

પ્રતિ,

અધિકષક ઇજનેરશ્રી,

પંચાયત મા.મ.વર્તુળ-૧,

રાજકોટ.

વિષય: ડ્રાફ્ટ ટેન્ડર પેપર મંજૂર કરવા બાબત.

કામનું નામ: રી-કન્સ્ટ્રક્શન ઓફ માઈનોર બ્રીજીસ, સ્લેબ ડ્રેઈન્સ, બોક્સ કલ્વર્ટ એન્ડ પાઈપ કલ્વર્ટ એટ વેરીયસ લોકેશન્સ ઇન ટેવલુમી દ્વારકા ફ્રિસ્ટ્રીક (પં) અન્ડર એમએમજીએસવાય ઇન ધ સ્ટેટ ઓફ ગુજરાત પેકેજ-૨ (વોલ્યુમ-૧ પુટ ટુ ટેન્ડર/વોલ્યુમ-૨ ડ્રોઈંગ/વોલ્યુમ-૩ નોટ પુટ ટુ ટેન્ડર/વોલ્યુમ-૪ પ્રિક્યુ બુકલેટ)

ઉપરોક્ત વિષય પરત્વેના આપના તા.૩૧/૦૩/૨૦૨૬ પત્ર નં. પીબી/દ્વારકા/ડીટીપી/૧૨૩૮ અન્વયે જણાવવાનું કે, સદર કામના રૂ.૧૩,૪૫,૦૦,૪૦૭.૬૭/- (અઠે રૂપિયા તેર કરોડ પિસ્તાલીસ લાખ ચારસો સાત અને સડસઠ પૈસા પુરા) ના ડી.ટી.પી./એસ.બી.ડી. નીચેની શરતોએ મંજૂર કરવામાં આવે છે.

શરતો:

- (૧) ટેન્ડરમાંની ખાલી જગ્યાઓ નિયમાનુસાર ભરવાની રહેશે.
- (૨) ટેન્ડર કોપી આપવાનો અને પરત લેવાનો ગાળો નોટીસ પીરીયડ પ્રવર્તમાન નિયમોનુસાર સુનિશ્ચિત કરવાનો રહેશે.
- (૩) ડી.ટી.પી./એસ.બી.ડી. માં છાપેલ વિગતો અને ટાઈપ થયેલ વિગતો અથવા અન્ય ભાષદોષની વિગતો ચકાસી સુધારવાની રહેશે.
- (૪) ડી.ટી.પી./ એસ.બી.ડીમાંની વધારાની વિગતો ટેન્ડર કોપીમાં આપવાની રહેશે નહીં.
- (૫) કામગીરીમાં વાપરવાના મટીરીયલ્સ માટે કરવાના થતા ટેસ્ટ માટે સરકારશ્રીના તા.૨૪/૧૦/૯૪ ના હુકમ ક્રમાંક: એસએસઆર/૧૦૯૪/આઈબી/૧૨૯/૧૦/સ નો અમલ કરવાનો રહેશે.
- (૬) માલસામાન માટેની જરૂરીયાત અને ધોરણો અંગેની વિગતોનો પણ ડી.ટી.પી.માં સ્પેશીફિકેશન સાથે સમાવેશ કરવાનો રહેશે.
- (૭) ગ્રાન્ટની મર્યાદામાં ખર્ચ કરવાનું આયોજન કરી ટેન્ડર મંગાવવાના રહેશે.
- (૮) સદર કામની સમય મર્યાદા ૧૪ (ચૌદ) માસની રાખવામાં આવેલ છે.



ઉપ સચિવ (પં.૨)૨  
માર્ગ અને મકાન વિભાગ

નકલ રવાના:

- (૧) કાર્યપાલક ઇજનેરશ્રી, પંચાયત (મા.મ.) વિભાગ, ટેવલુમી દ્વારકા તરફ જરૂરી કાર્યવાહી અર્થે.
- (૨) શાખા સીલેક્ટ ફાઈલ-૨૦૨૬/૬(૧) શાખા

# STANDARD BIDDING DOCUMENT

## PROCUREMENT OF

### CIVIL WORKS


RE-CONSTRUCTION OF MINOR BRIDGES, SLAB DRAINS, BOX CULVERTS & PIPE CULVERTS AT VARIOUS LOCATIONS IN DEVBHUMI DWARKA DISTRICT (PANCHAYAT) UNDER MMGSY, IN THE STATE OF GUJARAT. (PACKAGE - 2)

## COMPLETE BIDDING DOCUMENT


### CLIENT:


Executive Engineer, R&B Panchayat Division, Devbhumi Dwarka

  
Deputy Executive Engineer  
Panch. R&B Sub Division

  
Deputy Executive Engineer,  
R. & B. (Panchayat) Sub Division  
~~JAM-KHAMBHALIA.~~  
Bhumerud

  
Deputy Executive Engineer,  
R. & B. (Panchayat) Sub Division  
JAM-KHAMBHALIA.

