Security shall be issued by an entity and from within a country (or other jurisdiction) approved by the Employer, and shall be in the form as given in Section 8 (Contract Forms) or in another form specifically approved by the Employer.

The Performance Security/additional Performance Security shall be, at the Contractor's option, in any of the following forms:

- (i) An unconditional Bank guarantee in the prescribed format
- (ii) A Pay Order / Demand Draft drawn on a Scheduled / Nationalized Bank in India in favour of “Rail Infrastructure Development Company (Karnataka) Ltd” payable at Bangalore
- (iii) FDR in favour of “Rail Infrastructure Development Company (Karnataka) Ltd.” (free from any encumbrance).
- (iv) A deposit of cash or online bank transfer to K RIDE account

The bank guarantee shall be from a bank having minimum net-worth of over INR 500 million from the specified banks as under:

- (i) a Schedule Bank in India, or
- (ii) a Foreign Bank having their operations in India, or
- (iii) a Foreign Bank which does not have operations in India is required to provide a counter-guarantee by State Bank of India,

In case the contractor is a JV;”the Performance Security/additional Performance Security, if any in terms of ITB 35.5, shall be submitted by each JV Partner separately on behalf of the JV in favour of K RIDE in proportion of their respective percentage share specified in the JV Agreement. The additional Performance Security shall be submitted by the

partner(s) responsible for execution of schedule(s) (as per JV agreement) against which additional Performance Security is required to be submitted in terms of ITB 35.5. However,

Submission of Performance Guarantee Security by individual partners on behalf of the JV shall in no way dilute their Joint & Several responsibility. The Employer shall be entitled to recover the amount of Bank Guarantees individually and all the Partners jointly at its discretion.”

The Contractor shall ensure that the Performance Security/additional Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied defects, if any. If the contractor does not complete the work for any reasons whatsoever, the terms of the Performance Security/ additional Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 28 days prior to the expiry date, the Contractor shall be bound to extend the validity of the Performance Security/additional Performance Security until the Works have been completed and any defects have been remedied.

The Guarantees shall be unconditional and irrevocable. The Employer shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate or passing of the Final Payment Certificate whichever is later. However, on completion of specified section(s) and successful passage of defect liability period for such section(s) along with execution of any leftover works at the time of completion of such section(s), the contractor shall be entitled for release of 90% of the proportionate Performance Security calculated as specified in Contract Data subject to the condition that Engineer certifies that no recoveries are pending in the contract. In case Engineer points out amount to be recovered then the contractor shall be entitled for release of 90% of the proportionate Performance Security calculated as specified in Contract Data minus the amount to be recovered.

The Employer shall return additional Performance Security submitted in terms of ITB 35.5 as per the following;

- (a) If the contractor submits an application stating that all the works against the particular schedule(s)/bill(s) for which additional Performance Security was submitted in terms of ITB 35.5 have been completed in all respect, then the Employer, on being satisfied with the claim of the contractor, shall return the full additional Performance Security against the particular schedule(s). Decision of the Employer regarding completion of works against a particular schedule/bill shall be final and binding on the contractor.
- (b) If the contractor submits an application stating that majority of the works (physical progress being not less than 90%) against the particular schedule(s)/bill(s) for which additional Performance Security was submitted in terms of ITB 35.5 have been completed and execution of balance works is held up for reasons not attributable to the Contractor, then the Employer, on being satisfied with the claim of the contractor, shall return 75% of the amount of additional Performance Security against the particular schedule(s). The balance amount of additional Performance Security shall however be returned only after completion of the works against the particular schedule(s)/bill(s) for which additional Performance Security was submitted in terms of ITB 35.5, in all respects to the satisfaction of the Employer. Decision of the

Employer regarding completion of works against a particular schedule/bill shall be final and binding on the contractor.

Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or a reduction to the Contract Price as a result of a change in cost and/or legislation or as a result of a Variation amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Engineer's request promptly submit Performance Guarantee @ 10% of the increased amount over the original contract price in a specific currency. On the other hand if the value of contract price decreases by more than 25% of the original contract price payable in a specific currency, Performance Guarantee @ 10% of the decrease in contract price from the original contract price in a specific currency shall be returned to the contractor, on his request.

Wherever the contract is terminated under Clause 15.2, the Performance Guarantee shall be encashed by the Employer:

- i) in full including additional performance guarantee amount, if any, taken in terms of sub clause 35.5 of ITB and not due for release on the date of issue of termination letter in terms of this clause, in case of termination of the contract as a whole; Or
- ii) at the discretion of the Employer it may be encashed in part/parts proportionate to the Contract price of the bill/schedule to which the terminated part of work belongs i.e $P = (A \times B) \div C$ where

P=Proportionate Bank Guarantee Amount.

A=Contract price of the particular bill/schedule to which the terminated part of work belongs.

B=Performance Guarantee amount in terms of GCC sub clause 4.2.

C=Total Contract price.

Plus additional performance Guarantee amount, if any, taken in terms of sub clause 35.5 of ITB and not due for release on the date of issue of termination letter in terms of this clause against this particular bill/schedule to which the terminated part of the work belongs, in case of termination in part/parts.

The balance work should be got done separately, and independently by K RIDE without risk and cost of the original contractor. The original contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a JV or a partnership firm, then every member/partner of such a firm would be debarred from participating in the tender for the balance work either in his/her individual capacity or as a partner of any other JV/partnership firm.

In case the contractor fails to perform the contract or any JV partner fails to perform its obligations under the JV agreement, which is a part of this agreement, the Employer may issue notice of such default to the said JV partner or the JV (depending upon reasons of default) and declare the said JV partner or the JV as Poor Performer. The issue of such notice shall automatically debar the JV partner or JV, as the case may be, from participating in any K RIDE tender from the date of issue of notice of default. The relevant performance security including additional performance security, if any, in terms of sub clauses 35.5 of ITB submitted by the Contractor or submitted on behalf of JV partner to the extent not due for release at the time of contemplation of such action shall be encashed and forfeited either

fully or in proportion of the percentage share of that partner in the JV agreement, as the case may be.

4.3 Contractor's Representative

The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary, including financial powers, to act on the Contractor's behalf under the Contract.

Unless the Contractor's Representative is named in the Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked, or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Engineer's prior consent, and the Engineer shall be notified accordingly.

The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Engineer has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

The Contractor shall depute his Representative to attend all the review meetings notified by the Engineer

4.4 Sub-contractors

The Contractor shall not subcontract the whole of the Works. The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor.

Unless otherwise stated in the Special Conditions of Contract:

- (a) the Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract or as specifically provided in the Contract data or value of any sub-contract for Works, or the aggregate value of such sub-contracts with any Subcontractor, does not exceed 5% (five per cent) of the Contract Price provided that such works are

- not for the key activities in terms of clause 2.6 of section 3 (Evaluation and Qualification Criteria) which are to be executed by specialist subcontractor(s);
- (b) the prior consent of the Engineer shall be obtained to other proposed Subcontractors and/or suppliers. While submitting his proposal in this regard, the Contractor shall ensure that;
 - (i) total value of Works requiring such consent for subcontracting shall not be more than 70% (seventy per cent) of the Contract Price;
 - (ii) the proposed subcontractor must have executed works of 40% of value of the proposed subcontract through a single contract during last seven years; and
 - (iii) No banning/blacklisting/declaration as poor performer by K RIDE is in force on the proposed subcontractor (on the date of grant of consent by the Engineer);
 - (iv) No contract of the proposed subcontractor has been terminated by K RIDE during the last two years (to be reckoned from the date of grant of consent by the Engineer);
 - (v) the Contractor shall submit the proposal for subcontracting with the name, particulars and the relevant experience of the proposed subcontractor;
 - (c) the Contractor shall give the Engineer not less than 28 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site;
 - (d) each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Employer]; and
 - (e) On getting consent from the Engineer, the Contractor shall provide to the Engineer copy of the agreement entered with such subcontractor.

The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.

Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.

The Contractor shall endeavour to resolve all matters and payments amicably and speedily with the sub-contractors.

The Contractor shall indemnify and hold the Employer harmless against and from any claim of subcontractors or suppliers of the materials.

The Contractor shall release payment to the Sub-contractors/Suppliers promptly and shall endeavour to resolve all issues amicably and speedily with the Sub-contractors/Suppliers, so that the execution of work is not affected in any manner whatsoever.

In case a Sub-contractor/Supplier represents to the Engineer in writing with supporting documents, stating that he has not received payment due as per the agreement/work or purchase order for the works executed by such Sub-contractor or supplies made by such Supplier, which have been covered in previous Payment Certificates and the Engineer finds such representation having merit, the Engineer, before issuing next Payment Certificate, may forward a copy of the representation to the Contractor requesting the Contractor to supply reasonable evidence that the amount stated to be outstanding by the Sub-contractor/Supplier for the works executed or supplies made, which have been covered in previous Payment Certificates has been paid and if not, why the same is not

payable. The Engineer may recommend to make payment to the Sub-contractor/Supplier unless the Contractor submits reasonable evidence to the Engineer:

- (i) that the amount claimed has been paid, or
- (ii) satisfying the Engineer in writing that the Contractor is entitled to withhold or that the amount is not payable.

On the recommendation of the Engineer, the Employer may (at his sole discretion) directly pay to the Sub-contractor/Supplier the amount due for and on behalf of the Contractor, part or all of such amounts previously certified (less applicable deductions) as are found due to the Sub-contractor/Supplier by the Engineer. The Employer shall adjust the amount paid directly to the Sub-contractor/Supplier from any amount due by it to the Contractor. The Contractor shall repay the amount, in case no amount is found due by the Employer to the Contractor.

That the payment by Employer, on behalf of the Contractor to its Sub-contractor/Supplier, shall not alter any terms of agreement between the Employer and the Contractor and nor the same shall result in any privity of contract between the Employer and the Sub-contractor/Supplier.

4.5 Assignment of Benefit of Subcontract

If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Employer, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Employer for the work carried out by the Subcontractor after the assignment takes effect.

4.6 Co-operation

The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:

- (a) the Employer's Personnel,
- (b) any other contractors employed by the Employer, and
- (c) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Site of any work not included in the Contract.

Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

If, under the Contract, the Employer is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Engineer in the time and manner stated in the Specification.

4.7 Setting Out

The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contract or notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the works, notifying the Engineer within 28 days of the date of commencement

In the event of such discrepancy arising during the course of the work, for which Employer's documents are handed over after the date of commencement, the contractor shall seek clarifications within 14 days of receipt of such documents

The Employer shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

Contractor shall promptly notify the Employer and the Engineer of any error, omission, fault, or any other defect in the design, drawing or specifications for the works, which he discovers when reviewing the Contract Documents, and in the process of execution of the Works. The contractor shall be responsible to ensure correlation in various drawings and bill of quantities, before commencement and execution of work. In case of any discrepancy the contractor shall bring it to notice of the Engineer for clarification within 28 days of the issue of Letter of Acceptance. In the event of such discrepancy arising during the course of the work, for which drawings are given after the date of issue of Letter of Acceptance, the contractor shall seek clarifications within 14 days of receipt of such drawings.

4.8 Safety Procedures

The Contractor shall follow the provisions laid down in (Special Conditions of Contract), Chapter 1. (Safety and Security) of Section 5 (Works/Employers Requirements) and shall:

- (a) comply with all applicable safety regulations,
- (b) take care for the safety of all persons entitled to be on the Site,
- (c) use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,
- (d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Employer's Taking Over], and
- (e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

Additional Safety Precautions

- (1) The Contractor shall comply with all the precautions as required for the safety of the workmen by the I.L.O Convention No.62 as far as they are applicable to the Contract. The Contractor shall provide all necessary safety appliances; such as safety goggles, helmets, masks, etc to the workmen and the staff.
- (2) Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except for such short period work as can be done safely from ladders. When a ladder is used, an extra labourer shall be engaged for holding the ladder and if the ladder is used for carrying materials as

well, suitable foot-holds and hand-holds shall be provided on the ladder, which shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal in 1 vertical)

- (3) Scaffolding or staging more than 3.25 metres above the ground or floor, swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as maybe necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying in from the support or structure.
- (4) Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally, and if the height of any platform or gangway or stairway is more than 3.25 metres above ground level or floor level, it shall have closely spaced boards, have adequate width and be suitably provided with guard rails as described in (3) above.
- (5) Every opening in the floor of a structure or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of one metre.
- (6) Safe means of access and egress shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. The width between side rails in a rung ladder shall in no case be less than 30 cm for ladders up to and including 3 metres in length. For longer ladders the width shall be increased at least 6 mm for each additional 30 cm of length. Spacing of steps shall be uniform and shall not exceed 30 cm.
- (7) Adequate precautions shall be taken to prevent danger from electrical equipment. Adequate safety measures shall be taken when any work is undertaken near any live highly charged electric wire. Necessary shutdown may be arranged, where and whenever essential. All rules in force in this connection shall be fully complied with. The Contractor shall ensure all precautions to prevent any accidents due to electrocution or otherwise.
- (8) No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect the public from accidents and shall be bound to bear the expenses of defending every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.
- (9) Excavation and Trenching : All trenches, 1.5 metres or more in depth, shall at all times be supplied with at least one ladder for each 20 metres in length or fraction thereof, Ladders shall be extended from the bottom of the trench to at least 1 metre above the surface of the ground. The sides of a trench, which is 1.5 metres or more in depth shall be stepped back to provide a suitable slope, or be securely held by timber bracing so as to avoid the danger of side collapse. Excavated material shall not be placed within 1.5 metres of the edge of any trench or half the depth of the

trench, whichever is more. Excavation shall be made from the top to the bottom. Under no circumstances shall undermining or undercutting be done.

- (10) Demolition : Before any demolition work is commenced and also during the process of the work :
- (a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - (b) No electric cable or apparatus, which is liable to be a source of danger other than a cable or apparatus used by operators, shall remain electrically charged:
 - (c) All practical steps shall be taken to prevent danger to persons employed by the Employer, from risk of fire or explosion, or flooding. No floor, roof or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
- (11) All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the site and maintained in a condition suitable for immediate use; and the Contractor shall take adequate steps to ensure proper use of such equipment by those concerned.
- (a) Workers employed on mixing asphaltic materials, cement, lime mortars, concrete etc. shall be provided with protective footwear and protective goggles.
 - (b) Those engaged in handling any material, which is injurious to the eyes, shall be provided with protective goggles.
 - (c) Those engaged in welding works shall be provided with welder's protective eye-shield.
 - (d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - (e) When workers are employed in sewers and manhole, which are in use, the contractor shall ensure that manhole covers are open and manholes are ventilated at least for an hour before workers are allowed to go into them. Manholes so open shall be cordoned off with suitable railing and provide warning signals or boards to prevent accidents to the public.
- (12) The Contractor shall not employ men below the age of 18 years and women, on the work of painting with products containing lead in any form. Whenever men above the age of 18 years are employed on the work of lead painting, the following precautions shall be taken:
- (a) No paint containing lead or lead products shall be used except in the form of paste or ready made paint.

- (b) Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
 - (c) Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable workers to wash during and at the close of any day's work.
- 13) When work is performed near any place where there is risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
- (14) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:
- (a) (i) These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good working order, be regularly inspected and properly maintained.
 - (ii) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from defects
 - (b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 shall be in charge of any hoisting machine including scaffold equipment. Only trained men over the age of 21 shall be permitted to give signals to such plant and appliance operators.
 - (c) For every hoisting machine and every chain hook, shackle, swivel and pulley block used in hoisting, lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine or a variable safe working load, each safe working load and conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to in the paragraph above shall be loaded beyond safe working load except for the purpose of testing.
 - (d) In case of the Employer's machine, safe working load shall be notified by the Engineer or his Representative. As regards Contractor's machines, the Contractor shall notify safe working load of each machine to the Engineer or his Representative, whenever he brings it to the site of work and get it verified by him.
- (15) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards; hoisting appliances shall be provided with such means as will reduce the risk of accident during descent of load to the minimum. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other materials which are good conductor of electricity.

- (16) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.
- (17) These safety provisions shall be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work location. Persons responsible for ensuring compliance with the Safety Code shall be named therein by the Contractor.
- (18) To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the contractor shall be open to inspection by the Engineer or his Representative.
- (19) Notwithstanding anything contained in conditions (1) to (17) above, the Contractor shall at its own costs, remain liable to comply with the provisions of all acts, rules, regulations, and bylaws for the time being in force in India and applicable in this matter.
- (20) For work carried out in the vicinity of any wharf or quay, the Contractor shall abide by all the provisions of the Dock Workers (Safety, Health and Welfare) Scheme, 1961.
- (21) The Contractor shall at his own expense provide protective safety Equipment like gloves and footwear for all labour engaged on concrete mixing work and all other types of working involving the use of tar, cement, etc. to the satisfaction of the Engineer or his Representative, and on his failure to do so, the employer shall be entitled to provide the same and recover the cost from the Contractor.
- (22) The Contractor shall be responsible for observance, by the sub-contractors, of the foregoing provisions.
- (23) All construction labour at all time shall use personal protective equipment like, safety shoes, helmets and reflective jackets in all activities at site. This shall be ensured without fail on each work site. Failing to comply with this, provision shall attract penalty of Rs. 500/- per occasion per staff.

4.8.1

Notwithstanding with any other provision, the Contractor shall have to pay penalty for damage to Railway cable in terms of clause C 15 of the JPO as given in para 1.2 of Chapter 1. (Safety and Security) of Section 5 (Works/Employers Requirements) and shall also indemnify the Employer against any losses, damages to property or life in terms of para 1.11 and 1.12 of the chapter 1. (Safety and Security) of Section 5 (Works/Employers Requirements).

4.9 Quality Assurance

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Engineer shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor himself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

4.10 Site Data

The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Employer shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Bid or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Bid as to all relevant matters, including (without limitation):

- (a) the form and nature of the Site, including sub-surface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
- (d) the Laws, procedures and labour practices of the Country, and
- (e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.
- (f) Data made available by the Employer in accordance with the preceding paragraph shall be deemed to include data listed elsewhere in the contract as open for inspection at the address stipulated in the Contract.

4.11 Sufficiency of the Accepted Contract Amount

The Contractor shall be deemed to:

- (a) have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount, and
- (b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].

Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Physical Conditions

In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.

This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favourable than could reasonably have been foreseen when the Contractor submitted the Bid. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

The Engineer may take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Bid, which may be made available by the Contractor, but shall not be bound by any such evidence.

4.13 Rights of Way and Facilities

The Contractor shall bear all costs and charges for special and/or temporary rights-of-way which he may require, including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facilities outside the Site which he may require for the purposes of the Works.

In case any operation connected with traffic necessitates diversion, obstruction or closure of any road, railway or any other right of way, the approval of the Engineer and the concerned authorities shall be obtained well in advance by the Contractor.

Provided that if it is found necessary for the Contractor to move one or more loads of heavy constructional plants and equipment, materials or Pre-constructed units or parts of units of work over roads, highways, bridges on which such oversized and overweight items that are not normally to be moved, the contractor shall obtain prior permission from the concerned authorities.

Payments for complying with the requirements, if any, for protection or strengthening of the roads, highways or bridges shall be made by the contractor and such expenses shall be deemed to be included in his quoted contract price.

4.14 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

- (a) the convenience of the public, or
- (b) the access to and use and occupation of all roads and footpaths, irrespective of whether they are public or in the possession of the Employer or of others or
- (c) Passenger amenities at stations and station platforms.

The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.15 Access Route

The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

Except as otherwise stated in these Conditions:

- (a) the Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
- (b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
- (c) the Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route;

- (d) the Employer does not guarantee the suitability or availability of particular access routes; and
- (e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Special Conditions of Contract:

- (a) the Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- (b) the Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and
- (c) the Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods, and shall negotiate and pay all claims arising from their transport.

4.17 Contractor's Equipment

The Contractor shall be responsible for all Contractors' Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

In the event of Contractor imports any equipment the following shall apply"

- (a) **Custom Clearance:** The Employer will assist the contractor, when required by furnishing letters of recommendation for obtaining expeditious clearance through customs of constructional plants, material and other things required for the works and then for re-export, if any. The following publications, may be referred to by the contractor for guidance about custom regulations etc :

- (i) Import & export policy, together with amendments, if any, published by Govt. of India, Ministry of Commerce..
- (j) Hand Book of Procedures, together with amendments, if any, Volume 1 and 2 published by Ministry of Commerce.
- (iii) Customs Tariff, together with amendments, if any published by Central Customs.

The Contractor shall be responsible to follow the latest rules and regulations without any liability of the Employer.

- (c) **Re-export of contractors equipment:** The contractor shall obtain all the relevant information regarding procedure for the import and subsequent re-export of his equipment and materials from the Chief Controller of Imports and Exports, Bangalore, and shall inform himself and keep himself informed on the details of custom charges and draw-back regulations as applicable to the items of Constructional plant. The contractor shall provide the necessary guarantee/bonds where these are required by

the customs notwithstanding that import licenses may be granted in the name of Employer.

- (c) Notwithstanding the provisions mentioned above, Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with the customs authorities at the port of entry an approved export bond or bank guarantee, valid until the Time for Completion plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor's Equipment and spare parts, and **callable** in the event the Contractor's Equipment is not exported from the Country on completion of the Contract. A copy of the **bond** or bank guarantee endorsed by the custom authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts. Upon export of individual items of Contractor's Equipment or spare parts, or upon the completion of the Contract, Contractor shall prepare for approval by the customs authority the authorities, an assessment of the residual value of the Contractor's Equipment and spare parts to be exported based on the depreciation scale(s) and other criteria used by the customs authorities for such purposes under the provisions of the applicable Laws. Import duties and taxes shall be due and payable to the customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the contractor's equipment and spare parts to be exported and (b) on the initial imported value that contractor's equipment and spare parts remaining in the Country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise the security shall be called in the full amount remaining in the Country.
- (d) **Conditions of hire of the contractor's equipment:** A certified copy of the agreement in respect of any item of Equipment held by contractor under any agreement for hire or hire purchase thereof, shall be supplied to the Engineer/Employer."

4.18 Protection of the Environment

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

4.19 Electricity, Water and Gas

The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require.

The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specification. The Contractor shall, at his risk and cost,

provide any apparatus necessary for his use of these services and for measuring the quantities consumed.

The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.

4.20 Employer's, Equipment and Free-Issue Material

The Employer shall make the Employer's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:

- (a) the Employer shall be responsible for the Employer's Equipment, except that
- (b) the Contractor shall be responsible for each item of Employer's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.

The appropriate quantities and the amounts due (at such stated prices) for the use of Employer's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.

The Employer shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Contract data.

The Employer shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them, and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Employer shall immediately rectify the notified shortage, defect or default.

In case materials are handed over, in accordance with the procedure prescribed by the Engineer, after proper measurement and accounted for, the contractor shall be solely liable for any shortage, damage, defect or default in such material, and shall indemnify the Employer until the final account of materials is made by the Contractor on completion of the work.

4.21 Progress Reports

Unless otherwise stated in the Special Conditions of Contract, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.

Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

Each report shall include:

- i. charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction,

erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
photographs showing the status of manufacture and of progress on the Site; for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:

- (i) commencement of manufacture,
- (ii) Contractor's inspections,
- (iii) tests, and
- (iv) shipment and arrival at the Site;

the details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];

copies of quality assurance documents, test results and certificates of Materials;

list of notices given under Sub-Clause 2.5 [Employer's Claims] and notices given under Sub-Clause 20.1 [Contractor's Claims];

safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and

comparisons of actual and planned progress of all activities, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in the Special Conditions of Contract:

- (a) the Contractor shall be responsible for keeping unauthorised persons off the Site, and
- (b) authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by the Employer or the Engineer, as authorised personnel of the Employer's other contractors on the Site.

4.23 Contractor's Operations on Site

The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Engineer as working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition.

However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfill obligations under the Contract.

4.24 Fossils

All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Employer. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

5	Nominated Subcontractors
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5.1 Definition of nominated Subcontractor

In the Contract, “nominated Subcontractor” means a Subcontractor:

- (a) who is stated in the Contract as being a nominated Subcontractor, or
- (b) whom the Engineer, under Clause 13 [Variations and Adjustments], instructs the Contractor to employ as a Subcontractor.

5.2 Objection to Nomination

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Engineer as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Employer agrees to indemnify the Contractor against and from the consequences of the matter:

- (a) there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- (b) the subcontract does not specify that the nominated Subcontractor shall indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- (c) the subcontract does not specify that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:
 - (i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract, and
 - (ii) indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities.

5.3 Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

5.4 Evidence of Payments

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received (Within 7 days of receipt of previous

payment by the contractor) all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- (a) submits this reasonable evidence to the Engineer, or
- (b)
 - (i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
 - (ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement,

then the Employer may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

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6	Staff and Labour
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6.1 Engagement of Staff and Labour

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within the Country.

6.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

If the Employer is obliged to provide amenities or arrange payment of wages to contract labour employed by the contractor either directly or through sub contractor under the contract on account of failures on the part the contractor to provide the amenities and / or arrange payment of wages to the contract labour as required of him under the provision of the said act / rules made there under, the Engineer/Employer shall be at liberty without prejudice to the rights of Engineer/Employer under Section 20(2) and 21(4) of the contract labour (Regulation and Abolition) Act 1970 to recover the whole or part of the expenditure so incurred on the wages so paid by the Engineer/Employer/Railway from the security deposit and/or from any sum or sums due to the contractor whether under this contract or any other contract.

The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances, and any benefits as are subject to taxes under the Laws of the Country for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

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, regulation or notifications including amendment. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/ regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

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

The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities provide by the said Act and said Rules.

The Contractor and his Sub Contractors shall comply with all applicable Labour Laws, and should not employ Child Labour for construction and maintenance activities. The Contractor shall provide appropriate facilities for children in Construction Camp sites.

The Contractors shall not differentiate wages between men and women for work of equal value.

6.3 Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst persons in the service of the Employer or the Engineer.

6.4 Labour Laws

The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration, and emigration, and shall allow them all their legal rights. The contractor and his sub-contractors shall be responsible to ensure at his own cost, compliance to all laws, bye-laws, rules and regulations for the time being in force pertaining to the employment of local or imported labour and shall take all necessary precautions to ensure and preserve the health and safety of all staff employed directly or through sub-contractors or petty contractors on the works which shall include all the acts listed in Appendix – 1 but not limited to the same.

The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

During continuance of the Contract, the Contractor and his Sub-Contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central government or local authority and any other labour laws (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 hat are applicable to construction industry are given in Appendix 1 to these Conditions of Contract.

6.5 Working Hours

No work shall be carried out on the Site on locally recognised days of rest, or outside the normal working hours stated in the Contract Data, unless:

- (a) otherwise stated in the Contract,

- (b) the Engineer gives consent, or
- (c) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.

6.6 Facilities for Staff and Labour

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.

The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and a standing arrangement for ambulance service are available at a phone call at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same. The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence.

HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

Epidemics

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

Records of Safety and Health

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

Submission of Returns: :

The contractor shall be responsible for timely submission of all returns and statements to the concerned authorities in full compliance of all rules, bye-laws and regulations for the time being in force.

The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to of Sexually Transmitted Diseases (STD)—or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

The Contractor shall include in the program to be submitted for the execution of the Works under Sub-Clause 8.3 an alleviation program for Site staff and labour and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related sub-contracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this program shall not exceed the Provisional Sum dedicated for this purpose.

6.8 Contractor's Superintendence

Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

The Contractor shall employ the key personnel named in the Schedule of 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.

The Contractor shall not employ any retired government Gazetted officer, who has either not completed one year after the date of retirement, or has not obtained permission to employment with the Contractor.

6.9 Contractor's Personnel

The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- (a) persists in any misconduct or lack of care,
- (b) carries out duties incompetently or negligently,
- (c) fails to conform with any provisions of the Contract, or
- (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

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 (7) days and has no further connection with the work in the Contract. The replacement person shall be appointed within fourteen (14) days of the notification by the Engineer.

A reasonable proportion of the Contractor's Superintending Staff shall have a working knowledge of the English language or the Contractor shall have available on site at all times a sufficient number of competent interpreters to ensure the proper transmission of instructions and information. If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

6.12 Foreign Personnel

The Contractor may bring in to the country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work

permits. The Employer will, without any financial liability, if requested by the Contractor, use his best endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial. Contractor shall also be responsible for any legal liabilities during their stay.

6.13 Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

6.14 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

6.15 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

The Contractor shall provide his staff and labour with suitable prophylactics for the prevention of malaria, and take steps to prevent the formation of stagnant pools of water. He shall comply with all the regulations of the local health authorities in these respects and shall in particular arrange to spray thoroughly with approved insecticides all buildings erected on the site such treatment shall be carried out at least once a year or as instructed by the Engineer. The Contractor shall warn his staff and labour of the dangers of diseases like Malaria, Filaria and other contagious diseases etc. and also Scorpions, Snakes, Wild animals etc. and preventive actions required to be taken by the labour and staff.

6.16 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter or disposal thereto by Contractor's Personnel.

6.17 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

6.18 Festivals and Religious Customs

The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.

6.19 Funeral Arrangements

The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.

6.20 Prohibition of Forced or Compulsory Labour

The contractor shall not employ "forced or compulsory labour" in any form. "Forced or compulsory labour" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

6.21 Prohibition of Harmful Child Labour

The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

6.22 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and shall be available for inspection by the Engineer during normal working hours. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

- (j) In addition to the above, the Contractor shall register his firm/company etc. on website 'www.shramikkalyan.indianrailways.gov.in' and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/ updation on Portal shall be done as under:
- (a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Employer/Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
 - (b) Contractor once approved by any Employer/Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LoAs issued in his favour.
 - (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LoA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned Employer/Engineer. Employer/Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.

- (d) After approval of LoA by Employer/Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
 - (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.
- (ii) While processing payment of any 'Interim Payment Certificate' or 'Final Payment Certificate' or release of 'Advances' or 'Performance Guarantee / Security deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

7	Plant, Materials and Workmanship
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7.1 Manner of Execution

The Contractor shall carry out the manufacture of Plant, the production and manufacture of Materials, and all other execution of the Works:

- (a) in the manner (if any) specified in the Contract,
- (b) in a proper workmanlike and careful manner, in accordance with recognised good practice, and
- (c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

7.2 Samples

The Contractor shall submit the following samples of Materials, and relevant information, to the Engineer for consent prior to using the Materials in or for the Works:

- (a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
- (b) additional samples instructed by the Engineer as a Variation.

Each sample shall be labelled as to origin and intended use in the Works.

7.3 Inspection

The Employer's Personnel shall at all reasonable times:

- (a) have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
- (b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.

The Contractor shall give the Employer's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

The Contractor shall give notice to the Engineer whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.

7.4 Testing

This Sub-Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).

The Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.

The Engineer may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.

The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.

If the Contractor suffers delay and/or incurs Cost from complying with these instructions or as a result of a delay for which the Employer is responsible, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

The Contractor shall promptly forward to the Engineer duly certified reports of the tests. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Engineer has not attended the tests, he shall be deemed to have accepted the readings as accurate.

7.5 Rejection

If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

If the Engineer requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Employer to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay these costs to the Employer.

7.6 Remedial Work

Notwithstanding any previous test or certification, the Engineer may instruct the Contractor to:

- (a) remove from the Site and replace any Plant or Materials which is not in accordance with the Contract,
- (b) remove and re-execute any other work which is not in accordance with the Contract, and
- (c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.

The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).

If the Contractor fails to comply with the instruction, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay to the Employer all costs arising from this failure.

7.7 Ownership of Plant and Materials

Each item of Plant and Materials shall, to the extent consistent with the Laws of the Country, become the property of the Employer at whichever is the earlier of the following times, free from liens and other encumbrances:

- (a) when it is delivered to the Site;
- (b) when the Contractor is entitled to payment of the value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- (a) natural Materials obtained from outside the Site, and
- (b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal areas within the Site are specified in the Contract.

8	Commencement, Delay and Suspension
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8.1 Commencement of Works

The Engineer shall give the Contractor not less than 7 days' notice of the Commencement Date. Unless otherwise stated in the Special Conditions of Contract, the Commencement Date shall be within the number of days after the Contractor receives the Letter of Acceptance as specified in Contract Data.

The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date, and shall then proceed with the Works with due expedition and without delay.

8.2 Time for Completion

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

- (a) achieving the passing of the Tests on Completion, and
- (b) completing all work which is stated in the Contract as being required for whole of the Works or Section(s) to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections].
- (c) The date of completion for works described in this sub-clause, shall be the earliest of the following :
 - (i) The date CRS recommends opening of the Section(s) for public carriage of passengers to Central Government, for speeds of not less than 75% of the designed operating speeds or,
 - (ii) The date CRS authorises the Railway Administration for opening of Section(s), subject to sanction of the Central Government for speeds of not less than 75% of the designed operating speeds, or,
 - (iii) The date CRS authorizes/sanctions opening of Section(s) without inspection.

8.3 Programme

The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice under Sub-Clause 8.1 [*Commencement of Works*]. The program shall include the physical and Financial Progress vis-à-vis program and forecast cash flow adopting Project Management Software Primavera/Sure Track/MS Project or as mutually agreed. The program must identify the milestones, interface requirements and program reporting elements. The Contractor shall supply, free of cost one set of authorized software to the Engineer and the soft copy of structured program for the project. This shall be updated every month. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

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- (a) the order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,
 - (b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
 - (c) the sequence and timing of inspections and tests specified in the Contract, and
 - (d) a supporting report which includes:
 - (i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and
 - (ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

Unless the Engineer, within 21 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Employer's Personnel shall be entitled to rely upon the programme when planning their activities.

The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 13.3 [Variation Procedure].

If, at any time, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer within 15 days in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking-Over of the Works and Sections] is or will be delayed by any of the following causes:

- (a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,
- (b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,
- (c) exceptionally adverse climatic conditions,
- (d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
- (e) any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors.

If the Contractor considers himself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Engineer in accordance with Sub-Clause 20.1 [Contractor's Claims]. When determining each extension of time under Sub-Clause 20.1, the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

- (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,
- (b) these authorities delay or disrupt the Contractor's work, and
- (c) the delay or disruption was Unforeseeable,

then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

8.6 Rate of Progress

If, at any time:

- (a) actual progress is too slow to complete within the Time for Completion, and/or
- (b) progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme],

other than as a result of a cause listed in Sub-Clause 8.4 [Extension of Time for Completion], then the Engineer may instruct the Contractor to submit, under Sub-Clause 8.3 [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

Unless the Engineer notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Employer to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay these costs to the Employer, in addition to delay damages (if any) under Sub-Clause 8.7 below.

8.7 Extension of Time for Completion with Delay Damages

If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion for entire work or for specified section wise completion period], and he is not entitled to an extension of time under sub clause 8.4 then the employer may grant extension of time with delay damage in such case, the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay delay damages to the Employer for this default. These delay damages shall be the sum stated in the Contract Data, which shall be paid for every day which shall elapse between the relevant Time for Completion and the date stated in the Taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Contract Data.

Further, if the contractor fails to achieve physical/financial targets as per the agreed programme for a consecutive period of 3 months without any valid reasons, other than attributable to the contractor, a provisional recovery of delay damages shall be made from the next interim payment certificate @ 1/10th of the sum of delay damages stated in the contract data, for the entire period of 3 months. Such recovery shall continue from the further interim payment certificates till the contractor is able to make good the shortfall and achieve the cumulative targets as per agreed programme. On achieving the cumulative progress targets as per agreed programme, the entire amount recovered till that month, shall be refunded to the contractor in the next interim payment certificate. In case the contractor is unable to make good the shortfall and achieve the cumulative targets resulting in delay in completion of the project, then the provisional recoveries made shall be adjusted against the delay damages to be finally imposed on the contractor.

These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [Termination by Employer] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

8.8 Suspension of Work

The Engineer may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

The Engineer may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9, 8.10 and 8.11 shall not apply.

8.9 Consequences of Suspension

If the Contractor suffers delay and/or incurs Cost from complying with the Engineer's instructions under Sub-Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 [Suspension of Work].

8.10 Payment for Plant and Materials in Event of Suspension

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/or Materials, if:

- (a) the work on Plant or delivery of Plant and/or Materials has been suspended for more than 28 days,
- (b) the Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Engineer's instructions, and
- (c) Such materials or plant is received at site.

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 28 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension.

8.13 Bonus for early completion:

If the Contractor achieves completion of the whole of the Works or any section(s) prior to the intended Completion Date prescribed in Contract data (Extension of time pursuant to Clause 8.4 or any other clause of these conditions will not be considered), the Employer shall pay to the Contractor a sum stated in the Contract data as bonus for early completion, for every calendar month which shall elapse between the date of completion of all items of works as stipulated in the contract, including variations ordered by the Engineer and the time prescribed in Clause 8.2. However, on handing over of the particular section for construction of OHE foundations after completing formation, turbing, side drains & protection works for the section excluding station yards but including buildings required for commissioning of the section, the section shall be considered to be substantially completed for the purposes of first stage bonus payment.

If General Manager of the Zonal Railway has signed application for opening of the section(s), such section(s) shall be treated as substantially completed on the date 45 days after the date of signing the application for the purposes of second stage bonus under this clause subject to the conditions that: -

- a) In case the CRS has authorized the opening of the section(s) within 45 days from the date of signing the application, then date of authorization shall be the date of completion.

- b) In case the CRS has not authorized opening of the section(s) after having come for inspection within 45 days from the date of signing the application, then the section(s) shall not be treated as substantially completed for the purposes of bonus under this clause.

For the purpose of calculating bonus payments, the time given in the Bid for completion of the whole works or any section(s) is fixed and unless otherwise agreed, no adjustment of the time by reasons of granting an extension of time pursuant to clause 8.4 or any other

clause of these conditions will be allowed. Any period falling short of completed month shall be ignored for the purpose of computing the period relevant for the payment of bonus.

If the Contractor achieves completion of the whole of the Works or any section(s) prior to the intended Completion Date prescribed in Contract data (Extension of time pursuant to Clause 8.4 or any other clause of these conditions will not be considered), the Employer shall pay to the Contractor a sum stated in the Contract data as bonus for early completion, for every calendar month which shall elapse between the date of completion of all items of works as stipulated in the contract, including variations ordered by the Engineer and the time prescribed in Clause 8.2. However, on completion of all PSC girder/slab bridges including protection works and successful passing of load testing but excluding linking of track, and on completion of all steel girder bridges, if any, including protection works but excluding load testing and linking of track on steel girder bridges, the section shall be considered to be substantially completed for the purposes of bonus payment under this clause. In case the particular section involves construction of steel bridges, the payment of bonus shall only be done on successful passing of load testing of steel bridges but the bonus is to be calculated from the date of substantial completion as defined above.

For the purpose of calculating bonus payments, the time given in the Bid for completion of the whole works or any section(s) is fixed and unless otherwise agreed, no adjustment of the time by reasons of granting an extension of time pursuant to clause 8.4 or any other clause of these conditions will be allowed. Any period falling short of completed month shall be ignored for the purpose of computing the period relevant for the payment of bonus.

9	Tests on Completion
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9.1 Contractor's Obligations

The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].

The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

If the Tests on Completion are being unduly delayed by the Employer, Sub-Clause 7.4 [Testing] (fifth paragraph) and/or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.