  
Divisional Accountant  
Panch. R&B Division  
Devbhumi Dwarka

  
Executive Engineer  
Panch. R&B Division  
Devbhumi Dwarka

**D.T.P. APPROVED**

Rs. 13,45,00,407.67/-  
(Rs. Thirteen Crore Four  
Five Lakh Four hundred  
Seven and Sixty Seven  
Paise Only/-)  
Letter No. EOT/2726/163/0-2,  
Dated.....



सत्यमेव जयते

  
Superintending Engineer,  
Panchayat (R. & B.) Circle No. 1  
RAJKOT.

  
C. E. (Saurashtra) & A. S.  
Sachivalaya, Gandhinagar  
R. & B. Department

**GOVERNMENT OF GUJARAT**  
**ROAD & BUILDING DEPARTMENT**

This is a generic SBD to be used for Civil works. Each user/concern department needs to examine and put up their particular bidding requirement like; qualification criteria, contract Data etc., marked at [#] while finalizing their own bidding process.

### SCOPE OF WORK (PACKAGE-2)

Sr. No.	Name of Project	Structure Type	Structure Configuration
1	Construction of Hume Pipes Drain on Dwarka Vasai Hamusar Road Between Km.16/200 to 16/220 (ODR) Ta. Dwarka.	Hume Pipe Drain	5 Nos. of 900mm Dia. Pipe
2	Construction of skew Slab Drain on Premsar to Tankariya Road Bet, Km. 0/700 to 0/900 Ta. Kalyanpur	Slab Drain	2 Spans pf 7m c/c
3	Construction of Box Culvert on Raval to Gorana Road (VR) Km.2/60 to 2/70 Ta. Kalyanpur.	Box Culvert	3 x 3m x 2.5m Box Culvert
4	Construction of Box Culvert on Suryavadar to Sanidam Road Between Km. 1/800 to 2/0 (MDR) Ta. Kalyanpur.	Box Culvert	4 x 3m x 3m Box Culvert
5	Construction of New Minor Bridge on Local River at CH. 7/600 to 7/700 & Construction of Pipe Culvert at CH. 1/800 to 2/000 on Reta Kalavad-Sankhla Road Taluka Bhanvad District Devbhumi Dwarka.	Minor Bridge & Pipe Culvert	2 Spans of 7m c/c & 3 Nos. of 1200mm Dia. Pipe
6	Construction of Box Type Minor Bridge at Ch. 0/900 to 1/000 & Pipe Culvert at Ch. 1/100 To 1/200 On Sajadiyali Gunda Road Tal. Bhanwad Dist. Devbhumi Dwarka.	Minor Bridge & Pipe Culvert	7 x 4m x 2m Box Culvert & 4 Nos. of 1200mm Dia. Pipe
7	Construction Of New Minor Bridge on Vasai-Makanpur Road at Ch. 3/80 To 4/00 Taluka Dwarka District Devbhumi Dwarka.	Minor Bridge	7 Spans of 7m c/c
8	Reconstruction of Existing Bridge on Local River at Ch 2/800 to 2/700 on Dangarvad Ashiyavdar Road, Taluka- Kalyanpur, District - Dev Bhumi Dwarka.	Minor Bridge	4 Spans of 7m c/c
9	Construction of New Box Culvert on Local River at Ch. 0/400 To 0/600 on Haripur - Paneli Road Ta. Kalyanpur, Dist. Devbhumi Dwarka.	Box Culvert	5 x 6m x 3m Box Culvert
10	Reconstruction of Existing Bridge on Local River at Ch. 0/000 To 0/200 on Danta to Highway Road Near Danta village Khambhalia.	Minor Bridge	4 Spans pf 10m c/c
11	Construction of Hume Pipe Drain on Dwarka Vasai Hamusar Road Between Km.16/800 to 16/820 (ODR) Ta. Dwarka	Hume Pipe Drain	5 Nos. of 900mm Dia. Pipe