If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.

If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Employer's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Engineer shall be entitled to:

- (a) order further repetition of Tests on Completion under Sub-Clause 9.3;
- (b) if the failure deprives the Employer of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Employer

shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 11.4 [Failure to Remedy Defects]; or

- (c) issue a Taking-Over Certificate, if the Employer so requests.

In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Contract, and the Contract Price shall be reduced by such amount as shall be appropriate to cover the reduced value to the Employer as a result of this failure. Unless the relevant reduction for this failure is stated (or its method of calculation is defined) in the Contract, the Employer may require the reduction to be (i) agreed by both Parties (in full satisfaction of this failure only) and paid before this Taking-Over Certificate is issued, or (ii) determined and paid under Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations].

9.5 Contractor's obligations

Notwithstanding the provisions of sub-clauses 4.1, 9.1 to 9.4 the provisions in subsequent sub-clauses shall apply for works of Permanent Way, signaling and telecommunication and railway electrification excluding General Electrical Services.

- (a) The Contractor shall be responsible for the execution of temporary and/or permanent works which may require the prior sanction/approval of Commissioner of Railway Safety (CRS) in accordance with extant rules for "The Railways opening for Public Carriage of Passengers" was amended from time to time. And applicable as and when the works are undertaken. The Contractor shall initiate the process for approval at least **63** (sixty three) days prior to undertaking such works which require the approval of Commissioner of Railway Safety (CRS) and furnish draft documentation to the Engineer.
- (b) The Contractor shall ensure that existing services and operations for public carriage of passengers or goods, are not affected except those, which are essentially required to be regulated for execution of works. Such items of works shall be planned and coordinated through the Engineer.
- (c) Prior to the commencement of commercial operations of passenger traffic :
 - (i) The Contractor may have to operate locomotives, track machines and any other rolling stock for track tamping, trial runs, etc. for which track, signaling or OHE works must comply with the specifications.
 - (ii) The Employer may permit freight train operations to Railway after certification by the authorized person of Zonal Railway
 - (iii) The Contractor shall be responsible for maintaining the facilities ensuring safety of operations under (i) & (ii) above as per specifications.

10	Employer's Taking Over
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10.1 Taking Over of the Works and Sections

Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Employer/Railway when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

The Contractor may apply by notice to the Engineer for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.

In case the works are to be taken over in accordance with sub-clause 9.5, the completed works shall be taken over by the Zonal Railway with the procedure specified by the Engineer.

The Engineer shall, within 28 days after receiving the Contractor's application:

- (a) issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
- (b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 28 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

10.2 Taking Over of Parts of the Works

The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.

The Employer shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Employer does use any part of the Works before the Taking-Over Certificate is issued:

- (a) the part which is used shall be deemed to have been taken over as from the date on which it is used,
- (b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and
- (c) if requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

After the Engineer has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

If the Contractor incurs Cost as a result of the Employer taking over and/or using a part of the Works, other than such use as is specified in the Contract or agreed by the Contractor, the Contractor shall (i) give notice to the Engineer and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such Cost, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this Cost and profit.

If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages], and shall not affect the maximum amount of these damages.

10.3 Interference with Tests on Completion

If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Employer/Engineer/other Contractors of the Employer, are responsible, the Employer shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be

carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

10.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11	Defects Liability
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11.1 Completion of Outstanding Work and Remedying Defects

In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

- (a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
- (b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Employer on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer.

11.2 Cost of Remedying Defects

All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

- (a) any design for which the Contractor is responsible,
- (b) Plant, Materials or workmanship not being in accordance with the Contract, or
- (c) failure by the Contractor to comply with any other obligation.

If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Employer, and Sub-Clause 13.3 [Variation Procedure] shall apply

11.3 Extension of Defects Notification Period

The Employer shall be entitled subject to Sub-Clause 2.5 [Employer's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or damage. However, a Defects Notification Period shall not be extended by more than two years.

If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by (or on behalf of) the Employer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Employer may (at his option):

- (a) Carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay to the Employer the costs reasonably incurred by the Employer in remedying the defect or damage;
- (b) require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or
- (c) if the defect or damage deprives the Employer of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

11.5 Removal of Defective Work

If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

11.6 Further Tests

If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 days after the defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

11.7 Right of Access

Until the Performance Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Employer's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search shall be agreed or determined by the Engineer in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the Contract Price.

11.9 Performance Certificate

Performance of the Contractor's obligations shall not be considered to have been completed until the Employer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

The Employer shall issue the Performance Certificate within 28 days after the latest of the expiry dates of the Defects Notification Periods, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects.

Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

If all these items have not been removed within 28 days after the Employer receives a copy of the Performance Certificate, the Employer may sell or otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.

12	Measurement and Evaluation
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12.1 Works to be Measured

The Works shall be measured, and valued for payment, in accordance with this Clause.

Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

- (a) promptly either attend or send another qualified representative to assist the Engineer in making the measurement, and
- (b) supply any particulars requested by the Engineer.

If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.

Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of Measurement

Except as otherwise stated in the Contract and notwithstanding local practice:

- (a) measurement shall be made of the net actual quantity of each item of the Permanent Works, and
- (b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

Except as otherwise stated in the contract, the Engineer shall proceed in accordance with sub clause 3.5 (Determinations) to agree or determine the contract price by evaluating each item of work, applying the measurement agreed or determined in accordance with the above sub clause 12.1 and 12.2 and the appropriate rate or price for the item.

For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the contract or, if there is no such item, specified for similar work.

12.3.1

However, a new rate or price shall be appropriate for an item of work if :

(a) all the following conditions are met for existing item of the contract:

- (i) the measured quantity of the item is increased by more than 50% from the quantity of this item in the Bill of Quantities or the Schedule,
- (ii) this increase in quantity multiplied by specified rate for this item in the Bill of Quantities or the Schedule, exceeds 0.25% of the Accepted Contract Amount,
- (iii) this item is not specified in the contract as a “fixed rate item”.

Note: New rates in case of increase in quantity of the agreement items shall be applicable to the increase in quantities beyond the quantities required to meet conditions specified under 12.3.1 (a) (i) & (ii) above.

OR

(b) (i) the work is instructed under clause 13[Variations and Adjustments],

(ii) no rate or price is specified in the contract for this item, and

(iii) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the contract.

OR

(c) On passage of original completion period stipulated in the contract, if site in some stretches has not been handed over for execution of the work due to any of the reasons mentioned below:

(i) non acquisition of land,

(ii) non availability of forest/wild life clearances,

(iii) non removal of encroachments, delay in shifting of utilities (to be shifted by other agencies) and

(iv) non handing over of the sites by other agencies/authorities

and the contractor otherwise has been executing the works satisfactorily on other sites, as certified by the Engineer, the contractor shall be entitled for new rates for the items and quantities of work which could not be executed in the stretches still to be handed over. In case the progress is not satisfactory, the contractor shall not be entitled for new rates and the Employer shall have the option either to continue the work in these stretches through the same agency or get it executed through other means.

In case of entitlement for new rates, if the contractor is not willing to take up the work in these stretches, he will have the option to say so in writing or if no agreement is reached on new rates, the remaining works of such stretches shall be excluded from the scope of the contract through a variation statement. In such a case the contractor shall not be entitled for any claim or compensation on this account. The employer shall get the remaining works on these stretches executed through other means.

12.3.2

- (i) Each new rate or price for item(s) as described in sub paragraph 12.3.1 (a) & (c) above shall be derived from an assessment of the reasonable cost of executing the work with an additional element of 15% towards overheads and profit of the Contractor.
- (ii) Each new rate or price for item(s) as described in sub paragraph 12.3.1 (b) above shall be derived from an assessment of the reasonable cost of executing the work with an additional element of 15% towards overheads and profit of the Contractor, subject to the condition that such item(s) as described in sub paragraph 12.3.1 (b) above is/are not available in the “Standard Bill of Quantities of K RIDE”.
- (iii) In case item(s) as described in sub paragraph 12.3.1 (b) above is/are available in the “Standard Bill of Quantities of K RIDE (updated upto 28 days prior to deadline for submission of bids)”, new rate or price for such items shall be the rate as available in the “Standard Bill of Quantities of K RIDE (updated upto 28 days prior to deadline for submission of bids)”, modified by the percentage above/below accepted in this contract for the respective schedule and also price variation shall be applicable in the same manner as applicable to items specified in the contract.
- (iv) The assessment of reasonable cost of executing the work (except over heads and profit which shall be 15%) shall be arrived at based on the prevailing rates and by taking guidance from the following documents. The priority of the documents shall be in accordance with the following sequence:
 - a) Analysis of Unified SOR of Indian Railway;
 - b) Analysis issued by MORTH;
 - c) Schedule of Rates issued by CPWD;
 - d) Market analysis.
- (v) If the final rate decided by the competent authority as per K RIDE SOP is not acceptable to the contractor, the contractor will be bound to execute the work at the rates as decided by the competent authority of K RIDE but he may refer the dispute in rate for settlement as per provisions of clause 20 of General Conditions of Contract. Until such time as an appropriate rate or price is agreed or determined, the Engineer shall make the Interim payment at the rate of 80% of the rate proposed by him and accepted by the Project Director (concerned GM(Civil) in charge of the project).

12.3.3

Until such time as an appropriate rate or price is agreed or determined, the Engineer shall make the Interim payment at the rate of 80% of the rate proposed by him and accepted by the Project Director (concerned GM(Civil) in charge of the project).

12.4 Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- (a) the Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- (b) the omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- (c) this cost is not deemed to be included in the evaluation of any substituted work;

then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

K RIDE

13	Variations and Adjustments
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13.1 Right to Vary

Variations may be initiated by the Employer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by making a request to the Contractor to submit a proposal.

The Contractor shall execute and be bound by each Variation till the price does not exceed 50% of the agreemental value as specified in letter of acceptance / original agreement. For variation beyond the above the contractor shall be bound to execute, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that the Contractor cannot readily obtain the Goods required for the Variation. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

Each Variation may include:

- (a) changes to the quantities of any item of work included in the Contract,
- (b) changes to the quality and other characteristics of any item of work,
- (c) changes to the levels, positions and/or dimensions of any part of the Works,
- (d) omission of any work unless it is to be carried out by others,
- (e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
- (f) changes to the sequence or timing of the execution of the Works.

The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation.

13.2 Value Engineering

The Contractor may, at any time, submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].

If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

- (a) the Contractor shall design this part,
- (b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
- (c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a

fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:

- (i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and
- (ii) the reduction (if any) in the value to the Employer of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

However, if amount (i) is less than amount (ii), there shall not be a fee.

13.3 Variation Procedure

If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

- (a) a description of the proposed work to be performed and a programme for its execution,
- (b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
- (c) the evaluation of the Variation shall be as specified in Clause 12.3 Evaluation.

The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.

13.4 Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

13.5 Provisional Sums

Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer's instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer may instruct:

- (a) work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or

- (b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which these shall be included in the Contract Price:
- (i) the actual amounts paid (or due to be paid) by the Contractor, and
 - (ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in the Contract Data shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

13.6 Day work

For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

- (a) the names, occupations and time of Contractor's Personnel,
- (b) the identification, type and time of Contractor's Equipment and Temporary Works, and
- (c) the quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates]

13.7 Adjustments for Changes in Legislation

Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and

(b) payment of any such Cost, which shall be included in the Contract Price

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

In case there is a decrease in cost as a result of changes of Law by Legislation after the Base Date, the Engineer shall proceed in accordance with Sub Clause 3.5 (determination) to agree or determine these matters without waiting for Contractor's / Employer's Notice.

Notwithstanding the foregoing, the Contractor shall not be entitled to such an extension of time if the same shall already have been taken into account in determining an extension and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8.

13.8 Adjustment for changes in cost.

Price Variation Clause (PVC):

46A.1 Applicability: Price Variation Clause (PVC) shall be applicable only in those contracts where tender conditions specifically permit it. Materials supplied free of cost by Railway to the Contractors and any extra **NS** item(s) included in subsequent variation falling outside the purview of the Schedule of Items of tender shall fall outside the purview of Price Variation Clause. If, in any case, accepted offer includes some specific payment to be made to consultants or some materials supplied by Railway free or at fixed rate, such payments shall be excluded from the gross value of the work for the purpose of payment/recovery of price variation.

46A.2 Base Month: The Base Month for 'Price Variation Clause' shall be taken as month 28 days prior to opening of tender including extensions, if any, unless otherwise stated elsewhere. The quarter for applicability of PVC shall commence from the month following Base month. The Price Variation shall be based on the average Price Index of the quarter under consideration.

46A.3 Validity: Rates accepted by Railway Administration shall hold good till completion of work and no additional individual claim shall be admissible except:

- (a) Payment/recovery for increase/decrease in GST on works contract or imposition/removal of any tax/cess on Works Contract as per Clause 37,
- (b) Payment/recovery for overall market situation as per Price Variation Clause given hereunder.

46A.4 Adjustment for variation in prices of material, labour, fuel, explosives, detonators, steel, concreting, ferrous, non-ferrous, insulators, zinc and cement shall be determined in the manner prescribed.

46A.5 Components of various items in a contract on which variation in prices be admissible, shall be Material, Labour, Fuel, Explosives & Detonators, Steel, Cement, Concreting, Ferrous, Non-ferrous, Insulator, Zinc, Erection etc. However, for fixed components, no price variation shall be admissible.

46A.6 The percentages of labour component, material component, fuel component etc. in various types of Engineering contracts shall be as under:

S. No	Component	E/Work & Minor Bridges Contracts, Ballast Supply Contracts, Tunneling Contracts (without explosive)	Tunneling Contracts (with explosives)	Major and Important Bridges Contracts	Building Contracts	Permanent Way linking Contracts (Manual)	Other Works Contracts
1	Labour Component	20	20	20	40	50	20
2	Other Material Components	10	15	30	35	5	20
3	Plant Machinery & Spares	30	15	20	5	15	30
4	Fuel & Lubricants Component	25	15	15	5	15	15
5	Fixed Component*	15	15	15	15	15	15
6	Detonators & Explosive Component	-	20	-	-	-	-

* It shall not be considered for any price variation.

46A.7 Formulae: The Amount of variation in prices in several components (labour, material etc.) shall be worked out by the following formulae:

$$(i) \quad L = \frac{W \times (LQ - LB)}{LB} \times \frac{LC}{100}$$

$$(ii) \quad M = \frac{W \times (MQ - MB)}{MB} \times \frac{MC}{100}$$

$$(iii) \quad F = \frac{W \times (FQ - FB)}{FB} \times \frac{FC}{100}$$

$$(iv) \quad E = \frac{W \times (EQ - EB)}{EB} \times \frac{EC}{100}$$

$$(v) \quad PM = \frac{W \times (PMQ - PMB)}{PMB} \times \frac{PMC}{100}$$

$$(vi) \quad S = SW \times \frac{(SQ - SB)}{SB}$$

$$(vii) \quad C = CV \times (CQ - CB) / CB$$

For Railway Electrification Works:

$$(viii) \quad T = [(CS - CO) / CO \times 0.4136] \times TC$$

$$(ix) \quad R = [(RT - RO) / RO + (ZT - ZO) / ZO \times 0.06] \times RC$$

$$(x) \quad N = [(PT - PO) / PO] \times NC$$

$$(xi) \quad Z = [(ZT - ZO) / ZO] \times ZC$$

$$(xii) \quad I = [(IT - IO) / IT] \times 85$$

Where,

L	Amount of price variation in Labour
M	Amount of price variation in Materials
F	Amount of price variation in Fuel
E	Amount of price variation in Explosives
PM	Amount of price variation in Manufacture of machinery for mining, Quarrying and Construction
S	Amount of price variation in Steel
C	Amount of price variation in Cement
T	Amount of price variation in Concreting
R	Amount of price variation in Ferrous Items
N	Amount of price variation in Non-Ferrous Items
Z	Amount of price variation in Zinc
I	Amount of price variation in Insulator
Lc	% of Labour Component
Mc	% of Material Component
Fc	% of Fuel Component
Ec	% of Explosive Component
PMc	% of Manufacture of machinery for mining, Quarrying and Construction Component
Tc	% of Concreting Component
Rc	% of Ferrous Component

- Nc % of Non-Ferrous Component
- Zc % of Zinc Component
- W Gross value of work done by Contractor as per on-account bill(s) excluding cost of materials supplied by Railway at fixed price, minus the price values of cement and steel. This will also exclude specific payment, if any, to be made to the consultants engaged by Contractors (such payment shall be indicated in the Contractor's offer)
- LB Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the base period
- LQ Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
- MB Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the base period
- MQ Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
- FB Wholesale Price Index for the group Fuel & Power as published in the R.B.I. Bulletin for the base period
- FQ Index Number of Wholesale Price Index – By Groups and Sub-Groups for the group Fuel & Power as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
- EB Index number of Monthly Whole Sale Price Index for the category 'Explosive' of (g).Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
- EQ Index number of Monthly Whole Sale Price Index for the category 'Explosive' of (g).Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the average price index of 3 months of the quarter under consideration.
- PMB Index number of Monthly Whole Sale Price Index for the category 'k. Manufacture of machinery for mining, quarrying and construction' under (R) MANUFACTURE OF MACHINERY AND EQUIPMENT, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
- PMQ Index number of Monthly Whole Sale Price Index for the category 'k. Manufacture of machinery for mining, quarrying and construction' under (R) MANUFACTURE OF MACHINERY AND EQUIPMENT, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy

- & Promotion (DIPP), for the average price index of 3 months of the quarter under consideration.
- SW Gross value of steel supplied by the Contractor as per the 'on-account' bill for the month under consideration
- SB Index number of Monthly Whole Sale Price Index for the relevant category of mild steel item as mentioned in Clause 46A.9, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP); for the base period.
- SQ Index number of Monthly Whole Sale Price Index for the relevant category of mild steel item as mentioned in Clause 46A.9, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP); for the average price index of the 3 months of the quarter under consideration.
- Cv Value of Cement supplied by Contractor as per on account bill in the quarter under consideration
- CB Index No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the base period
- CQ No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the average price index of the 3 months of the quarter under consideration
- CS RBI wholesale price index for Cement, Lime & Plaster for the month which is six months prior to date of casting of foundation
- Co RBI wholesale price index for Cement, Lime & Plaster for the month which is one month prior to date of opening of tender
- Rt IEEMA price index for Iron & Steel for the month which is two months prior to date of inspection of material.
- RO IEEMA price index for Iron & Steel for the month which is one month prior to date of opening of tender.
- PT IEEMA price index for Copper wire bar for the month which is two months prior to date of inspection of material.
- PO IEEMA price index for Copper wire bar for the month which is one month prior to date of opening of tender.
- ZT IEEMA price index for Zinc for the month which is two months prior to date of inspection of material
- Zo IEEMA price index for Zinc for the month which is one month prior to date of opening of tender
- IT RBI wholesale price index for the sub-group "other Portland and Ceramic product" for the month which is two months prior to date of inspection of material
- IO RBI wholesale price index for the sub-group "other Portland and Ceramic product" for the month which is one month prior to date of opening of tender

46A.8 The demands for escalation of cost shall be allowed on the basis of provisional indices as mentioned above in Clause 46A.7. Any adjustment needed to be done based on the finally published indices shall be made as and when they become available.

46A.9: Relevant categories of steel for the purpose of operating Price Variation formula as mentioned in this Clause shall be as under:

SL	Category of Steel Supplied in Railway Work	Category of Steel Items as mentioned in Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP).
1.	Reinforcement bars and other rounds	'MS Bright Bars' individual commodity of group item (d) Mild Steel-Long Products under (N) MANUFACTURE OF BASIC METAL.
2.	All types and sizes of angles, channels and joists	'Angles, Channels, Sections, Steel' individual commodity of group item (d) Mild Steel-Long Products under (N) MANUFACTURE OF BASIC METAL.
3.	All types and sizes of plates	'e. Mild Steel – Flat Products' of (N) MANUFACTURER OF BASIC METAL
4	Any other section of steel not covered in the above categories and excluding HTS	Average of price for the 3 categories covered under SL 1, 2 & 3 above

46A.10 Price Variation during Extended Period of Contract

The price adjustment as worked out above, i.e. either increase or decrease shall be applicable upto the stipulated date of completion of work including the extended period of completion where such extension has been granted under Clause 17-A of the Standard General Conditions of Contract. However, where extension of time has been granted due to Contractor's failure under Clause 17-B of the Standard General Conditions of Contract, price adjustment shall be done as follows:

- a. In case the indices increase above the indices applicable to the last month of original completion period or the extended period under Clause 17-A, the price adjustment for the period of extension granted under Clause 17-B shall be limited to the amount payable as per the Indices applicable to the last month of the original completion period or the extended period under Clause 17-A of the Standard General Conditions of Contract; as the case may be.
- b. In case the indices fall below the indices applicable to the last month of original/extended period of completion under Clause 17-A, as the case may be; then the lower indices shall be adopted for the price adjustment for the period of extension under Clause 17-B of the Standard General Conditions of Contract.

14	The Contract Price
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14.1 The Contract Price

Unless otherwise stated in the Special Conditions of Contract:

- (a) the Contract Price shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
- (b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];
- (c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and final quantities:
 - (i) of the Works which the Contractor is required to execute, or
 - (ii) for the purposes of Clause 12 [Measurement and Evaluation]; and
- (d) the Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules, if applicable. The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.
- (e) It may be noted that in the event of the Contractor not making the due payments stated in sub-clause (b) above, and the concerned party puts up a claim with the Employer / Engineer, then the Employer / Engineer may make such payments and deduct the same from the sums due to the Contractor.

14.2 Advance Payment**14.2.1 Mobilization Advance**

The Employer shall make payment, as an Interest bearing advance for mobilization, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Contract Data.

Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Contract Data, this Sub-Clause shall not apply.

The Engineer shall issue an interim payment certificate for the first installment of mobilisation advance after receiving an application for advance payment (under sub clause 14.3 [Application for Interim Payment Certificates]) and after the Employer receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment plus 10%. The next installment shall be released only when the contractor submits statement of having utilized the previous installment of mobilization advance and the Employer is satisfied that the utilization has been done in purposeful manner.

14.2.2 Advance against Plant and Machinery

Interest bearing advance against plant and machinery, is payable for procurement of plant, equipment and machinery to be utilized specifically for the subject works, provided

the same have reached the site along with purchase order and the invoices against a guarantee in amounts and currencies equal to the advance payment plus 10%. The total advance payment under this sub-clause, including the applicable currencies and proportions, shall be as stated in the Contract Data.

All such plant, equipment and machinery shall be used only for executing the works under this Contract. No such plant, equipment and machinery shall be removed from the site, unless advance equivalent to the advance against such machinery has been fully repaid and prior permission of the Engineer has been obtained.

The Engineer shall decide whether a particular plant, equipment or machinery is actually required to execute the work. No advance is payable against items identified as unnecessary. The plant and machinery admissible for advance payment and its valuation shall be done by the Engineer on following considerations;

- (i) New items : 80% of purchase price
- (ii) Used or Second hand items : Not to be considered
- (iii) New Items valued at less than Rs. 10,00,000 each : Not to be considered.

14.2.3 Guarantees

Advances as mentioned in sub-clauses 14.2.1 & 14.2.2 above, shall be payable against acceptable Bank Guarantees from banks as specified in clause 4.2. The guarantees shall be in the form as given in Section 8 (Contract Forms) or in another form approved by the Employer. The Contractor shall ensure that the guarantees are valid and enforceable until the advance amount paid as has been repaid, but its amount may be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

14.2.4 Recovery of Advances

Unless stated otherwise in the Contract Data, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:

- (a) deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment) exceeds 5 percent of the Accepted Contract Amount less Provisional Sums or passage of six months from the date of release of first advance payment, whichever is earlier; and
- (b) deductions shall be made for accrued interest on the advance up to the month and advance at the rate stated in the Contract Data of the amount of each Interim Payment Certificate (excluding the advance payment and deductions and repayments of retention) in the currencies and proportions of the advance payment until such time as the advance payment and accrued interest has been repaid; provided that the advance payment and accrued interest shall be completely repaid prior to the time when 80 percent of the Accepted Contract Amount has been certified for payment. If the amount of interim payment certificate is not sufficient for recovery of accrued interest or in the opinion of the Employer satisfactory progress is not being achieved by the contractor, then the contractor will have to deposit the accrued

interest and return the mobilisation advance in part or in full as demanded by the Employer, failing which Employer shall have the right to encash the Bank Guarantee(s)

The contractor shall always have the option to start repayment earlier and/or to complete the repayment earlier than the due date.

If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Employer], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Employer.

14.2.5 Advances to be Used only for this Work

The advances shall be used by the Contractor strictly for the purpose of the Contract, and for the purpose for which they are paid. Under no circumstances, shall the advances be diverted for other purposes. Any such diversion shall be construed as a breach of the Contract and the Contractor shall be asked to return the advance at once and pay interest at 15% per annum till the advance is recovered back from him. The Contractor shall return the advance and pay the interest in one go without demur.

Employer retains the right for any other remedy prescribed for breach of Contract in this regard.

The Contractor, if required by the Engineer shall provide the details of utilisation of Mobilisation advance.

14.3 Application for Interim Payment Certificates

The Contractor shall submit a Statement in six copies to the Engineer in accordance with the payment procedure specified by the Engineer, after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports] and Record Measurement Sheets.

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- (a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
- (b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];
- (c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Contract Data to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Contract Data;
- (d) Any amounts to be added and deducted for the advance payments and repayments in accordance with sub clause 14.2 [Advance Payment];

- (e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
- (f) any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
- (g) the deduction of amounts certified in all previous Payment Certificates.
- (h) for invoicing as per GST Laws, the estimated contract value of the Works executed in terms of (a) above and any amounts added or deducted as per (b), (e) to (g) above is to be broken up in two components i.e. (i) the base amount excluding GST (ii) GST component (calculated at the rate for works contract service as per GST Laws).
- (i) Statement of interim payments certificates should be submitted by the Contractor to the Engineer by the 7th day of each month for the work executed upto the end of the previous month.
- (j) An amount to be deducted for the payments to be made to different Departments towards payments liable to be made by the Contractor.

14.4 Schedule of Payments

If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- (a) the instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
- (b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
- (c) if these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less than that on which the instalments were previously based.

If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

14.5 Plant and Materials intended for the Works

If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3:

- (k) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and

- (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Contract Data, this Sub-Clause shall not apply.

The Engineer shall determine and certify each addition if the following conditions are satisfied:

- (a) the Contractor has:

- (i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and
- (ii) submitted a statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

- (b) the relevant Plant and Materials:

- (i) are those listed in the Schedules for payment when shipped,
- (ii) have been shipped to the Country, en route to the Site, in accordance with the Contract; and
- (iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Employer in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration;

or

- (c) the relevant Plant and Materials:

- (i) are those listed in the Schedules for payment when delivered to the Site,
- (ii) the original 'Invoice' and the original 'Inspection Certificate' by the approved Inspection agency marked 'for payment' is furnished with the Application for IPC [sub-Clause 14.3].
- (iii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract.

The additional amount to be certified shall be the equivalent of eighty percent of the Engineer's determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials. The amount shall be certified on receipt of an Indemnity Bond for the stated amount in the Form approved by the Employer.

The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment

Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

No amount will be certified or paid until the employer has received and approved the performance security. Thereafter, the Engineer shall within two days after receiving a statement and supporting documents (including Contractor's certificate in terms of Sub-Clause 6.22 (ii)), issue to the Employer a provisional interim payment certificate which shall state the amount which the Engineer determines to be due after preliminary check as per K RIDE's procedure order. After this the Engineer shall, within 28 days after receiving a statement and supporting documents, issue to the employer an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with supporting particulars.

However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue the Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Contract Data. In this event, the Engineer shall give notice to the Contractor accordingly.

An Interim Payment Certificate shall not be withheld for any other reason, although:

- (a) if anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- (b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

14.7 Payment

The Employer shall pay to the Contractor:

- (a) the first instalment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment], whichever is later;
- (b) (i) After preliminary scrutiny and certifications by the Engineer, payment of 70% of the certified net payment due (after recoveries and deductions), shall be made by the Employer within 10 days of receiving a statement and supporting documents by the Engineer subject to the condition that last interim payment certificate has been settled after detailed check. In the event of the contractor submitting bills based on false measurements, Project Director should issue a written warning to him to the effect that the facility of 70% payment without detailed check will be withdrawn in future. If the contractor repeats the misconduct this facility should be withdrawn.

- (iii) The amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents. Any discrepancy shall be rectified in the next payment to the Contractor; and
- (c) the amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate or, the undisputed amount shown in the Final Statement, within 56 days after the date of notification of the suspension in accordance with Sub-Clause 16.2.

Payment of the amount due, unless specified in the Contract Data, shall be made in INR into the bank account, nominated by the Contractor except for the Contract where the Contractor has opted for payment through Letter of Credit (LC) arrangement. In such a case, the procedure for payment shall be as prescribed in clause 14.7.1 below.

- (d) the amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate or, the undisputed amount shown in the Final Statement, within 56 days after the date of notification of the suspension in accordance with Sub-Clause 16.2.

Payment of the amount due, unless specified in the Contract Data, shall be made in INR into the bank account, nominated by the Contractor except for the Contract where the Contractor has opted for payment through Letter of Credit (LC) arrangement. In such a case, the procedure for payment shall be as prescribed in clause 14.7.1 below.

However, in case of JV, direct payment to individual JV partners shall be made on joint certification (about the net amounts payable to individual partners) by the authorized representative of the JV and concerned respective authorized representative of individual JV partners, after making requisite recoveries/deductions from the gross payment. In case of any dispute regarding the net amounts payable to individual partners, the Engineer shall decide the same on the basis of the execution of items of works under Schedules/Bills indicated in the JV agreement as the responsibility of execution of each JV partner. Payment to individual JV partners shall be treated as payment made to the JV. The said payment shall not alter any obligation of the JV and its individual Partners under the Agreement and their obligations under the agreement shall remain joint and several.

A foreign company (either single entity or JV partner), shall have to submit proof of having opened their project office in India before any payment (including advance payment) is released to such a company. The required proof here shall be a copy of the report containing information as per format prescribed by Reserve Bank of India submitted to the Director General of Police (DGP) of the state concerned in which project office has been established.

14.7.1

Procedure for payment through LC:

- (i) The LC shall be a sight LC.
- (ii) The contractor shall select his Advising/Negotiating bank for LC. The incidental cost towards issue of LC and its operation thereof shall be borne by the contractor.

- (iii) The Employer's Bank and its nodal branch for issue of LCs based on requests received from Employer Accounts Units shall be as indicated in the Contract Data. The Branch office of the Employer's Bank, where the Employer Accounts Office has its Account, as indicated in the Contract Data, will be the issuance/reimbursing branch for LC issued under this arrangement. The Bank shall remain same for this tender till completion of contract. The present incidental cost @ 0.15% per annum of LC value or any increase/decrease by the banks for issue of LC and operation thereof shall be borne by the contractor and shall be recovered from his Interim Payment Certificates.
- (iv) The LC shall be opened initially for duration of 180 to 365 days in consultation with contractor. The LC shall be extended time to time as per the progress of the contract, on the request of the contractor. The value of LC to be opened initially as well as extended thereafter shall be finalized by the engineer in consultation with the contractor on the basis of expected progress of work.
- (v) The LC terms and conditions shall inter-alia indemnify and save harmless the Employer from and against all losses, claims and demands of every nature and description brought or recovered against the Employer by reason of any act or omission of the contractor, his agents or employees, in relation to the Letter of Credit (LC). All sums payable/borne by Employer on this account shall be considered as reasonable compensation and paid by contractor.
- (vi) The LC terms and conditions shall inter-alia provide that Employer will issue a Document of Authorisation (in the format decided in consultation with the Employer's Bank) after passing the Interim Payment Certificate for completed work, to enable contractor to claim the authorized amount from their bank.
- (vii) The acceptable, agreed upon document for payments to be released under the LC shall be the Document of Authorisation.
- (viii) The Document of Authorisation shall be issued by Employer Accounts Office against each Interim Payment Certificate passed by Employers.
- (ix) On issuance of document of Authorisation, a copy of Document of Authorization shall be sent to the contractor. A copy of Document of Authorisation shall also be sent by Employer Accounts Office to Employer's bank.
- (x) On receipt of Document of Authorization, the contractor shall present his claim to his bank (advising Bank) for necessary payments as per LC terms and conditions. The claim shall comprise of copy of Document of Authorization, Bill of Exchange and Payment Certificate.
- (xi) The payment against LC shall be subject to verification from Employer's Bank .
- (xii) The contractor's bank (advising bank) shall submit the documents to the Employer's Bank .

- (xiii) The Employer's bank (Issuing Bank) shall, after verifying the claim so received w.r.t. the Document of Authorisation received from Employer Accounts Office release the payment to contractor's bank (advising bank) for crediting the same to contractor's account.
- (xiv) Any number of Interim Payment Certificates can be dealt within one LC, provided the sum total of payments to contractor is within the amount for which LC has been opened.
- (xv) The LC shall be closed after the release of Final Payment certificate including PVC amount, if any, to the contractor.
- (xvi) In case of JV, LC shall be opened in the name of JV and option of direct payment to individual JV partners through LC shall not be permissible.

14.8 Delayed Payment

If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive interest compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Special Conditions of Contract, the interest amount be calculated at the annual rate of seven percent.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

14.9 Payment of Retention Money

The Retention Money shall be certified and paid with the final payment certificate or bank guarantee against retention money shall be released, after making required adjustments for recovery for shortage/excess materials, if any **(except those quantities which become surplus due to change in planning/scheme by K RIDE in case the recovery for surplus/excess materials is still balance after adjusting the amount payable in the final payment certificate.**

The contractor shall be entitled to substitute a bank guarantee in the form approved by the Employer with the retention money amount recovered upto the date of request. Such substitution shall be permissible maximum upto 3 times. The Bank Guarantee shall be valid upto end of Defect Liability Period. In case of extension of date of completion of contract, the Contractor shall extend the validity of the Bank Guarantee(s) until the revised end of Defect Liability Period.

Wherever the contract is terminated under Clause 15.2, the Retention Money shall be forfeited and the balance work should be got done separately.

14.10 Statement at Completion

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:

- (a) the value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works,
- (b) any further sums which the Contractor considers to be due, and
- (c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement as per procedure prescribed by the Engineer, with supporting documents showing in detail in a form approved by the Engineer:

14.11 Application for Final Payment Certificate

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement as per procedure prescribed by the Engineer, with supporting documents (including Contractor's certificate in terms of Sub-Clause 6.22 (ii)) showing in detail in a form approved by the Engineer:

- (a) the value of all work done in accordance with the Contract, and
- (b) any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, as per procedure prescribed by the Engineer the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

However if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.3 [Obtaining Dispute Board's Decision] or Sub-Clause 20.2 [Amicable Settlement], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

14.13 Issue of Final Payment Certificate

Within 28 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall issue, to the Employer, the Final Payment Certificate which shall state:

- (a) the amount which he fairly determines is finally due, and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- (a) in the Final Statement and also
- (b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

However, this Sub-Clause shall not limit the Employer's liability under his indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer.

14.15 Currencies of Payment

The Contract Price shall be paid in Indian Rupees (INR).

15	Termination by Employer
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15.1 Notice to Correct

If the Contractor fails to carry out any obligation under the Contract as mentioned below, but not limited to, the Engineer/ Employer may serve the contractor with a 14 days notice in writing calling upon the contractor to make good the failure and to remedy it. If the contractor;

- (a) fails to comply with Sub-Clause 4.2 [Performance Security],
- (b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
- (c) without reasonable excuse fails to:
 - (i) proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
 - (ii) comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 28 days after receiving it, or
 - (iii) adhere to the agreed programme of work / activity on the critical path, by a margin of 10% of the stipulated period, or
 - (iv) take steps to deploy competent and adequate number of personnel, and equipment to achieve progress as per agreed programme or
 - (v) adhere to the instructions of Engineers/Employer persistently or
 - (vi) comply any provision of the contract or
 - (vii) provide the Engineer/Employer or their representative proper facilities for inspecting the works or any part thereof as required, under Clause 7.3 (Inspection) and 7.4 (Testing).
- (d) subcontracts the whole or major part of the Works or assigns the Contract without prior written consent of the Employer.,

If the contractor does not, within 14 days of receipt of notice under this sub-clause, proceed to make good his default in so far as the same is capable of being made good and carry on the work of complying with such direction as contained in the notice under sub clause 15.1, to the entire satisfaction of the Engineer/Employer, the Employer shall be entitled to take action under sub-clause 15.1.1 or 15.1.2 or 15.2 below.

15.1.1

In case of contractor's repeated failure to adhere to the agreed program, and whereas the contractor has been served with a Notice to Correct under Clause 15.1 of GCC, if the contractor approaches K RIDE with a revised program with specific monthly physical and financial targets along with the proposal to deploy matching inputs in the form of manpower and other resources to the satisfaction of the Employer, then the Employer may consider whether to proceed with termination of the contract under Clause 15.2 of GCC or to continue with the contract. However, the request to

continue with the contract shall only be considered if the contractor supports his earnestness to adhere to the revised program by submitting additional Performance Security in the form of Bank Guarantee(s) of specified number and value as decided by the Employer (total value of which will not exceed 10% of the contract price). The encashment of these additional Bank Guarantee(s) shall be linked with the non achievement of agreed physical/financial targets agreed upon by the Contractor and the Employer.

15.1.2

In case the contractor's failure is limited to only some of the works, and in response to Notice to Correct under Clause 15.1 of GCC, the contractor approaches the Employer that such works may be offloaded from him and got executed through another agency and additional cost incurred, if any, should be recovered from his dues, the Employer, on being convinced that the anticipated additional cost for such works will not be substantial and can be recovered from the dues of the contractor and that such offloading will help in improving the overall progress of the project, may agree to such offloading without any repercussion on the performance security and/or additional bank guarantees, if any, submitted by the contractor. However, the Employer will not be under any compulsion to agree to such a request. The Contractor shall be informed of the LOA issued to other agency(ies) for such works.

In case the contractor does not approach the employer for offloading but the Employer is convinced that:

- (i) offloading of some works will help in improving the progress of the project;
- (ii) termination/part termination of the contract at this stage will not be in the interest of the project;
- (iii) the anticipated additional cost for such works will not be substantial and can be recovered from the dues of the contractor;

The Employer may issue 7 days notice to the Contractor stating the resources required to be deployed against each work. If the contractor fails to deploy the required resources as indicated in the notice, the employer shall offload such works and proceed with getting the works executed through other agency(ies). The Contractor shall be informed of the LOA issued to other agency(ies) for such works.

Offloading under the sub clause 15.1.2 shall be without any repercussion on the performance security and/or additional bank guarantees, if any, submitted by the contractor. The Contractor would have no future claim on this account and the extra expenditure so incurred, if any, by the Employer in getting the offloaded work done, shall be recovered from subsequent payment certificates or any other dues of the contractor.