<b>Sr. No.</b>	<b>Name of Project</b>	<b>Structure Type</b>	<b>Structure Configuration</b>
12	Construction of Hume Pipe Drain on Padali to Goriyali Road Between Km.4/600 To 4/800 (ODR) Ta. Dwarka	Hume Pipe Drain	3 Nos. of 900mm Dia. Pipe
13	Construction of Hume pipes Drain on Gaga Approach Road Between Km.3/000 to 3/600 (MDR) Ta. Devbhumi Dwarka	Hume Pipe Drain	3 Nos. of 900mm Dia. Pipe
14	Construction of Hume pipes Drain on Bhatvadiya Gokalpar Road Between Km.2/500 to 2/700 (ODR) Ta. Kalyanpur.	Hume Pipe Drain	4 Nos. of 900mm Dia. Pipe
15	Construction to Vented Causeway & P/W On Dholamulavasar Nanabhavda Aniyari Khatumba Road Between 7/400 to 7/600 (ODR) Ta. Dwarka	Vented Causeway	6 Nos. of 600mm Dia. Pipe
16	Construction of Hume pipes Drain on Gaga Approach Road Between Km.3/600 to 3/800 Ta. Devbhumi Dwarka.	Hume Pipe Drain	3 Nos. of 1200mm Dia. Pipe
17	Construction of High-level Vented Causeway on Kenedi to Khakhara Road Between Km.0/400 to 0/600 (VR) Ta. Kalyanpur	Vented Causeway	6 Nos. of 900mm Dia. Pipe
18	Construction of Low-Level Causeway on Jambusar Joshipara to Join MDR Road Between Km.1/250 to 1/350 (VR) Ta. Bhanvad.	Low Level Causeway	Level Portion - 55 metre
19	Construction of Vented Causeway on Sanosari to Jamdevaliya Road Between Km.1/100 to 1/300 Ta. Kalyanpur.	Vented Causeway	3 Nos. of 900mm Dia. Pipe

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**INVITATION FOR BID**  
**(IFB)**

## NATIONAL COMPETITIVE BIDDING

- The Executive Engineer, R&B Panchayat Division, Devbhumi Dwarka invites bids for the construction work of detailed in the table.

The bidders may submit bids for any or all of the following works.

**TABLE**

Package No.	Name of work	Approximate value of works (Rs.)	Bid security (Rs.)	Cost of Document	Period of completion	#Class of Registration / Category of contractor if required
1	2	3	4	5	6	7
1	RECONSTRUCTION OF MINOR BRIDGES, SLAB DRAINS, BOX CULVERTS & PIPE CULVERTS AT VARIOUS LOCATIONS IN DEVBHUMI DWARKA DISTRICT (PANCHAYAT) UNDER MMGSY, IN THE STATE OF GUJARAT. (PACKAGE-2)	Rs. 13,45,00,407.67	Rs. 13,46,000	Rs. 18,000	14 Months (Including Monsoon)	"AA" class with Special Category-I (Bridge)

- Prospective / Interested bidder may download the Bid Documents from website <https://www.nprocure.com> free of cost till the Time and Date as mentioned on online NIT at website <https://www.nprocure.com>.

#

- However, Bidder who is submitting the Bid Online will have to pay the Bid Document Fee / Tender Fee through Demand Draft only of any Schedule Bank payable at **Devbhumi Dwarka and in favour of 'Executive Engineer, R&B Panchayat Division, Devbhumi Dwarka'** Once the Bid is received online, Bid Document/Tender Fee will not be refundable.

The Demand Draft for Bid Document/Tender fee and FDR/Bank Guarantee against Bid Security/EMD shall be submitted in electronic format through online (by scanning) while uploading the bid, this submission shall mean that Bid document/Tender fee and Bid Security/EMD has been received. Accordingly, the offer of only those shall be opened whose Bid Document/Tender Fee and Bid Security/EMD have been received electronically. However, for the purpose of realization of Demand Draft, and FDR/Bank Guarantee bidder shall send the same in original through R.P.A.D. so as to reach to # **'Executive Engineer, R&B Panchayat Division, Devbhumi Dwarka'** within 7 Days from the last day of bid submission.

Penaltative action for not submitting Demand Draft / FDR / Bank Guarantee in original to Executive Engineer / Tender Inviting Authority by bidder shall be initiated.

- Bids received online, will be opened on the time, date and place as specified in the online NIT at website <https://www.nprocure.com> in the presence of the bidders or their authorized representatives, who wish to remain present.

If the office happens to be closed on the day of opening of the bids as specified, the bids will be opened on the next working day at the same time and venue.

- A pre bid meeting will be held on states on online at 12:00 hrs at the office of S.E., Panchayat (R&B) Rajkot circle-1 to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in clause 9.2 of 'instructions to Bidders' of the bidding documents.
- #Bid Security (EMD) is equal to 1% of Estimated Amount put to bid / tender and should be rounded off to the next thousand rupees.

- Other Information is as under:

- Agencies can prepare and edit their offers a number of times before the end of the tender submission date and time. After the tender submission date and time, the bidder cannot modify / edit / withdraw their submitted offer in any case. No written or online request in this regard shall be granted.
- Offers in physical form will not be accepted in any case.