15.2 Termination by Employer

The Employer shall be entitled to terminate the Contract as a whole or any part or parts (as may be specified in the Notice of Termination under any of the above Sub-Clause issue) if the Contractor:

- (a) fails to comply with the directions contained in the notice under Sub-Clause 15.1 [Notice to Correct],
- (b) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against it by Court or Statutory Authority him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
- (c) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
 - (i) for doing or forbearing to do any action in relation to the Contract, or
 - (ii) for showing or forbearing to show favour or disfavour to any person in relation to the Contract,

or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (c). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination

In any of these events or circumstances, the Employer may, by Notice Terminate the contract with immediate effect.

The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer, under the Contract or otherwise.

The Contractor shall remove all his plants and machinery from the site then leave the Site and deliver any required Goods, all Contractors' Documents, and other design documents made by or for him, to the Engineer within 7 days from the issue of Notice of Termination, failing which Delay Damages as prescribed for delay in completion of works shall be imposed as per provision of clause 8.7. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice of Termination (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor for completing the work.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Employer] has taken effect, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract. For this purpose, the contractor shall be notified the date for witnessing of measurements and handing over of the materials for which contractor has already been paid. In case the contractor fails to attend or send a representative even after such notice, the Engineer shall ex parte proceed with measurements of the works executed and taking over of plants and materials etc. for which payment has already been made to the contractor, which shall be treated as final.

15.4 Payment after Termination

After a notice of termination under Sub-Clause 15.2 [Termination by Employer] has taken effect, the Employer may:

- (a) proceed in accordance with Sub-Clause 2.5 [Employer's Claims],
- (b) encash the Performance Guarantee and forfeit the Performance

Security:

- i) In full including additional Performance Guarantee amount if any taken in terms of sub clause 35.5 of ITB and not due for release on the date of issue of termination letter, in case of termination of the contract as a whole; Or
- ii) in part/parts proportionate to the contract price of the bill/schedule to which the terminated part of work belongs i.e.

$P = (A \times B) \div C$ where,

P = Proportionate Bank Guarantee Amount

A = Contract Price of the particular bill/schedule to which the terminated part of work belongs

B = Performance Guarantee amount in terms of GCC sub clause 4.2

C = Total Contract Price

Plus additional Performance Guarantee amount if any taken in terms of sub clause 35.5 of ITB and not due for release on the date of issue of termination letter against that particular bill/Schedule to which the terminated part of the work belongs in case of termination in part/parts.

- (c) release any payment due to the contractor for works executed prior to termination and evaluation under clause 15.3 (valuation at date of termination, however, if by this time the Contractor has failed to make a payment due to the Employer, the same will be deducted from the payment due and any balance remaining shall then be paid to the Contractor.)

15.5 Employer's Entitlement to Termination for Convenience

The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Clause 16.2 [Termination by Contractor].

After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 19.1 [Payment and Release in case of Optional Termination].

15.6 Corrupt or Fraudulent Practices

If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 15 shall apply as if such expulsion had been made under Sub-Clause 15.2.

For the purposes of this Sub-Clause:

- (a) *“corrupt practice” means the offering, giving, receiving of soliciting of anything of “value to influence the action of a public official in the procurement process or in the Contract execution.*
- (b) *“fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of the Contract to the detriment of the Employer, 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 Employer of the benefits of free and open competition.*
- (c) *“collusive practice” means a scheme or arrangement between two or more bidders, with or without the knowledge of the Employer, designed to establish bid prices at artificial, noncompetitive levels.*
- (d) *“coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.*

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17	Risk and Responsibility
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17.1 Indemnities

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- (a) bodily injury, sickness, disease or death, of any person including railway user whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and
- (b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property].

17.2 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Employer. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Employer.

After responsibility has accordingly passed to the Employer, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Employer's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3 Employer's Risks

The risks referred to in Sub-Clause 17.4 below, insofar as they directly affect the execution of the works in the Country, are:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, within the Country,
- (c) riot, commotion or disorder within the Country by persons other than the Contractor's Personnel,
- (d) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity,
- (e) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
- (f) use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract,
- (g) design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible, and
- (h) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventative precautions.

17.4 Consequences of Employer's Risks

If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (f) and (g) of Sub-Clause 17.3 [Employer's Risks], Cost shall be payable.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

17.5 Intellectual and Industrial Property Rights

In this Sub-Clause, “infringement” means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and “claim” means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any claim within 28 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

The Employer shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

- (a) an unavoidable result of the Contractor’s compliance with the Contract, or
- (b) a result of any Works being used by the Employer:
 - (i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
 - (ii) in conjunction with any thing not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

The Contractor shall indemnify and hold the Employer harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.6 Limitation of Liability

Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, provided that this exclusion shall not apply to any obligation of the Contractor to pay Delay Damages to the Employer under Sub-Clause 8.7 [Delay Damages].

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Employer’s Equipment and Free-Issue Material], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum as specified in the Contract Data or if nothing is specified in the Contract Data, the accepted Contract Amount.

This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Employer's Accommodation/ Facilities

The Contractor shall take full responsibility for the care of the Employer provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

K RIDE

18	Insurance
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18.1 General Requirements for Insurances

In this Clause, “insuring Party” means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Employer shall act for Employer’s Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

The relevant insuring Party shall, within the respective periods stated in the Contract Data (calculated from the Commencement Date), submit to the other Party:

- (a) evidence that the insurances described in this Clause have been effected, and
- (b) copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor’s Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].
- (c) If the contractor fails to submit evidence and copies of the policies as mentioned in (a) & (b) above to prove that the policies have been obtained within the period specified in the contract data, and submits the same later on and from the submitted evidence it is found that the policies have not been obtained within the period specified, the Employer shall recover double the cost of the premium for the period the policies have been delayed.

When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.

Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay double the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [Employer's Claims] or Sub-Clause 20.1 [Contractor's Claims], as applicable.

The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

18.2 Insurance for Works and Contractor's Equipment

The Contractor shall insure the Works, Plant, Materials, including those issued by the Employer and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit, subject to a maximum value indicated in Contract Data.. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).

The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

Unless otherwise stated in the Special Conditions of Contract, insurances under this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,

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- (b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated between the Parties for the sole purpose of rectifying the loss or damage,
 - (c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Employer's Risks],
 - (d) shall also cover loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Employer's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Contract Data (if an amount is not so stated, this sub-paragraph (d) shall not apply), and
 - (e) may however exclude loss of, damage to, and reinstatement of:
 - i) part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
 - ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
 - iii) a part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage, and
 - iv) Goods while they are not in the Country, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].

If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Employer, with supporting particulars. The Employer shall then (i) be entitled subject to Sub-Clause 2.5 [Employer's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

18.3 Insurance against injury to Persons and Damage to Property

The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the amount stated in the Contract Data, with no limit on the number of occurrences. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

Unless otherwise stated in the Special Conditions of Contract, the insurances specified in this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,
- (b) shall be in the joint names of the Parties,
- (c) shall be extended to cover liability for all loss and damage to the Employer's property including Railways Property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
- (d) may however exclude liability to the extent that it arises from:
 - (i) the Employer's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works,
 - (ii) damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects, and
 - (iii) a cause listed in Sub-Clause 17.3 [Employer's Risks], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for Contractor's Personnel

The Contractor shall abide by the provisions of ESIC Act, 1948 (extended from time to time) to take care of insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness or disease. In addition the contractor shall also maintain insurance against liability for claim of death of any person employed by the Contractor or any other of the Contractor's Personnel.

The Employer and the Engineer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19	Force Majeure
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If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of public enemy, civil commotion, sabotage, serious loss or damage by fire, explosions, epidemics, strikes, lockouts or acts of God (hereinafter referred to 'events') provided, notice of the happening of any such event is given by either party to the other within 14 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and works under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and decision of the Engineer as to whether the works have been so resumed or not shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a continuous period exceeding 84 days, either party may at its option terminate the contract by giving notice to the other party.

19.1 Payment and Release in case of Optional Termination

Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include :

- (a) The amounts payable for any work carried out for which a price is stated in the contract;
- (b) The Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the contractor is liable to accept delivery; this Plant and materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, the Contractor shall place the same at the Employer's disposal;
- (c) Other Costs or liabilities supported by necessary documentary evidence which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works as per mutually agreed programme.
- (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost).

20	Claims, Disputes and Arbitration
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20.1 Contractor's Claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Employer's liability, the Engineer may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

- (a) this fully detailed claim shall be considered as interim;
- (b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer may reasonably require; and
- (c) the Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.

Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within such time.

Each Payment Certificate shall include such amounts for any claim as have been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the

Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

The Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

20.2 Amicable Settlement

In case any dispute between the Engineer and the Contractor for which claim has already been made by the contractor, remains unresolved, the Contractor shall, then, give notice of dissatisfaction and intention to commence arbitration to the Employer duly specifying the subject of the dispute or difference as also the amount of claim item wise. The Parties shall make attempts to settle the dispute amicably before the commencement of arbitration as per procedure by KRIDE. However, unless both Parties agree otherwise, demand for arbitration may be made by the contractor after ninety days from the day on which a notice of dissatisfaction and intention to commence arbitration was given, even if no attempt at amicable settlement has been made.

Procedure for Amicable Settlement in contracts

1. Amicable Settlement Committee at senior management level shall make an attempt to resolve the issues/disputes within 90 days of request by the contractor.
2. The committee shall comprise of the following:-
 - (i) GM /K RIDE directly in-charge of the project;
 - (ii) Concerned finance officer, and
 - (iii) GM /K RIDE (in the same order) directly in-charge of the project of other discipline(s) in case the issues involve other discipline(s) of the engineering
3. Whenever the contractor submits a request for amicable settlement, MD/K RIDE should forward the same to concerned GM /K RIDE (in the same order) directly in-charge of the project. GM /K RIDE on receipt of the same shall issue a note to the concerned finance officer and concerned GM/K RIDE of other discipline in case the issues involved other discipline(s) of engineering, about the request for amicable settlement to be dealt by them and fix a date in consultation with them for a hearing. The date should then be communicated to the MD/K RIDE, GM/ /K RIDE of other department (if the issues involved their department) and contractor for presenting their case before the Amicable Settlement Committee.

4. This being an additional workload like arbitration, the Committee members shall be paid fee by KRIDE at the rates payable to the Arbitrators of KRIDE.

20.3 Arbitration

Any dispute, in respect of which amicable settlement has not been reached, arising between the Employer and the Domestic or Foreign Contractor related to any matter arising out of or connected with this contract, then the contractor shall be entitled to demand in writing that the dispute or difference be referred to arbitration.

Only such dispute(s) or difference(s) in respect of which the demand had been made for amicable settlement under GCC 20.2 but could not be settled, shall be referred to arbitration subject to the condition that cumulative amount of claims in the contract is not exceeding 20% of the contract price. In case the cumulative amount of claims exceeds 20% of the contract price, arbitration clause will not be applicable.

The Arbitration proceedings shall commence from the day, a written and duly quantified demand for arbitration is received by Managing Director, Rail Infrastructure Development Company (Karnataka) Limited, Bangalore /K RIDE).

The disputes so referred to arbitration shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996 and any statutory modification or re-enactment thereof.

Further, it is agreed between the parties as under:

20.3.1

Number of Arbitrators: The arbitral tribunal shall consist of three arbitrators.

20.3.2

Procedure for Appointment of Arbitrators: The arbitrators shall be appointed as per following procedure:

- (a) The Contractor, while invoking demand for arbitration, shall submit to MD/K RIDE, claims duly quantified along with name and contact details of his nominee arbitrator. Thereafter, he Employer will nominate his nominee arbitrator within a period of 30 days from receipt of such demand from the Contractor and will issue letter of appointment to both the arbitrators appointed by the parties with a copy to the Contractor.
- (b) The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties and shall act as Presiding Arbitrator. In case of failure of the two Arbitrators appointed by the parties to reach upon consensus within a period of 30 days from the appointment of the Arbitrators subsequently appointed, then, upon the request of either or both parties, the Presiding Arbitrator shall be appointed by the Managing Director, Rail Infrastructure Development Company (Karnataka) Limited, Bangalore.
- (c) If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his office as arbitrator, or vacates his/their office/offices or is/are unable or unwilling to perform his functions as arbitrator for any reason whatsoever or dies or in the opinion of the concerned GM/K RIDE fails to act without undue delay,

the MD/K RIDE shall appoint new arbitrator/arbitrators to act in his/their place except in case of new Presiding Arbitrator who shall be chosen following the same procedure as mentioned in para (b) above. Such re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator(s).

20.3.3

Qualification and Experience of Arbitrators (to be appointed as per sub-clause 20.3.2 above): The contract being of specialized nature requiring knowledge and experience of dealing with construction contracts, the arbitrators to be appointed shall have minimum qualification and experience as under:

Arbitrator shall be;

a working/retired officer (not below E-9 grade and above in a PSU with which K RIDE has no business relationship) of any discipline of Engineering or Accounts/Finance department, having experience in Contract Management of construction contracts; or

a retired officer (retired not below the HAG level) of any Engineering/Accounts Services of Central Government, having experience in Contract Management of construction contracts; or a retired officer who should have retired more than 3 years previously from the date of appointment as Arbitrator (retired not below E-9 grade in K RIDE or a PSU with which K RIDE has a business relationship) of any Engineering discipline or Accounts department, having experience in Contract Management of construction contracts.

20.3.4

No person other than the persons appointed as per above procedure and having above qualification and experience shall act as Arbitrator. In case any person having the qualification and experience other than that mentioned above is nominated as arbitrator, the arbitration clause shall cease to exist and shall not be applicable.

No new claim, except as otherwise mutually agreed by the Parties, shall be added during proceedings by either party. However, a party may amend or supplement the original claim or defence thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the delay in making it.

20.3.5

Neither party shall be limited in the proceedings before such arbitrators to the evidence nor did arguments previously put before during amicable settlement.

20.3.6

The reference to arbitration may proceed, notwithstanding that the Works shall not then be or be alleged to be complete, provided always that the obligations of the Employer, the Engineer and the Contractor shall not be altered by the reason of the arbitration being conducted during the progress of the Works. Neither party shall be entitled to suspend the Works, nor shall payment to the Contractor be withheld on account of such proceedings

20.3.7

If the contractor(s) does/do not prefer his/their specific and final claims in writing, within a period of 90 days of receiving the intimation from the Employer/Engineer that the final bill is ready for signature of the contractor(s), he/they will be deemed to have waived his/their claim(s) and the Employer shall be discharged and released of all liabilities under the contract in respect of these claims.

20.3.8

Arbitration proceedings shall be held at Bangalore, India or at a place where GM(CIVIL)/K RIDE's (dealing the contract) office is located, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be in English.

20.3.9

The Arbitral Tribunal should record day to day proceedings. The proceedings shall normally be conducted on the basis of documents and written statements.

All arbitration awards shall be in writing and shall state item wise, the sum and detailed reasons upon which it is based.

20.3.10

Any ruling on award shall be made by a majority of members of Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

A party may apply for correction of any computational errors, any typographical or clerical errors or any other error of similar nature occurring in the award of a tribunal and interpretation of specific point of award to tribunal within 60 days of the receipt of award.

A party may apply to tribunal within 60 days of receipt of award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

20.3.11

Where the Arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.

20.3.12

The fees and other charges of the conciliator/arbitrators shall be as per the fee structure fixed by the employer as amended from time to time irrespective of the fact whether the Arbitrator(s) is/are appointed by the parties or by the Court of law unless specifically directed by Hon'ble Court otherwise on the matter, and shall be shared equally by the Employer and the Contractor. However, the expenses incurred by each party in connection with the preparation, presentation will be borne by itself

21. Jurisdiction of courts

The Contract Agreement shall be subject to exclusive jurisdiction of Courts as indicated in the Contract Data.

APPENDIX 1

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

(The laws as current on the date of bid opening will apply)

- a) **Workmen Compensation Act 1923:** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) **Employees P.F. and Miscellaneous Provision Act 1952 (since amended):** The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) payment of P.F. accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951:** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition) Act 1970:** The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.
- f) **Minimum Wages Act 1948:** The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- g) **Payment of Wages Act 1936:** It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979:** The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

- i) **Payment of Bonus Act 1965:** The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- j) **Industrial Disputes Act 1947:** The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) **Industrial Employment (Standing Orders) Act 1946:** It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) **Trade Unions Act 1926:** The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act 1986:** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) **Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979:** The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and back, etc.
- o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996:** All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to

whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

As per Central Government's Notification No.S.O.2899 dated 26.09.1996 under this act, the cess shall be levied @1% of cost of construction works which shall be deducted from each bill of the payment due to the contractor.

- p) **Factories Act 1948:** The Act lays down the procedure for approval at 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.
- q) **The Employees State Insurance Act, 1948 (Act No. 34 of 1948) (Provisions as extended from time to time):**An Act to provide for certain benefits to employees in case of sickness, maternity and 'employment injury' and to make provision for certain other matters in relation thereto.

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Section 7	Special Conditions of Contract (SCC)
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Section 7**Contract Data****Common to all Packages**

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

Conditions	Reference to GCC	Data
Employer's name and address	1.1.2.2 & 1.3	Rail Infrastructure Development Company (Karnataka) Limited (A Joint venture of GoK and MoR) MSIL House, 7th Floor, #36, Cunningham Road Bangalore – 560052 Tele: 91-80-22370582 Fax: 91-80-22370581
Employer's Representative	1.1.2.6	General Manager (Civil), Rail Infrastructure Development Company (Karnataka) Limited MSIL House, 7th Floor, #36, Cunningham Road Bangalore – 560052 Tele: 91-80-22370582 Fax: 91-80-22370581 E – Mail: md@kride.in
Engineer's name and address	1.1.2.4 & 1.3 (b)	<i>Will be notified later</i>
Defects Notification Period	1.1.3.7	180 days.
Electronic transmission systems	1.3 (a)	Not permitted
Address for Communication to Employer	1.3 (b)	General Manager (Civil), Rail Infrastructure Development Company (Karnataka) Limited MSIL House, 7th Floor, #36, Cunningham Road Bangalore – 560052 Tele: 91-80-22370582 Fax: 91-80-22370581 E – Mail: md@kride.in
Governing Law	1.4	The Laws of Republic of India
Ruling language	1.4	English
Language for communications	1.4	English

Conditions	Reference to GCC	Data
Time for access to Site (after the date of commencement)	2.1	Starting from the Date of Commencement, the section will be progressively handed over in 90 days.
Performance Security	4.2 & 11.9	<p>(a) The Performance Security shall be for an amount of 10% (Ten percent) of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract amount in the prescribed form for the stated amount valid for a period of 28 days beyond issue of performance certificate. The contractor shall have the following options;</p> <p>(i) to submit full performance security for an amount equal to 10% of the contract price;</p> <p>or</p> <p>(ii) to submit part performance security for an amount equal to 5% of the contract price and the balance performance security shall be recovered from interim payment certificates @ 10% of the bill amount starting from 1st bill till it reaches full Performance Security. The contractor shall not be entitled to any interest on the amounts so recovered. However, the contractor shall be entitled for release of recovered amount of performance security against submission of bank guarantee of an equivalent amount, maximum three times during the contract.</p> <p>(b) Additional Performance Security, if any, shall be for an amount as determined by Employer in terms of ITB 35.5 and informed through letter of award and in the same currency(ies) of the Accepted Contract amount in the prescribed form valid for a period of 28 days beyond issue of performance certificate.</p>
Normal working hours	6.5	Sunrise to Sunset (This may be modified to suit the work requirements).
Commencement of works	8.1	Within fifteen (15) days from the date Contractor receives Letter of acceptance.
Maximum amount of delay damages	8.7	10% (ten percent) of the Contract Price.

Conditions	Reference to GCC	Data					
Amount of bonus for early completion	8.13	1% of the Contract Price per month (part of the month to be excluded) for substantial completion of work.					
Maximum limit of bonus	8.13	5% of Contract Price.					
State Capital Applicable		Bangalore					
Mobilization advance payment	14.2.1	Comprises of the percentage of Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable and in installments as mentioned below; <table><tr><th>Mobilisation Advance</th><th>Installments</th></tr><tr><td>As per request of the Contractor subject to a maximum of 5%</td><td>Two Equal</td></tr></table>		Mobilisation Advance	Installments	As per request of the Contractor subject to a maximum of 5%	Two Equal
Mobilisation Advance	Installments						
As per request of the Contractor subject to a maximum of 5%	Two Equal						
Timing of Mobilization Advance Payment	14.2.1	First Installment within 21 (Twenty one) days from the date of receipt of guarantee acceptable to Employer. Second Installment shall be released only when the contractor submits statement of having utilized the First Installment of mobilization Advance and the Employer is satisfied that the utilization has been done in purposeful manner. This shall be released within 21 days from the date of receipt of guarantee acceptable to the Employer.					
Advance Payment against Plant and Machinery	14.2.2	The total advance for Plant and Machinery shall be limited to 5% of the Contract price. Each time advance shall be paid within 21 days from the date of receipt of guarantee acceptable to the Employer subject to the fulfillment of other conditions of the sub-clause.					
Interest on Advance Payment	14.2.1 & 14.2.2	At the rate of 8.95% simple interest per annum on reducing balances.					

Conditions	Reference to GCC	Data
Repayment rate of Advance payment	14.2.4	<p>13.5% (Thirteen and half percent) of the amount of each payment if the advance taken is 10% of the contract price.</p> <p>20% (Twenty percent) of the amount of each payment if the advance taken is 15% of the contract price.</p> <p>If the total advance taken is less, the rate of recovery shall be proportionate.</p> <p>In case further advance is taken under sub-clause 14.2.1 and/or 14.2.2, after repayment has already been started, the Repayment Rate (R%) shall be revised in the next payment certificate as per following formula;</p> <p>$R = \frac{A \times 100}{80 - \% \text{ financial progress till previous payment certificate}}$</p> <p>Where 'A' is total outstanding Advance as a percentage of Contract Price.</p> <p>If the Contractor returns part of the advance amount on his own or on the instructions of the Employer or in the event that the Contractor has failed to deposit the advance amount as per demand of the Employer and the Employer has subsequently encashed the Bank Guarantee(s), then the rate of recovery shall be suitably reworked considering the balance amount of advance due to be recovered and to ensure that the complete recovery of advance and accrued interest is made within 80% of the financial progress.</p>
Percentage of Retention Money	14.3	<p>Retention money shall be deducted @ 2% of the total value of 'exclusive supply items' of BOQ</p> <ol style="list-style-type: none"> against which last installment of stage payment is included in the interim payment certificate for items having stage payment condition; full payment against items (not having any stage payment condition) included in the interim payment certificate. <p>It is clarified that retention money is not applicable to advance payment under clause 14.5(c).</p>
Limit of Retention Money	14.3	2% of the Contract Price
Plant and Materials	14.5 (b)	Not applicable

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Section 8

Contract Forms

Section 8**Contract Forms**

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

All italicized text is for guidance how to prepare the various forms and shall be deleted from the final documents.

Table of Forms

Title	Form No	Page No
Form of Contract Performance Security	Form No. COF/3	270-272
Form of additional Performance Security	--	273-275
Advance Payment Security	--	276-279
Indemnity bond for the safe custody of the plant and materials supplied by the contractor	--	280-283
Form of Bank Guarantee For Release of Balance Retention Money	--	284-286

COF/3

**FORM OF CONTRACT PERFORMANCE
SECURITY (BANK GUARANTEE)**
[Refer Clause 41 of Instructions to Bidders]

(On non-judicial stamp paper of the appropriate value in accordance with stamp Act. The stamp paper to be in the name of Executing Bank).

From:

Name and Address of the Bank.....

To:

The Managing Director,
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor,
#36, Cunningham Road,
Bangalore – 560052

WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited, hereinafter called the **Employer**, acting through **[Insert Designation and address of the Employer's Representative]**, has accepted the bid of **[Insert Name and address of the Contractor]**, hereinafter called the **Contractor**, for the work of **[Insert Name of Work]**, vide Notification of Award No. **[Insert Notification of Award No.]**.

AND

WHEREAS, the contractor is required to furnish Performance Security for the sum of **[Insert Value of Performance Security required]**, in the form of bank guarantee, being a condition precedent to the signing of the contract agreement.

WHEREAS, **[Insert Name of the Bank]**, with its Branch **[Address]** having its Headquarters office at **[Address]**, hereinafter called the **Bank**, acting through **[Designation(s) of the authorised person of the Bank]**, have, at the request of the **[Insert name of the JV partner]**, a JV partner on behalf of the contractor, agreed to give guarantee for performance security and additional performance security as hereinafter contained:

- 1 KNOW ALL MEN by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay the Employer the full amount in the sum of **[Insert Value of Performance Security required]** as above stated.
- 2 The Bank undertakes to immediately pay on presentation of demand by the Employer any amount up to and including aforementioned full amount

- without any demur, reservation or recourse. Any such demand made by the Employer on the Bank shall be final, conclusive and binding, absolute and unequivocal notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Employer of Bank..
- 3 On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
 - 4 The Bank shall pay the amount as demanded immediately on presentation of the demand by Employer without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
 5. The Bank Guarantee shall be unconditional and irrevocable.
 - 6 The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Contractor.
 - 7 The Bank agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
 - 8 This guarantee is valid and effective from the date of its issue, which is ***[insert date of issue]***. The guarantee and our obligations under it will expire on ***[Insert the date twenty eight days after the expected end of defect liability period]***. All demands for payment under the guarantee must be received by us on or before that date.
 - 9 The Bank agrees that the Employers right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will be valid until either the aforementioned full amount is paid to the Employer or the guarantee is released by Employer before the Expiry date.
 - 10 The Bank agrees that its obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
 - 11 The expressions Bank and Employer herein before used shall include their respective successors and assigns.
 - 12 The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee

is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

- 13 The Guarantee shall be in addition to and without prejudice to any other security Guarantee (s) of the contractor in favour of the Employer available with the Employer. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Employer.

Date

Place.....

.....
[Signature of Authorised person of Bank]

.....
[Name in Block letters]

.....
[Designation]

.....
[P/Attorney] No.

.....
Bank's Seal

[P/Attorney] No.

Witness:

1. Signature
Name & Address & Seal
2. Signature
Name & address & Seal

Note :

1. All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.
2. In case the guarantee is issued by a foreign Bank, which does not have operations in India, the said bank shall have to provide a counter-guarantee by State Bank of India.
3. In case the Contractor is a JV, the Performance Security is required to be furnished on behalf of the JV in favour of the Employer by the JV Partners in proportion of their respective percentage share specified in the JV Agreement. The percentage share of M/s **[Insert Name of the JV Partner]** in the JV is **[Fill share % in the JV]** percent. All the Bank Guarantee of JV Partners are liable to be encashed cumulatively.

**FORM OF ADDITIONAL PERFORMANCE SECURITY
(BANK GUARANTEE)**

[Refer Clause 35.5 of Instructions to Bidders]

*(On non-judicial stamp paper of the appropriate value in accordance with stamp Act.
The stamp paper to be in the name of Executing Bank)*

From:

Name and Address of the Bank.....

.....

To:

The Managing Director,
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor,
#36, Cunningham Road
Bangalore – 560052

WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited, hereinafter called the **Employer**, acting through **[Insert Designation and address of the Employer's Representative]**, has accepted the bid of **[Insert Name and address of the Contractor]**, hereinafter called the **Contractor**, for the work of **[Insert Name of Work]**, vide Notification of Award No. **[Insert Notification of Award No.]**.

AND

WHEREAS, the contractor is required to furnish additional Performance Security for the sum of **[Insert Value of additional Performance Security required]**, in the form of bank guarantee, being a condition precedent to the signing of the contract agreement.

WHEREAS, **[Insert Name of the Bank]**, with its Branch **[Address]** having its Headquarters office at **[Address]**, hereinafter called the **Bank**, acting through **[Designation(s) of the authorised person of the Bank]**, have, at the request of the [Insert name of the JV partner], a JV partner on behalf of the contractor, agreed to give guarantee for additional performance security as hereinafter contained:

- 1 KNOW ALL MEN by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay the Employer the full amount in the sum of **[Insert Value of additional Performance Security required]** as above stated.
- 2 The Bank undertakes to immediately pay on presentation of demand by the Employer any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Employer on the Bank shall be final, conclusive and binding, absolute and unequivocal notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Employer of Bank.

- 3 On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
- 4 The Bank shall pay the amount as demanded immediately on presentation of the demand by Employer without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
- 5 The Bank Guarantee shall be unconditional and irrevocable.
- 6 The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Contractor.
- 7 The Bank agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
- 8 This guarantee is valid and effective from the date of its issue, which is ***[insert date of issue]***. The guarantee and our obligations under it will expire on ***[Insert the date twenty eight days after the expected end of defect liability period]***. All demands for payment under the guarantee must be received by us on or before that date.
- 9 The Bank agrees that the Employers right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will be valid until either the aforementioned full amount is paid to the Employer or the guarantee is released by Employer before the Expiry date.
- 10 The Bank agrees that its obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
- 11 The expressions Bank and Employer herein before used shall include their respective successors and assigns.

- 12 The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.
- 13 The Guarantee shall be in addition to and without prejudice to any other security Guarantee(s) of the contractor in favour of the Employer available with the Employer. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Employer.

Date

Place.....

.....
[Signature of Authorised person of Bank]

.....
[Name in Block letters]

.....
[Designation]

.....
[P/Attorney] No.

.....
Bank's Seal

[P/Attorney] No.....

Witness:

1. Signature
Name & Address & Seal
2. Signature
Name & address & Seal

Note :

- 1 All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.
- 2 In case the guarantee is issued by a foreign Bank, which does not have operations in India, the said bank shall have to provide a counter-guarantee by State Bank of India.
- 3 The Bank Guarantee should be duly attested by Notary public with notarial stamp of appropriate value affixed thereon.
- 4 In case the Contractor is a JV, the additional Performance Security is required to be furnished on behalf of the JV in favour of the Employer by the JV Partner(s) who is responsible for execution of schedule(s) (as per JV agreement) against which additional Performance Security is required to be submitted in terms of ITB 35.5. All the Bank Guarantee of JV Partners are liable to be encashed cumulatively.

Advance Payment Security

[Refer Clause 14.2 of GCC]

***(On non-judicial stamp paper of appropriate value in accordance with stamp Act.
The stamp paper to be in the name of Executing Bank)***

From

[Name and Address of the Bank]

To

The Managing Director,
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor,
#36, Cunningham Road
Bangalore – 560052

Beneficiary: Rail Infrastructure Development Company (Karnataka) Limited.

Guarantee No.: *[.....reference number of the guarantee.....]* **Dated:** *[.....]*

WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited **(hereinafter called the Employer)** has entered into Contract No. *[....reference number of the Contract....]* dated *[.....]* for the execution of *[name of the contract]* **(hereinafter called the Contract)** with *[....name of the Contractor....]* **(hereinafter called the Contractor)**.

WHEREAS, according to the Conditions of the Contract, an advance payment is admissible to the contractor against submission of bank guarantee(s).

At the request of the Contractor, we *[....name of the Bank....]* with our branch at *[....address....]*, having our Head Office at *[....address....]* **(hereinafter called the Bank)** have, at the request of *[.....Insert name of the JV partner.....]*, a JV partner on behalf of the Contractor, agreed to give the said guarantee as hereinafter contained:

1. KNOW ALL MEN by these present that I/We the undersigned *[....Insert name(s) of authorized representative(s) of the Bank....]*, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantees to pay the Employer the sum of Rs. *[....value in figure....]* (Rupees *[....value in words....]* only) **(hereinafter called the Full Amount)**.

2. The Bank undertakes to immediately pay to the Employer, without any demur, reservation or recourse, any amount up to and including aforementioned full amount upon first written demand/demands from the Employer.
3. On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
4. The Bank shall pay the amount so demanded without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
5. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank, the Contractor or the Employer.
6. The Bank agrees that no change, addition, modification to the terms of the Contract Agreement or to any document, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
7. This guarantee is valid and effective from the date of its issue, which is [....*date of issue*....]. The guarantee and our obligations under it will expire on dated[....*Please refer note 4 & 5*....]. All demands for payment under the guarantee must be received by us on or before that date.
8. The Bank agrees that the Employer's right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will continue until either the aforementioned full amount is paid to the Employer or the guarantee validity period expires.
9. The Bank agrees that its obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
10. The expressions Bank and Employer herein before used shall include their respective successors and assigns.

11. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

Dated[.....]

Place[.....]

.....
(Signature of the Authorized Person of the Bank)

.....
(Name in Block Letters)

.....
(Designation)

.....
(Bank's Seal)

.....
(Authorization No.)

Witness:

1.
Signature, Name & Address

2.
Signature, Name & Address

Note:

1. *All italicized text in brackets [...text...] is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.*
2. *In case the guarantee is issued by a foreign Bank, the said bank shall have operations in India and should be issued by Indian operations branch of the said bank.*
3. *The Bank Guarantee should be duly attested by Notary Public with notarial stamps of appropriate value affixed thereon.*
4. **Mobilization Advance under GCC 14.2.1:**

(a) For Single Entity

For each Installment of Advance, two Bank Guarantees of equal amounts (each equal to half of the first installment of advance plus 10%) shall be furnished. Each Bank Guarantee shall be valid for the stipulated completion period of the contract.

OR

(b) For JV

For each Installment of Advance, individual JV partner shall furnish Bank Guarantee equal to his share in the installment of Advance plus 10%. Each Bank Guarantee shall be valid for the stipulated completion period of the contract.

5. Advance against Plant and Machinery under GCC 14.2.2:

(a) For Single Entity

For each Installment of Advance, a Bank Guarantee equal to the installment of advance plus 10% shall be furnished. The Bank Guarantee shall be valid for the stipulated completion period of the contract.

OR

(b) For JV

For each Installment of Advance, individual JV partner shall furnish a Bank Guarantee equal to his share in the installment of advance plus 10%. Each Bank Guarantee shall be valid for the stipulated completion period of the contract.

**INDEMNITY BOND FOR THE SAFE CUSTODY OF THE PLANT
AND MATERIALS SUPPLIED BY THE CONTRACTOR**

[Refer Clause 14.5 of GCC]

(To be executed on Non-Judicial Stamp Paper of Appropriate Value and notarised)

THIS INDEMNITY BOND made on this _____ day of _____ 20____
by _____ (*insert the name of the Contractor and its registered address*) (hereinafter
called “the Contractor”) which expression shall where the context do admits or implies be
deemed to include its executors, administrators and assigns, in favour of the Rail
Infrastructure Development Company (Karnataka) Limited, MSIL House, 7th Floor, #36,
Cunningham Road, Bangalore – 560052 (hereinafter called “K RIDE”) on the other part.

WHEREAS by an Agreement/Letter of Acceptance No. _____ dated _____
(hereinafter called “the said agreement”), the Contractor has agreed to execute the
_____ (*Name of Work*) (hereinafter called “the Works”) .

AND WHEREAS the Contractor has submitted to K RIDE/ the Engineer for payment on
plants & materials procured by him and brought to the site of the Works or his workshop
for use in the Works.

AND WHEREAS K RIDE/ the Engineer has agreed to make advance/stage payment to
the Contractor the total sum of Rs. _____ (*in Figures*) [Rupees
_____ (*in Words*) in Interim Payment Certificate (IPC)
No. _____, the quantities and other particulars of which are detailed in this IPC
for the said works signed by the Contractor on _____ for the Plant and Materials
brought by the Contractor to site of the works or his workshop. Brief details are also
mentioned in schedule 1 appended hereto.

NOW THIS INDEMNITY BOND WITNESS that in pursuance of the said agreement and
in consideration of the sum of Rs. _____ (*in Figures*)
_____ (*in Words*) on or before the execution of these presents to be
paid to the Contractor by K RIDE so aforesaid, the Contractor doth hereby covenant and
agree with K RIDE and declare as follows: -

1. That the said sum of Rs. _____ (*In Figures*) _____ (*in Words*) to be paid by K RIDE to the Contractor as aforesaid shall be utilized by the Contractor in or towards the execution of the said works and for no other purpose whatsoever.
2. That the Plant and Materials detailed in the said IPC which have been offered to and accepted by K RIDE/ the Engineer, are absolutely the Contractor's own property and free from encumbrances of any kind and the Contractor will not make any application for or receive any further payment on the Plant and Materials which are not absolutely his own property and free from encumbrances of any kind, the Contractor indemnifies the K RIDE against all claims on any Plant and Materials in respect of which payment is to be made to him as aforesaid.
3. That the Contractor undertakes that the Plant and Materials shall be used exclusively for the performance / execution of the Contract strictly in accordance with the terms and conditions of the Contract and no part of the Plant and Materials shall be utilized for any other work or purpose whatsoever.
4. That the Contractor is obliged and shall remain absolutely responsible for the safe transit / protection and custody of the Plant and Materials against all risks whatsoever including acts of the God till the Plant and Materials are duly incorporated in the works, commissioned and are taken over by K RIDE/Railway (including surplus Plant and Materials, if required as instructed by K RIDE/ the Engineer) in accordance with the terms of the Contract. The Contractor undertakes to keep K RIDE harmless against any loss or damage that may be caused to the Plant and Materials.
5. That the said Plant and Materials shall not on any account be removed from the site of the works except with the written permission of K RIDE/ the Engineer. Further, K RIDE/ the Engineer shall always be free at all times to take possession of the materials in whatever form the materials may be in, if in its opinion, the Plant and Materials are likely to be endangered, mis-utilized or converted to uses other than those specified in the Contract, by any acts or omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds himself and undertakes to comply with the directions of demand of K RIDE to return the Plant and Materials without any demur or reservation.

6. That the said plant and materials shall, at all times, be open to inspection by K RIDE/ the Engineer or any authorized representative. In the event of the said material or any part thereof at any time being found to be in lesser quantity than for which payment has been released or the same has been stolen, destroyed or damaged or becoming deteriorated, the Contractor will forthwith replace the same or repair and make good the same as required by K RIDE/ the Engineer.
7. That making payment does not mean that Plant and Materials are of required specifications and quality or that whole of the quantity brought to site by Contractor will be used in the work. The Contractor is fully responsible for the materials to conform to required quality and specification and if at any time K RIDE/ the Engineer do not find the material satisfactory, the Contractor at his own cost would replace these. K RIDE/ the Engineer would be at liberty to recover cost of these from any dues of the Contractor. Also any Plant and Materials which are in excess of what is finally required under the contract would be the Contractor's property without any liability on K RIDE/ the Engineer who would recover the cost of this from the Contractor.
8. That this Indemnity Bond is irrevocable. If at any time, any loss or damage occurs to the Plant and Materials or the same or any part thereof is mis-utilized in any manner whatsoever, then the Contractor hereby agrees that the decision of K RIDE/ the Engineer as to assessment of loss or damage to the Plant and Materials shall be final and binding on the Contractor. The Contractor binds itself and undertakes to replace the lost and/or damaged Plant and Materials at its own cost and/or shall pay the amount of loss to K RIDE without any demur, reservation or protest. This is without prejudice to any other right or remedy that may be available to K RIDE/ the Engineer against the Contractor under the Contract or under this Indemnity Bond.
9. That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of those presents, the total amount of the payment shall immediately on the happening of such default be recovered by K RIDE/ the Engineer from any dues of Contractor. It is also clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purpose including legal / penal consequences.

10. IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its authorized representative, the day, month and year first above mentioned.