- C. Demand Draft purchased by the other than bidder and issued after the last date of submission of Bids, will not be considered or accepted.
- D. The cost incurred by the contractor for this offer for clarification or attending discussion, conferences or site visits will not be reimbursed by the Employer or Engineer-in-Charge.
- E. Conditional tender shall not be accepted.
- F. Any changes, addition, alternation made in the prescribed form attached with tender are liable to be rejected.
- G. Any change in format or conditional Bank Guarantee will not be accepted and the bidder will be considered non-responsive.
- H. All the bidders are instructed to fill in information strictly in accordance with the format given in the checklist / qualification document / tender document.
- I. It is mandatory for the bidders to supply each and every information as asked strictly in electronic format at appropriate places only.
- J. Blank / insufficient information shall be treated as nil information and shall result in disqualification.
- K. Even if the bidder has been qualified in a similar or larger size of project in the past, it shall not be deemed to be a ground / reason for not giving required information for this work / bid.
- L. Information supplied for earlier projects shall not be considered while evaluation of this bid. The Government will not ask for any other information, unless it is found absolutely necessary by the competent authority.
- M. If found necessary, the contractor will be intimated for negotiation,

**# For the works costing up to 7.5 crore (ROAD), 7.0 crore (BUILDING & BRIDGE) kindly refer to SSR-10-2015-17-C dated 03-02-2017**

For the works costing under 7.5 crore for Road Works and 7.0 crore for Building and Bridge Works following documents shall be submitted in electronic format only through online by scanning and the (i) Bid Document Fee / Tender Fee (ii) Bid Security / EMD should be sent in original to the Tender opening authority through RPAD, so as to reach the Executive Engineer within 7 days from last day of submission of Bid.

- (i) Bid Document Fee / Tender Fee
- (ii) Bid Security / EMD or Valid EMD Exemption Certificate of Appropriate Class of Registration of Approved Contractors
- (iii) Registration Certificate of Appropriate Class "AA" or above
- (iv) Registration Certificate of Special Category - Road / Bridge / Building and Category - I / II / III, if required
- (v) GST Number
- (vi) Work Experience given in para 4.5.3(6)
- (vii) Other Documents, as required...
- (viii) Bank Solvency Certificate for current calendar year.
- (ix) Concrete Batch mixing Automatic plant minimum capacity 15 m<sup>3</sup>/Hr. (Supporting document :- lease Agreement, Invoice copy)



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

## Section 1: Instructions to Bidders

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## **A. GENERAL**

### **1. Scope of Bid**

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

### **2. Source of Funds**

- 2.1 The expenditure on this project will be met from the budget of Govt. of Gujarat / Govt. of India for centrally sponsored projects.

### **3. Eligible Bidders**

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

### **4. Qualification of the Bidder**

- 4.1 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary. The proposed methodology should include a program of construction backed with equipment planning and deployment duly supported with broad calculations and quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.

4.2 Deleted

4.3 Deleted

4.4 Deleted

#### **#4.5 QUALIFICATION CRITERIA:**

**(Applicable for the works which require Post Qualification)**

- 4.5.1 Qualification will be based on applicant's meeting all the following minimum pass/fail criteria regarding the applicant's general and particular experience, personnel and equipment capabilities and financial positions, as demonstrated by the applicant's responses in the forms attached to the letter of application (specified requirement for joint ventures are given under para 4.6 below) Subcontractors experience and resources shall not be taken in to account in determining the applicants compliance with the qualifying criteria

To qualify for more than one contract, the applicant must demonstrate having experience and resources sufficient to meet the aggregate of the qualification criteria for each contract given in paragraphs 4.5.4, 4.5.5 and 4.5.9 below

#### 4.5.2 Base year and Escalation

The base year shall be taken as Current financial year

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

<u>Year</u>	<u>Financial Year</u>	<u>Multiplying factor</u>
Base year of inviting tender	2025-2026	1.00
-1	2024-2025	1.10
-2	2023-2024	1.21
-3	2022-2023	1.33
-4	2021-2022	1.46
-5	2020-2021	1.61

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

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

#### 4.5.3. General Experience.

The Applicant shall meet with the following minimum criteria:

- (a) Achieved a minimum Annual Financial Turnover (6.73 Cr.) (defined as billing for works in progress and completed in all classes of civil engineering construction works only) in any one year, over the last five years of the annual value of contract / contracts applied for.
- (b) Experience in successfully completing or substantially completing at least one contract of bridge works of ROB/Flyover bridge/River bridge/slab drain/culverts in which bidder has carried out ~~Cast in situ RCC solid slab type superstructure with open foundation of~~ at least 40% value (5.38 Cr.) of proposed contract within the last five years.

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

Substantially completed works means those works which are at least 90% completed as on the date of submission (i.e. gross value of work done up to the last date of submission is 90% or more of the original contract price) and continuing satisfactorily.

For these, a certificate from the employers shall be submitted along with the application incorporating clearly the name of the work, contract value, billing amount, date of commencement of works, satisfactory performance of the contractor and any other relevant information.

**4.5.4. Personnel Capabilities.**

Availability for his work of personnel with adequate experience as required; as per Appendix.