11. SCHEDULE 1

Particulars of the Plant and Materials	Quantity	Value of the Plant and Materials

Signed, Sealed and Delivered by the said Contractor

(Contractor's Name)

Dated:

(AUTHORISED SIGNATORY)

Place:

SEAL OF COMPANY

IN THE PRESENCE OF:

WITNESS: SIGNATURE _____

NAME: _____

ADDRESS : _____

Note:

The contractor has the option to submit the Indemnity Bond to cover all the items and quantities of Plant and Materials of stage payment or to submit indemnity bond each time the stage payment is to be taken or Plant and Materials advance is to be taken.

**FORM OF BANK GUARANTEE FOR RELEASE
OF BALANCE RETENTION MONEY**

*(On non-judicial stamp paper of the appropriate value in accordance with stamp Act.
The stamp paper to be in the name of Executing Bank).*

From:

.....
.....*Name and Address of the Bank*.....
.....

To:

The Managing Director,
Rail Infrastructure Development Company (Karnataka) Limited,
MSIL House, 7th Floor,
#36, Cunningham Road
Bangalore – 560052.

- a) WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited, (hereinafter called the **Employer**), acting through **[Insert Designation and address of the Employer's Representative]**, has entered into a contract with **[Insert Name and address of the Contractor's Representative]**, (hereinafter called the **Contractor**), for the work of **[Insert Name of Work]**, vide Notification of Award No. **[Insert Notification of Award No.]**.
- b) WHEREAS as per conditions of contract Employer has deducted an amount of RS **[Insert Amount deducted as retention money]** towards retention money till date, and WHEREAS now the contractor has requested the Employer for releasing the said amount on submission of a bank guarantee of equivalent amount which has been accepted by the Employer. ****

OR

WHEREAS as per conditions of contract Employer has deducted an amount of RS **[Insert Amount deducted as retention money]** towards retention money till date, out of a total amount of Rs **[Insert total Amount of retention money deductible as specified in the contract]** which is due to be deducted as retention money as per Contract agreement and WHEREAS now the Contractor has requested the Employer to accept a bank guarantee of the equivalent amount of the total retention money due as per contract agreement so that the amount already deducted may be released in favour of the contractor and that no further deduction towards retention money will be made in future which has been accepted by the Employer. ****

- c) WHEREAS, **[Insert Name of the Bank]**, with its Branch **[Address]** having its Headquarters office at **[Address]**, hereinafter called the **Bank**, acting through **[Designation(s) of the authorised person of the Bank]**, have, at the request of the contractor, agreed to give guarantee as hereinafter contained:
1. KNOW ALL MEN by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee the Employer to pay the full amount in the sum of **[Insert Value of the Bank Guarantee being submitted]** as above stated.
 2. The Bank undertakes to immediately pay to the Employer any amount up to and including aforementioned full amount upon written order/orders from the Employer without any demur, reservation or recourse.
 3. On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
 4. The Bank shall pay the amount so demanded without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
 5. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Contractor.
 6. The Bank agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
 7. This guarantee is valid and effective from the date of its issue, which is **[insert date of issue]**. The guarantee and our obligations under it will expire on **[Insert the date twenty eight days after the expected end of defect liability period.]**. All demands for payment under the guarantee must be received by us on or before that date.
 8. The Bank agrees that the Employers right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will continue

until either the aforementioned full amount is paid to the Employer or the guarantee expires.

9. The Bank agrees that its obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
10. The expressions Bank and Employer herein before used shall include their respective successors and assigns.
11. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

Date

Place.....

.....
[Signature of Authorised person of Bank]

.....
[Name in Block letters]

.....
[Designation]

.....
.....[Address].....

.....

Witness :

1. *Signature*
Name & Address & Seal
2. *Signature*
Name & address & Seal

Bank's Seal
Authorisation No.....

Note :

- 1) *All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.*
- 2) *In case the guarantee is issued by a foreign Bank, the said bank shall have operations in India and should be countersigned by Indian operations branch of the said bank.*
- 3) *The Bank Guarantee should be duly attested by Notary public with notarial stamps of appropriate value affixed thereon.*
- 4) ***** strike out whichever is not applicable.*

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Section 9	Bill of Quantities
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Section 9	Bill of Quantities
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I N D E X

	Description	Page No
1.	Reach 3 : Package 1	287-328
2.	Reach 4 : Package 2	329-359
3.	Reach 5 : Package 3	360-401



ರೈಲು ಮೂಲಸೌಲಭ್ಯ ಅಭಿವೃದ್ಧಿ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ನಿಯಮಿತ

रेल इन्फ्रास्ट्रक्चर डेवलपमेंट कंपनी (कर्नाटक) लिमिटेड

Rail Infrastructure Development Company (Karnataka) Limited
(A Joint Venture of Govt. of Karnataka & Ministry of Railways)

MSIL House, 7th Floor, #36, Cunningham Road, Bangalore – 560052
Tele – 080 22370581, Fax : + 91-80-22370581, web : www.kride.in

Price Proposal

Package 1

Baiyyappanahalli – Hosur section : Doubling of track

REACH 3: Km 174/590 to Km182/500

Earthwork in cutting, embankment and construction of
Major/Minor bridges/RUB's and other miscellaneous
works in Bangalore Division of
South Western Railway.

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

SUMMARY OF BILLS OF QUANTITIES

Particulars	Department Value (Rs.)
SCHEDULE - A	17874039.14
SCHEDULE - B	9356580.5
SCHEDULE - C	42491400
SCHEDULE - D	47716000
SCHEDULE - E	41328420
SCHEDULE - F	18109618.00
SCHEDULE - G	319000
SCHEDULE - J	16730691
SCHEDULE - L	14287645
SCHEDULE - N	14388
SCHEDULE - O	100568
Total	208328350

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule A-USSOR ITEMS - Items of works that are covered by Unified schedule of rates 2011 of South Western Railway

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
1	013140	Removal of excavated/slip earth/ debris/ malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, re-handling, loading, unloading and leading, etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/ROCKS, BOULDERS including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/ breast/ retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge	cum	750.00	140.54	105405
2	014053	Turfing / planting, including all lead and lift, and watering as required until properly rooted, with. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period if the turfing is properly rooted. Planting Sarkanda / sarpat or any other suitable species approved by the engineer	100 Sqm	20000.00	4109.65	821930
3	014062	Providing and laying Jute Geo-Textile (JGT) in slopes of Railway embankment in accordance with RDSO's guidelines for application of Jute Geotextile in Railway embankments and hill slopes no. RDSO/2007/GE:G-0008 or its subsequent versions, including incidental earthwork and fixing arrangements With GJ - Type 2	100 Sqm	20000.00	4450.49	890098
4	031012	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto Plinth level : 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 40mm nominal size)	cum	350.00	1869.47	654314.5
5	032020	Providing and fixing precast M 15 grade cement concrete in string or lacing courses, coping, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, etc. upto floor two level, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required shuttering, centering complete - excluding the cost of cement. (cast at site)	cum	100.00	2527.44	252744
6	032031	Providing and fixing at or near ground level, Precast M 20 grade cement concrete as per approved design and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including the cost of required centering and shuttering complete but excluding the cost of cement. (cast at site) in kerbs, edging etc.	cum	30.00	2399.70	71991

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
7	056042	Cement Concrete Solid Block Masonry in foundation and plinth with: (factory made blocks) Cement mortar 1:4 (1cement: 4fine sand)	cum	85.00	3385.45	287763.25
8	056050	Extra over Item 056040 for Cement Concrete Solid Block masonry in superstructure above plinth level upto floor two level	cum	45.00	570.47	25671.15
9	061013	Random rubble masonry with hard stone in foundation and plinth including levelling up with concrete as per specifications, upto plinth level with : Cement mortar 1:6 (1cement: 6coarse sand)	cum	200.00	2023.44	404688
10	081012	Structural steel work in single section including cutting, bending, straightening, drilling, rivetting, bolting, hoisting, fixing in position, including applying a priming coat of approved steel primer, complete - upto 6m height above G.L In flats, plates, round or square bars	Kg	825.00	57.49	47429.25
11	091070	Moorum flooring 10 cm thick (consolidated depth) including watering and ramming. With Contractor's Moorum	Sqm	2000.00	110.17	220340
12	092062	Providing and laying plain cement concrete flooring of specified thickness with mix design concrete over firm, well prepared and well compacted bed including provision of designed expansion joint & finishing manually or mechanical trowel ling & vacuum dewatering complete. Expansion joint to be paid for separately. M-25	cum	350.00	2885.17	1009809.5
13	111012	12 mm cement plaster of mix - 1:6 (1cement: 6fine sand)	Sqm	300.00	75.31	22593
14	131083	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Internal work - exposed on wall 25mm nominal outer dia. Pipes	Metre	100.00	164.34	16434
15	131086	50mm nominal outer dia. Pipes	Metre	75.00	568.07	42605.25
16	162080	Avenue Plants Delonix regia (Gulmohar) of height 135-150 cm in big each polybag of size 25-30cm	Each	500.00	40.88	20440
17	162091	Ficus religiosa (Peepal) of height 120-135 cm in big polybag of size 30-35cm	Each	500.00	40.88	20440
18	162106	Michelia champa (Golden Champa) of height 60-75 cm in earthen pots of size 25cm	Each	500.00	70.85	35425
19	181021	Demolishing plain cement concrete including disposal of material within 50m lead 1:2:4 or richer mix with max. 20 mm coarse aggregate	cum	300.00	555.62	166686
20	181030	Demolishing R.C.C. work including cutting and stacking of steel bars and disposal of unserviceable material within 50m lead. (Extra payment for scraping, cleaning and straightening of bars to be made separately)	cum	75.00	810.58	60793.5

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
21	181040	Extra over Item Nos. 181021 and 181050 if pavement breaker is used on orders of Engineer	cum	125.00	243.17	30396.25
22	182013	Demolishing brick work including stacking of serviceable material and disposal of unserviceable material within 50m lead in cement mortar	cum	75.00	469.56	35217
23	182033	Demolishing stone rubble masonry including stacking of serviceable material and disposal of unserviceable material within 50m lead in cement mortar	cum	325.00	560.34	182110.5
24	191011	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30 cm), including refilling and reinstating surface, and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area 0m to 10m	Metre	50.00	1007.02	50351
25	191012	10m to 20m	Metre	10.00	1037.22	10372.2
26	191030	Extra for 150mm dia bore in hard Rock/ large Boulder at all levels	Metre	20.00	4878.30	97566
27	191041	Drilling of NX size borehole (75 mm dia) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 0m to 10m	Metre	15.00	3167.41	47511.15
28	191100	Taking out 100mm dia & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labelling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS 2720	Each	15.00	348.45	5226.75
29	191110	Taking out 100mm dia & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labelling and transporting the samples to laboratory. Samples shall be collected as per IS 2720	Each	8.00	348.45	2787.6
30	191120	Conducting standard penetration test as per IS 2131 at approximate 1.5 m intervals in bore holes, as directed by the Engineer in charge	Each	20.00	209.07	4181.4
31	191130	Collection of water samples at required intervals	Each	7.00	139.38	975.66
32	191141	Conducting laboratory Tests on collected soil samples as per relevant IS code				
33	191142	Moisture contents/ Dry density	Each	7.00	290.38	2032.66
34	191143	Atterberg Limit	Each	7.00	290.38	2032.66
35	191144	Specific Gravity	Each	7.00	232.30	1626.1
36	191145	Grain size analysis including Hydrometer analysis	Each	7.00	232.30	1626.1
37	191146	Direct Shear Test	Each	7.00	1742.25	12195.75
38	191147	Natural density	Each	7.00	290.38	2032.66
39	191148	Consolidation test	Each	7.00	290.38	2032.66
		Unconfined compression test	Each	7.00	290.38	2032.66

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
40	191149	Tri-axial test	Each	7.00	1742.25	12195.75
		Conducting Laboratory tests on collected ROCK SAMPLES as per relevant IS code				
41	191151	Density test	Each	7.00	290.38	2032.66
42	191152	Water absorption & Porosity	Each	7.00	232.30	1626.1
43	191153	Hardness	Each	7.00	290.38	2032.66
44	191154	Unconfined compression test	Each	7.00	232.30	1626.1
45	191155	Point load test	Each	7.00	406.53	2845.71
46	191156	Modulus of elasticity	Each	7.00	406.53	2845.71
47	191160	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete /reinforcement including determination of pH value	Each	3.00	871.13	2613.39
48	191170	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	3.00	871.13	2613.39
49	191180	Preparation and submission of Final report giving complete and comprehensive record of investigations, laboratory test reports and calculations in approved format	Each	3.00	2323.00	6969
		Earth work in excavation for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. incl. all lift, disposal of surplus soil upto a lead of 300 M, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge				
50	192011	All kinds of soils	cum	13000.00	182.73	2375490
51	192012	Ordinary rock	cum	4000.00	237.64	950560
53	192014	Hard rock (blasting prohibited)	cum	2500.00	451.19	1127975
54	192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40 mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	cum	1800.00	1538.08	2768544
55	221060	Providing and laying Pitching with stone boulders weighing not less than 35 kg each with the voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications (Filter media to be paid separately under the relevant item)	cum	600.00	1667.43	1000458

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
56	221070	Providing and laying Filter material As Per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical specification	cum	400.00	1648.61	659444
57	222010	Providing and laying Flooring with rubble stone , laid over 15 cm thick CC 1:2:4 and the voids filled with CC 1:2:4 complete with the joints pointed with 1:2 Cement sand mortar as per drawing and Technical specifications. Payment for cement to be done separately. Voids in the rubble stone to be taken as 35% of the gross volume of the stone layer. (Base concrete to be paid extra)	cum	500.00	1544.90	772450
58	222040	Supply and laying of coarse sand including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer incharge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media	cum	400.00	1369.48	547792
59	222230	Painting the HFL and danger level marks, year of HFL on bridge abutments and piers with ready mixed paint as per standard in two coats over one coat of primer with all materials, labour, tools, scaffolding, all lead and lift etc including writing complete	Each Mark	32.00	121.35	3883.2
60	222240	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white back ground with all labour, tools, cement, paint etc. with all lead and lifts	Each	22.00	536.26	11797.72
61	222250	Providing cast in situ plaques for bridge foundations details of size 45x45x5 cm in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm deep notch over abutment & piers, engraving the letters & figures with CM 1:3 and finished smooth including painting letters and figures with 2 coats of black enamel and plaque with white enamel with all labour, tools, cement, paint, curing, etc. as a complete job	Each	3.00	656.53	1969.59
62	222290	Providing Boulder backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra	cum	1300.00	178.76	232388

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
63	222360	Surface protection of Underside of Bridge Decks, Girders, Inside of Box Girders, Railings, etc. of Bridges and Substructures which are not in River Bed by cleaning and drying the surface; repairing local defects, e.g. honeycombs with a paste of cement admixed with 5% by weight of cement of Polymer bonding agent, applying (@ 0.30 litre per square metre) a coat (DFT of 100-150 micron) of a translucent brown coloured modified phenolic resin based single component high performance polymeric waterproofing compound (sp. gr. 0.87, rosin content nil and a solid content of minimum 0.47%), applying (@0.25 litre per square metre) a top coat of a modified phenolic resin based single component waterproofing compound of grey or other shades (sp. gr. 0.85) before the base coat becomes tack-free; permitting the coatings to cure and dry naturally; the 2-coat system shall be impermeable under a water head of 20.0 metres, complete as per specification	Sqm	1500.00	263.80	395700
64	231010	Preparation of subgrade by excavating earth upto 22.5cm depth, dressing to camber and consolidating with power road roller of 8 to 12 tonne capacity including making good the undulations etc. and disposal of surplus earth with lead upto 50 metres	Sqm	2300.00	49.66	114218
65	231020	Consolidation of subgrade with power road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and re-rolling the subgrade	Sqm	2300.00	1.31	3013
		Providing and laying water bound macadam with specified stone aggregate, stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete.				
66	231042	Base course with 63mm to 45mm size including stone screening 13.2mm size	cum	400.00	1110.24	444096
67	231043	Base course with 53mm to 22.4mm size including stone screening 11.2mm size	cum	400.00	1215.82	486328
		Providing and applying tack coat using bitumen emulsion (Rapid setting) complying with IS: 8887- 1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specification				
68	233011	On W.B.M. @ 0.4kg/ sqm	Sqm	2500.00	19.49	48725
69	233012	On bituminous surface @ 0.25kg/ sqm	Sqm	2500.00	13.86	34650

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
70	235010	Providing and laying seal coat of premixed fine aggregate (passing 2.36mm and retained on 180micron sieve) with bitumen using 128 kg of bitumen of grade 80/ 100 bitumen and 0.60cum of fine aggregate per 100sqm of road surface including rolling and finishing with road roller all complete. Note - This should not be operated along with Hot mix carpeting	Sqm	2500.00	74.90	187250
		No. of Items Seventy only	Schedule A: Departmental Value			17874039.14
			Tenderer's / Contractor's percentage			
			Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule B-Items of works pertains to Earthwork.

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Earthwork in cutting in all soils: Earthwork for excavation in cuttings for all kinds of soils in connection with making formation/side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) The term 'all soils' mentioned above include loose soil, ordinary soil (workable with spade), hard soil including stiff clay, moorum, shingle, soft laterite etc., requiring close application of picks to loosen and small boulders measuring not more than 300 mm in any direction. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed is payable in a particular bill initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over.	cum	23000.00	61.20	1407600

S No.	Description of Item	Unit	Qty	Rate	Amount
2	<p>Earthwork in cutting in Soft Rock : Earthwork for excavation in cuttings in soft rock strata comprising disintegrated rocks of lime stone, sand stone, hard laterite etc., removable without blasting in connection with making formation/side drains/catch water drains/ bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) Soft rock means rock which does not require blasting and which can be excavated by continuous operation of excavators/picks/bars etc. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over.</p>	cum	13000.00	78.00	1014000

S No.	Description of Item	Unit	Qty	Rate	Amount
3	EW03-104 : Earthwork in cutting in Hard Rock requiring controlled blasting or other means Earthwork for excavation in cuttings in hard rock strata using explosives or chemicals, jack hammers or any other advance methods from authorised manufacturers/ license holders, in controlled manner, in connection with making formation/side drains/catch water dains/ bridges /trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractors equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/ outside railway land so as to clear the the site with all leads & lifts, as directed by Engineer-in- charge. Note: i) Payment shall be based on cross section measurement only. ii) Hard rock requiring controlled blasting means rock which cannot be excavated by excavators/ picks/ bars etc. and which require controlled blasting duly providing protection measures for properties around or which require use of chemicals or other means to loosen the rock. (iii) No extra payment for lead etc., is admissible. (iv) Only 75% payment for the quantity executed in a particular bill is payable initially. 15% of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10% shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) This item shall be operated with specific prior approval of CE (construction) for works requiring blasting near inhabited area/ residential houses within town/ village limits where open blasting is not permitted by the revenue / local authorities.	cum	7500.00	478.00	3585000

S No.	Description of Item	Unit	Qty	Rate	Amount
4	EW03-201 : Earth work in filling with cut spoils: Earthwork in embankments for making formation with Railways usable cut spoils excavated from cuttings in specified layers not exceeding 300 mm in thickness with lead and lifts including rehandling, transportation, unloading & spreading in layers, benching of slopes, sectioning to profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's vehicles, machinery, labour, consumables etc., complete as per technical specifications & special conditions and as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only (ii) The rate includes testing of cut spoil for parameters to assess the suitability for use in embankments which shall be done for every 10000 cum and/or for every change of layer characteristics. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) Formation width at top shall be made with 500mm extra on either side initially and after compaction be cut to standard profile. No extra payment shall be made for this purpose. If the extra width as above is not made at any single location of less than 100 m length, payments due shall be reduced by 5 percent for that entire 100 m stretch. (vi) For leads upto 500m from the spot of release, accepted rates shall apply. For leads beyond 500 m and upto 1 km, 5 percent extra over the accepted rates shall be paid. For all leads beyond 1 km and irrespective of any extent further, another 5 percent over the accepted rates shall be paid and no their compensation will be eligible.	cum	36000.00	52.50	1890000
5	Mechanical compaction of earth work: Mechanical compaction of embankment, approaches to bridges etc., in specified layers using specified capacity vibratory power rollers as per type of soil, to achieve specified dry density of earth/other material using contractor's power rollers, tools and plants, consumables, labour, watering etc., all complete as per specification & special conditions and as directed by Engineer-in-charge. Note: If any other roller or other equipment is used for compaction, payment for the complete layer shall be reduced by 20 percent of the accepted rate for mechanical compaction.	cum	98730.00	10.50	1036665

S No.	Description of Item	Unit	Qty	Rate	Amount
6	Turfing: Turfing the slopes of the bank/cutting with contractors sods of approved quality about 20x20x7.5cm size collected/brought from outside railway limits, fixing the same over the slopes/ cess duly dressing the profile, loosening to required depth, gently ramming after laying, watering as required, making saucer drains 60cm wide from top to toe with necessary curvature for the free flow of water collected at the top at 25m intervals using contractors boulders with contractors vehicle, labour, consumables, all lead and lift etc., all complete and as per directions of Engineer-in-charge. Note : (i) 75 percent payment shall be made initially and balance 25 percent shall be released after 6 months or maintenance period whichever is more after satisfactory growth of turfing is certified by the Engineer-in-charge.	Sqm	25000.00	11.30	282500
7	Plotting initial levels: Computer Plotting of the theoretical cross section profile based on the initial levels of ground, recorded in the level books for cuttings/embankments at intervals of 25m or less including computation of theoretical profile/quantities duly deducting quantities for bridges and any other structure not requiring execution of earthwork in A4 size sheet with contractor's material, man power, consumables, tools and plants etc., and as directed by Engineer-in-charge. Note: i) Plottings and calculations are to be submitted to Railway in 3 sets. (ii) One cross section in one A4 size sheet is required.	Kilometre	8.00	4700.00	37600
8	Plotting final levels: Computer plotting of the theoretical & actual final finished cross section profile, duly indicating different type of strata available/ excavated in the x-section, based on the final levels recorded in the level books for banks/ cuttings at intervals of 25m or less, including computation of theoretical/actual quantities done as per classification of different types of soil/blanketing material as certified by Engineer-in-charge duly deducting quantities for bridges and any other structure not requiring execution of earthwork in A4 size sheet with contractor's material, man power, consumables, tools and plants etc., and as directed by Engineer-in-charge. Note: i) Plottings and calculations are to be submitted to Railway in 3 sets ii) One cross section in one A4 sheet is required. iii) For embankments, computation of different soils viz., cut spoils, contractor's own earth, blanketing material are to be shown separately as per measurement recorded.	Kilometre	8.00	4700.00	37600

S No.	Description of Item	Unit	Qty	Rate	Amount
9	Design of high bank/deep cutting slope based on slope stability analysis as specified by RDSO/theoretical methods, for railway cuttings/embankment more than 6m in height/depth based on the material available in cutting/embankments, including collecting required number of soil samples and conducting required laboratory tests as per RDSO specifications so as to find out soil parameters required in slope stability analysis, working out design slope based on manual method/computer software including furnishing detailed calculations in a report form with contractor's men, material, machinery etc and as directed by Engineer-in-charge. Note: Recommended slopes designs shall be from reputed designers and shall include detailed calculations to be submitted in 3 copies. The unit for this item is Crosssection'.	Per Unit	3.00	17500.00	52500
10	Fixing reference pegs: Striking out of centre line of railway alignment using total station or any other latest survey equipment and fixing centre line pegs of adequate size with Railway's tie bars/cut rails at every 100m on straight and 25m in curves, at bridges etc., with contractors surveyor, equipment, all consumables, labour etc. Note : (i) The reference pegs shall be fixed along the alignment at appropriate locations to provide information for execution of formation, bridges, ballasting and linking of track throughout the period of construction. (ii) Contractor is responsible for maintaining the reference pegs including shifting in case of shifting of alignment or to facilitate construction. (iii) The reference pegs shall be usable as temporary bench marks wherever required.	Each	85.00	154.30	13115.5
	No. of Items Ten only	Schedule B: Departmental Value			9356580.5
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule C-Items of works pertains to Supply of Cement.

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supply of Ordinary Portland cement of 43 / 53 grade conforming to IS 8112 / IS 12269 (upto date)and/or Portland Pozzolana Cement conforming to IS/1489 (upto date), at site of work to the extent of the quantities required for various items of works in schedule items including all cost of loading, unloading,leading, transporting, stacking, storing including making proper storage arrangements and all consumables, machinery, vehicles, labour etc., complete and as directed by the Engineer-in-charge. (a) Ordinary Portland Cement (43/53 Grade) NOTE :1) Use of Portland Pozzolana cement shall be restricted strictly to the permitted construction items only. Pozzolana cement shall not be used in PSC construction. 2) Admixtures such as super plasticizers will be permitted based on specific designs for permitted construction items with the approval of the DY.Chief Engineer-in-charge. However, admixtures proposed shall be supplied free of cost by the Contractor and no compensation will be payable. 3. 33 Grade cement shall not be used in railway construction works.	Tonne	6700.00	6342.00	42491400
	No. of Items One only	Schedule C: Departmental Value			42491400
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule D-Items of works pertains to Concrete works.

S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>Plain Cement Concrete (M15 to M30 design mix) Cast-in-situ work (cement will be paid separately) with Contractors all materials including 40mm or below graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality in foundations, abutments, piers, wing walls, return walls etc., of bridges and other structures as required, including fixing and removal of contractors shutter/ form work/ supports, vibrating/compacting, providing weep holes with contractors AC pipes 75 to 100mm dia wherever necessary, providing normal/approved expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., complete with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., as per approved drawings/specification /conditions and as directed by the Engineer-in-charge.</p> <p>NOTES: (1) Single rate will apply for all mixes (M15,M20,M25 and M30) irrespective of proportion of materials used (per cubic metre (cum) of concrete). (2) All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS Concrete Bridge Code and relevant IS Codes/Specifications and other relevant specifications as prescribed. Weigh batching is mandatory for all PCC, RCC and PSC works. (3) Rates shall include all materials, operations, etc., complete except for Cement, which will be paid for separately. Steels including fabrication, if used, and excavations for foundations will be paid under relevant SSR or other schedules separately. (4) Shuttering and supporting form work shall be of good quality materials only. For PSC/RCC girders/slabs/beams/columns, only rigid plate steel shutters shall be used. (5) Mix design with requirement of all tests shall be arranged by the Contractor at his cost. (6) Admixtures as required/ as per designs shall be arranged by the Contractor at his cost. (7) All material and concrete tests as required shall be arranged by the contractor at his cost. (8) Rate includes placing of concrete in position for all heights by manual/concrete pump/crane etc.,</p>	cum	10000.00	2500.00	25000000

S No.	Description of Item	Unit	Qty	Rate	Amount
2	<p>Plain Cement Concrete (M15 to M30 design mix) Cast-in-situ work (cement will be paid separately) with Contractors all materials including 20mm/12.5mm graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality in bed blocks, wearing coat, coping, ballast walls etc. of bridges and other structures as required, including fixing and removal of contractors shutter/form work/ supports, vibrating/compacting, providing weep holes with contractors AC pipes 75 to 100mm dia wherever necessary, providing normal/approved expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/ bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., complete, with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., as per approved drawings/specification / conditions and as directed by the Engineer-in-charge.</p> <p>NOTES: (1) Single rate will apply for all mixes (M15,M20,M25 and M30) irrespective of proportion of materials used (per cubic metre (cum) of concrete) (2) All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS Concrete Bridge Code and relevant IS Codes/Specifications and other relevant specifications as prescribed. Weigh batching is mandatory for all PCC, RCC and PSC works. (3) Rates shall include all materials, operations, etc., complete except for Cement, which will be paid for separately. Steels including fabrication, if used, and excavations for foundations will be paid under relevant SSR or other schedules separately. (4) Shuttering and supporting form work shall be of good quality materials only. For PSC/RCC girders/slabs/beams/columns, only rigid plate steel shutters shall be used. (5) Mix design with requirement of all tests shall be arranged by the Contractor at his cost. (6) Admixtures as required/ as per designs shall be arranged by the Contractor at his cost. (7) All material and concrete tests as required shall be arranged by the contractor at his cost. (8) Rate includes placing of concrete in position for all heights by manual/concrete pump/crane etc.,</p>	cum	100.00	2600.00	260000

S No.	Description of Item	Unit	Qty	Rate	Amount
3	Reinforced Cement Concrete (M20 to M40 design mix) work (Cement & Steel will be paid separately), with Contractors all materials including 20mm graded hard crushed stone aggregate, sand, admixture, water etc., of approved quality in foundations including below ground level, abutments, piers, pile caps, bed blocks, trestle beams, girders, pedestals, retaining walls, boxes/slabs for flat top bridges, deck slabs, girders, kerb walls, diaphragms, cross frames etc., on girder bridges and other structures of any design/shape as required, above or below ground level of any size and shape, including fixing and removal of contractors shutters/form work/ supports, vibrating/compacting, and providing weep holes with AC pipes 75mm to 100mm dia and normal/approved expansion joints with necessary materials as per designs/drawings wherever necessary, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required etc., complete and including handling, uncoiling, cutting, bending, cranking, tying M.S./Tor Rods/wires/other steel to form reinforcement with Contractors galvanized binding wire of size 18/20 SWG(0.90mm) to IS280, etc., fixing in position reinforcement gauge complete as required with all lead, lift, transport, materials, consumables, labour, tools and plant, etc., and including 2 coats of cement painting as per approved drawings/specifications/ conditions and as directed by the Engineer-in-charge. Plant produced Ready-mix concrete shall be used only with the specific approval of the Dy.Chief Engineer.	cum	4000.00	3600.00	14400000

S No.	Description of Item	Unit	Qty	Rate	Amount
4	<p>Pre-stressed Cement Concrete (M35 to M50 design mix) post-tensioned work (cement, steel, HTS wire/strands will be paid separately) in girders/slab of any design/shape, with Contractor's all materials including 20mm graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality and all special materials for prestressed concrete including Flexible GI/Other sheathing, coupler, bearing plates, anchorages, wedges, grout, anticorrosive treatment etc., of special/approved quantity and quality as per designs/drawings, including post-tensioning with contractor's own jack, power and other equipment complete, fixing and removal of contractors shutter/form work/ supports vibrating/compacting, providing weep holes with contractor's AC pipes 75 to 100mm dia wherever necessary, providing normal expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., and including handling, uncoiling, cutting, bending, cranking, tying HTS/MS/TOR rods/other steel to form tendons and reinforcement gage with contractor's galvanised binding wire of 18/20 SWG(0.90mm) to IS 280, etc., fixing the tendons and reinforcement in position as required, complete, with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., and including 2 coats of cement painting, as per approved drawings/specification/conditions and as directed by the Engineer-in-charge. Plant produced Ready-mix concrete shall be used only with the specific approval of the Dy.Chief Engineer. (a) For PSC slabs</p>	cum	380.00	11000.00	4180000

S No.	Description of Item	Unit	Qty	Rate	Amount
5	<p>Providing and installing 1000mm/600mm dia RCC cast-in-situ BORED PILES using Rotary/ Conventional method of drilling in all kinds of soils and rock (including boulders, soft, weathered or hard rock) duly providing Contractor's M35/M40 grade concrete (with 20mm size graded stone aggregate and all other materials including admixtures as required), including fabricating and fixing in position reinforcement gauge as per designs/drawings, removing/chipping off latience and concrete above cut off level for a depth upto 1.0 M of the pile top, protection arrangements for the bore hole as required for various types of soil (except for providing permanent M.S.liners in very loose soils) with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (Per running metre of pile depth to be quoted) (a) 1000 mm dia RCC pile in M35/M40 Concrete in all soils including weathered rock including through boulders/ obstructions. NOTES:- (1) Rates include cost of all operations and cost of all materials including temporary liners and other protection as required but excluding cement and reinforcement steel and permanent M.S liners in very loose soil. Reinforcement steel, cement (including 10% extra cement for under water concreting) and permanent M.S liners will be paid under other relevant schedules at the discretion of the Engineer-in-charge. Pile measurement for payment will be upto cut off level only. (2) Piles shall be provided with proper shoe/base to rest properly on rock/ soil as designed. Rates include cost of bedding and seating the piles on hard rock, wherever specified, with a minimum of 1.0m anchorage as specified. However, hard rock blasting required, if any, will be paid separately under other relevant schedules at the discretion of the Engineer-in-charge.</p>	RM	130.00	4800.00	624000

S No.	Description of item	Unit	Qty	Rate	Amount
6	Providing and installing 1000mm/600mm dia RCC cast-in-situ BORED PILES using Rotary/Conventional method of drilling in all kinds of soils and rock (including boulders, soft, weathered or hard rock) duly providing Contractor's M35/M40 grade concrete (with 20mm size graded stone aggregate and all other materials including admixtures as required), including fabricating and fixing in position reinforcement gauge as per designs/drawings, removing/chipping off latience and concrete above cut off level for a depth upto 1.0 M of the pile top, protection arrangements for the bore hole as required for various types of soil (except for providing permanent M.S.liners in very loose soils) with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (Per running metre of pile depth to be quoted) (c) 1000mm dia RCC pile in M35/M40 Concrete in hard rock. NOTES:- (1) Rates include cost of all operations and cost of all materials including temporary liners and other protection as required but excluding cement and reinforcement steel and permanent M.S liners in very loose soil. Reinforcement steel, cement (including 10% extra cement for under water concreting) and permanent M.S liners will be paid under other relevant schedules at the discretion of the Engineer-in-charge. Pile measurement for payment will be upto cut off level only. (2) Piles shall be provided with proper shoe/base to rest properly on rock/ soil as designed. Rates include cost of bedding and seating the piles on hard rock, wherever specified, with a minimum of 1.0m anchorage as specified. However, hard rock blasting required, if any, will be paid separately under other relevant schedules at the discretion of the Engineer-in-charge.	RM	20.00	5500.00	110000
7	Supplying, fabricating, driving and placing in position permanently 6mm thick M.S.Liners including cutting, bending, welding and fabricating with Contractor's 6mm thick M.S.Sheets as necessary for RCC piles of 1000/600mm dia with all lead, lift, transport materials, consumables, tools & plant, labour including operation of rig/machinery for driving etc., complete as per specifications and as directed by the Engineer-in-charge.(per running metre of liner depth to be quoted) (a) 6mm thick M.S.liners for 1000mm dia RCC piles. NOTES:- (1) Rate is payable for the liner depth used only and does not include wastage of any material involved and no extra rate/compensation is payable in this regard.	RM	80.00	7000.00	560000

S No.	Description of Item	Unit	Qty	Rate	Amount
8	<p>Conducting and pile load test on a 600mm to 1200 mm pile duly creating all loads and providing all staging and instrumentation, with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (per metric tonne (t) of loading to be quoted).</p> <p>NOTES:- (1) Single rate shall apply for all piles of any dia metre. Rate includes cost of all materials, operations, instrumentations, technical works etc., and disposing of all waste materials away from the site appropriately. (2) Testing shall be done as per IS 2911 specifications or as directed by the Engineer-in-charge duly creating all necessary loads which will be in the range of 300-600 t depending upon the designs. All loads may be created with available local material or any other at the cost of the contractor. (3) Loading calculations and procedure shall be submitted by the Contractor in advance and got approved. Report shall be submitted by the contractor after the test in a proper format specifying the calculations for loads, deflections and other parameters (specified and actual) as per relevant specifications.</p>	Tonne	750.00	380.00	285000
9	<p>Supply and laying of RCC Hume pipes of dia 900mm/1200mm of NP4/RDSO designs suitable for all types of Railway loading standards including providing levelling course, jointing, compaction as per approved drawings with contractor's fixing materials, collars, aggregates and all other materials as required with all lead, lift, transport, consumables, labour, tools and plant, etc., complete as directed by the Engineer-in-charge. (per running metre length of pipe to be quoted). (a) Laying with 900mm pipe NOTES: (1) Rates include all materials, operations etc., complete except cement used which will be paid for separately. (2) Contractor shall produce design/ test reports to prove the suitability of the Hume Pipe. Decision regarding standard of pipe to be used by the Engineer-in-charge is final and binding on the contractor. (3) Rates include local transport within the section only. Transport from factory upto the section/office of the Engineer-in-charge will be paid under relevant SSR items.</p>	RM	300.00	5000.00	1500000

S No.	Description of Item	Unit	Qty	Rate	Amount
10	Supply and laying of RCC Hume pipes of dia 900mm/1200mm of NP4/RDSO designs suitable for all types of Railway loading standards including providing levelling course, jointing, compaction as per approved drawings with contractor's fixing materials, collars, aggregates and all other materials as required with all lead, lift, transport, consumables, labour, tools and plant, etc., complete as directed by the Engineer-in-charge. (per running metre length of pipe to be quoted). (b) Laying with 1200mm pipe NOTES: (1) Rates include all materials, operations etc., complete except cement used which will be paid for separately. (2) Contractor shall produce design/ test reports to prove the suitability of the Hume Pipe. Decision regarding standard of pipe to be used by the Engineer-in-charge is final and binding on the contractor. (3) Rates include local transport within the section only. Transport from factory upto the section/office of the Engineer-in-charge will be paid under relevant SSR items.	RM	75.00	5800.00	435000
11	Drilling of 25mm/40mm dia holes in concrete/stone masonry/hard rock underground/over ground, to a depth of 400mm for dowelling/ anchoring including fixing of steel dowels/angles/flats and grouting with cement mortar (1:3) with Contractors all materials, drilling equipment, lead, lift, labour, transport, tools & plant, consumables, etc., complete (excluding cement & steel) as per specifications and as directed by the Engineer-in-charge. NOTES:- (1) Rate includes all materials, operations etc., excluding cement and steel, which will be paid under other relevant schedules.	Numbers	100.00	150.00	15000

S No.	Description of Item	Unit	Qty	Rate	Amount
12	<p>LAUNCHING of complete PSC spans including PSC main units and RCC ballast retainers if any for various spans available at bridge site using Contractor's ROAD CRANE, on completed abutments/ piers of bridges including placing at correct location/level/alignment, providing a layer of cement and Cast-iron borings in 1:1 proportion for uniform bedding, adjusting after initial seating using Contractor's jacks, if required, and including all temporary arrangements as per drawings/specifications etc., with all lead, lift, transport, materials, consumables, fuel, tools & plant, labour, etc., complete and as directed by the Engineer-in-charge.(Per no.for type of span to be quoted) c) Launching of 4.57m span NOTES:-</p> <p>(1) One span may consists of 2/3/4 PSC units and/or 2 ballast retainers, based on the design. It is the responsibility of the Contractor to assess the quantities based on drawings correctly in advance. (2) Rates quoted are for launching of the complete span involved. In case of Casting of ballast retainers at site, the rate will be reduced in proportion to the reduction in weight. (3) Slabs shall be handled by Contractor's Road Crane only. For any damage to the slab during launching/handling, the cost of the slab including damages and losses will be recovered from the Contractor.</p>	Numbers	1.00	47000.00	47000