**4.5.5. Equipment Capabilities**

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

The bidders should, however, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with layout and necessary drawings and calculations to allow the employer to review their proposals. The numbers, types and capacities of each plant/equipment shall be shown in the proposals along with the cycle time for each operation for the given production capacity to match the requirements.

**4.5.6. Financial Position**

The Applicant should give undertaking that he has access to, or has available, liquid assets (aggregate of working capital, cash in hand and uncommitted bank guarantees) and / or credit facilities up to 25 percent of the value of the contract / contracts applied.

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

**4.5.8. Litigation History**

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

**4.5.9. Disqualification**

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

Made misleading or false representation in the forms, statements submitted, and / or Record of poor performance such as abandoning the work, rescinding of contract for which the reasons are attributable to the non - performance of the contractor; consistent history of litigation awarded against the applicant or financial failure due to bankruptcy. The rescinding of contract of a joint venture on account of reasons other than non - performance, such as Most Experienced partner of joint venture pulling out, court directions leading to breaking up of a joint venture before the start of work, which are not attributable to the poor performance of the contractor will, however, not affect the qualification of the individual partners.

**#4.6 ~~JOINT VENTURE: (Maximum 3 Members i.e. 1 Lead & 2 Others)~~**  
**~~(Applicable only for estimated project cost of 50 Crore and above)~~**

**4.6.1 ~~Joint ventures must comply with the following requirement:-~~**

~~(a) Following are the minimum qualification requirements:~~

~~(i) The lead partner shall meet not less than 50 percent of all criteria given in para 4.5.3 & 4.5.6 above. The joint venture must collectively satisfy the criteria of para 4.5.3 & 4.5.6 above. The experience of the other joint venture partners shall be considered if it is not less than 30 percent of the qualifying criteria in para 4.5.3 & 4.5.6 above.~~

~~(ii) Individually each member must satisfy the requirements of para 4.5.7 & 4.5.8 above.~~

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

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

**4.7. Bid Capacity.**

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

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

A = Maximum value of work executed in any one year during the last five years (updated to the price level of the year indicated in appendix) taking into account the completed as well as works in Progress.

B = Value at current price level of the existing commitments and ongoing works to be completed during the next **24 months (period of completion of work for which bids are invited)**; and

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

**Note :- In Case of joint venture, the available bid capacity will be applied for each partner to the extent of his proposed participation in the execution of the work.**

**4.8 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:**

- Made misleading or false representation in the forms, statements and Attachments the submitted in proof the qualification requirements; and / or

- Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delay in completion, litigation history, or financial failures etc.; and/ or
- Participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

**5. One bid per bidder**

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

**6. Cost of Bidding**

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

**7. Site Visit**

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

The costs of visiting the site shall be at the Bidder's own expense.



## B. BIDDING DOCUMENTS

### 8. Content of Bidding Documents

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

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

- 8.2. Volumes I, II, III and IV are available online and documents to be furnished by the bidder in compliance to section 2 will be prepared by him and furnished as Volume-V in two parts (refer clause 12).
- 8.3. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, technical specifications, bill of quantities, forms, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

### 9. Clarification Bidding Documents

- 9.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or through E-mail at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 15 days prior to the deadline for submission of bids. Employer's response will be published on website including a description of the enquiry but without identifying its source.

#### 9.2. Pre-bid meeting

- 9.2.1. The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the address, venue, time and date as indicated in the appendix.

- 9.2.2. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 9.2.3. The bidder shall be required to submit any questions in writing or e-mail to reach the Employer not later than 03 days before the meeting.
- 9.2.4. Minutes of the meeting, including the question raised (Without identifying the source of enquiry) and the responses given will be published without delay on the tender website i.e. [www.nprocure.com](http://www.nprocure.com). Any modification of the bidding documents listed in sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting.
- 9.2.5. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

## **10. Amendment of Bidding Documents**

- 10.1. Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
- 10.2. Any addendum thus issued shall be part of the bidding documents. The Employer will assume no responsibility for the same.
- 10.3. To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at his discretion, extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

## C. PREPARATION OF BIDS

### 11. Language of the Bid

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

### 12. Documents Comprising the Bid

12.1. The bid be submitted by the bidder as Volume V of the bid document (refer Clause 8.1) shall be in two separate parts:

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

- (i) Bid Security in the form specified in Section 8
- (ii) Qualification Information and supporting documents as specified in Section 2
- (iii) Certificates, undertakings, affidavits as specified in Section 2
- (iv) Any other information pursuant to Clause 4.5 of these instructions
- (v) Undertaking that the bid shall remain valid for the period specified in Clause 15.1

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

- (i) Form of Bid as specified in Section 6
- (ii) Priced Bill of Quantities for items specified in Section 7

12.2. The Bidder shall submit the details/information pertaining to each part i.e., technical as well as financial and must be submitted online only.