S No.	Description of Item	Unit	Qty	Rate	Amount
13	LAUNCHING of complete PSC spans including PSC main units and RCC ballast retainers if any for various spans available at bridge site using Contractor's ROAD CRANE, on completed abutments/ piers of bridges including placing at correct location/level/alignment, providing a layer of cement and Cast-iron borings in 1:1 proportion for uniform bedding, adjusting after initial seating using Contractor's jacks, if required, and including all temporary arrangements as per drawings/specifications etc., with all lead, lift, transport, materials, consumables, fuel, tools & plant, labour, etc., complete and as directed by the Engineer-in-charge.(Per no.for type of span to be quoted) d) Launching of 6.1 m span NOTES:- (1) One span may consists of 2/3/4 PSC units and/or 2 ballast retainers, based on the design. It is the responsibility of the Contractor to assess the quantities based on drawings correctly in advance. (2) Rates quoted are for launching of the complete span involved. In case of Casting of ballast retainers at site, the rate will be reduced in proportion to the reduction in weight. (3) Slabs shall be handled by Contractor's Road Crane only. For any damage to the slab during launching/handling, the cost of the slab including damages and losses will be recovered from the Contractor.	Numbers	5.00	60000.00	300000
	No. of Items One only	Schedule C: Departmental Value			47716000
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule E-Items of works pertains to Supply of Steel

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supply of High Yield Strength Deformed reinforcement steel bars / Fe 415 / Fe 415D / Fe 415S / Fe 500D / Fe 500S / Fe 550 / Fe 550D / Fe 600 conforming to IS 1786:2008 (with latest amendment) at site of work to the extent actually required for the work including all cost of loading, unloading, leading, transporting, stacking, storing, labour, consumables, machinery, vehicles etc., complete and as directed by the Engineer-in-charge. NOTE: (1) The rate quoted for this item is applicable for Fe500, Fe550 and Fe 600 and their variants viz. Fe 500D, Fe 500S and Fe 550D. If Fe 415 grade or its variants Fe 415D or Fe 415S are used, they will be paid at a reduction of Rs.2000/- per MT from agreed rates. (2) Stage payment for supply of steel shall be limited to 75% of the agreed rates subject to production of Bank Guarantee/ Indemnity Bond as specified, Test certificates, Insurance, limitation in quantity supplied at a time, conditions for stacking/storing/ preserving at site. However, this payment will be restricted to a maximum of 30% of the Schedule quantity at any point of time. (3) Payment for reinforcement rods will be made as per actual used including over laps, cranks, bends, etc., if any, as per approved drawing and as per Special Conditions for use of steel. However, no payment will be made for any wastage. Quantity will be calculated for nominal diameter of the bars using standard weights per running metre or as per actual weights whichever is less. (4) Binding wire, clamping materials etc., used in construction shall not be treated as supply items under this schedule and shall be governed by the Schedule and Special Conditions under the relevant items of concreting etc., and no extra payment shall be made. (5) Reinforcement steel shall be supplied and used as per approved drawings and as per instructions of the Engineer-in-charge.	Tonne	798.00	51790.00	41328420
	No. of Items One only	Schedule E: Departmental Value			41328420
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule F-Items of Blanketting of formation, Contractors own earth & Bridge approaches

S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>Earth work in filling with COE: Earthwork in embankment in making formation with contractors own earth of approved quality in specified layers not exceeding 300mm thickness from approved earth quarries outside railway limits in all soils with loading, unloading, all lead and lifts, rehandling, transportation, spreading in layers, benching of slopes, sectioning to profile, clearing of debris/garbage/vegetation/shrubs etc., in the railway alignment using contractor's vehicles, machinery, labour, consumables etc., as per technical specification & special conditions and as directed by Engineer-in-charge. Note: (i) Payment shall be made based on cross section measurement only. (ii) The rate includes all charges, taxes, royalty, seignorage etc., and for pretesting of soil quality at quarry for every 20000 cum or change of layer and testing at site for every 5000 cum or change of layer for assessing the suitability of the soil for use in embankments and all other tests as specified in the specifications. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) Only soils of category I or II or III or IV as per clause 15 of Technical Specifications is permitted. Payment for category III will be reduced by 5 percent and for category IV will be reduced by 10 percent of the accepted rates. Accepted rates apply to soil with PI upto 7. For PI beyond 7 and upto 20, a further reduction of 10 percent in accepted rates shall apply. Use of category V soils as per clause 15 of Technical Specifications is banned. (vi) Formation width at top shall be made with 500mm extra on either side initially and after compaction be cut to standard profile. No extra payment shall be made for this purpose. If the extra width is not made at any single location of less than 100 m length, payments due shall be reduced by 5% for that entire 100 m stretch.</p>	cum	62730.00	126.60	7941618.00

S No.	Description of Item	Unit	Qty	Rate	Amount
2	<p>Earth work at bridge approaches: Earthwork in embankment in filling up approaches of major bridge for 50m either side with soil of GW classification only including mechanical or special type of compaction such as water compaction in specified layers from approved earth quarries outside railway limits with loading, unloading, all lead and lifts, rehandling, transportation, spreading in layers, benching of slopes, sectioning to profile, clearing of debris/garbage/ vegetation/shrubs etc., using contractors vehicles, machinery, labour, consumables etc., as per technical specification & special conditions and as directed by Engineer-in-charge. Note: (i) Payment shall be made based on cross section measurement only. (ii) The rate includes all charges, taxes, royalty, seignorage etc., and for pretesting of soil quality at quarry for every 20000 cum or change of layer and testing at site for every 1000 cum or change of layer for assessing the suitability of the soil for use in embankments and all other tests as specified in the specifications. (iii) No extra payment for lead etc., is admissible. (iv) Only 75% payment for the quantity executed in a particular bill is payable initially. 15% of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10% shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) No payment will be made for the complete layer if soil other than GW classification is used and/or if mechanical compaction or special compaction is not used.</p>	cum	8000.00	191.00	1528000.00

S No.	Description of Item	Unit	Qty	Rate	Amount
3	Blanketing of formation: Manufacturing, supplying, transporting to site, spreading in layers, compacting the blanketing material and dressing/finishing the formation to profile as per RDSO specification No.GE-G-1 with upto date correction slips conforming to upper blanket layer guiding enveloping curves as per sketch B RDSO's Drawing No.GT/SD/0011/ Rev.2/2001 of the said specification including spreading and compacting with vibratory rollers of adequate capacity, duly sprinkling water/ allowing to dry to achieve optimum moisture content as specified, complete in all respects and as directed by Engineer-in-charge. Rate includes all materials, transporting/leading/unloading, spreading, labour, manufacturing, mixing & blending by any means, all tests on materials, to obtain the specified gradation, leads, lifts, assent, dissent, crossing of nalla /stream and all other obstructions, all machinery, tools and plants, handling and re-handling of the materials, fuel, royalty, octroi, licensing charges, incidentals, etc, complete.	cum	24000.00	360.00	8640000.00
	No. of Items Three only	Schedule F: Departmental Value			18109618.00
		Tenderer's / Contractor's percentage			
		Total			

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REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule G-Item pertaining of supply of HTS WIRES

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supplying of High Tensile Steel wires/strands to IS 14268 (upto date) of suitable dia as approved in designs/ drawings/ conditions from approved manufacturer at the site of work to the extent of quantity required for various items of works in schedule of items including all cost of loading, leading, transporting, storing, unloading, handling, rehandling, stacking, protecting etc., in the contractor's store godowns as per IS specifications with all lead, lift, transport, consumables, labour, tools & plant and all other incidental charges etc., complete and as directed by the Engineer-in-charge. NOTE:- (1) Payment will be made only for HTS wire/strands used in the structure for lengths measured from bearing plate to bearing plate or face to face of the structure and no extra for wastage etc., will be allowed. (2) 50% of the agreement rate will be paid for the HTS wire/strand brought to the site on production of Indemnity Bond/Bank Guarantee as per Special Conditions and other necessary certificates and the balance will be paid only after completion of all works connected to prestressing and certification of the quality of the slab/girder/etc., where the HTS materials are used.	Tonne	5.00	63800.00	319000
	No. of Items one only	Schedule G: Departmental Value			319000
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule J-Items of miscellaneous works

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Preparation of design and General Arrangement/Working Drawings for broad gauge bridges to 25T loading and supply of 3 copies of the same along with design calculations in correlation with RDSO guidelines for verification/approval of Railway department, after approval submission of final working drawings on gateway or similar tracing paper with three sets of copies of the same duly collecting all site details and soil particulars by the excavation of open trial pit of suitable depth. Payment shall be inclusive of labour, tools, plants with all lead and lift, etc., as directed by the Engineer-in-Charge. for Minor bridges	Each	19.00	4500.00	85500
2	Preparation of Minor Bridges completion plan in Auto Cad duly incorporating all necessary details required and submitting the same in the check plot. Final drawing is to be produced in the film after affecting the necessary corrections given in the check plot	Each	19.00	4000.00	76000
3	Rail fencing by the side of existing rack with the BG/IMG rails (52 kg/90R/75R) available as per drawing No.DY.CE/C/N/BNC/SK 2-06 duly excavating trenches at every 5m for a depth of 1m below the existing/proposed formation level at every 5m intervals at a distance of 2.5m from existing track duly carrying out all necessary cutting of rails, drilling of holes with gas and providing bolts & nuts arrangements as indicated in drawing with contractor's supply of bolts & nuts including all labour, materials, consumables and completing the job as instructed by Engineer-in-charge. The scrap and the cut rail pieces has to be handed over at Section Engineer/Stores Construction, Bangalore City.	MT	6.00	3000.00	18000
4	Collecting field data, topo sheet from Survey of India Department, surveying and preparation and submitting Hydraulic water way calculations for minor bridges as per RDSO guide lines and Railway bridge substructure code with all design calculations and details in three copies in bound form with contractor's labour and materials with contractor's labour, tools, plants, equipment with all lead and lift etc., complete and as directed by the Engineer-in-charge including recommendations	Each	19.00	2500.00	47500
5	Preparation and submission of LC gate plan with existing road details and other relevant particulars in AUTO CAD on 50 micron thickness tracing film of A1 size.	Each	2.00	2500.00	5000

S No.	Description of Item	Unit	Qty	Rate	Amount
6	Providing caution watchmen at workspot where caution order is imposed at a rate of one caution watchmen per 12 hours shift round the clock with necessary electric torch, banner flags, hand flags etc., who will be on continuous vigil and exhibit necessary hand signals to the trains for their safe passage over the caution spot as directed by the Engineer-in-charge. NOTE : Rate to be quoted as per day (24 hours basis).	Day	400.00	742.00	296800
7	Fixing of reference pillars at the edge of formation with railways rails 41.1/4.60R/90R of 1.5m long fixed in cement concrete foundations of 3 x 3 x .75 m size with 1m length projected above ground level and duly marking proposed formation level and proposed rail level in red enamel paint over white enamel paint background of 10cm band including cutting of rails, loading, unloading, transportation, excavation , erection and painting with contractors supply of paint, labour , tools and plants, all lead and lift etc. complete (cement concrete and cement will be paid separately under relevant item). Rails will be supplied at nominated depot	Each	85.00	50.00	4250
8	Construction of hexagonal type gate lodges as per Plan No.650/96 in all respects ABOVE PLINTH LEVEL except foundation works. This work consists following : 1) Brick Masonry in stock bricks in cm 1:6 2) Cement concrete flooring with 1:3:6 mix and smooth finishing with cm 1:3 3) Steel doors and windows 4) RCC lintel and sloped roof. 5) Weathering course and water proof machine pressed tiles over roof 6) Internal shelf as per type plans. 7) Painting LC particulars, duty roster and protection diagram etc., on gate lodge.8) White washing, colour washing, painting in all respects as per plan with contractors cement complete and as directed by Engineer-in-charge (the cost of steel will be paid separately under Sch."E".	Each	2.00	83500.00	167000
9	Improving Bearing capacity by removing loose soil, filling with boulders, sand, rolling with vibro roller in layers of 30 cm thick	cum	300.00	300.00	90000
10	Hydraulic waterway calculation for catchment area (25 Sq. Km with Q-50 discharge as per RDSO guidelines, CWC Guidelines and Railway Bridge sub structure code and submitting the calculation	Each	3.00	6000.00	18000
11	Design of sub structure including foundation for bridges (Water way bridges/ROB/RUB including major bridge) as per latest loading standards for a single line BG track based on soil investigation report, preparation of detailed structural and working drawings with bar bending schedule. Design to be done by recognised/reputed consultants etc. Submitting approved drawings on a tracing film/ latest tracing material and compact disc along with 6 copies of final working drawings, structural drawings and design calculations with contractor's labour tools plant etc and as directed by Engineer in charge	Each	3.00	90000.00	270000

S No.	Description of Item	Unit	Qty	Rate	Amount
12	Design of super-structure for bridges (water way bridges/ROB/RUB including major bridge) as per latest loading standards for a single line BG track preparation of detailed structural and working drawings with bar bending schedule. Design to be done by recognised/reputed consultant and proof checked by another recognised consultant like IIT, Stup consultants etc., submitting approved drawings on a tracing film/latest tracing material and compact disk along with 6 copies of final working drawings, structural drawings and designs calculations with contractors labour, tools, plants, etc., and as directed by Engineer-in-charge	Each	3.00	140000.00	420000
13	Providing safety barricading as per drg. No. SWR/CN/BNC/SK/165-2018/R with contractor's materials and labour including all leads and lifts complete as directed by Engineer in charge. (Size 100 mm x 1650 mm Rcc pole) Note: 1. Casting of RCC pillars shall be carried out in nominated depot and submerged water curing. 2. The precast RCC posts shall be transported to date duly handling carefully without causing any damage and erect it at nominated locations as per deg duly ensuring safety of running trains. 3. Maintenance of the rope, RCC pillars etc shall be at the cost of contractor. 4. 90% of the payment shall be released after erecting fencing to the satisfaction of Engineer in charge.	RM	8000.00	327.60	2620800
14	Painting of steel girder of ROB with contractor's supply of epoxy paints as follows, duly removing oil/grease from the metal surface by using petroleum Hydrocarbon Solvents to IS 1745 and prepare the surface by sand/grit blasting using Air compressor and apply two primer coats with epoxy zinc phosphate to RDSO specification No. Mfc/PCM - 102/86 to 60 microns (for two coats) intermediate coat of Epoxy Micaceous Iron Oxide to RDSO No.Mfc/PCN-103/86 to 100 microns (one coat) and finish with two coats of polyurethane Red Oxide to RDSO No. mfc/PCN-109/88 - 80 microns (two coats) - (Total five coats) at an height of 6.5m above rail level over OHE power line area under restricted time limit, under power shut down either at day time or night time with contractor's labour, T&P, Epoxy paints, consumables, Sand Blasting equipments, sand, Air compressor, all lead and lift, staging required if any complete and as directed by Engineer-in-charge	Sqm	900.00	410.00	369000

S No.	Description of Item	Unit	Qty	Rate	Amount
15	Item Description:- Painting of bridge particulars on Abutment pier by painting with, two coats of synthetic enamel paint of approved colour and make to required length including cleaning the surface free from dust dirt mortar spills and writing letters to required height with enamel paint indicating the heights flood level line painted distinctly by 25mm broad white line along with the year of its occurrence in figure 100mm deep direction of flow should be distinctly marked with a bright red band 5cm wide centrally over a white band 10cm wide for length of 60cm with contractors labour tools, paint, paints brushes consumable all lead as directed by Engineer-in-charge .NOTE : Unit of each bridge consists painting two coats on abutment/pier after cleaning to required length and marking FSL,HFL,DL, Direction of flow at each bridge	Each	3.00	500.00	1500
16	Item Description:- Painting of road surface using approved quality thermo plastic material (Homogenously composed of aggregate, pigment, resins and glass reflectorising beads) properties of thermo plastic material shall confirm to BS 3262 (Part I) forming central lines strips of 10x300 cms each with 600cm gap between strips in straight reaches, 300cms gap between strips in steep curves, and continuous strips in the edge of road applied hot, either by screeding or extension process at the rate of 5 Kg/ Sqm of painted surface using suitable machine capable of controlled preparation and laying with surface applicator of glass beads, 250 gram/sqm allowing cooling to ambient pavement temprature that shall produce an adherent pavement marking of minimum specified thickness of 2.5mm including barricading for traffic diversion, cost of paint and other materials labour charges hire charges of machineries etc., complete as per the Engineer-In-Charge.	Sqm	25.00	500.00	12500
17	Item Description:- Providing and laying of sand bags layer by layer filled with sand in each bag of standard cement bag size with all contractor's own bags, sand, labour, tools and plants including transportation to the site of work complete as directed by the Engineer - in - charge	Each	2500.00	20.00	50000
18	Item Description:- Transportation of steel cribs of size 6' X 2' X 2' made of MS angles of 75mm X 75mm X 10mm/8mm or 65mm X 65mm X 8mm from PWI/stores at Yeswantpur /Midsection wherever available to the bridge spot including leading, loading, transportation and unloading and stacking using contractors own vehicle, labour, tools & plants, consumables etc without damaging any Railway property and as directed by Engineer in-charge. (Approx. Qty. 200 Nos, approx. lead 225 km) UNIT: PER NO. PER KM	Per Unit	20000.00	2.00	40000

S No.	Description of Item	Unit	Qty	Rate	Amount
19	Item Description:- Supplying, providing & fabricating and fixing in position true to line & level, Elastomeric POT- cum-PTFE bearings complete as per drawings, technical specifications or as directed by eht Engineer. The unit rate shall cater for any resetting of bearings, if required. (In case of different capacity of bearing, required for the work the rate quoted will be proportionately increased/decreased). a) Fixed bearings i) Free Bearing	Tonne	1650.00	140.00	231000
20	Item Description:- Supply, fabrication, painting and erection of road traffic warning boards of suitable height for various purposes such as NO PARKING, NO ENTRY, HTV PROHIBITED, etc., as per IRC standards made of 50x50x5 mm MS Angles and 3mm thick MS plate for the board of appropriate size, painting 2 coats with appropriate enamel paint and pasted with reflective tickers/reflective paint on the board erected into the ground with cement concrete 1:3:6 for 0.30x0.30x0.60 metre including earthwork excavation, etc., as directed by the Engineer-in-Charge	Each	9.00	1400.00	12600
21	Item Description:- Supplying, providing 150mm dia UPVC rainwater downtake pipe of 6 Kg/sqm pressure pipe with accessories like bends, collars etc., as required including providing suitable MS clamps with Bolts & Nuts 3 Nos per stanchion with stanchion with contractor's materials like clamps, Bolts & nuts etc., labours, tools & plants, with all lead, lifts complete as directed by the Engineer-in-charge.	Metre	80.00	410.00	32800
22	Excavation along the alignment of signalling cable / OFC / Power cable carefully and exposing the same without any damage and excavating the new trench along the railway alignment or along the alignment as specified by the railway engineer - in - charge, laying or removed cable, filling up all complete with sand and laying a layer of brick with contractor's own materials, tool and plants etc., as directed by the engineer - in - charge. Note: In case the cable is damaged cost of restoration and the cost of cable will be recovered from the contractor. The decision of the railway with regard the cost to be recovered will be final.	RM	16000	200	3200000
23	Supplying providing and removing heavy duty shoring for excavation in foundation trenches for bridges and buildings near existing bridge/track/building to a depth not less than 3.0m using contractors ISMC 150 X 75 X 5.7@ 1.0 m intervals and MS sheet of 6 mm thick. The released material shall belong to the contractor.	Sqm	100	920.00	92000
24	Providing heavy duty interlocking pavement blocks 150mm thick made of cement concrete M35 of richer grade at level crossings layed on sand bed of 75mmover 300mm well compacted granular subbase of well graded stone aggregate of 40mm and down size and toewalls around the prefeiry for confining the blocks.	Sqm	200	954.00	190800

S No.	Description of item	Unit	Qty	Rate	Amount
25	Casting RCC box segments, base slab etc., as per approved RDSO/Railway Drawing, with specified design mix of M35 with all contractors materials such as coarse and fine aggregate, labour, masonry, tools and plants, complete but excluding cost of cement and steel and as directed by Engineer-in-charge. Casting of RCC box segments has to be done near to bridge site and kept ready for launching.	1 CUM	200	4500	900000
26	Placing of RCC box segments, base slab using road cranes with all contractor's men machine consumables etc. This item will be required for new construction line portion.	1 MT	500	1900	950000
27a	Providing Toyota Innova Crysta / Toyota Corolla Altis / Honda Civic or similar approved road vehicle(s) as per relevant special conditions	per month	36	54000.00	1944000.00
27b	Providing Toyota Yaris G CVT / Honda City 2020 / Hyundai Verna 1.6 CRDI SX(O) / Skoda Rapid 1.5 TDI CR Ambition AT or similar approved road vehicle(s)	per month	18	48000.00	864000.00
27c	Providing Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	per month	18	40000.00	720000.00
28	Extra payment for providing any of the vehicles mentioned in item no. 26(a) / 26(b) as per the criteria/ stipulations/specifications/conditions mentioned therein including the notes and in the ASC, with Driver(s) cum Attendant(s) beyond 12 hours a day	Vehicle Hours	576	150.00	86400.00
29	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official				
29a	For the class/type of the vehicle mentioned in item no. 24(a)	Vehicle KM	1440	15.00	21600.00
29b	For the class/type of the vehicle mentioned in item no. 24 (b)	Vehicle KM	720	13.00	9360.00
29c	For the class/type of the vehicle mentioned in item no. 24(c)	Vehicle KM	720	12.00	8640.00

S No.	Description of Item	Unit	Qty	Rate	Amount
30	Extra payment for extra days of run, over and above 26 days per month on certification by the user official				
30a	For the class of the vehicle mentioned in item no. 24 (a) with all conditions therein	Vehicle day	144	2200	316800.00
30b	For the class of the vehicle mentioned in item no. 24 (b) with all conditions therein	Vehicle day	72	1900	136800.00
30c	For the class of the vehicle mentioned in item no. 24 (c) with all conditions therein	Vehicle day	72	1600	115200.00
31	Supply of Motor Bike 150CC or more as per relevant special conditions	per month	72	8000	576000.00
32	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official	Vehicle KM	4000	2.5	10000.00
33	<p>Providing site office and office equipments for employer with contractor's material, Labour, Tools and Plant, Equipment etc. including provision of Water Supply, Drainage, Power arrangements, office maintenance as per the details mentioned in Chapter 3(Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents.</p> <p>Note 1: This item is provided with the contention that new site offices will be constructed for this purpose and 75% payment of the accepted rates will be made after making available functional office balance 15% payment shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor</p> <p>Note 2: Alternatively if suitable accommodation is available on hire basis at suitable location acceptable to the employer, the contractor can arrange same under the item but in such a case the payment shall be regulated as below</p> <p>(a) 10% payment shall be made on completion of one month from the date of making available the office fit for functioning.</p> <p>(b) Remaining 90% payment shall be paid in equal monthly instalments that is (0.9xquoted rate)/(stipulated Completion period in months + defect liability period in months)</p> <p>Note 3 : In case stipulated period gets extended, payment on monthly basis, under this item, in such extended period, shall be made as under;</p> <p>(i) In case of new construction @[(54% of quoted rate)/(Stipulated Completion period in months</p>	per Sq. M of Plinth area	62	13788.00	854856.00

S No.	Description of Item	Unit	Qty	Rate	Amount
34	Providing Furniture as given under chapter 3 (Site Facilities for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents. Note: Payment shall be made @ 75% of the accepted rate after making available furniture items functional in office, balance 15% payment shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor	LS per site office	1	200000.00	200000.00
35	Driving 'Z' section MS sheet piles, upto 10mm thickness, side by side in all kinds of soil mechanically or manually as per directions of Engineer-in-charge and removing after the work. The rate shall include all labour, materials, tools and plants, lead and lift as per site condition including 'Z' section sheet pile. Note: Measurement will be based on area covered i.e depth of pile actually driven in the earth along the trench multipiled by length of such protection along the trench	sqm	500	1331.97	665985.00
	No. of Items Thirty Five only	Schedule J: Departmental Value		16730691	
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule L-BRIDGE GIRDER ITEMS

S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>SUPPLY ,FABRICATION AND ERECTION/LAUNCHING OF STEEL GIRDER (PLATE GIRDER/BOWSTRING GIRDER):</p> <p>Supply of structural steel viz steel plates conforming to quality B0 or BR or C of Grade designation E250 or higher Grade designation as per Approved Drawing, Steel sections such as channels, angles, I-Beams conforming to Quality A E250 of IS:2062 or of higher Grade designation as per Approved Drawing. Stud Steel conforming to IS 3935-66, MS Rivets conforming to IS 1148 - 1962, IS 2155 - 1962, bolts conforming to IS 3640, IS 1363, Fabrication, assembling, transportation, erection/launching (launching during traffic/ and power block) of Steel girder (to be utilized as composite girder) including riveting, welding (MMAW/SAW/CO2), bolting (HSFG/Normal bolts), drifts with contractors materials, consumables, fuel, labour, taxes/levies, lead lift, plant and machinery, hire charges equipments, staging, scaffolding, temporary arrangements, deployment of caution watchman, Non destructive testing of raw materials and welds and other tests as required etc., templates, zigs, fixtures, backup supports, accessories, transporting various components from fabrication shop to the site including loading, unloading, lift etc., launching by means of road crane of adequate capacity (including a standby working crane of the same or higher capacity) etc., complete as per the relevant IS specifications, IRS B1-2001, IRS BS-110 (with up-to date correction slip) issued by RDSO and as per the other relevant IRS/IS/IRC as detailed in Additional special conditions (ASC-FAB-ERC-CG-1 & ASC-FAB-ERC-CG-2), as directed by Engineer-in-charge. The launching has to be done as per the scheme supplied by the contractor and approved by Railways. The launching has to be done with help of contractor's road cranes of suitable capacity/ launching nose etc. as approved by Railway during traffic block and /or power block as approved by Railway. The Rates quoted is inclusive of :- a. Cost of steel materials, Rivets, nuts, bolts and welding etc. Including fabrication, fabrication materials, templates, fixtures, equipments, tools & plants required for the work. b.Transportation of raw materials. c. Skilled/ Unskilled labourers required for the work. d. Excise Duty, Octroi, Sales Tax and other</p>	MT	115.00	113983.00	13108045

S No.	Description of Item				
2	METALIZING OF FULL FABRICATED COMPONENTS: Metalizing of Full fabricated components of composite girder duly preparing the surfaces by sand/ grit blasting as per the specification of metalizing and sand/ grit blasting (Metalizing thickness of minimum 115 microns with avg. thickness of 150 micron) and painting with one coat of primer to IS 5666 (1970) followed by one coat of zinc chromate primer to IS 104 (45 micron) and two finishing coat of aluminium paint to IS 2339 (each of 35 micron) with contractor's materials, labour, tools and plants scaffoldings etc. complete and as directed by the Engineer - in-charge. Detailed procedure shall be followed as per Additional Special conditions and as per IRS B-1/2001.	Sqm	1000.00	819.00	819000
3	DECK SHEETING: 1.Designing, supplying, fabricating and providing of trapezoidal roll formed deck sheeting profiles of 50mm depth made of galvanised steel troughed metal decking plate over cross girders/supports for cast-in-situ deck slab of ROB. Thickness of deck plate shall be 1.00mm (minimum) and shall serve as permanent shuttering to deck slab of 250mm (max) thickness measured over crest of metal decking and shall have adequate strength to support the weight of green concrete and imposed loads during concreting over a span of 2000mm between supports. Deck sheets to be embossed to facilitate enhanced sheet to concrete bonding with contractor's all materials, men, equipment, tools and plant, fixing arrangements, all lead and lift and the work to be carried out above Railway tracks and 25 KV OHE electrified area without affecting Railway traffic and damage to Railway properties as directed by Engineer-in-charge. NOTE: 1.The rate includes submission of manufacturers design calculations/test reports, technical details and the supply to be taken from reputed manufacturing firms.	Sqm	200.00	1803.00	360600
	No. of Items Three only			Schedule L: Departmental Value	14287645
				Tenderer's / Contractor's percentage	
				Total	

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule N-Items of works pertains to Road works.					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Providing speed breakers as per type plan No CE/LC/SK-5 and CE/LC/SK-6 including painting white and yellow bands, diagonals etc. Complete with contractors labour, men, materials, machinery, consumables, approved paint, T&P, crew, fuel etc., complete including all lead and lifts and directed by the Engineer-in-charge.	Each	6.00	2398.00	14388
	No. of Items One only	Schedule N: Departmental Value			14388
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 3

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.174/590 to Km.182/500 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule O-BRIDGE MISC.ITEMS

S No.	Description of Item	Unit	Qty	Rate	Amount
1	HAND RAIL WITH PIPE Supplying, hand rail comprising one row of MS pipe of 100mm dia (as per IS 1239) fixed to the vertical supporting MS brackets 16mm thick and of height 30cm above crash barrier which are fixed to the crash barrier parapet at 2.0m intervals including painting the hand rail/MS brackets by one coat of red oxide primer and two coats of synthetic enamel painting of suitable colour with contractor's all materials, tools & plants, labour, consumables, all lead & lift, etc complete as directed by Engineer-in-charge.	MT	0.75	76383.00	57287.25
2	COMPLETION DRAWING: Preparation and submission of GAD/Completion drawing for the Major bridges/ROBS/RUBs based on soil exploration and water way calculation for fixing suitable span as per RDSO design and drawing in AutoCAD on 100micron film double mat finish as per Railway standard approved by the Engineer-in-charge to specified scales including submission of check print for proof check to incorporate suggested corrections and modifications and supply final copy in compact disk and 6 copies in ammonia print in A0 size with all contractor's materials, labours, tools, plants etc., complete.	Each	3.00	14427.00	43281
	No. of Items Two only	Schedule O: Departmental Value			100568
		Tenderer's / Contractor's percentage			
		Total			



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रेल इन्फ्रास्ट्रक्चर डेवलपमेंट कंपनी (कर्नाटक) लिमिटेड

Rail Infrastructure Development Company (Karnataka) Limited
(A Joint Venture of Govt. of Karnataka & Ministry of Railways)

MSIL House, 7th Floor, #36, Cunningham Road, Bangalore – 560052
Tele – 080 22370581, Fax : + 91-80-22370581, web : www.kride.in

Price Proposal

Package 2

Baiyyappanahalli – Hosur section : Doubling of track

REACH 4 : Km 165/000 to Km174/590

Earthwork in cutting, embankment and construction of
Minor bridges/RUB's and other miscellaneous works in
Bangalore Division of
South Western Railway.

REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)

SUMMARY OF BILLS OF QUANTITIES

Particulars	Department Value (Rs.)
SCHEDULE - A	16849958
SCHEDULE - B	10997565
SCHEDULE - C	44711100
SCHEDULE - D	47068000
SCHEDULE - E	41276630
SCHEDULE - F	22681342.00
SCHEDULE - G	63800
SCHEDULE - J	18364606
SCHEDULE - N	14388
Total	202027389

REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)						
Schedule A-USSOR ITEMS - Items of works that are covered by Unified schedule of rates 2011 of South Western Railway						
Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
1	013140	Removal of excavated/slip earth/ debris/ malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, re-handling, loading, unloading and leading, etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/ROCKS, BOULDERS including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/breast/retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge	cum	750.00	140.54	105405
2	014053	Turfing / planting, including all lead and lift, and watering as required until properly rooted, with. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period if the turfing is properly rooted. Planting Sarkanda/ sarpat or any other suitable species approved by the engineer	100 Sqm	20000.00	4109.65	821930
3	014062	Providing and laying Jute Geo-Textile (JGT) in slopes of Railway embankment in accordance with RDSO's guidelines for application of Jute Geotextile in Railway embankments and hill slopes no. RDSO/2007/GE:G-0008 or its subsequent versions, including incidental earthwork and fixing arrangements With GJ - Type 2	100 Sqm	20000.00	4450.49	890098
4	031012	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto Plinth level : 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 40mm nominal size)	cum	350.00	1869.47	654314.5
5	032020	Providing and fixing precast M 15 grade cement concrete in string or lacing courses, coping, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, etc. upto floor two level, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required shuttering, centering complete - excluding the cost of cement. (cast at site)	cum	100.00	2527.44	252744
6	032031	Providing and fixing at or near ground level, Precast M 20 grade cement concrete as per approved design and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including the cost of required centering and shuttering complete but excluding the cost of cement. (cast at site) in kerbs, edging etc.	cum	30.00	2399.70	71991

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
7	056042	Cement Concrete Solid Block Masonry in foundation and plinth with: (factory made blocks) Cement mortar 1:4 (1cement: 4fine sand)	cum	85.00	3385.45	287763.25
8	056050	Extra over Item 056040 for Cement Concrete Solid Block masonry in superstructure above plinth level upto floor two level	cum	45.00	570.47	25671.15
9	061013	Random rubble masonry with hard stone in foundation and plinth including levelling up with concrete as per specifications, upto plinth level with : Cement mortar 1:6 (1cement: 6coarse sand)	cum	200.00	2023.44	404688
10	081012	Structural steel work in single section including cutting, bending, straightening, drilling, rivetting, bolting, hoisting, fixing in position, including applying a priming coat of approved steel primer, complete - upto 6m height above GL In flats, plates, round or square bars	Kg	825.00	57.49	47429.25
11	091070	Moorum flooring 10 cm thick (consolidated depth) including watering and ramming. With Contractor's Moorum	Sqm	2000.00	110.17	220340
12	092062	Providing and laying plain cement concrete flooring of specified thickness with mix design concrete over firm, well prepared and well compacted bed including provision of designed expansion joint & finishing manually or mechanical trowel ling & vacuum dewatering complete. Expansion joint to be paid for separately. M-25	cum	350.00	2885.17	1009809.5
13	111012	12 mm cement plaster of mix - 1:6 (1cement: 6fine sand)	Sqm	300.00	75.31	22593
14	131083	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in- Charge. Internal work - exposed on wall 25mm nominal outer dia. Pipes	Metre	100.00	164.34	16434
15	131086	50mm nominal outer dia. Pipes	Metre	75.00	568.07	42605.25
16	162080	Avenue Plants Delonix regia (Gulmohar) of height 135-150 cm in big each polybag of size 25-30cm	Each	500.00	40.88	20440
17	162091	Ficus religiosa (Peepal) of height 120-135 cm in big polybag of size 30-35cm	Each	500.00	40.88	20440
18	162106	Michelia champa (Golden Champa) of height 60-75 cm in earthen pots of size 25cm	Each	500.00	70.85	35425
19	181021	Demolishing plain cement concrete including disposal of material within 50m lead				
20	181030	1:2.4 or richer mix with max. 20 mm coarse aggregate	cum	300.00	555.62	166686
21	181040	Demolishing R.C.C. work including cutting and stacking of steel bars and disposal of unserviceable material within 50m lead. (Extra payment for scraping, cleaning and straightening of bars to be made separately)	cum	75.00	810.58	60793.5
22	182013	Extra over Item Nos. 181021 and 181050 if pavement breaker is used on orders of Engineer	cum	125.00	243.17	30396.25
23	182013	Demolishing brick work including stacking of serviceable material and disposal of unserviceable material within 50m lead In cement mortar	cum	75.00	469.56	35217

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
23	182033	Demolishing stone rubble masonry including stacking of serviceable material and disposal of unserviceable material within 50m lead In cement mortar	cum	325.00	560.34	182110.5
24	191011	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30 cm), including refilling and reinstating surface, and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area 0m to 10m	Metre	50.00	1007.02	50351
25	191012	10m to 20m	Metre	10.00	1037.22	10372.2
26	191030	Extra for 150mm dia bore in hard Rock/ large Boulder at all levels	Metre	20.00	4878.30	97566
27	191041	Drilling of NX size borehole (75 mm dia) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 0m to 10m	Metre	15.00	3167.41	47511.15
28	191100	Taking out 100mm dia & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labelling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS 2720	Each	15.00	348.45	5226.75
29	191110	Taking out 100mm dia & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labelling and transporting the samples to laboratory. Samples shall be collected as per IS 2720	Each	5.00	348.45	1742.25
30	191120	Conducting standard penetration test as per IS 2131 at approximate 1.5 m intervals in bore holes, as directed by the Engineer in charge	Each	10.00	209.07	2090.7
31	191130	Collection of water samples at required intervals	Each	5.00	139.38	696.9
32	191141	Conducting laboratory Tests on collected soil samples as per relevant IS code Moisture contents/ Dry density	Each	5.00	290.38	1451.9
33	191142	Atterberg Limit	Each	5.00	290.38	1451.9
34	191143	Specific Gravity	Each	5.00	232.30	1161.5
35	191144	Grain size analysis including Hydrometer analysis	Each	5.00	232.30	1161.5
36	191145	Direct Shear Test	Each	5.00	1742.25	8711.25
37	191146	Natural density	Each	5.00	290.38	1451.9
38	191147	Consolidation test	Each	5.00	290.38	1451.9
39	191148	Unconfined compression test	Each	5.00	290.38	1451.9
40	191149	Tri-axial test	Each	5.00	1742.25	8711.25
41	191151	Conducting Laboratory tests on collected ROCK SAMPLES as per relevant IS code Density test	Each	5.00	290.38	1451.9
42	191152	Water absorption & Porosity	Each	5.00	232.30	1161.5

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
43	191153	Hardness	Each	5.00	290.38	1451.9
44	191154	Unconfined compression test	Each	5.00	232.30	1161.5
45	191155	Point load test	Each	5.00	406.53	2032.65
46	191156	Modulus of elasticity	Each	5.00	406.53	2032.65
47	191160	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete/ reinforcement including determination of pH value	Each	3.00	871.13	2613.39
48	191170	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	3.00	871.13	2613.39
49	191180	Preparation and submission of Final report giving complete and comprehensive record of investigations, laboratory test reports and calculations in approved format	Each	3.00	2323.00	6969
50	192011	Earth work in excavation for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. incl. all lift, disposal of surplus soil upto a lead of 300 M, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge All kinds of soils	cum	12000.00	182.73	2192760
51	192012	Ordinary rock	cum	3500.00	237.64	831740
53	192014	Hard rock (blasting prohibited)	cum	2200.00	451.19	992618
54	192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40 mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	cum	1750.00	1538.08	2691640
55	221060	Providing and laying Pitching with stone boulders weighing not less than 35 kg each with the voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications (Filter media to be paid separately under the relevant item)	cum	550.00	1667.43	917086.5
56	221070	Providing and laying Filter material As Per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical specification	cum	350.00	1648.61	577013.5
57	222010	Providing and laying Flooring with rubble stone, laid over 15 cm thick CC 1:2:4 and the voids filled with CC 1:2:4 complete with the joints pointed with 1:2 Cement sand mortar as per drawing and Technical specifications. Payment for cement to be done separately. Voids in the rubble stone to be taken as 35% of the gross volume of the stone layer. (Base concrete to be paid extra)	cum	450.00	1544.90	695205

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
58	222040	Supply and laying of coarse sand including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer incharge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media	cum	350.00	1369.48	479318
59	222230	Painting the HFL and danger level marks, year of HFL on bridge abutments and piers with ready mixed paint as per standard in two coats over one coat of primer with all materials, labour, tools, scaffolding, all lead and lift etc including writing complete	Each Mark	28.00	121.35	3397.8
60	222240	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white back ground with all labour, tools, cement, paint etc. with all lead and lifts	Each	28.00	536.26	15015.28
62	222290	Providing Boulder backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra	cum	1200.00	178.76	214512
63	222360	Surface protection of Underside of Bridge Decks, Girders, Inside of Box Girders, Railings, etc. of Bridges and Piers and Substructures which are not in River Bed by cleaning and drying the surface; repairing local defects, e.g. honeycombs with a paste of cement admixed with 5% by weight of cement of Polymer bonding agent, applying (@ 0.30 litre per square metre) a coat (DFT of 100-150 micron) of a translucent brown coloured modified phenolic resin based single component high performance polymeric waterproofing compound (sp. gr. 0.87, rosin content nil and a solid content of minimum 0.47%), applying (@ 0.25 litre per square metre) a top coat of a modified phenolic resin based single component waterproofing compound of grey or other shades (sp. gr. 0.85) before the base coat becomes tack-free; permitting the coatings to cure and dry naturally; the 2-coat system shall be impermeable under a water head of 20.0 metres, complete as per specification	Sqm	1400.00	263.80	369320
64	231010	Preparation of subgrade by excavating earth upto 22.5cm depth, dressing to camber and consolidating with power road roller of 8 to 12 tonne capacity including making good the undulations etc. and disposal of surplus earth with lead upto 50 metres	Sqm	2100.00	49.66	104286

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
65	231020	Consolidation of subgrade with power road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and re-rolling the subgrade	Sqm	2100.00	1.31	2751
66	231042	Providing and laying water bound macadam with specified stone aggregate, stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete. Base course with 63mm to 45mm size including stone screening 13.2mm size	cum	350.00	1110.24	388584
67	231043	Base course with 53mm to 22.4mm size including stone screening 11.2mm size	cum	350.00	1215.82	425537
68	233011	Providing and applying tack coat using bitumen emulsion (Rapid setting) complying with IS: 8887- 1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specification On W.B.M. @ 0.4kg/ sqm	Sqm	2400.00	19.49	46776
69	233012	On bituminous surface @ 0.25kg/ sqm	Sqm	2400.00	13.86	33264
70	235010	Providing and laying seal coat of premixed fine aggregate (passing 2.36mm and retained on 180micron sieve) with bitumen using 128 kg of bitumen of grade 80/ 100 bitumen and 0.60cum of fine aggregate per 100sqm of road surface including rolling and finishing with road roller all complete. Note - This should not be operated along with Hot mix carpeting	Sqm	2400.00	74.90	179760
		No. of Items Seventy only	Schedule A: Departmental Value			16849958
			Tenderer's / Contractor's percentage			
			Total			

Seal & Signature of the Bidder

REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule B - Items of works pertains to Earthwork.					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>Earthwork in cutting in all soils: Earthwork for excavation in cuttings for all kinds of soils in connection with making formation/side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge.</p> <p>Note:</p> <p>i) Payment shall be based on cross section measurement only.</p> <p>ii) The term 'all soils' mentioned above include loose soil, ordinary soil (workable with spade), hard soil including stiff clay, moorum, shingle, soft laterite etc., requiring close application of picks to loosen and small boulders measuring not more than 300 mm in any direction.</p> <p>(iii) No extra payment for lead etc., is admissible.</p> <p>(iv) Only 75 percent payment for the quantity executed is payable in a particular bill initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over.</p>	cum	40000.00	61.20	2448000

S No.	Description of Item	Unit	Qty	Rate	Amount
2	<p>Earthwork in cutting in Soft Rock : Earthwork for excavation in cuttings in soft rock strata comprising disintegrated rocks of lime stone, sand stone, hard laterite etc., removable without blasting in connection with making formation/side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge.</p> <p>Note:</p> <p>i) Payment shall be based on cross section measurement only.</p> <p>ii) Soft rock means rock which does not require blasting and which can be excavated by continuous operation of excavators/picks/bars etc.</p> <p>(iii) No extra payment for lead etc., is admissible.</p> <p>(iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over.</p>	cum	10000.00	78.00	780000

S No.	Description of Item	Unit	Qty	Rate	Amount
3	<p>Earthwork in cutting in Hard Rock requiring controlled blasting or other means Earthwork for excavation in cuttings in hard rock strata using explosives or chemicals, jack hammers or any other advance methods from authorised manufacturers/ license holders, in controlled manner, in connection with making formation/ side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractors equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment</p> <p>/ outside railway land so as to clear the the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) Hard rock requiring controlled blasting means rock which cannot be excavated by excavators/ picks/ bars etc. and which require controlled blasting duly providing protection measures for properties around or which require use of chemicals or other means to loosen the rock. (iii) No extra payment for lead etc., is admissible. (iv) Only 75% payment for the quantity executed in a particular bill is payable initially. 15% of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10% shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) This item shall be operated with specific prior approval of CE (construction) for works requiring blasting near inhabited area/ residential houses within town/ village limits where open blasting is not permitted by the revenue / local authorities.</p>	cum	7500.00	478.00	3585000

S No.	Description of Item	Unit	Qty	Rate	Amount
4	Earth work in filling with cut spoils: Earthwork in embankments for making formation with Railways usable cut spoils excavated from cuttings in specified layers not exceeding 300 mm in thickness with lead and lifts including rehandling, transportation, unloading & spreading in layers, benching of slopes, sectioning to profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's vehicles, machinery, labour, consumables etc., complete as per technical specifications & special conditions and as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only (ii) The rate includes testing of cut spoil for parameters to assess the suitability for use in embankments which shall be done for every 10000 cum and/or for every change of layer characteristics. (iii) No extra payment for lead etc., is admissible (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) Formation width at top shall be made with 500mm extra on either side initially and after compaction be cut to standard profile. No extra payment shall be made for this purpose. If the extra width as above is not made at any single location of less than 100 m length, payments due shall be reduced by 5 percent for that entire 100 m stretch. (vi) For leads upto 500m from the spot of release, accepted rates shall apply. For leads beyond 500 m and upto 1 km, 5 percent extra over the accepted rates shall be paid. For all leads beyond 1 km and irrespective of any extent further, another 5 percent over the accepted rates shall be paid and no their compensation will be eligible.	cum	50000.00	52.50	2625000
5	EW03-301 : Mechanical compaction of earth work: Mechanical compaction of embankment, approaches to bridges etc., in specified layers using specified capacity vibratory power rollers as per type of soil, to achieve specified dry density of earth/other material using contractor's power rollers, tools and plants, consumables, labour, watering etc., all complete as per specification & special conditions and as directed by Engineer-in-charge. Note: If any other roller or other equipment is used for compaction, payment for the complete layer shall be reduced by 20 percent of the accepted rate for mechanical compaction.	cum	107870.00	10.50	1132635

S No.	Description of Item	Unit	Qty	Rate	Amount
6	EW03-303 : Turfing: Turfing the slopes of the bank/cutting with contractors sods of approved quality about 20x20x7.5cm size collected/ brought from outside railway limits, fixing the same over the slopes/ cess duly dressing the profile, loosening to required depth, gently ramming after laying, watering as required, making saucer drains 60cm wide from top to toe with necessary curvature for the free flow of water collected at the top at 25m intervals using contractors boulders with contractors vehicle, labour, consumables, all lead and lift etc., all complete and as per directions of Engineer-in-charge. Note : (i) 75 percent payment shall be made initially and balance 25 percent shall be released after 6 months or maintenance period whichever is more after satisfactory growth of turfing is certified by the Engineer-in-charge.	Sqm	25000.00	11.30	282500
7	Plotting initial levels: Computer Plotting of the theoretical cross section profile based on the initial levels of ground, recorded in the level books for cuttings/embankments at intervals of 25m or less including computation of theoretical profile/quantities duly deducting quantities for bridges and any other structure not requiring execution of earthwork in A4 size sheet with contractor's material, man power, consumables, tools and plants etc., and as directed by Engineer-in-charge. Note: i) Plottings and calculations are to be submitted to Railway in 3 sets. (ii) One cross section in one A4 size sheet is required.	Kilometre	10.00	4700.00	47000
8	Plotting final levels: Computer plotting of the theoretical & actual final finished cross section profile, duly indicating different type of strata available/ excavated in the x-section, based on the final levels recorded in the level books for banks/ cuttings at intervals of 25m or less, including computation of theoretical/actual quantities done as per classification of different types of soil/blanketing material as certified by Engineer-in-charge duly deducting quantities for bridges and any other structure not requiring execution of earthwork in A4 size sheet with contractor's material, man power, consumables, tools and plants etc., and as directed by Engineer-in-charge. Note: i) Plottings and calculations are to be submitted to Railway in 3 sets ii) One cross section in one A4 sheet is required. iii) For embankments, computation of different soils viz., cut spoils, contractor's own earth, blanketing material are to be shown separately as per measurement recorded.	Kilometre	10.00	4700.00	47000

S No.	Description of Item	Unit	Qty	Rate	Amount
9	Design of high bank/deep cutting slope based on slope stability analysis as specified by RDSO/theoretical methods, for railway cuttings/embankment more than 6m in height/depth based on the material available in cutting/embankments, including collecting required number of soil samples and conducting required laboratory tests as per RDSO specifications so as to find out soil parameters required in slope stability analysis, working out design slope based on manual method/computer software including furnishing detailed calculations in a report form with contractor's men, material, machinery etc and as directed by Engineer-in-charge. Note: Recommended slopes designs shall be from reputed designers and shall include detailed calculations to be submitted in 3 copies. The unit for this item is Crosssection'.	Per Unit	2.00	17500.00	35000
10	Fixing reference pegs: Striking out of centre line of railway alignment using total station or any other latest survey equipment and fixing centre line pegs of adequate size with Railway's tie bars/cut rails at every 100m on straight and 25m in curves, at bridges etc., with contractors surveyor, equipment, all consumables, labour etc. Note : (i) The reference pegs shall be fixed along the alignment at appropriate locations to provide information for execution of formation, bridges, ballasting and linking of track throughout the period of construction. (ii) Contractor is responsible for maintaining the reference pegs including shifting in case of shifting of alignment or to facilitate construction. (iii) The reference pegs shall be usable as temporary bench marks wherever required.	Each	100.00	154.30	15430
	No. of items ten only	Schedule B: Departmental Value			10997565
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule C - Items of works pertains to Supply of Cement.					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supply of Ordinary Portland cement of 43 / 53 grade conforming to IS 8112 / IS 12269 (upto date) and/or Portland Pozzolana Cement conforming to IS/1489 (upto date), at site of work to the extent of the quantities required for various items of works in schedule items including all cost of loading, unloading, leading, transporting, stacking, storing including making proper storage arrangements and all consumables, machinery, vehicles, labour etc., complete and as directed by the Engineer-in-charge. (a) Ordinary Portland Cement (43/53 Grade) NOTE : 1) Use of Portland Pozzolana cement shall be restricted strictly to the permitted construction items only. Pozzolana cement shall not be used in PSC construction. 2) Admixtures such as super plasticizers will be permitted based on specific designs for permitted construction items with the approval of the DY.Chief Engineer-in-charge. However, admixtures proposed shall be supplied free of cost by the Contractor and no compensation will be payable. 3. 33 Grade cement shall not be used in railway construction works.	Tonne	7050.00	6342.00	44711100
		Schedule C: Departmental Value		44711100	
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)				
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Schedule D - Items of works pertains to Concrete works.

S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>Plain Cement Concrete (M15 to M30 design mix) Cast-in-situ work (cement will be paid separately) with Contractors all materials including 40mm or below graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality in foundations, abutments, piers, wing walls, return walls etc., of bridges and other structures as required, including fixing and removal of contractors shutter/ form work/ supports, vibrating/compacting, providing weep holes with contractors AC pipes 75 to 100mm dia wherever necessary, providing normal/approved expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., complete, with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., as per approved drawings/specification /conditions and as directed by the Engineer-in-charge. NOTES: (1) Single rate will apply for all mixes (M15,M20,M25 and M30) irrespective of proportion of materials used (per cubic metre (cum) of concrete). (2) All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS Concrete Bridge Code and relevant IS Codes/Specifications and other relevant specifications as prescribed. Weigh batching is mandatory for all PCC, RCC and PSC works. (3) Rates shall include all materials, operations, etc., complete except for Cement, which will be paid for separately. Steels including fabrication, if used, and excavations for foundations will be paid under relevant SSR or other schedules separately. (4) Shuttering and supporting form work shall be of good quality materials only. For PSC/RCC girders/slabs/beams/columns, only rigid plate steel shutters shall be used. (5) Mix design with requirement of all tests shall be arranged by the Contractor at his cost. (6) Admixtures as required/ as per designs shall be arranged by the Contractor at his cost. (7) All material and concrete tests as required shall be arranged by the contractor at his cost. (8) Rate includes placing of concrete in position for all heights by manual/concrete pump/crane etc.,</p>	cum	10000.00	2500.00	25000000

S No.	Description of Item	Unit	Qty	Rate	Amount
2	<p>Plain Cement Concrete (M15 to M30 design mix) Cast-in-situ work (cement will be paid separately) with Contractors all materials including 20mm/12.5mm graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality in bed blocks, wearing coat, coping, ballast walls etc. of bridges and other structures as required, including fixing and removal of contractors shutter/form work/ supports, vibrating/compacting, providing weep holes with contractors AC pipes 75 to 100mm dia wherever necessary, providing normal/approved expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/ bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., complete with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., as per approved drawings/specification / conditions and as directed by the Engineer-in-charge. NOTES: (1) Single rate will apply for all mixes (M15, M20, M25 and M30) irrespective of proportion of materials used (per cubic metre (cum) of concrete) (2) All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS Concrete Bridge Code and relevant IS Codes/Specifications and other relevant specifications as prescribed. Weigh batching is mandatory for all PCC, RCC and PSC works. (3) Rates shall include all materials, operations, etc., complete except for Cement, which will be paid for separately. Steels including fabrication, if used, and excavations for foundations will be paid under relevant SSR or other schedules separately. (4) Shuttering and supporting form work shall be of good quality materials only. For PSC/RCC orders/slabs/ beams /columns, only rigid plate steel shutters shall be used. (5) Mix design with requirement of all tests shall be arranged by the Contractor at his cost. (6) Admixtures as required/ as per designs shall be arranged by the Contractor at his cost. (7) All material and concrete tests as required shall be arranged by the contractor at his cost. (8) Rate includes placing of concrete in position for all heights by manual/concrete pump/crane etc.,</p>	cum	100.00	2600.00	260000

S No.	Description of Item	Unit	Qty	Rate	Amount
3	Reinforced Cement Concrete (M20 to M40 design mix) work (Cement & Steel will be paid separately), with Contractors all materials including 20mm graded hard crushed stone aggregate, sand, admixture, water etc., of approved quality in foundations including below ground level, abutments, piers, pile caps, bed blocks, trestle beams, girders, pedestals, retaining walls, boxes/slabs for flat top bridges, deck slabs, girders, kerb walls, diaphragms, cross frames etc., on girder bridges and other structures of any design/shape as required, above or below ground level of any size and shape, including fixing and removal of contractors shutters/form work/ supports, vibrating/compacting, and providing weep holes with AC pipes 75mm to 100mm dia and normal/approved expansion joints with necessary materials as per designs/drawings wherever necessary, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required etc., complete and including handling, uncoiling, cutting, bending, cranking, tying M.S./T or Rods/ wires /other steel to form reinforcement with Contractors galvanized binding wire of size 18/20 SWG(0.90mm) to IS280, etc., fixing in position reinforcement gauge complete as required with all lead, lift, transport, materials, consumables, labour, tools and plant, etc., and including 2 coats of cement painting as per approved drawings/specifications/ conditions and as directed by the Engineer-in-charge. Plant produced Ready-mix concrete shall be used only with the specific approval of the Dy.Chief Engineer.	cum	4800.00	3600.00	17280000
4	Pre-stressed Cement Concrete (M35 to M50 design mix) post-tensioned work (cement, steel, HTS wire/strands will be paid separately) in girders/slab of any design/shape, with Contractor's all materials including 20mm graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality and all special materials for prestressed concrete including Flexible GI/Other sheathing, coupler, bearing plates, anchorages, wedges, grout, anticorrosive treatment etc., of special/approved quantity and quality as per designs/drawings, including post-tensioning with contractor's own jack, power and other equipment complete, fixing and removal of contractors shutter/form work/ supports vibrating/compacting, providing weep holes with contractor's AC pipes 75 to 100mm dia wherever necessary, providing normal expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., and including handling, uncoiling, cutting, bending, cranking, tying HTS/MS/TOR rods/other steel to form tendons and reinforcement gauge with contractor's galvanized binding wire of 18/20 SWG(0.90mm) to IS 280, etc., fixing the tendons and reinforcement in position as required, complete, with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., and including 2 coats of cement painting, as per approved drawings/ specification/ conditions and as directed by the Engineer-in-charge. Plant produced Ready-mix concrete shall be used only with the specific approval of the Dy.Chief Engineer. (a) For PSC slabs	cum	150.00	11000.00	1650000

S No.	Description of Item	Unit	Qty	Rate	Amount
5	<p>Providing and installing 1000mm/600mm dia RCC cast-in-situ BORED PILES using Rotary/Conventional method of drilling in all kinds of soils and rock (including boulders, soft, weathered or hard rock) duly providing Contractor's M35/M40 grade concrete (with 20mm size graded stone aggregate and all other materials including admixtures as required), including fabricating and fixing in position reinforcement gauge as per designs/drawings, removing/chipping off latence and concrete above cut off level for a depth upto 1.0 M of the pile top, protection arrangements for the bore hole as required for various types of soil (except for providing permanent M.S.liners in very loose soils) with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (Per running metre of pile depth to be quoted) (a) 1000 mm dia RCC pile in M35/M40 Concrete in all soils including weathered rock including through boulders/obstructions. NOTES:- (1) Rates include cost of all operations and cost of all materials including temporary liners and other protection as required but excluding cement and reinforcement steel and permanent M.S.liners in very loose soil. Reinforcement steel, cement (including 10% extra cement for under water concreting) and permanent M.S.liners will be paid under other relevant schedules at the discretion of the Engineer-in-charge. Pile measurement for payment will be upto cut off level only. (2) Piles shall be provided with proper shoe/base to rest properly on rock/ soil as designed. Rates include cost of bedding and seating the piles on hard rock, wherever specified, with a minimum of 1.0m anchorage as specified. However, hard rock blasting required, if any, will be paid separately under other relevant schedules at the discretion of the Engineer-in-charge.</p>	RM	80	4800.00	384000

S No.	Description of Item	Unit	Qty	Rate	Amount
6	<p>Providing and installing 1000mm/600mm dia RCC cast-in-situ BORED PILES using Rotary/Conventional method of drilling in all kinds of soils and rock (including boulders, soft, weathered or hard rock) duly providing Contractor's M35/M40 grade concrete (with 20mm size graded stone aggregate and all other materials including admixtures as required), including fabricating and fixing in position reinforcement gauge as per designs/drawings, removing/chipping off latence and concrete above cut off level for a depth upto 1.0 M of the pile top, protection arrangements for the bore hole as required for various types of soil (except for providing permanent M.S.liners in very loose soils) with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (Per running metre of pile depth to be quoted) (c) 1000mm dia RCC pile in M35/M40 Concrete in hard rock. NOTES:- (1) Rates include cost of all operations and cost of all materials including temporary liners and other protection as required but excluding cement and reinforcement steel and permanent M.S liners in very loose soil. Reinforcement steel, cement (including 10% extra cement for under water concreting) and permanent M.S liners will be paid under other relevant schedules at the discretion of the Engineer-in-charge. Pile measurement for payment will be upto cut off level only. (2) Piles shall be provided with proper shoe/base to rest properly on rock/ soil as designed. Rates include cost of bedding and seating the piles on hard rock, wherever specified, with a minimum of 1.0m anchorage as specified. However, hard rock blasting required, if any, will be paid separately under other relevant schedules at the discretion of the Engineer-in-charge.</p>	RM	12.00	5500.00	66000
7	<p>Supplying, fabricating, driving and placing in position permanently 6mm thick M.S.Liners including cutting, bending, welding and fabricating with Contractor's 6mm thick M.S.Sheets as necessary for RCC piles of 1000/600mm dia with all lead, lift, transport materials, consumables, tools & plant, labour including operation of rig/machinery for driving etc., complete as per specifications and as directed by the Engineer-in-charge.(per running metre of liner depth to be quoted) (a) 6mm thick M.S.liners for 1000mm dia RCC piles. NOTES:- (1) Rate is payable for the liner depth used only and does not include wastage of any material involved and no extra rate/compensation is payable in this regard.</p>	RM	30.00	7000.00	210000

S No.	Description of Item	Unit	Qty	Rate	Amount
8	Conducting and pile load test on a 600mm to 1200 mm pile duly creating all loads and providing all staging and instrumentation, with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (per metric tonne (t) of loading to be quoted). NOTES:- (1) Single rate shall apply for all piles of any dia metre. Rate includes cost of all materials, operations, instrumentations, technical works etc., and disposing of all waste materials away from the site appropriately. (2) Testing shall be done as per IS 2911 specifications or as directed by the Engineer-in-charge duly creating all necessary loads which will be in the range of 300-600 t depending upon the designs. All loads may be created with available local material or any other at the cost of the contractor. (3) Loading calculations and procedure shall be submitted by the Contractor in advance and got approved. Report shall be submitted by the contractor after the test in a proper format specifying the calculations for loads, deflections and other parameters (specified and actual) as per relevant specifications.	Tonne	200.00	380.00	76000
9	Supply and laying of RCC Hume pipes of dia 900mm/1200mm of NP4/RDSO designs suitable for all types of Railway loading standards including providing levelling course, jointing, compaction as per approved drawings with contractor's fixing materials, collars, aggregates and all other materials as required with all lead, lift, transport, consumables, labour, tools and plant, etc., complete as directed by the Engineer-in-charge. (per running metre length of pipe to be quoted). (a) Laying with 900mm pipe NOTES: (1) Rates include all materials, operations etc., complete except cement used which will be paid for separately. (2) Contractor shall produce design/ test reports to prove the suitability of the Hume Pipe. Decision regarding standard of pipe to be used by the Engineer-in-charge is final and binding on the contractor. (3) Rates include local transport within the section only. Transport from factory upto the section/office of the Engineer-in-charge will be paid under relevant SSR items.	RM	300.00	5000.00	1500000
10	Supply and laying of RCC Hume pipes of dia 900mm/1200mm of NP4/RDSO designs suitable for all types of Railway loading standards including providing levelling course, jointing, compaction as per approved drawings with contractor's fixing materials, collars, aggregates and all other materials as required with all lead, lift, transport, consumables, labour, tools and plant, etc., complete as directed by the Engineer-in-charge. (per running metre length of pipe to be quoted). (b) Laying with 1200mm pipe NOTES: (1) Rates include all materials, operations etc., complete except cement used which will be paid for separately. (2) Contractor shall produce design/ test reports to prove the suitability of the Hume Pipe. Decision regarding standard of pipe to be used by the Engineer-in-charge is final and binding on the contractor. (3) Rates include local transport within the section only. Transport from factory upto the section/office of the Engineer-in-charge will be paid under relevant SSR items.	RM	100.00	5800.00	580000

S No.	Description of Item	Unit	Qty	Rate	Amount
11	Drilling of 25mm/40mm dia holes in concrete/stone masonry/hard rock underground/over ground, to a depth of 400mm for dowelling/ anchoring including fixing of steel dowels/angles/flats and grouting with cement mortar (1:3) with Contractors all materials, drilling equipment, lead, lift, labour, transport, tools & plant, consumables, etc., complete (excluding cement & steel) as per specifications and as directed by the Engineer- in-charge. NOTES:- (1) Rate includes all materials, operations etc., excluding cement and steel, which will be paid under other relevant schedules.	Numbers	100.00	150.00	15000
12	LAUNCHING of complete PSC spans including PSC main units and RCC ballast retainers if any for various spans available at bridge site using Contractor's ROAD CRANE, on completed abutments/piers of bridges including placing at correct location/level/alignment, providing a layer of cement and Cast-iron borings in 1:1 proportion for uniform bedding, adjusting after initial seating using Contractor's jacks, if required, and including all temporary arrangements as per drawings/specifications etc., with all lead, lift, transport, materials, consumables, fuel, tools & plant, labour, etc., complete and as directed by the Engineer-in-charge.(Per no.for type of span to be quoted) c) Launching of 4.57m span NOTES:- (1) One span may consist of 2/3/4 PSC units and/or 2 ballast retainers, based on the design. It is the responsibility of the Contractor to assess the quantities based on drawings correctly in advance. (2) Rates quoted are for launching of the complete span involved. In case of Casting of ballast retainers at site, the rate will be reduced in proportion to the reduction in weight. (3) Slabs shall be handled by Contractor's Road Crane only. For any damage to the slab during launching/handling, the cost of the slab including damages and losses will be recovered from the Contractor.	Numbers	1.00	47000.00	47000
No. of Items twelve only		Schedule D: Departmental Value	47068000		
		Tenderer's / Contractor's percentage			
		Total			

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REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)	
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Schedule E - Items of works pertains to Supply of Steel

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supply of High Yield Strength Deformed reinforcement steel bars / Fe 415 / Fe 415D / Fe 415S / Fe 500D / Fe 500S / Fe 550 / Fe 550D / Fe 600 conforming to IS 1786:2008 (with latest amendment) at site of work to the extent actually required for the work including all cost of loading, unloading, leading, transporting, stacking, storing, labour, consumables, machinery, vehicles etc., complete and as directed by the Engineer-in-charge. NOTE: (1) The rate quoted for this item is applicable for Fe500, Fe550 and Fe 600 and their variants viz. Fe 500D, Fe 500S and Fe 550D. If Fe 415 grade or its variants Fe 415D or Fe 415S are used, they will be paid at a reduction of Rs.2000/- per MT from agreed rates. (2) Stage payment for supply of steel shall be limited to 75% of the agreed rates subject to production of Bank Guarantee/ Indemnity Bond as specified, Test certificates, Insurance, limitation in quantity supplied at a time, conditions for stacking/ storing/ preserving at site. However, this payment will be restricted to a maximum of 30% of the Schedule quantity at any point of time. (3) Payment for reinforcement rods will be made as per actual used including over laps, cranks, bends, etc., if any, as per approved drawing and as per Special Conditions for use of steel. However, no payment will be made for any wastage. Quantity will be calculated for nominal diameter of the bars using standard weights per running metre or as per actual weights whichever is less. (4) Binding wire, clamping materials etc., used in construction shall not be treated as supply items under this schedule and shall be governed by the Schedule and Special Conditions under the relevant items of concreting etc., and no extra payment shall be made. (5) Reinforcement steel shall be supplied and used as per approved drawings and as per instructions of the Engineer-in-charge.	Tonne	797.00	51790.00	41276630
No. of Item one only		Schedule E: Departmental Value		41276630	
		Tenderer's / Contractor's percentage			
		Total			

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REACH 4

Name of Work :Baivyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule F- Items of Blanketting of formation, Contractors own earth & Bridge approaches

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Earth work in filling with COE: Earthwork in embankment in making formation with contractors own earth of approved quality in specified layers not exceeding 300mm thickness from approved earth quarries outside railway limits in all soils with loading, unloading, all lead and lifts, rehandling, transportation, spreading in layers, benching of slopes, sectioning to profile, clearing of debris/garbage/vegetation/shrubs etc., in the railway alignment using contractor's vehicles, machinery, labour, consumables etc., as per technical specification & special conditions and as directed by Engineer-in-charge. Note: (i) Payment shall be made based on cross section measurement only. (ii) The rate includes all charges, taxes, royalty, seignorage etc., and for pretesting of soil quality at quarry for every 20000 cum or change of layer and testing at site for every 5000 cum or change of layer for assessing the suitability of the soil for use in embankments and all other tests as specified in the specifications. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) Only soils of category I or II or III or IV as per clause 15 of Technical Specifications is permitted. Payment for category III will be reduced by 5 percent and for category IV will be reduced by 10 percent of the accepted rates. Accepted rates apply to soil with PI upto 7. For PI beyond 7 and upto 20, a further reduction of 10 percent in accepted rates shall apply. Use of category V soil as per clause 15 of Technical Specifications is banned. (vi) Formation width at top shall be made with 500mm extra on either side initially and after compaction be cut to standard profile. No extra payment shall be made for this purpose. If the extra width is not made at any single location of less than 100 m length, payments due shall be reduced by 5% for that entire 100 m stretch.	cum	57870.00	126.60	7326342.00

S No.	Description of Item	Unit	Qty	Rate	Amount
2	Earth work at bridge approaches: Earthwork in embankment in filling up approaches of major bridge for 50m either side with soil of GW classification only including mechanical or special type of compaction such as water compaction in specified layers from approved earth quarries outside railway limits with loading, unloading, all lead and lifts, rehandling, transportation, spreading in layers, benching of slopes, sectioning to profile, clearing of debris/garbage/ vegetation/shrubs etc., using contractors vehicles, machinery, labour, consumables etc., as per technical specification & special conditions and as directed by Engineer-in-charge. Note: (i) Payment shall be made based on cross section measurement only. (ii) The rate includes all charges, taxes, royalty, seignorage etc., and for pretesting of soil quality at quarry for every 20000 cum or change of layer and testing at site for every 1000 cum or change of layer for assessing the suitability of the soil for use in embankments and all other tests as specified in the specifications. (iii) No extra payment for lead etc., is admissible. (iv) Only 75% payment for the quantity executed in a particular bill is payable initially. 15% of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10% shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) No payment will be made for the complete layer if soil other than GW classification is used and/or if mechanical compaction or special compaction is not used.	cum	5000.00	191.00	955000.00
3	Blanketing of formation: Manufacturing, supplying, transporting to site, spreading in layers, compacting the blanketing material and dressing/finishing the formation to profile as per RDSO specification No.GE-G-1 with upto date correction slips conforming to upper blanket layer guiding enveloping curves as per sketch B RDSO's Drawing No.GT/SD/0011/ Rev.2/2001 of the said specification including spreading and compacting with vibratory rollers of adequate capacity, duty sprinkling water/ allowing to dry to achieve optimum moisture content as specified, complete in all respects and as directed by Engineer-in-charge. Rate includes all materials, transporting/leading/unloading, spreading, labour, manufacturing, mixing & blending by any means, all tests on materials, to obtain the specified gradation, leads, lifts, assent, dissent, crossing of nalla /stream and all other obstructions, all machinery, tools and plants, handling and re-handling of the materials, fuel, royalty, octroi, licensing charges, incidentals, etc. complete.	cum	40000.00	360.00	14400000.00
	No. of items three only	Schedule F: Departmental Value			22681342.00
		Tenderer's / Contractor's percentage			
		Total			

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REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)	

Schedule - G- Item pertaining of supply of HTS WIRES					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supplying of High Tensile Steel wires/strands to IS 14268 (upto date) of suitable dia as approved in designs/ drawings/ conditions from approved manufacturer at the site of work to the extent of quantity required for various items of works in schedule of items including all cost of loading, leading, transporting, storing, unloading, handling, rehandling, stacking, protecting etc., in the contractor's store godowns as per IS specifications with all lead, lift, transport, consumables, labour, tools & plant and all other incidental charges etc., complete and as directed by the Engineer-in-charge. NOTE:- (1) Payment will be made only for HTS wire/strands used in the structure for lengths measured from bearing plate to bearing plate or face of the structure and no extra for wastage etc., will be allowed. (2) 50% of the agreement rate will be paid for the HTS wire/strand brought to the site on production of Indemnity Bond/Bank Guarantee as per Special Conditions and other necessary certificates and the balance will be paid only after completion of all works connected to prestressing and certification of the quality of the slab/girder/etc., where the HTS materials are used.	Tonne	1.00	63800.00	63800
No. of item one only		Schedule A: Departmental Value		63800	
		Tenderer's / Contractor's percentage			
		Total			

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REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule J - Items of miscellaneous works

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Preparation of design and General Arrangement/Working Drawings for broad gauge bridges to 25T loading and supply of 3 copies of the same along with design calculations in correlation with RDSO guidelines for verification/approval of Railway department, after approval submission of final working drawings on gateway or similar tracing paper with three sets of copies of the same duly collecting all site details and soil particulars by the excavation of open trial pit of suitable depth. Payment shall be inclusive of labour, tools, plants with all lead and lift, etc., as directed by the Engineer-in-Charge. for Minor bridges	Each	28.00	4500.00	126000
2	Preparation of Minor Bridges completion plan in Auto Cad duly incorporating all necessary details required and submitting the same in the check plot. Final drawing is to be produced in the film after affecting the necessary corrections given in the check plot	Each	28.00	4000.00	112000
3	Rail fencing by the side of existing rack with the BG/MG rails (52 kg/90R/75R) available as per drawing No.DY.CE/C/NBNC/SK 2-06 duly excavating trenches at every 5m for a depth of 1m below the existing/proposed formation level at every 5m intervals at a distance of 2.5m from existing track duly carrying out all necessary cutting of rails, drilling of holes with gas and providing bolts & nuts arrangements as indicated in drawing with contractor's supply of bolts & nuts including all labour, materials, consumables and completing the job as instructed by Engineer-in-charge. The scrap and the cut rail pieces has to be handed over at Section Engineer/Stores Construction, Bangalore City.	MT	6.00	3000.00	18000
4	Collecting field data, topo sheet from Survey of India Department, surveying and preparation and submitting Hydraulic water way calculations for minor bridges as per RDSO guide lines and Railway bridge substructure code with all design calculations and details in three copies in bound form with contractor's labour and materials with contractor's labour, tools, plants, equipment with all lead and lift etc., complete and as directed by the Engineer-in-charge including recommendations	Each	28.00	2500.00	70000
5	Preparation and submission of LC gate plan with existing road details and other relevant particulars in AUTO CAD on 50 micron thickness tracing film of A1 size.	Each	2.00	2500.00	5000
6	Providing caution watchmen at workspot where caution order is imposed at a rate of one caution watchmen per 12 hours shift round the clock with necessary electric torch, banner flags, hand flags etc., who will be on continuous vigil and exhibit necessary hand signals to the trains for their safe passage over the caution spot as directed by the Engineer-in-charge. NOTE : Rate to be quoted as per day (24 hours basis).	Day	200.00	742.00	148400
7	Fixing of reference pillars at the edge of formation with railways rails 41.1/4,60R/90R of 1.5m long fixed in cement concrete foundations of .3 x .3 x .75 m size with 1m length projected above ground level and duly marking proposed formation level and proposed rail level in red enamel paint over white enamel paint background of 10cm band including cutting of rails, loading, unloading, transportation, excavation, erection and painting with contractors supply of paint, labour, tools and plants, all lead and lift etc. complete (cement concrete and cement will be paid separately under relevant item). Rails will be supplied at nominated depot	Each	85.00	50.00	4250

S No.	Description of Item	Unit	Qty	Rate	Amount
8	Construction of hexagonal type gate lodges as per Plan No.650/96 in all respects ABOVE PLINTH LEVEL except foundation works. This work consists following : 1) Brick Masonry in stock bricks in cm 1:6 2) Cement concrete flooring with 11:3:6 mix and smooth finishing with cm 1:3 3) Steel doors and windows 4) RCC lintel and sloped roof. 5) Weathering course and water proof machine pressed tiles over roof 6) Internal shelf as per type plans. 7) Painting LC particulars, duty roster and protection diagram etc., on gate lodge.8) White washing, colour washing, painting in all respects as per plan with contractors cement complete and as directed by Engineer-in-charge (the cost of steel will be paid separately under Sch."E".	Each	2.00	83500.00	167000
9	Improving Bearing capacity by removing loose soil, filling with boulders, sand, rolling with vibro roller in layers of 30 cm thick	cum	300.00	300.00	90000
10	Hydraulic waterway calculation for catchment area (25 Sq. Km with Q-50 discharge as per RDSO guidelines, CWC Guidelines and Railway Bridge sub structure code and submitting the calculation	Each	0.00	6000.00	0
11	Design of sub structure including foundation for bridges (Water way bridges/ROB/RUB including major bridge) as per latest loading standards for a single line BG track based on soil investigation report, preparation of detailed structural and working drawings with bar bending schedule. Design to be done by recognised/reputed consultants etc. Submitting approved drawings on a tracing film/ latest tracing material and compact disc along with 6 copies of final working drawings, structural drawings and design calculations with contractor's labour tools plant etc and as directed by Engineer in charge	Each	0.00	90000.00	0
12	Design of super-structure for bridges (water way bridges/ROB/RUB including major bridge) as per latest loading standards for a single line BG track preparation of detailed structural and working drawings with bar bending schedule. Design to be done by recognised/reputed consultant and proof checked by another recognised consultant like IIT, Stup consultants etc., submitting approved drawings on a tracing film/latest tracing material and compact disk along with 6 copies of final working drawings, structural drawings and designs calculations with contractors labour, tools, plants, etc., and as directed by Engineer-in-charge	Each	0.00	140000.00	0

S No.	Description of Item	Unit	Qty	Rate	Amount
13	Providing safety barricading as per drg. No. SWR/CN/BN/C/SK/165-2018/R with contractor's materials and labour including all leads and lifts complete as directed by Engineer in charge. (Size 100 mm x 1650 mm RCC pole) Note: 1. Casting of RCC pillars shall be carried out in nominated depot and submerged water curing. 2. The precast RCC posts shall be transported to date duly handling carefully without causing any damage and erect it at nominated locations as per duly ensuring safety of running trains. 3. Maintenance of the rope, RCC pillars etc shall be at the cost of contractor. 4. 90% of the payment shall be released after erecting fencing to the satisfaction of Engineer in charge.	RM	8500.00	327.60	2784600
14	Painting of road surface using approved quality thermo plastic material (Homogenously composed of aggregate, pigment, resins and glass reflectorising beads) properties of thermo plastic material shall conform to BS 3262 (Part I) forming central lines strips of 10x300 cms each with 600cm gap between strips in straight reaches, 300cms gap between strips in steep curves, and continuous strips in the edge of road applied hot, either by screeding or extension process at the rate of 5 Kg/ Sqm of painted surface using suitable machine capable of controlled preparation and laying with surface applicator of glass beads, 250 gram/sqm allowing cooling to ambient pavement temperature that shall produce an adherent pavement marking of minimum specified thickness of 2.5mm including barricading for traffic diversion, cost of paint and other materials labour charges hire charges of machineries etc., complete as per he Engineer-In-Charge.	Sqm	25.00	500.00	12500
15	Item Description:- Providing and laying of sand bags layer by layer filled with sand in each bag of standard cement bag size with all contractor's own bags, sand, labour, tools and plants including transportation to the site of work complete as directed by the Engineer - in - charge	Each	2500.00	20.00	50000
16	Transportation of steel cribs of size 6' X 2' X 2' made of MS angles of 75mm X 75mm X 10mm/8mm or 65mm X 65mm X 8mm from PWI/stores at Yeswantpur /Midsection wherever available to the bridge spot including leading, loading, transportation and unloading and stacking using contractors own vehicle, labour, tools & plants, consumables etc without damaging any Railway property and as directed by Engineer in-charge. (Approx. Qty: 200 Nos. approx. lead 225 km) UNIT: PER NO. PER KM	Per Unit	20000.00	2.00	40000
17	Supply, fabrication, painting and erection of road traffic warning boards of suitable height for various purposes such as NO PARKING, NO ENTRY, HTV PROHIBITED, etc., as per IRC standards made of 50x50x5 mm MS Angles and 3mm thick MS plate for the board of appropriate size, painting 2 coats with appropriate enamel paint and pasted with reflective stickers/reflective paint on the board erected into the ground with cement concrete 1:3:6 for 0.30x0.30x0.60 metre including earthwork excavation, etc., as directed by the Engineer-in-Charge	Each	30.00	1400.00	42000
18	Supplying, providing 150mm dia UPVC rainwater downtake pipe of 6 Kg/sqm pressure pipe with accessories like bends, collars etc., as required including providing suitable MS clamps with Bolts & Nuts 3 Nos per stanchion with stanchion with contractor's materials like clamps, Bolts & nuts etc., labours, tools & plants, with all lead, lifts complete as directed by the Engineer-in-charge.	Metre	80.00	410.00	32800
19	Excavation along the alignment of signalling cable / OFC / Power cable carefully and exposing the same without any damage and excavating the new trench along the railway alignment or along the alignment as specified by the railway engineer - in - charge, laying or removed cable, filling up all complete with sand and laying a layer of brick with contractor's own materials, tool and plants etc., as directed by the engineer - in - charge. (Note: In case the cable is damaged cost of restoration and the cost of cable will be recovered from the contractor. The decision of the railway with regard the cost to be recovered will be final.	RM	20000	200	4000000