12.3. Following documents will be deemed to be part of the bid.

Section	Particulars	Volume No.
	<b>Invitation for Bids (IFB)</b>	
1	Instruction to Bidders	Volume I
3	Conditions of Contract	
4	Contract Data	
5	Specifications	Volume II
9	Drawings	Volume IV

### 13. Bid Prices

13.1 The Contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.

13.2 The bidder shall fill in rates and prices and line-item total (both in figures and words) for all items of the Works described in the Bill of Quantities along with total bid price (Both in figures and words). Item for which no rate or price is entered by the bidder will not be paid for by the Bill of Quantities.

13.3 All duties, taxes, and other levies except GST payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder. (GST will be paid extra)

13.4 Deleted

13.5 The rates and prices quoted by the bidder are subject to adjustment during the

performance of the Contract in accordance with the provisions of Clause 47 of the Condition of Contract **(Irrespective of the time limit and Bid Amount)**

**14. Currencies of Bid and Payment**

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

**15. Bid Validity**

- 15.1 Bids shall remain valid for a period of not less than 120 days after the deadline date for bid submission specified in Clause 20.
- 15.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified period. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his security for a period of the extension, and in compliance with Clause 16 in all respects.

**#16. Bid Security**

- 16.1. The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This Bid security shall be in favour of Employer as named in Appendix and may be in one of the following forms;
- a. Bank Guarantee from any scheduled Indian bank, in the format given in Volume III. **(Bank Guarantee is applicable only for Bid Estimated Amount of 01 Crore and above)** and Bank Guarantee of Schedule and Private Banks shall be considered as per GoG Finance Department's Circular No. FD/MSM/e-file/4/2023/0057/D.M.O. Date 21/04/2023 or as per their latest amendment.
- b. Fixed Deposit Receipt issued by any Scheduled Indian Bank or a foreign Bank approved by the Reserve Bank of India.
- OR**
- # A Valid Bid Security / EMD Exemption Certificate issued by (1) Road & Building Department or (2) Narmada Water Resources, Water Supply and Kalpsar Department of Govt of Gujarat. **Exemption Certificate is applicable only when Registration Certificate of Appropriate Class and Category of Approved Contractors is required as eligible criteria of bidder.**

- 16.2 Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall be valid for 45 days beyond the validity of the bid i.e. total validity of **120 + 45 = 165 Days**
- 16.3 Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 and 16.2 above shall be rejected by the Employer as non-responsive.
- 16.4 The Bid Security of unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 15.1
- 16.5 The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.
- 16.6 The bid Security may be forfeited
- (a) If the Bidder withdraws the bid after Bid opening during the period of Bid validity.
  - (b) If the Bidder does not accept the correction of the Bid Price, if any or
  - (c) In the case of a successful Bidders, if the Bidder fails the specified time limit to
    - (i) Sign the Agreement; or
    - (ii) Furnish the requirement Performance Security.
  - (d) #If found necessary, the bidder will be intimated for negotiation, He will be intimated maximum three times within the validity period for negotiation, If contractor does not respond in time, his Bid Security (EMD) will be forfeited and his tender will be rejected. Punitive action will be taken on such contractors. (As per GoG R&B Dept's Gr. No. S/22/2017/6369/D, Dt.08/06/2018)

## **17. Alternative Proposals by Bidders.**

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

## **18. Format and Signing of Bid**

- 18.1 The Bidder shall prepare documents comprising the bid as described in Clause 12 of these Instructions to bidder as the "Technical Bid "and "Financial Bid" in separate parts to be uploaded.

## **D. SUBMISSION OF BIDS**

**19. Deleted**

**20. Deadline for Submission of the Bids**

20.1. Complete Bids must be received online by the Employer at the tender website specified above not later than the date indicated in appendix.

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

**21. Deleted**

**22. Modification and Withdrawal of Bids**

22.1. Bidders may modify or withdraw their bids online before the deadline prescribed in Clause 20 or pursuant to Clause 23.

22.2 Deleted

22.3. No bid shall be modified or withdrawn after the deadline for submission of Bid.

22.4. Withdrawal or modification of a bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 may result in the forfeiture of the Bid security pursuant to Clause 16.