S No.	Description of Item	Unit	Qty	Rate	Amount
20	Supplying providing and removing heavy duty shoring for excavation in foundation trenches for bridges and buildings near existing bridge/track/building to a depth not less than 3.0m using contractors ISMC 150 X 75 X 5.7@ 1.0 m intervals and MS sheet of 6 mm thick. The released material shall belong to the contractor.	Sqm	100	920.00	92000
21	Providing heavy duty interlocking pavement blocks 150mm thick made of cement concrete M35 of richer grade at level crossings layed on sand bed of 75mm over 300mm well compacted granular subbase of well graded stone aggregate of 40mm and down size and toe walls around the prefeiry for confining the blocks.	Sqm	200	954.00	190800
22	Casting RCC box segments, base slab etc., as per approved RDSO/Railway Drawing, with specified design mix of M35 with all contractors materials such as course and fine aggregate, labour, masonry, tools and plants, complete but excluding cost of cement and steel and as directed by Engineer-in-charge. Casting of RCC box segments has to be done near to bridge site and kept ready for launching.	1 CUM	500	4500	2250000
23	Placing of RCC box segments, base slab using road cranes with all contractor's men machine consumables etc" This item will be required for new construction line portion.	1 MT	1200	1900	2280000
24a	Providing Toyota Innova Crysta / Toyota Corolla Altis / Honda Civic or similar approved road vehicle(s) as per relevant special conditions	per month	36	54000.00	1944000.00
24 b	Providing Toyota Yaris G CVT / Honda City 2020 / Hyundai Verna 1.6 CRDI SX(O) / Skoda Rapid 1.5 TDI CR Ambition AT or similar approved road vehicle(s)	per month	18	48000.00	864000.00
24 c	Providing Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	per month	18	40000.00	720000.00
25	Extra payment for providing any of the vehicles mentioned in item no. 26(a) /26(b) as per the criteria/ stipulations/specifications/conditions mentioned therein including the notes and in the ASC, with Driver(s) cum Attendant(s) beyond 12 hours a day	Vehicle Hours	576	150.00	86400.00
26	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official				
26 a	For the class/type of the vehicle mentioned in item no. 24(a)	Vehicle KM	1440	15.00	21600.00
26 b	For the class/type of the vehicle mentioned in item no. 24 (b)	Vehicle KM	720	13.00	9360.00
26 c	For the class/type of the vehicle mentioned in item no. 24(c)	Vehicle KM	720	12.00	8640.00

S No.	Description of item	Unit	Qty	Rate	Amount
27	Extra payment for extra days of run, over and above 26 days per month on certification by the user official				
27 a	For the class of the vehicle mentioned in item no. 24 (a) with all conditions therein	Vehicle day	144	2100	302400.00
27 b	For the class of the vehicle mentioned in item no. 24 (b) with all conditions therein	Vehicle day	72	1900	136800.00
27 c	For the class of the vehicle mentioned in item no. 24 (c) with all conditions therein	Vehicle day	72	1600	115200.00
	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official	Vehicle KM	4000	2.5	10000.00
28	Supply of Motor Bike 150CC or more as per relevant special conditions	per month	72	8000	576000.00
29	<p>Providing site office and office equipments for employer with contractor's material, Labour, Tools and Plant, Equipment etc. including provision of Water Supply, Drainage, Power arrangements, office maintenance as per the details mentioned in Chapter 3 (Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents.</p> <p>Note 1: This item is provided with the contention that new site offices will be constructed for this purpose and 75% payment of the accepted rates will be made after making available functional office balance 15% payment shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor</p> <p>Note 2: Alternatively if suitable accommodation is available on hire basis at suitable location acceptable to the employer, the contractor can arrange same under the item but in such a case the payment shall be regulated as below</p> <p>(a) 10% payment shall be made on completion of one month from the date of making available the office fit for functioning.</p> <p>(b) Remaining 90% payment shall be paid in equal monthly instalments that is (0.9xquoted rate)/(stipulated Completion period in months + defect liability period in months)</p> <p>Note 3 : In case stipulated period gets extended, payment on monthly basis, under this item, in such extended period, shall be made as under;</p> <p>(i) In case of new construction @((54% of quoted rate)/(Stipulated Completion period in months</p>	per Sq. M of Plinth area	62	13788.00	854856.00
30	<p>Providing Furniture as given under chapter 3 (Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents.</p> <p>Note: Payment shall be made @ 75% of the accepted rate after making available furniture items functional in office, balance 15% payment shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor</p>	LS per site office	1	200000.00	200000.00
	No. of items thirty only	Schedule A: Departmental Value			18364606
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 4

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Minor bridges/RUB's and other miscellaneous works from Km.165/00 to Km.174/590 in Baiyyappanahalli - Hosur section (excluding station yards)	

Schedule N - Items of works pertains to Road works.					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Providing speed breakers as per type plan No CE/LC/SK-5 and CE/LC/SK-6 including painting white and yellow bands, diagonals etc. Complete with contractors labour, men, materials, machinery, consumables, approved paint, T&P, crew, fuel etc., complete including all lead and lifts and directed by the Engineer-in-charge.	Each	6.00	2398.00	14388
	No. of Item one only		Departmental Value		14388
			Tenderer's / Contractor's percentage		
			Total		

Seal & Signature of the Bidder



ರೈಲು ಮೂಲಸೌಕರ್ಯ ಅಭಿವೃದ್ಧಿ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ನಿಯಮಿತ

ರೇಲ ಇನ್‌ಫ್ರಾಸ್ಟ್ರಕ್ಚರ್ ಡೆವಲಪ್‌ಮೆಂಟ್ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ಲಿಮಿಟೆಡ್

Rail Infrastructure Development Company (Karnataka) Limited
(A Joint Venture of Govt. of Karnataka & Ministry of Railways)

MSIL House, 7th Floor, #36, Cunningham Road, Bangalore – 560052
Tele – 080 22370581, Fax : + 91-80-22370581, web : www.kride.in

Price Proposal

Package 3

Baiyyappanahalli – Hosur section : Doubling of track

REACH 5 : Km 158/700 to Km165/000

Earthwork in cutting, embankment and construction of
Major/Minor bridges/RUB's and other miscellaneous
works in Bangalore Division of
South Western Railway.

REACH 5

Name of Work :Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)

SUMMARY OF BILLS OF QUANTITIES

Particulars	Department Value (Rs.)
SCHEDULE - A	29619601.43
SCHEDULE - B	10015901
SCHEDULE - C	77245560
SCHEDULE - D	87310100
SCHEDULE - E	59610290
SCHEDULE - F	27511948.00
SCHEDULE - G	319000
SCHEDULE - J	17651141.80
SCHEDULE - L	22237440
SCHEDULE - N	47960
SCHEDULE - O	315711
Total	331884653

REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)						
Schedule A-USSOR ITEMS - Items of works that are covered by Unified schedule of rates 2011 of South Western Railway						
Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
1	012040	Filling, watering and ramming earth in 15 cm layers in floors and foundations with surplus earth from foundations including 50m lead and 1.5m lift	cum	4000.00	24.30	97200
2	013140	Removal of excavated/slip earth/ debris/ malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, re-handling, loading, unloading and leading, etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/ROCKS, BOULDERS including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/breast/retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge	cum	300.00	140.54	42162
3	014053	Turfing / planting, including all lead and lift, and watering as required until properly rooted, with. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period if the turfing is properly rooted. Planting Sarkanda / sarpat or any other suitable species approved by the engineer	100 Sqm	10000.00	4109.65	410965
4	014062	Providing and laying Jute Geo-Textile (JGT) in slopes of Railway embankment in accordance with RDSO's guidelines for application of Jute Geotextile in Railway embankments and hill slopes no. RDSO/2007/GE:G-0008 or its subsequent versions, including incidental earthwork and fixing arrangements With GJ - Type 2	100 Sqm	10000.00	4450.49	445049
5	031012	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto Plinth level : 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 40mm nominal size)	cum	1500.00	1869.47	2804205
6	032020	Providing and fixing precast M 15 grade cement concrete in string or lacing courses, coping, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, etc. upto floor two level, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required shuttering, centering complete - excluding the cost of cement. (cast at site)	cum	100.00	2527.44	252744

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
7	032031	Providing and fixing at or near ground level, Precast M 20 grade cement concrete as per approved design and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including the cost of required centering and shuttering complete but excluding the cost of cement (cast at site) in kerbs, edging etc.	cum	50.00	2399.70	119985
8	056042	Cement Concrete Solid Block Masonry in foundation and plinth with: (factory made blocks) Cement mortar 1:4 (1 cement: 4 fine sand)	cum	100.00	3385.45	338545
9	056050	Extra over Item 056040 for Cement Concrete Solid Block masonry in superstructure above plinth level upto floor two level	cum	80.00	570.47	45637.6
10	061013	Random rubble masonry with hard stone in foundation and plinth including levelling up with concrete as per specifications, upto plinth level with : Cement mortar 1:6 (1 cement: 6 coarse sand)	cum	150.00	2023.44	303516
11	081012	Structural steel work in single section including cutting, bending, straightening, drilling, rivetting, bolting, hoisting, fixing in position, including applying a priming coat of approved steel primer, complete - upto 6m height above GL In flats, plates, round or square bars	Kg	650.00	57.49	37368.5
12	091070	Moorum flooring 10 cm thick (consolidated depth) including watering and ramming. With Contractor's Moorum	Sqm	3000.00	110.17	330510
13	092062	Providing and laying plain cement concrete flooring of specified thickness with mix design concrete over firm, well prepared and well compacted bed including provision of designed expansion joint & finishing manually or mechanical trowel ling & vacuum dewatering complete. Expansion joint to be paid for separately. M-25	cum	400.00	2885.17	1154068
14	098022	Supplying and laying interlocking pre-cast CC block pavers of approved design factory manufactured of specified grade cement concrete on passenger platform, foot paths, circulating area etc. including setting in position over 25mm thick bedding layer of fine sand, filling the joints with fine sand, leveling including compaction as per IS:15658 80mm thick blocks of M35 grade for medium traffic	Sqm	100.00	611.92	61192
15	111012	12 mm cement plaster of mix - 1:6 (1 cement: 6 fine sand)	Sqm	350.00	75.31	26358.5
16	131083	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Internal work - exposed on wall 25mm nominal outer dia. Pipes	Metre	150.00	164.34	24651

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
17	131086	50mm nominal outer dia. Pipes	Metre	150.00	568.07	85210.5
18	162080	Avenue Plants Delonix regia (Gulmohar) of height 135-150 cm in big each polybag of size 25-30cm	Each	500.00	40.88	20440
19	162091	Ficus religiosa (Peepal) of height 120-135 cm in big polybag of size 30-35cm	Each	1000.00	40.88	40880
20	162106	Michelia champa (Golden Champa) of height 60-75 cm in earthen pots of size 25cm	Each	1000.00	70.85	70850
21	181021	Demolishing plain cement concrete including disposal of material within 50m lead 1:2:4 or richer mix with max. 20 mm coarse aggregate	cum	1700.00	555.62	944554
22	181030	Demolishing R.C.C. work including cutting and stacking of steel bars and disposal of unserviceable material within 50m lead. (Extra payment for scraping, cleaning and straightening of bars to be made separately)	cum	150.00	810.58	121587
23	181040	Extra over Item Nos. 181021 and 181050 if pavement breaker is used on orders of Engineer	cum	200.00	243.17	48634
24	182013	Demolishing brick work including stacking of serviceable material and disposal of unserviceable material within 50m lead in cement mortar	cum	100.00	469.56	46956
25	182033	Demolishing stone rubble masonry including stacking of serviceable material and disposal of unserviceable material within 50m lead in cement mortar	cum	500.00	560.34	280170
26	191100	Taking out 100mm dia & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labelling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS 2720	Each	10.00	348.45	3484.5
27	191110	Taking out 100mm dia & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labelling and transporting the samples to laboratory. Samples shall be collected as per IS 2720	Each	10.00	348.45	3484.5
28	191011	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30 cm), including refilling and reinstating surface, and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area 0m to 10m	Metre	100.00	1007.02	100702
29	191012	10m to 20m	Metre	20.00	1037.22	20744.4
30	191030	Extra for 150mm dia bore in hard Rock/ large Boulder at all levels	Metre	50.00	4878.30	243915
31	191041	Drilling of NX size borehole (75 mm dia) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 0m to 10m	Metre	40.00	3167.41	126696.4

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
32	191120	Conducting standard penetration test as per IS 2131 at approximate 1.5 m intervals in bore holes, as directed by the Engineer in charge	Each	50.00	209.07	10453.5
33	191130	Collection of water samples at required intervals	Each	5.00	139.38	696.9
34	191141	Conducting laboratory Tests on collected soil samples as per relevant IS code Moisture contents/ Dry density	Each	5.00	290.38	1451.9
35	191142	Atterberg Limit	Each	5.00	290.38	1451.9
36	191143	Specific Gravity	Each	5.00	232.30	1161.5
37	191144	Grain size analysis including Hydrometer analysis	Each	5.00	232.30	1161.5
38	191145	Direct Shear Test	Each	5.00	1742.25	8711.25
39	191146	Natural density	Each	5.00	290.38	1451.9
40	191147	Consolidation test	Each	5.00	290.38	1451.9
41	191148	Unconfined compression test	Each	5.00	290.38	1451.9
42	191149	Tri-axial test	Each	5.00	1742.25	8711.25
43	191151	Conducting Laboratory tests on collected ROCK SAMPLES as per relevant IS code Density test	Each	5.00	290.38	1451.9
44	191152	Water absorption & Porosity	Each	5.00	232.30	1161.5
45	191153	Hardness	Each	5.00	290.38	1451.9
46	191154	Unconfined compression test	Each	5.00	232.30	1161.5
47	191155	Point load test	Each	5.00	406.53	2032.65
48	191156	Modulus of elasticity	Each	5.00	406.53	2032.65
49	191160	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	2.00	871.13	1742.26
50	191170	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	2.00	871.13	1742.26
51	191180	Preparation and submission of Final report giving complete and comprehensive record of investigations, laboratory test reports and calculations in approved format	Each	5.00	2323.00	11615
52	192011	Earth work in excavation for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. incl. all lift, disposal of surplus soil upto a lead of 300 M, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge All kinds of soils	cum	7000.00	182.73	1279110

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
53	192012	Ordinary rock	cum	3500.00	237.64	831740
54	192013	Hard rock (requiring blasting)	cum	1700.00	371.16	630972
55	192014	Hard rock (blasting prohibited)	cum	3000.00	451.19	1353570
56	192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40 mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	cum	2300.00	1538.08	3537584
57	221060	Providing and laying Pitching with stone boulders weighing not less than 35 kg each with the voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications (Filter media to be paid separately under the relevant item)	cum	450.00	1667.43	750343.5
58	221070	Providing and laying Filter material As Per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical specification	cum	400.00	1648.61	659444
59	222010	Providing and laying Flooring with rubble stone, laid over 15 cm thick CC 1:2:4 and the voids filled with CC 1:2:4 complete with the joints pointed with 1:2 Cement sand mortar as per drawing and Technical specifications. Payment for cement to be done separately. Voids in the rubble stone to be taken as 35% of the gross volume of the stone layer. (Base concrete to be paid extra)	cum	640.00	1544.90	988736
60	222040	Supply and laying of coarse sand including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer incharge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media	cum	1000.00	1369.48	1369480
61	222230	Painting the HFL and danger level marks, year of HFL on bridge abutments and piers with ready mixed paint as per standard in two coats over one coat of primer with all materials, labour, tools, scaffolding, all lead and lift etc including writing complete	Each Mark	18.00	121.35	2184.3
62	222240	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white back ground with all labour, tools, cement, paint etc with all lead and lifts	Each	30.00	536.26	16087.8

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
63	222250	Providing cast in situ plaques for bridge foundations details of size 45x45x5 cm in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm deep notch over abutment & piers, engraving the letters & figures with CM 1:3 and finished smooth including painting letters and figures with 2 coats of black enamel and plaque with white enamel with all labour, tools, cement, paint, curing, etc. as a complete job	Each	7.00	656.53	4595.71
64	222290	Providing Boulder backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra	cum	7500.00	178.76	1340700
65	222360	Surface protection of Underside of Bridge Decks, Girders, Inside of Box Girders, Railings, etc. of Bridges and Piers and Substructures which are not in River Bed by cleaning and drying the surface; repairing local defects, e.g. honeycombs with a paste of cement admixed with 5% by weight of cement of Polymer bonding agent, applying (@ 0.30 litre per square metre) a coat (DFT of 100-150 micron) of a translucent brown coloured modified phenolic resin based single component high performance polymeric waterproofing compound (sp. gr. 0.87, rosin content nil and a solid content of minimum 0.47%), applying (@ 0.25 litre per square metre) a top coat of a modified phenolic resin based single component waterproofing compound of grey or other shades (sp. gr. 0.85) before the base coat becomes tack-free; permitting the coatings to cure and dry naturally; the 2-coat system shall be impermeable under a water head of 20.0 metres, complete as per specification	Sqm	3000.00	263.80	791400
66	231010	Preparation of subgrade by excavating earth upto 22.5cm depth, dressing to camber and consolidating with power road roller of 8 to 12 tonne capacity including making good the undulations etc. and disposal of surplus earth with lead upto 50 metres	Sqm	3000.00	49.66	148980
67	231020	Consolidation of subgrade with power road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and re-rolling the subgrade	Sqm	3000.00	1.31	3930
68		Providing and laying water bound macadam with specified stone aggregate, stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete.		0.00		0
69	231042	Base course with 63mm to 45mm size including stone screening 13.2mm size	cum	400.00	1113.24	444096

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
70	231043	Base course with 53mm to 22.4mm size including stone screening 11.2mm size	cum	500.00	1215.82	607910
71	233011	Providing and applying tack coat using bitumen emulsion (Rapid setting) complying with IS: 8887- 1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specification On W.B.M. @ 0.4kg/ sqm	Sqm	3000.00	19.49	58470
72	233012	On bituminous surface @ 0.25kg/ sqm	Sqm	3000.00	13.86	41580
73	235010	Providing and laying seal coat of premixed fine aggregate (passing 2.36mm and retained on 180micron sieve) with bitumen using 128 kg of bitumen of grade 80/ 100 bitumen and 0.60cum of fine aggregate per 100sqm of road surface including rolling and finishing with road roller all complete. Note - This should not be operated along with Hot mix carpeting	Sqm	3000.00	74.90	224700
74	238021	Providing and laying Dense Bituminous concrete on prepared surface with specified graded stone aggregate for wearing course, mixing of bitumen, filler & stone aggregate in hot mix plant, transporting the mixed material and laying with mechanical paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per specification, to achieve the desired density and compaction but excluding cost of primer / tack coat 40 mm / 50mm compacted thickness with bitumen of grade 60/70 @ 6.5% and lime @ 3% by weight of total mix	cum	300.00	7609.43	2282829
75	238050	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and in accordance with applicable specifications	Sqm	160.00	479.92	76787.2
76	252390	Stone Boulder Weighing minimum 35 Kg Each	cum	7500.00	455.40	3415500

Item	USSOR ITEMS	Description of Item	Unit	Qty	Rate	Amount
77	192011(19 2020)	Earth work in excavation for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. incl. all lift, disposal of surplus soil upto a lead of 300 M, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge Extra for the quantity of works, executed in or underwater and/ or liquid mud including pumping out water as required [RATE = 20% of Basic Items]	cum	1200.00	36.55	43860
		No. of Items Seventy Seven only	Schedule A: Departmental Value			29619601.43
			enderer's / Contractor's percentag			
			Total			

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REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule B-EARTHWORK ITEMS					
S No.	Description of item	Unit	Qty	Rate	Amount
1	Earthwork in cutting in all soils: Earthwork for excavation in cuttings for all kinds of soils in connection with making formation/side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) The term 'all soils' mentioned above include loose soil, ordinary soil (workable with spade), hard soil including stiff clay, moorum, shingle, soft laterite etc., requiring close application of picks to loosen and small boulders measuring not more than 300 mm in any direction. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed is payable in a particular bill initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over.	cum	10000.00	61.20	612000.000

S No.	Description of Item	Unit	Qty	Rate	Amount
2	Earthwork in cutting in Soft Rock : Earthwork for excavation in cuttings in soft rock strata comprising disintegrated rocks of lime stone, sand stone, hard laterite etc., removable without blasting in connection with making formation/side drains/catch water drains/ bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to embankment/outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) Soft rock means rock which does not require blasting and which can be excavated by continuous operation of excavators/picks/bars etc. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over.	cum	10000.00	78.00	780000.000
3	Earthwork in cutting in Hard Rock requiring blasting: Earthwork for excavation in cuttings in hard rock strata by blasting using explosives in connection with making formation/ side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's equipment, machinery, labour, consumables etc., as per technical specifications & special conditions including removing cut spoils and taking to embankment / outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) Hard rock requiring blasting means rock which require blasting and which cannot be excavated by excavators/ picks/ bars etc. (iii) No extra payment for lead etc., is admissible.	cum	0.00	235.00	0.000

S No.	Description of Item	Unit	Qty	Rate	Amount
4	<p>Earthwork in cutting in Hard Rock requiring controlled blasting or other means Earthwork for excavation in cuttings in hard rock strata using explosives or chemicals, jack hammers or any other advance methods from authorised manufacturers/ license holders, in controlled manner, in connection with making formation/ side drains/catch water drains/bridges/trolley refuges etc., as per required cross section, L- section & profile including removing all trees, bushes, debris, constructions, etc., from the site with contractors equipment, machinery, labour, consumables etc., as per technical specifications & special conditions, including removing cut spoils and taking to mbankment / outside railway land so as to clear the site with all leads & lifts, as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only. ii) Hard rock requiring controlled blasting means rock which cannot be excavated by excavators/ picks/ bars etc. and which require controlled blasting duly providing protection measures for properties around or which require use of chemicals or other means to loosen the rock. (iii) No extra payment for lead etc., is admissible. (iv) Only 75% payment for the quantity executed in a particular bill is payable initially. 15% of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10% shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) This item shall be operated with specific prior approval of CE (construction) for works requiring blasting near inhabited area/ residential houses within town/ village limits where open blasting is not permitted by the revenue / local authorities.</p>	cum	12000.00	478.00	5736000.000

S No.	Description of Item	Unit	Qty	Rate	Amount
5	<p>Earth work in filling with cut spoils: Earthwork in embankments for making formation with Railways usable cut spoils excavated from cuttings in specified layers not exceeding 300 mm in thickness with lead and lifts including rehandling, transportation, unloading & spreading in layers, benching of slopes, sectioning to profile including removing all trees, bushes, debris, constructions, etc., from the site with contractor's vehicles, machinery, labour, consumables etc., complete as per technical specifications & special conditions and as directed by Engineer-in-charge. Note: i) Payment shall be based on cross section measurement only (ii) The rate includes testing of cut spoil for parameters to assess the suitability for use in embankments which shall be done for every 10000 cum and/or for every change of layer characteristics. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) Formation width at top shall be made with 500mm extra on either side initially and after compaction be cut to standard profile. No extra payment shall be made for this purpose. If the extra width as above is not made at any single location of less than 100 m length, payments due shall be reduced by 5 percent for that entire 100 m stretch. (vi) For leads upto 500m from the spot of release, accepted rates shall apply. For leads beyond 500 m and upto 1 km, 5 percent extra over the accepted rates shall be paid. For all leads beyond 1 km and irrespective of any extent further, another 5 percent over the accepted rates shall be paid and no their compensation will be eligible.</p>	cum	20000.00	52.50	1050000.000
6	<p>Mechanical compaction of earth work: Mechanical compaction of embankment, approaches to bridges etc., in specified layers using specified capacity vibratory power rollers as per type of soil, to achieve specified dry density of earth/other material using contractor's power rollers, tools and plants, consumables, labour, watering etc., all complete as per specification & special conditions and as directed by Engineer-in-charge. Note: If any other roller or other equipment is used for compaction, payment for the complete layer shall be reduced by 20 percent of the accepted rate for mechanical compaction.</p>	cum	140000.00	10.50	1470000.000

S No.	Description of Item	Unit	Qty	Rate	Amount
7	Turfing: Turfing the slopes of the bank/cutting with contractors sods of approved quality about 20x20x7.5cm size collected/ brought from outside railway limits, fixing the same over the slopes/ cess duly dressing the profile, loosening to required depth, gently ramming after laying, watering as required, making saucer drains 60cm wide from top to toe with necessary curvature for the free flow of water collected at the top at 25m intervals using contractors boulders with contractors vehicle, labour, consumables, all lead and lift etc., all complete and as per directions of Engineer-in-charge. Note : (i) 75 percent payment shall be made initially and balance 25 percent shall be released after 6 months or maintenance period whichever is more after satisfactory growth of turfing is certified by the Engineer-in-charge.	Sqm	20000.00	11.30	226000.000
8	Plotting initial levels: Computer Plotting of the theoretical cross section profile based on the initial levels of ground, recorded in the level books for cuttings/embankments at intervals of 25m or less including computation of theoretical profile/quantities duly deducting quantities for bridges and any other structure not requiring execution of earthwork in A4 size sheet with contractor's material, man power, consumables, tools and plants etc., and as directed by Engineer-in-charge. Note: i) Plottings and calculations are to be submitted to Railway in 3 sets. (ii) One cross section in one A4 size sheet is required.	KM	6.50	4700.00	30550.000
9	Plotting final levels: Computer plotting of the theoretical & actual final finished cross section profile, duly indicating different type of strata available/ excavated in the x-section, based on the final levels recorded in the level books for banks/ cuttings at intervals of 25m or less, including computation of theoretical/actual quantities done as per classification of different types of soil/blanketing material as certified by Engineer-in-charge duly deducting quantities for bridges and any other structure not requiring execution of earthwork in A4 size sheet with contractor's material, man power, consumables, tools and plants etc., and as directed by Engineer-in-charge. Note: i) Plottings and calculations are to be submitted to Railway in 3 sets ii) One cross section in one A4 sheet is required. iii) For embankments, computation of different soils viz., cut spoils, contractor's own earth, blanketing material are to be shown separately as per measurement recorded.	KM	6.50	4700.00	30550.000

S No.	Description of Item	Unit	Qty	Rate	Amount
10	Design of high bank/deep cutting slope based on slope stability analysis as specified by RDSO/theoretical methods, for railway cuttings/ embankment more than 6m in height/depth based on the material available in cutting/embankments, including collecting required number of soil samples and conducting required laboratory tests as per RDSO specifications so as to find out soil parameters required in slope stability analysis, working out design slope based on manual method/computer software including furnishing detailed calculations in a report form with contractor's men, material, machinery etc and as directed by Engineer-in-charge. Note: Recommended slopes designs shall be from reputed designers and shall include detailed calculations to be submitted in 3 copies. The unit for this item is Crosssection'.	Per Unit	4.00	17500.00	70000.000
11	Fixing reference pegs: Striking out of centre line of railway alignment using total station or any other latest survey equipment and fixing centre line pegs of adequate size with Railway's tie bars/cut rails at every 100m on straight and 25m in curves, at bridges etc., with contractors surveyor, equipment, all consumables, labour etc. Note : (i) The reference pegs shall be fixed along the alignment at appropriate locations to provide information for execution of formation, bridges, ballasting and linking of track throughout the period of construction. (ii) Contractor is responsible for maintaining the reference pegs including shifting in case of shifting of alignment or to facilitate construction. (iii) The reference pegs shall be usable as temporary bench marks wherever required.	Per Unit	70.00	154.30	10801.000
	No. of Items Eleven only	Schedule B: Departmental Value			10015901.000
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule C-SUPPLY OF OP CEMENT

S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supply of Ordinary Portland cement of 43 / 53 grade conforming to IS 8112 / IS 12269 (upto date)and/or Portland Pozzolana Cement conforming to IS/1489 (upto date), at site of work to the extent of the quantities required for various items of works in schedule items including all cost of loading, unloading,loading, transporting, stacking, storing including making proper storage arrangements and all consumables, machinery, vehicles, labour etc., complete and as directed by the Engineer-in-charge. (a) Ordinary Portland Cement (43/53 Grade) NOTE :1) Use of Portland Pozzolana cement shall be restricted strictly to the permitted construction items only. Pozzolana cement shall not be used in PSC construction. 2) Admixtures such as super plasticizers will be permitted based on specific designs for permitted construction items with the approval of the DY.Chief Engineer-in-charge. However, admixtures proposed shall be supplied free of cost by the Contractor and no compensation will be payable. 3. 33 Grade cement shall not be used in railway construction works.	Tonne	12180.00	6342.00	77245560
	No. of Items One only	Schedule C: Departmental Value			77245560
		Tenderer's / Contractor's percentage			
		Total			

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REACH 5

Schedule D-CONCRET WORK ITEMS					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>Plain Cement Concrete (M15 to M30 design mix) Cast-in-situ work (cement will be paid separately) with Contractors all materials including 40mm or below graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality in foundations, abutments, piers, wing walls, return walls etc., of bridges and other structures as required, including fixing and removal of contractors shutter/ form work/ supports, vibrating/compacting, providing weep holes with contractors AC pipes 75 to 100mm dia wherever necessary, providing normal/approved expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required, etc., complete, with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., as per approved drawings/specification /conditions and as directed by the Engineer-in-charge. NOTES: (1) Single rate will apply for all mixes (M15,M20,M25 and M30) irrespective of proportion of materials used (per cubic metre (cum) of concrete). (2) All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS Concrete Bridge Code and relevant IS Codes/Specifications and other relevant specifications as prescribed. Weigh batching is mandatory for all PCC, RCC and PSC works. (3) Rates shall include all materials, operations, etc., complete except for Cement, which will be paid for separately. Steels including fabrication, if used, and excavations for foundations will be paid under relevant SSR or other schedules separately. (4) Shuttering and supporting form work shall be of good quality materials only. For PSC/RCC girders/slabs/beams/columns, only rigid plate steel shutters shall be used. (5) Mix design with requirement of all tests shall be arranged by the Contractor at his cost. (6) Admixtures as required/ as per designs shall be arranged by the Contractor at his cost. (7) All material and concrete tests as required shall be arranged by the contractor at his cost. (8) Rate includes placing of concrete in position for all heights by manual/concrete pump/crane etc.,</p>	cum	17000.00	2500.00	42500000

S No.	Description of Item	Unit	Qty	Rate	Amount
2	<p>Plain Cement Concrete (M15 to M30 design mix) Cast-in-situ work (cement will be paid separately) with Contractors all materials including 20mm/12.5mm graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality in bed blocks, wearing coat, coping, ballast walls etc. of bridges and other structures as required, including fixing and removal of contractors shutter/form work/ supports, vibrating/compacting, providing weep holes with contractors AC pipes 75 to 100mm dia wherever necessary, providing normal/approved expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/ bailing out of water wherever necessary with Contractors own pump, power, fuel etc.; finishing the surfaces wherever required, etc., complete with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., as per approved drawings/specification / conditions and as directed by the Engineer-in-charge. NOTES: (1) Single rate will apply for all mixes (M15,M20,M25 and M30) irrespective of proportion of materials used (per cubic metre (cum) of concrete) (2) All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS Concrete Bridge Code and relevant IS Codes/Specifications and other relevant specifications as prescribed. Weigh batching is mandatory for all PCC, RCC and PSC works. (3) Rates shall include all materials, operations, etc., complete except for Cement, which will be paid for separately. Steels including fabrication, if used, and excavations for foundations will be paid under relevant SSR or other schedules separately. (4) Shuttering and supporting form work shall be of good quality materials only. For PSC/RCC girders/slabs/beams/columns, only rigid plate steel shutters shall be used. (5) Mix design with requirement of all tests shall be arranged by the Contractor at his cost. (6) Admixtures as required/ as per designs shall be arranged by the Contractor at his cost. (7) All material and concrete tests as required shall be arranged by the contractor at his cost. (8) Rate includes placing of concrete in position for all heights by manual/concrete pump/crane etc.,</p>	cum	250.00	2600.00	650000

S No.	Description of Item	Unit	Qty	Rate	Amount
3	Reinforced Cement Concrete (M20 to M40 design mix) work (Cement & Steel will be paid separately), with Contractors all materials including 20mm graded hard crushed stone aggregate, sand, admixture, water etc., of approved quality in foundations including below ground level, abutments, piers, pile caps, bed blocks, trestle beams, girders, pedestals, retaining walls, boxes/slabs for flat top bridges, deck slabs, girders, kerb walls, diaphragms, cross frames etc., on girder bridges and other structures of any design/shape as required, above or below ground level of any size and shape, including fixing and removal of contractors shutters/form work/ supports, vibrating/compacting, and providing weep holes with AC pipes 75mm to 100mm dia and normal/approved expansion joints with necessary materials as per designs/drawings wherever necessary, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc., finishing the surfaces wherever required etc., complete and including handling, uncoiling, cutting, bending, cranking, tying M.S./Tor Rods/wires/other steel to form reinforcement with Contractors galvanized binding wire of size 18/20 SWG(0.90mm) to IS280, etc., fixing in position reinforcement gauge complete as required with all lead, lift, transport, materials, consumables, labour, tools and plant, etc., and including 2 coats of cement painting as per approved drawings/specifications/ conditions and as directed by the Engineer-in-charge. Plant produced Ready-mix concrete shall be used only with the specific approval of the Dy.Chief Engineer.	cum	9700.00	3600.00	34920000

S No.	Description of Item	Unit	Qty	Rate	Amount
4	<p>Pre-stressed Cement Concrete (M35 to M50 design mix) post-tensioned work (cement, steel, HTS wire/strands will be paid separately) in girders/slab of any design/shape, with Contractor's all materials including 20mm graded hard crushed stone aggregate, sand, admixture, water, etc., of approved quality and all special materials for prestressed concrete including Flexible GI/Other sheathing, coupler, bearing plates, anchorages, wedges, grout, anticorrosive treatment etc., of special/approved quantity and quality as per designs/drawings, including post-tensioning with contractor's own jack, power and other equipment complete, fixing and removal of contractors shutter/form work/ supports vibrating/compacting, providing weep holes with contractor's AC pipes 75 to 100mm dia wherever necessary, providing normal expansion joints with necessary materials as per design/drawings, curing of concrete, pumping/bailing out of water wherever necessary with Contractors own pump, power, fuel etc.; finishing the surfaces wherever required, etc., and including handling, uncoiling, cutting, bending, cranking, tying HTS/MS/TOR rods/other steel to form tendons and reinforcement gage with contractor's galvanised binding wire of 18/20 SWG(0.90mm) to IS 280, etc., fixing the tendons and reinforcement in position as required, complete, with all lead, lift, transport, consumables, labour, tools and plant, materials, etc., and including 2 coats of cement painting, as per approved wings/specification/conditions and as directed by the Engineer-in-charge. Plant produced Ready-mix concrete shall be used only with the specific approval of the Dy.Chief Engineer. (a) For PSC slabs</p>	cum	90.00	11000.00	990000

S No.	Description of Item	Unit	Qty	Rate	Amount
5	<p>Supplying and installation in position, Bonded type restrained NEOPRENE ELASTOMERIC bearings of required sizes and thickness manufactured by approved manufacturer conforming to designs, specifications and drawings complete including setting with 1:1 cement, sand wet mortar or special epoxy based mortar in levelling layers and adhesives as specified in drawings, testing of bearings by approved agencies with all lead, lift, transport, materials, consumables, tools and plant, labour etc., complete and as directed by the Engineer-in-charge. NOTES: (1) Neoprene bearings shall be as per U.I.C.772-R specifications or any other specifications as specified by the Railway as per the drawings issued by RDSO for various loadings/spans. (2) Payment will be made as per the size of the pad on volumetric basis per cubic centimetre (Cucm) and no extra payment will be eligible for the steel plates, adhesives etc., used in the pad.</p> <p>(3) Contractor shall produce at his cost designs to prove the capacity of the pad from the manufacturer along with test certificates as per specifications at a rate of one test for each type/design of pad or for 10000 Cucm whichever is less. Additional tests as specified/ as directed by the Engineer-in-charge shall also be carried out by the Contractor at his cost. (4) One spare pad for every 50 pads shall also be supplied by the Contractor at his cost for Railway's independent testing.</p>	cucm	1317000.00	1.10	1448700
6	<p>Conducting and load test on PSC superstructure of all designs/dimensions duly creating and removing all loads and providing all staging and instrumentation with all lead, lift, transport, materials, consumables, tools and plant, labour etc., complete as required as per relevant Specifications/Codes and as directed by the Engineer-in-charge.(Per metric tonne (t) of loading to be quoted) NOTES: (1) Load tests shall be carried out as per IRS Bridge Rules/ IRS Codes/ IRC codes as applicable. All load may be created with available local material in gunny bags or any other approved type of loading at the cost of contractor. The loads for PSC girders and slabs will be in the range of 150 to 500 t depending upon the designs. Rails or other materials, if available, will be spared free of cost but it is not binding on the Railway to provide the same. Rates include the cost of disposing all the waste materials appropriately away from the site. (2) Loading calculations and procedure shall be submitted by the contractor in advance and got approved. Report shall be submitted by the Contractor after the test in a proper format specifying the calculations for loads, deflections and other parameters (specified and actual) as per relevant specifications.</p>	Tonne	2250.00	600.00	1350000

S No.	Description of Item	Unit	Qty	Rate	Amount
7	<p>Providing and installing 1000mm/600mm dia RCC cast-in-situ BORED PILES using Rotary/ Conventional method of drilling in all kinds of soils and rock (including boulders, soft, weathered or hard rock) duly providing Contractor's M35/M40 grade concrete (with 20mm size graded stone aggregate and all other materials including admixtures as required), including fabricating and fixing in position reinforcement gauge as per designs/drawings, removing/chipping off latence and concrete above cut off level for a depth upto 1.0 M of the pile top, protection arrangements for the bore hole as required for various types of soil (except for providing permanent M.S.liners in very loose soils) with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (Per running metre of pile depth to be quoted) (a) 1000 mm dia RCC pile in M35/M40 Concrete in all soils including weathered rock including through boulders/ obstructions. NOTES:- (1) Rates include cost of all operations and cost of all materials including temporary liners and other protection as required but excluding cement and reinforcement steel and permanent M.S liners in very loose soil. Reinforcement steel, cement (including 10% extra cement for under water concreting) and permanent M.S liners will be paid under other relevant schedules at the discretion of the Engineer-in-charge. Pile measurement for payment will be upto cut off level only. (2) Piles shall be provided with proper shoe/base to rest properly on rock/ soil as designed. Rates include cost of bedding and seating the piles on hard rock, wherever specified, with a minimum of 1.0m anchorage as specified. However, hard rock blasting required, if any, will be paid separately under other relevant schedules at the discretion of the Engineer-in-charge.</p>	RM	100.00	4800.00	480000

S No.	Description of Item	Unit	Qty	Rate	Amount
8	<p>Providing and installing 1000mm/600mm dia RCC cast-in-situ BORED PILES using Rotary/Conventional method of drilling in all kinds of soils and rock (including boulders, soft, weathered or hard rock) duly providing Contractor's M35/M40 grade concrete (with 20mm size graded stone aggregate and all other materials including admixtures as required), including fabricating and fixing in position reinforcement gauge as per designs/drawings, removing/chipping off latience and concrete above cut off level for a depth upto 1.0 M of the pile top, protection arrangements for the bore hole as required for various types of soil (except for providing permanent M.S.liners in very loose soils) with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (Per running metre of pile depth to be quoted) (c) 1000mm dia RCC pile in M35/M40 Concrete in hard rock. NOTES:- (1) Rates include cost of all operations and cost of all materials including temporary liners and other protection as required but excluding cement and reinforcement steel and permanent M.S.liners in very loose soil. Reinforcement steel, cement (including 10% extra cement for under water concreting) and permanent M.S.liners will be paid under other relevant schedules at the discretion of the Engineer-in-charge. Pile measurement for payment will be upto cut off level only. (2) Piles shall be provided with proper shoe/base to rest properly on rock/ soil as designed. Rates include cost of bedding and seating the piles on hard rock, wherever specified, with a minimum of 1.0m anchorage as specified. However, hard rock blasting required, if any, will be paid separately under other relevant schedules at the discretion of the Engineer-in-charge.</p>	RM	40.00	5500.00	220000
9	<p>Supplying, fabricating, driving and placing in position permanently 6mm thick M.S.Liners including cutting, bending, welding and fabricating with Contractor's 6mm thick M.S.Sheets as necessary for RCC piles of 1000/600mm dia with all lead, lift, transport materials, consumables, tools & plant, labour including operation of rig/machinery for driving etc., complete as per specifications and as directed by the Engineer-in-charge. (per running metre of liner depth to be quoted) (a) 6mm thick M.S.liners for 1000mm dia RCC piles. NOTES:- (1) Rate is payable for the liner depth used only and does not include wastage of any material involved and no extra rate/compensation is payable in this regard.</p>	RM	100.00	7000.00	700000

S No.	Description of Item	Unit	Qty	Rate	Amount
10	Conducting and pile load test on a 600mm to 1200 mm pile duly creating all loads and providing all staging and instrumentation, with all lead, lift, transport, materials, consumables, tools & plant, labour etc., complete as per specifications and as directed by the Engineer-in-charge. (per metric tonne (t) of loading to be quoted). NOTES:- (1) Single rate shall apply for all piles of any dia metre. Rate includes cost of all materials, operations, instrumentations, technical works etc., and disposing of all waste materials away from the site appropriately. (2) Testing shall be done as per IS 2911 specifications or as directed by the Engineer-in-charge duly creating all necessary loads which will be in the range of 300-600 t depending upon the designs. All loads may be created with available local material or any other at the cost of the contractor. (3) Loading calculations and procedure shall be submitted by the Contractor in advance and got approved. Report shall be submitted by the contractor after the test in a proper format specifying the calculations for loads, deflections and other parameters (specified and actual) as per relevant specifications.	Tonne	500.00	380.00	190000
11	Supply and laying of RCC Hume pipes of dia 900mm/1200mm of NP4/RDSO designs suitable for all types of Railway loading standards including providing levelling course, jointing, compaction as per approved drawings with contractor's fixing materials, collars, aggregates and all other materials as required with all lead, lift, transport, consumables, labour, tools and plant, etc., complete as directed by the Engineer-in-charge. (per running metre length of pipe to be quoted). (a) Laying with 900mm pipe NOTES: (1) Rates include all materials, operations etc., complete except cement used which will be paid for separately. (2) Contractor shall produce design/ test reports to prove the suitability of the Hume Pipe. Decision regarding standard of pipe to be used by the Engineer-in-charge is final and binding on the contractor. (3) Rates include local transport within the section only. Transport from factory upto the section/office of the Engineer-in-charge will be paid under relevant SSR items.	RM	650.00	5000.00	3250000

S No.	Description of Item	Unit	Qty	Rate	Amount
12	Supply and laying of RCC Hume pipes of dia 900mm/1200mm of NP4/RDSO designs suitable for all types of Railway loading standards including providing levelling course, jointing, compaction as per approved drawings with contractor's fixing materials, collars, aggregates and all other materials as required with all lead, lift, transport, consumables, labour, tools and plant, etc., complete as directed by the Engineer-in-charge. (per running metre length of pipe to be quoted). (b) Laying with 1200mm pipe NOT ES: (1) Rates include all materials, operations etc., complete except cement used which will be paid for separately. (2) Contractor shall produce design/ test reports to prove the suitability of the Hume Pipe. Decision regarding standard of pipe to be used by the Engineer-in-charge is final and binding on the contractor. (3) Rates include local transport within the section only. Transport from factory upto the section/office of the Engineer-in-charge will be paid under relevant SSR items.	RM	50.00	5800.00	290000
13	Drilling of 25mm/40mm dia holes in concrete/stone masonry/hard rock underground/over ground, to a depth of 400mm for dowelling/ anchoring including fixing of steel dowels/angles/flats and grouting with cement mortar (1:3) with Contractors all materials, drilling equipment, lead, lift, labour, transport, tools & plant, consumables, etc., complete (excluding cement & steel) as per specifications and as directed by the Engineer-in-charge. NOTES:- (1) Rate includes all materials, operations etc., excluding cement and steel, which will be paid under other relevant schedules.	Numbers	1000.00	150.00	150000

S No.	Description of Item	Unit	Qty	Rate	Amount
14	LAUNCHING of complete PSC spans including PSC main units and RCC ballast retainers if any for various spans available at bridge site using Contractor's ROAD CRANE, on completed abutments/piers of bridges including placing at correct location/level/alignment, providing a layer of cement and Cast-iron borings in 1:1 proportion for uniform bedding, adjusting after initial seating using Contractor's jacks, if required, and including all temporary arrangements as per drawings/specifications etc., with all lead, lift, transport, materials, consumables, fuel, tools & plant, labour, etc., complete and as directed by the Engineer-in-charge. (Per no. for type of span to be quoted) e) Launching of any other equivalent span upto 9.15m span NOTES:- (1) One span may consists of 2/3/4 PSC units and/or 2 ballast retainers, based on the design. It is the responsibility of the Contractor to assess the quantities based on drawings correctly in advance. (2) Rates quoted are for launching of the complete span involved. In case of Casting of ballast retainers at site, the rate will be reduced in proportion to the reduction in weight. (3) Slabs shall be handled by Contractor's Road Crane only. For any damage to the slab during launching/handling, the cost of the slab including damages and losses will be recovered from the Contractor.	Numbers	2.00	85700.00	171400
	No. of Items Fourteen only	Schedule D: Departmental Value		87310100	
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule E-SUPPLY OF HYSD STEEL					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supply of High Yield Strength Deformed reinforcement steel bars / Fe 415 / Fe 415D / Fe 415S / Fe 500D / Fe 500S / Fe 550 / Fe 550D conforming to IS 1786:2008 (with latest amendment) at site of work to the extent actually required for the work including all cost of loading, unloading, leading, transporting, stacking, storing, labour, consumables, machinery, vehicles etc., complete and as directed by the Engineer-in-charge. NOTE: (1) The rate quoted for this item is applicable for Fe500, Fe550 and Fe 600 and their variants viz. Fe 500D, Fe 500S and Fe 550D. If Fe 415 grade or its variants Fe 415D or Fe 415S are used, they will be paid at a reduction of Rs.2000/- per MT from agreed rates. (2) Stage payment for supply of steel shall be limited to 75% of the agreed rates subject to production of Bank Guarantee/ Indemnity Bond as specified, Test certificates, Insurance, limitation in quantity supplied at a time, conditions for stacking/storing/ preserving at site. However, this payment will be restricted to a maximum of 30% of the Schedule quantity at any point of time. (3) Payment for reinforcement rods will be made as per actual used including over laps, cranks, bends, etc., if any, as per approved drawing and as per Special Conditions for use of steel. However, no payment will be made for any wastage. Quantity will be calculated for nominal diameter of the bars using standard weights per running metre or as per actual weights whichever is less. (4) Binding wire, clamping materials etc., used in construction shall not be treated as supply items under this schedule and shall be governed by the Schedule and Special Conditions under the relevant items of concreting etc., and no extra payment shall be made. (5) Reinforcement steel shall be supplied and used as per approved drawings and as per instructions of the Engineer-in-charge.	Tonne	1151.00	51790.00	59610290
	No. of Items One only	Schedule E: Departmental Value		59610290	
	Tenderer's / Contractor's percentage				
	Total				

Seal & Signature of the Bidder

REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule F-EARTHWORK IN FILLING WITH COE, BLANKETING AND BRIDGE APPROACHES					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Earth work in filling with COE: Earthwork in embankment in making formation with contractors own earth of approved quality in specified layers not exceeding 300mm thickness from approved earth quarries outside railway limits in all soils with loading, unloading, all lead and lifts, rehandling, transportation, spreading in layers, benching of slopes, sectioning to profile, clearing of debris/garbage/vegetation/shrubs etc., in the railway alignment using contractor's vehicles, machinery, labour, consumables etc., as per technical specification & special conditions and as directed by Engineer-in-charge. Note: (i) Payment shall be made based on cross section measurement only. (ii) The rate includes all charges, taxes, royalty, seignorage etc., and for pretesting of soil quality at quarry for every 20000 cum or change of layer and testing at site for every 5000 cum or change of layer for assessing the suitability of the soil for use in embankments and all other tests as specified in the specifications. (iii) No extra payment for lead etc., is admissible. (iv) Only 75 percent payment for the quantity executed in a particular bill is payable initially. 15 percent of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10 percent shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) Only soils of category I or II or III or IV as per clause 15 of Technical Specifications is permitted. Payment for category III will be reduced by 5 percent and for category IV will be reduced by 10 percent of the accepted rates. Accepted rates apply to soil with PI upto 7. For PI beyond 7 and upto 20, a further reduction of 10 percent in accepted rates shall apply. Use of category V soil as per clause 15 of Technical Specifications is banned. (vi) Formation width at top shall be made with 500mm extra on either side initially and after compaction be cut to standard profile. No extra payment shall be made for this purpose. If the extra width is not made at any single location of less than 100 m length, payments due shall be reduced by 5% for that entire 100 m stretch.	cum	122780.00	126.30	15543948

S No.	Description of Item	Unit	Qty	Rate	Amount
2	Earth work at bridge approaches: Earthwork in embankment in filling up approaches of major bridge for 50m either side with soil of GW classification only including mechanical or special type of compaction such as water compaction in specified layers from approved earth quarries outside railway limits with loading, unloading, all lead and lifts, rehandling, transportation, spreading in layers, benching of slopes, sectioning to profile, clearing of debris/ garbage/ vegetation/shrubs etc., using contractors vehicles, machinery, labour, consumables etc., as per technical specification & special conditions and as directed by Engineer-in-charge. Note: (i) Payment shall be made based on cross section measurement only. (ii) The rate includes all charges, taxes, royalty, seignorage etc., and for pretesting of soil quality at quarry for every 20000 cum or change of layer and testing at site for every 1000 cum or change of layer for assessing the suitability of the soil for use in embankments and all other tests as specified in the specifications. (iii) No extra payment for lead etc., is admissible. (iv) Only 75% payment for the quantity executed in a particular bill is payable initially. 15% of the balance amount shall be released after the L section and profile are perfectly reached and the formation is handed over to Railways. Remaining 10% shall be released only after the formation in the full block section or identified length is completed in all respects and handed over. (v) No payment will be made for the complete layer if soil other than GW classification is used and/or if mechanical compaction or special compaction is not used.	cum	8000.00	191.00	1528000
3	Blanketing of formation: Manufacturing, supplying, transporting to site, spreading in layers, compacting the blanketing material and dressing/ finishing the formation to profile as per RDSO specification No.GE:G-1 with upto date correction slips conforming to upper blanket layer guiding enveloping curves as per sketch B RDSO's Drawing No.GT/SD/0011/ Rev.2/2001 of the said specification including spreading and compacting with vibratory rollers of adequate capacity, duly sprinkling water/ allowing to dry to achieve optimum moisture content as specified, complete in all respects and as directed by Engineer-in-charge. Rate includes all materials, transporting/ leading/ unloading, spreading, labour, manufacturing, mixing & blending by any means, all tests on materials, to obtain the specified gradation, leads, lifts, assent, dissent, crossing of nalla /stream and all other obstructions, all machinery, tools and plants, handling and re-handling of the materials, fuel, royalty, octroi, licensing charges, incidentals, etc, complete.	cum	29000.00	360.00	10440000
Other Items					
No. of Items Three only		Schedule F: Departmental Value			27511948
		Tenderer's / Contractor's percentage			
		Total			

Seal & Signature of the Bidder

REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule J-ITEMS OF MISCELLANEOUS WORKS					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Preparation of design and General Arrangement/Working Drawings for broad gauge bridges to 25T loading and supply of 3 copies of the same along with design calculations in correlation with RDSO guidelines for verification/approval of Railway department, after approval submission of final working drawings on gateway or similar tracing paper with three sets of copies of the same duly collecting all site details and soil particulars by the excavation of open trial pit of suitable depth. Payment shall be inclusive of labour, tools, plants with all lead and lift, etc., as directed by the Engineer-in-Charge. for Minor bridges	Each	22.00	4500.00	99000.00
2	Preparation of Minor Bridges completion plan in Auto Cad duly incorporating all necessary details required and submitting the same in the check plot. Final drawing is to be produced in the film after affecting the necessary corrections given in the check plot	Each	22.00	4000.00	88000.00
3	Rail fencing by the side of existing rack with the BG/MG rails (52 kg/90R75R) available as per drawing No.DY.CE/C/CN/BNC/SK 2-06 duly excavating trenches at every 5m for a depth of 1m below the existing/proposed formation level at every 5m intervals at a distance of 2.5m from existing track duly carrying out all necessary cutting of rails, drilling of holes with gas and providing all bolts & nuts arrangements as indicated in drawing with contractor's supply of bolts & nuts including all labour, materials, consumables and completing the job as instructed by Engineer-in-charge. The scrap and the cut rail pieces has to be handed over at Section Engineer/Stores Construction, Bangalore City. NOTE: 1. Drawing can be referred in the office of K RIDE	MT	10.00	3000.00	30000.00
4	Collecting field data, topo sheet from Survey of India Department, surveying and preparation and submitting Hydraulic water way calculations for minor bridges as per RDSO guide lines and Railway bridge substructure code with all design calculations and details in three copies in bound form with contractor's labour and materials with contractor's labour, tools, plants, equipment with all lead and lift etc., complete and as directed by the Engineer-in-charge including recommendations	Each	18.00	2500.00	45000.00
5	Hydraulic waterway calculation for catchment area (25 Sq. Km with Q-50 discharge as per RDSO guidelines, CWC Guidelines and Railway Bridge sub structure code and submitting the calculation	Each	1.00	6000.00	6000.00

S No.	Description of Item	Unit	Qty	Rate	Amount
6	Providing caution watchmen at workspot where caution order is imposed at a rate of one caution watchmen per 12 hours shift round the clock with necessary electric torch, banner flags, hand flags etc., who will be on continuous vigil and exhibit necessary hand signals to the trains for their safe passage over the caution spot as directed by the Engineer-in-charge. NOTE : Rate to be quoted as per day (24 hours basis).	Day	1100.00	742.00	816200.00
7	Fixing of reference pillars at the edge of formation with railways rails 41.1/4.60R/90R of 1.5m long fixed in cement concrete foundations of .3 x .3 x .75 m size with 1m length projected above ground level and duly marking proposed formation level and proposed rail level in red enamel paint over white enamel paint background of 10cm band including cutting of rails, loading, unloading, transportation, excavation , erection and painting with contractors supply of paint, labour , tools and plants, all lead and lift etc. complete (cement concrete and cement will be paid separately under relevant item). Rails will be supplied at nominated depot	Each	160.00	50.00	8000.00
8	Construction of hexagonal type gate lodges as per Plan No.650/96 in all respects ABOVE PLINTH LEVEL except foundation works. This work consists following : 1) Brick Masonry in stock bricks in cm 1:6 2) Cement concrete flooring with 1:3:6 mix and smooth finishing with cm 1:3 3) Steel doors and windows 4) RCC lintel and sloped roof. 5) Weathering course and water proof machine pressed tiles over roof 6) Internal shelf as per type plans. 7) Painting LC particulars, duty roster and protection diagram etc., on gate lodge.8) White washing, colour washing, painting in all respects as per plan with contractors cement complete and as directed by Engineer-in-charge (the cost of steel will be paid separately under Sch."E"	Each	1.00	83500.00	83500.00
9	Improving Bearing capacity by removing loose soil, filling with boulders, sand, rolling with vibro roller in layers of 30 cm thick.	cum	300.00	300.00	90000.00
10	Design of sub structure including foundation for bridges (Water way bridges/ROB/RUB including major bridge) as per latest loading standards for a single line BG track based on soil investigation report, preparation of detailed structural and working drawings with bar bending schedule. Design to be done by recognised/reputed consultants etc. Submitting approved drawings on a tracing film/ latest tracing material and compact disc along with 6 copies of final working drawings, structural drawings and design calculations with contractor's labour tools plant etc and as directed by Engineer in charge.	Each	4.00	90000.00	360000.00

S No.	Description of Item	Unit	Qty	Rate	Amount
11	Design of super-structure for bridges (water way bridges/ROB/RUB including major bridge) as per latest loading standards for a single line BG track preparation of detailed structural and working drawings with bar bending schedule. Design to be done by recognised/reputed consultant and proof checked by another recognised consultant like IIT, Stup consultants etc., submitting approved drawings on a tracing film/latest tracing material and compact disk along with 6 copies of final working drawings, structural drawings and designs calculations with contractors labour, tools, plants, etc., and as directed by Engineer-in-charge	Each	4.00	140000.00	560000.00
12	Providing safety barricading as per drg. No. SWR/CN/BNC/SK/165-2018/R with contractor's materials and labour including all leads and lifts complete as directed by Engineer in charge. (Size 100 mm x 1650 mm Roc pole) Note: 1. Casting of RCC pillars shall be carried out in nominated depot and submerged water curing. 2. The precast RCC posts shall be transported to date duly handling carefully without causing any damage and erect it at nominated locations as per deg duly ensuring safety of running trains. 3. Maintenance of the rope, RCC pillars etc shall be at the cost of contractor. 4. 90% of the payment shall be released after erecting fencing to the satisfaction of Engineer in charge.	RM	7500.00	327.60	2457000.00
13	Casting and rolling /launching of precast RCC box of inside dimension 5.00 X 4.80 m with controlled concrete of M:35 grade The rate inclusive of the following a) Casting of RCC box segments as per the approved design and drawings using contractor's materials excluding steel and cement (Steel and cement will be paid separately through relevant items) b) Rolling / launching of boxes with previously laid concrete bed by approved method with contractor's materials labour tools and plants, consumables, crew, fuel, transportation, hire charges for suitable crane having double the capacity for handling the weight of the precast box segments (2 Nos) and other machinery etc., complete as directed by the Engineer in charge during day/night c) laying of levelling course / wearing course, earthwork excavation in " " foundation / forming bank shall be paid under relevant items separately. The rate includes disposal of surplus earth in low lying areas within Railway limits with all lead and lifts as directed by the Engineer in charge Note: 1. All concrete shall be weigh batched, machine mixed, compacted with mechanical vibrators and should conform to IRS concrete bridge code and relevant IS code/specification and other relevant specification as prescribed 2 Mix design with all required tests shall be arranged by the contractor at his own cost 3. admixture as required /as per design shall be arranged by the contractor at his own cost 4. All materials and concrete test shall be arranged by the contractor at his own cost. 5. Jointing of precast RCC box units by applying epoxy mortar Stage payment I. Only 50% of the payment for the quantity executed will be made after casting of the boxes initially 2. Balance 50 % payment shall be released only after rolling/ launching of box segments in final position	Metre	31.40	84672.00	2658700.80

S No.	Description of Item	Unit	Qty	Rate	Amount
14	Painting of steel girder of ROB with contractor's supply of epoxy paints as follows, duly removing oil/grease from the metal surface by using petroleum Hydrocarbon Solvents to IS 1745 and prepare the surface by sand/grit blasting using Air compressor and apply two primer coats with epoxy zinc phosphate to RDSO specification No. Mfc/PCM - 102/86 to 60 microns (for two coats) intermediate coat of Epoxy Micaceous Iron Oxide to RDSO No. Mfc/PCN-103/86 to 100 microns (one coat) and finish with two coats of polyurethane Red Oxide to RDSO No. mfc/PCN-109/88 - 80 microns (two coats) - (Total five coats) at an height of 6.5m above rail level over OHE power line area under restricted time limit, under power shut down either at day time or night time with contractor's labour, T&P, Epoxy paints, consumables, Sand Blasting equipments, sand, Air compressor, all lead and lift, staging required if any complete and as directed by Engineer-in-charge	Sqm	1100.00	410 00	451000.00
15	Painting of bridge particulars on Abutment pier by painting with, two coats of synthetic enamel paint of approved colour and make to required length including cleaning the surface free from dust dirt mortar spills and writing letters to required height with enamel paint indicating the heights flood level line painted distinctly by 25mm broad white line along with the year of its occurrence in figure 100mm deep direction of flow should be distinctly marked with a bright red band 5cm wide centrally over a white band 10cm wide for length of 60cm with contractors labour tools, paint, paints brushes consumable all lead as directed by Engineer-in-charge .NOTE : Unit of each bridge consists painting two coats on abutment/pier after cleaning to required length and marking FSL,HFL,DL, Direction of flow at each bridge.	Each	2.00	500 00	1000.00
16	Painting of road surface using approved quality thermo plastic material (Homogenously composed of aggregate, pigment, resins and glass reflectorising beads) properties of thermo plastic material shall confirm to BS 3262 (Part 1) forming central lines strips of 10x300 cms each with 600cm gap between strips in straight reaches, 300cms gap between strips in steep curves, and continuous strips in the edge of road applied hot, either by screeding or extension process at the rate of 5 Kg/ Sqm of painted surface using suitable machine capable of controlled preparation and laying with surface applicator of glass beads, 250 gram/sqm allowing cooling to ambient pavement temprature that shall produce an adherent pavement marking of minimum specified thickness of 2.5mm including barricading for traffic diversion, cost of paint and other materials labour charges hire charges of machineries etc., complete as per he Engineer-in-Charge.	Sqm	50.00	500 00	25000.00
17	Providing and laying of sand bags layer by layer filled with sand in each bag of standard cement bag size with all contractor's own bags, sand, labour, tools and plants including transportation to the site of work complete as directed by the Engineer - in - charge.	Each	4000.00	20.00	80000.00

S No.	Description of Item	Unit	Qty	Rate	Amount
18	Transportation of steel cribs of size 6' X 2' X 2' made of MS angles of 75mm X 75mm X 10mm/8mm or 65mm X 65mm X 8mm from PWI/stores at Yeswantpur /Midsection wherever available to the bridge spot including leading, loading, transportation and unloading and stacking using contractors own vehicle, labour, tools & plants, consumables etc without damaging any Railway property and as directed by Engineer in-charge. (Approx. Qty. 200 Nos, approx. lead 225 km	Each/Km	45000.00	2.00	90000.00
19	Supplying, providing & fabricating and fixing in position true to line & level, Elastomeric POT- cum- PTFE bearings complete as per drawings, technical specifications or as directed by eht Engineer. The unit rate shall cater for any resetting of bearings, if required. (In case of different capacity of bearing, required for the work the rate quoted will be proportionately increased/decreased). a) Fixed bearings i) Free Bearing	Tonne	1800.00	140.00	252000.00
20	Supply, fabrication, painting and erection of road traffic warning boards of suitable height for various purposes such as NO PARKING, NO ENTRY, HTV PROHIBITED, etc., as per IRC standards made of 50x50x5 mm MS Angles and 3mm thick MS plate for the board of appropriate size, painting 2 coats with appropriate enamel paint and pasted with reflective stickers/reflective paint on the board erected into the ground with cement concrete 1:3:6 for 0.30x0.30x0.60 metre including earthwork excavation, etc., as directed by the Engineer-in-Charge.	Each	8.00	1400.00	11200.00
21	Supplying, providing 150mm dia UPVC rainwater downtake pipe of 6 Kg/sqm pressure pipe with accessories like bends, collars etc., as required including providing suitable MS clamps with Bolts & Nuts 3 Nos per stanchion with stanchion with contractor's materials like clamps, Bolts & nuts etc., labours, tools & plants, with all lead, lifts complete as directed by the Engineer-in-charge.	Metre	40.00	410.00	16400.00
22	I Design and providing suitable Coffor Dams as approved for abutments and piers and maintaining upto the completion of work as directed including bailing out water using electric / mechanical pumps, making suitable access, fencing, lighting, watching, disposing the surplus excavated materials to locations away from site, with all leads and lifts etc., with all contractor's labour, materials, bullies, planks, sheets, form work, shoring, shuttering, cement, etc., and after completion of the work the coffer dam is to be dismantled and cleared of the site complete and as directed by Engineer-in-charge. NOTE : 70% payment will be made after completion of coffer dam and balance 30% of payment will be released after clearing of site on completion of work to clear the waterway	Each	3.00	20000.00	60000.00
23	Preparation and submission of LC gate plan with existing road details and other relevant particulars in AUTO CAD on 50 micron thickness tracing film of A1 size.	Each	1.00	2500.00	2500.00

S No.	Description of Item	Unit	Qty	Rate	Amount
24	Excavation along the alignment of signalling cable / OFC / Power cable carefully and exposing the same without any damage and excavating the new trench along the railway alignment or along the alignment as specified by the railway engineer - in - charge, laying or removed cable, filling up all complete with sand and laying a layer of brick with contractor's own materials, tool and plants etc., as directed by the engineer - in - charge. Note: In case the cable is damaged cost of restoration and the cost of cable will be recovered from the contractor. The decision of the railway with regard the cost to be recovered will be final.	RM	12600.00	200	2520000
25	Supplying providing and removing heavy duty shoring for excavation in foundation trenches for bridges and buildings near existing bridge/track/building to a depth not less than 3.0m using contractors ISMC 150 X 75 X 5.7 @ 1.0 m intervals and MS sheet of 6 mm thick. The released material shall belong to the contractor.	Sqm	250.00	920.00	230000.00
26	Providing heavy duty interlocking pavement blocks 150mm thick made of cement concrete M35 of richer grade at levelled crossings layed on sand bed of 75mm over 300mm well compacted granular subbase of well graded stone aggregate of 40mm and down size and toewalls around the prefeiry for confining the blocks.	Sqm	100	954.00	95400.00
27a	Providing Toyota Innova Crysta / Toyota Corolla Altis / Honda Civic or similar approved road vehicle(s) as per relevant special conditions	per month	36	54000.00	1944000.00
27b	Providing Toyota Yaris G CVT / Honda City 2020 / Hyundai Verna 1.6 CRDI SX(O) / Skoda Rapid 1.5 TDI CR Ambition AT or similar approved road vehicle(s)	per month	18	48000.00	864000.00
27c	Providing Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	per month	18	40000.00	720000.00
28	Extra payment for providing any of the vehicles mentioned in item no. 26(a) / 26(b) as per the criteria/ stipulations/specifications/conditions mentioned therein including the notes and in the ASC, with Driver(s) cum Attendant(s) beyond 12 hours a day	Vehicle Hours	576	150.00	86400.00
29	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official				
29a	For the class/type of the vehicle mentioned in item no. 27(a)	Vehicle KM	1440	15.00	21600.00
29b	For the class/type of the vehicle mentioned in item no. 27 (b)	Vehicle KM	720	13.00	9360.00
29c	For the class/type of the vehicle mentioned in item no. 27(c)	Vehicle KM	720	12.00	8640.00

S No.	Description of Item	Unit	Qty	Rate	Amount
	Extra payment for extra days of run, over and above 26 days per month on certification by the user official				
30a	For the class of the vehicle mentioned in item no. 27 (a) with all conditions therein	Vehicle day	144	2100	302400.00
30b	For the class of the vehicle mentioned in item no. 27(b) with all conditions therein	Vehicle day	72	1900	136800.00
30c	For the class of the vehicle mentioned in item no. 27 (c) with all conditions therein	Vehicle day	72	1600	115200.00
31	Supply of Motor Bike 150CC or more as per relevant special conditions	per month	72	8000	576000.00
	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official	Vehicle KM	4000	2.5	10000.00
32	<p>Providing site office and office equipments for employer with contractor's material, Labour, Tools and Plant, Equipment etc. including provision of Water Supply, Drainage, Power arrangements, office maintenance as per the details mentioned in Chapter 3 (Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents.</p> <p>Note 1: This item is provided with the contention that new site offices will be constructed for this purpose and 75% payment of the accepted rates will be made after making available functional office balance 15% payment shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor</p> <p>Note:2 Alternatively if suitable accommodation is available on hire basis at suitable location acceptable to the employer, the contractor can arrange same under the item but in such a case the payment shall be regulated as below</p> <p>(a) 10% payment shall be made on completion of one month from the date of making available the office fit for functioning.</p> <p>(b) Remaining 90% payment shall be paid in equal monthly instalments that is (0.9xquoted rate)/(stipulated Completion period in months + defect liability period in months)</p> <p>Note 3 : In case stipulated period gets extended, payment on monthly basis, under this item, in such extended period, shall be made as under;</p> <p>(i) In case of new construction @[(54% of quoted rate)/(Stipulated Completion period in months</p>	per Sq. M of Plinth area	62	13788.00	854856.00

S No.	Description of Item	Unit	Qty	Rate	Amount
33	Providing Furniture as given under chapter 3 (Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents. Note: Payment shall be made @ 75% of the accepted rate after making available furniture items functional in office, balance 15% payment shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor	LS per site office	1	200000.00	200000.00
34	Driving 'Z' section MS sheet piles, upto 10mm thickness, side by side in all kinds of soil mechanically or manually as per directions of Engineer-in-charge and removing after the work. The rate shall include all labour, materials, tools and plants, lead and lift as per site condition including 'Z' section sheet pile. Note: Measurement will be based on area covered i.e depth of pile actually driven in the earth along the trench multiplied by length of such protection along the trench	sqm	500	1331.97	665985.00
	No. of Items Thirty Four only	Schedule J: Departmental Value			17651141.80
		Tenderer's / Contractor's percentage			
		Total			

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REACH 5

Schedule G-HIGH TENSILE WIRE					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Supplying of High Tensile Steel wires/strands to IS 14268 (upto date) of suitable dia as approved in designs/ drawings/ conditions from approved manufacturer at the site of work to the extent of quantity required for various items of works in schedule of items including all cost of loading, leading, transporting, storing, unloading, handling, rehanging, stacking, protecting etc., in the contractor's store godowns as per IS specifications with all lead, lift, transport, consumables, labour, tools & plant and all other incidental charges etc., complete and as directed by the Engineer-in-charge. NOTE:- (1) Payment will be made only for HTS wire/strands used in the structure for lengths measured from bearing plate to bearing plate or face to face of the structure and no extra for wastage etc., will be allowed. (2) 50% of the agreement rate will be paid for the HTS wire/strand brought to the site on production of Indemnity Bond/Bank Guarantee as per Special Conditions and other necessary certificates and the balance will be paid only after completion of all works connected to prestressing and certification of the quality of the slab/girder/etc., where the HTS materials are used.	Tonne	5.00	63800.00	319000
No. of Items Thirty Four only		Schedule G: Departmental Value			319000
		Tenderer's / Contractor's percentage			
		Total			

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REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158/700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule L-BRIDGE GIRDER ITEMS					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	<p>SUPPLY ,FABRICATION AND ERECTION/LAUNCHING OF STEEL GIRDER (PLATE GIRDER/BOWSTRING GIRDER):</p> <p>Supply of structural steel viz steel plates conforming to quality B0 or BR or C of Grade designation E250 or higher Grade designation as per Approved Drawing, Steel sections such as channels, angles, I-Beams conforming to Quality A E250 of IS:2062 or of higher Grade designation as per Approved Drawing. Stud Steel conforming to IS 3935-66, MS Rivets conforming to IS 1148 - 1962, IS 2155 - 1962, bolts conforming to IS 3640, IS 1363, Fabrication, assembling, transportation, erection/launching (launching during traffic/ and power block) of Steel girder (to be utilized as composite girder) including riveting, welding (MMAW/SAW/CO2), bolting (HSFG/Normal bolts), drifts with contractors materials, consumables, fuel, labour, taxes/levies, lead lift, plant and machinery, hire charges equipments, staging, scaffolding, temporary arrangements, deployment of caution watchman, Non destructive testing of raw materials and welds and other tests as required etc., templates, zigs, fixtures, backup supports, accessories, transporting various components from fabrication shop to the site including loading, unloading, lift etc., launching by means of road crane of adequate capacity (including a standby working crane of the same or higher capacity) etc., complete as per the relevant IS specifications, IRS B1-2001, IRS BS-110 (with up-to date correction slip) issued by RDSO and as per the other relevant IRS/IS/IRC as detailed in Additional special conditions (ASC-FAB-ERC-CG-1 & ASC-FAB-ERC-CG-2), as directed by Engineer-in-charge. The launching has to be done as per the scheme supplied by the contractor and approved by Railways. The launching has to be done with help of contractor's road cranes of suitable capacity/ launching nose etc. as approved by Railway during traffic block and /or power block as approved by Railway. The Rates quoted is inclusive of :- a. Cost of steel materials, Rivets, nuts, bolts and welding etc. Including fabrication, fabrication materials, templates, fixtures, equipments, tools & plants required for the work. b. Transportation of raw materials. c. Skilled/ Unskilled labourers required for the work. d. Excise Duty, Octroi, Sales Tax and other taxes as applicable. e. All lead and lift etc. complete. f. Transportation of fabricated girder parts to site. g. Cold straightening of deformed and bent girder parts before their assembling and other ancillary steel structures wherever necessary</p>	MT	180.00	113983.00	20516940

S No.	Description of Item	Unit	Qty	Rate	Amount
2	METALIZING OF FULL FABRICATED COMPONENTS: Metalizing of Full fabricated components of composite girder duly preparing the surfaces by sand/ grit blasting as per the specification of metalizing and sand/ grit blasting (Metalizing thickness of minimum 115 microns with avg. thickness of 150 micron) and painting with one coat of primer to IS 5666 (1970) followed by one coat of zinc chromate primer to IS 104 (45 micron) and two finishing coat of aluminium paint to IS 2339 (each of 35 micron) with contractor's materials, labour, tools and plants scaffoldings etc. complete and as directed by the Engineer - in-charge. Detailed procedure shall be followed as per Additional Special conditions and as per IRS B-1/2001.	Sqm	1000.00	819.00	819000
3	DECK SHEETING: 1.Designing, supplying, fabricating and providing of trapezoidal roll formed deck sheeting profiles of 50mm depth made of galvanised steel troughed metal decking plate over cross girders/supports for cast-in-situ deck slab of R O B. Thickness of deck plate shall be 1.00mm (minimum) and shall serve as permanent shuttering to deck slab of 250mm (max) thickness measured over crest of metal decking and shall have adequate strength to support the weight of green concrete and imposed loads during concreting over a span of 2000mm between supports. Deck sheets to be embossed to facilitate enhanced sheet to concrete bonding with contractor's all materials, men, equipment, tools and plant, fixing arrangements, all lead and lift and the work to be carried out above Railway tracks and 25 KV OHE electrified area without affecting Railway traffic and damage to Railway properties as directed by Engineer-in-charge. NOTE: 1.The rate includes submission of manufacturers design calculations/test reports, technical details and the supply to be taken from reputed manufacturing firms.	Sqm	500.00	1803.00	901500
	No. of Items Three only	Schedule L: Departmental Value			22237440
		Tenderer's / Contractor's percentage			
		Total			

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Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158700 to Km.165/000 in Baiyyappanahalli - Hosur section (excluding station yards)					
Schedule N-ROAD WORK ITEMS					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	Providing speed breakers as per type plan No CE/LC/SK-5 and CE/LC/SK-6 including painting white and yellow bands, diagonals etc. Complete with contractors labour, men, materials, machinery, consumables, approved paint, T&P, crew, fuel etc., complete including all lead and lifts and directed by the Engineer-in-charge.	Each	20.00	2398.00	47960
	No. of Items Three only	Schedule N: Departmental Value			47960
		Tenderer's / Contractor's percentage			
		Total			

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REACH 5

Name of Work : Baiyyappanahalli - Hosur Doubling - Earthwork in cutting, embankment and construction of Major/Minor bridges/RUB's and other miscellaneous works from Km.158700 to Km.165000 in Baiyyappanahalli - Hosur section (excluding station yards)

Schedule O-BRIGDE MISC. ITEMS					
S No.	Description of Item	Unit	Qty	Rate	Amount
1	HAND RAIL WITH PIPE Supplying, hand rail comprising one row of MS pipe of 100mm dia (as per IS 1239) fixed to the vertical supporting MS brackets 16mm thick and of height 30cm above crash barrier which are fixed to the crash barrier parapet at 2.0m intervals including painting the hand rail/MS brackets by one coat of red oxide primer and two coats of synthetic enamel painting of suitable colour with contractor's all materials, tools & plants, labour, consumables, all lead & lift, etc complete as directed by Engineer-in-charge.	MT	3.00	76383.00	229149
2	COMPLETION DRAWING: Preparation and submission of GAD/Completion drawing for the Major bridges/ROBS/RUBs based on soil exploration and water way calculation for fixing suitable span as per RDSO design and drawing in AutoCAD on 100micron film double mat finish as per Railway standard approved by the Engineer-in-charge to specified scales including submission of check print for proof check to incorporate suggested corrections and modifications and supply final copy in compact disk and 6 copies in ammonia print in A0 size with all contractor's materials, labours, tools, plants etc., complete.	Each	6.00	14427.00	86562
	No. of Items Three only	Schedule O: Departmental Value			315711
	Tenderer's / Contractor's percentage				
	Total				

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