## **E. BID OPENING AND EVALUATION**

### **23. Bid Opening**

- 23.1 The Employer will open all the Bids received including modifications made pursuant to Clause 22, in the presence of the Bidders or their representatives who choose to attend at time, date and the place specified in Appendix in the manner specified in Clauses 20 and 23.3, In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.
- 23.2. Deleted.
- 23.3. The "Technical Bid" shall be opened. The amount, form and validity of the bid security furnished with each bid will be announced. If the bid security furnished does not conform to the amount and validity period as specified in the invitation for bid (ref. Column 4 and paragraph 3), and has not been furnished in the form specified in Clause 16, the technical bid will not be opened.
- 23.4. (i) Subject to confirmation of the bid security by the issuing Bank, the bids accompanied with valid bid security will be taken up for evaluation with respect to the Qualification information and other information furnished in part I of the bid pursuant to Clause 12.1.
- (ii) If required, the bidder will be asked in writing to clarify his Qualification Documents with respect to any required clarification.
- (iii) The bidders will respond in not more than 7 days of issue of the clarification letter.
- (iv) Immediately (usually within 3 or 4 days), on receipt of this clarification the Evaluation Committee will finalize the list of responsive bidders whose financial bids are eligible for consideration.
- 23.5. Deleted
- 23.6 At the time of opening of "Financial Bid", the names of the bidders were found responsive in accordance with Clause 23.4(iv) will be announced. The bids of only these bidders will be opened. The responsive Bidders' names, the Bid prices, the total amount of each bid, any discount, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening.
- 23.7 The time of opening of "Financial Bid", the names of the bidders were found responsive in accordance with Clause 23.4(iv) will be announced. The bids of only these bidders will be opened. The responsive Bidders' names, the Bid prices, the total amount of each bid, any discount, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening.
- 23.8 In case bids are invited for more than one package, the order for opening of the "Financial Bid" shall be in order of Estimated amount of Bids from highest to lowest.
- 23.9 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 23.6.

**24 Process to be Confidential**

- 24.1 Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.

**25. Clarification of Financial Bids**

- 25.1. To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by e-mail, but no change in the price or substances of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids.
- 25.2 Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his Bid opening to the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 25.3. Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decision may result in the rejection of the Bidders' bid.

**26. Examinations of Bids and Determination of Responsiveness**

- 26.1 During the detail evaluation of "Technical Bid", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3 and 4; (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding document. During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications, and drawings.
- 26.2 A substantially responsive "Financial Bid" is one which confirms all the terms, conditions, and specifications of bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights, or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.
- 26.3 If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

**27. Deleted**



**28. Deleted**

**29. Evaluation and Comparison of Financial Bids**

- 29.1. The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Sub-Clause 26.2.
- 29.2. Deleted.
- 29.3. The Employer reserves the right to accept or reject any variation or deviation. Variation and deviations and other factors, which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer, shall not be taken in to account in Bid evaluation.
- 29.4. The estimated effect of the price adjustment conditions under Clause 47 of the Conditions of Contract, during the period of implementation of the Contract, will not be taken in to account in Bid evaluation.
- 29.5. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract the Employer may require the Bidder to produce detailed consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 34 be increased at the expense of the successful /bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.
- 29.6. A bid which contains several items in the bill of Quantities which are unrealistically priced low and which cannot be substantiated satisfactorily by the bidder may be rejected as non-responsive.

**30. Deleted**

## **F. AWARD OF CONTRACT**

### **31. Award Criteria**

31.1. Subject to Clause 32, the Employer will award the contract to the Bidder whose Bid has been determined.

- (i) to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price; and
- (ii) to be within the available bid capacity adjusted to account for his bid price which is the lowest evaluation in any of the packages opened earlier than the one consideration.

In no case, the contract shall be awarded to any bidder whose available bid capacity is less than the evaluated bid price, even if the said bid is the lowest evaluated bid. The contract will in such cases be awarded to the next lowest bidder at his evaluation bid price.

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

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

### **33. Notification of Award and Signing of Agreement**

33.1. The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the condition of contract called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

33.2. The notification of award will constitute the formation of the contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause.

33.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and to the successful Bidder, within 28 days following the notification of award along with the Letter of Acceptance. Within 21 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.

33.4. Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

### **34. Performance Security**

34.1. (A) Within 10 (Ten) days of receipt of Letter of Acceptance, the successful Bidder shall furnish to the Employer an irrevocable and unconditional guarantee from a Bank in the form set forth in Section 8 (the "Performance Security") for an amount equal to 5% (five percent) of its Contract Price. In case of bids mentioned below, the successful Bidder, along with the Performance Security,

shall also furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the same form given at Section 8 towards an Additional Performance Security (The "Additional Performance Security") for an amount calculated as under:

- (a) If the Contract Price offered by the Selected Bidder is lower than 10% but upto 20% of the Estimated Project Cost, then the Additional Performance Security shall be calculated @ 20% of the difference in the (i) Estimated Project Cost (as mentioned in Bid Document) - Minus 10% of the Estimated Project Cost and (ii) Contract Price offered by the selected Bidder.
  - (b) If the Contract Price offered by the Selected Bidder is lower than 20% of the Estimated Project Cost, then the Additional Performance Security shall be calculated @ 30% of the difference in the (i) Estimated Project Cost (as mentioned in Bid Document) - Minus 10% of the Estimated Project Cost and (ii) Contract Price offered by the selected Bidder.
  - (c) This Additional Performance Security shall be treated as part of the Performance Security.
  - (B) The Performance Security shall be valid beyond 60(sixty) days of the Defects Liability Period and the Additional Performance Security shall be valid beyond 28 (twenty-eight) days of Project Completion Date.
- 34.2. (As per Gov. RRB Dept. Tharuv NO. PARACH/102020/329 LC Dt. 31/2/2024) If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder's option, by a Nationalized/Scheduled Indian bank or (b) by a foreign bank located in India and acceptable to the Employer. As per GoG Finance Department's Circular No. FD/MSM/e-file/4/2023/0057/D.M.O. Date 21/04/2023 or as per their latest amendment.
- 34.3. Failure of the successful Bidder to comply with the requirement of Sub-Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

### **35 — Advance Payment and Security**

35.1 — ~~The Employer will provide an Advance payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Data.~~

### **36. Deleted**

### **37. Corrupt or Fraudulent Practices**

- 37.1 The Employer will reject a proposal if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in completing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with National Highways Authority of India/ State PWD and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in completing for the contractor, or in execution.
- 37.2 Furthermore, Bidders shall be aware of the provision stated in Sub- Clause 59.2 of the Conditions of Contract.

**APPENDIX TO ITB**  
**Clause Reference With**  
**respect to Section -I**

1. The Name of the Employer is R&B Department, Gujarat. [ Cl.1.1]
2. The last five years.  
2024 - 2025  
2023 - 2024  
2022 - 2023  
2021 - 2022  
2020 - 2021
3. This Annual Financial Turnover Amount is Rs. 6,72,50,204/- [Cl.4.5.3 (a)]
4. Value of Work is Rs. 13,45,00,408/-
5. Deleted
6. ~~The cost of electric work is Rs.~~
7. ~~The cost of water supply / sanitary works is Rs.~~
8. Liquid assets and / or availability of credit facilities is Rs. [Cl.4.5.6]  
3,36,25,102/-
9. Price level of the financial year 2025-26 [Cl. 4.5.2]
10. The pre-bid meeting will take place at S.E., Panchayat (R&B) [Cl. 9.2.1]  
Department, Rajkot circle-1
11. The technical Bid will be opened at the office of the  
.....on dt..... at  
.....AM/PM
12. Address of the Employer: S.E., Panchayat (R&B) Department,  
Rajkot circle-1
13. Deleted
14. The bid should be submitted latest by [Cl. 20.1 & 20.2]  
As stated on online NIT
15. The bid will be opened at Division/Circle office as stated on [Cl. 23.1]  
online NIT
16. The Bank Draft in favour of Executive Engineer, (R&B) Panchayat  
Division, Devbhumi Dwarka
17. Deleted
18. Escalation factors (for the cost of works [Cl.4.5.2]  
executed and financial figure to a common base  
value) for works completed

<u>Year</u>	<u>Financial Year</u>	<u>Multiplying factor</u>
Base year of inviting tender	2025-2026	1.00
-1	2024-2025	1.10
-2	2023-2024	1.21
-3	2022-2023	1.33
-4	2021-2022	1.46
-5	2020-2021	1.61

**#LIST OF KEY PLANT & EQUIPMENT TO BE DEPLOYED ON CONTRACT WORK**  
**[Reference CL. 4.5.5]**

The contractors shall also give a list of machineries in his possession and which they propose to use on the work.

<b>Sr. No.</b>	<b>Plant or Machinery</b>	<b>Location</b>	<b>Age of Machinery (maximum 15 years)</b>	<b>Make</b>	<b>Capacity</b>	<b>Approximate Value</b>	<b>Remark</b>
<b>1</b>	<b>2(a)</b>	<b>2(b)</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

## **List of Key Personnel to be deployed on Contract Work**

### **(Reference Cl. 4.5.4)**

#### **# Employment of a qualified site Engineer by the Contractor.**

The Contractor shall employ full-time technically qualified staff during the execution of this work as under: -

1. Two graduate Civil Engineers and three diploma Civil Engineers when cost of the work to be executed is more than Rs.50 lakhs.
2. One graduate & two Diploma, Civil Engineers when the cost of the work to be executed is more than Rs.15 lakhs but less than Rs.50 lakhs.
3. Minimum one Diploma Civil Engineer when the cost of work is less than Rs.15 lakhs but more than Rs.5 lakhs.
4. Minimum two Diploma Civil Engineers for the work when the cost of work to be executed is less than Rs. 5 lakhs. The Engineer so employed for the Government work must have sufficient experience to handle the work independently. Such an Engineer shall have to stay at the site of work and he shall not be entrusted with other duty except this work.

In case the contractor or partner of the contractor firm is a Civil Graduate Engineer, Employment of a separate Engineer will not be necessary provided that the Engineer partner himself attends the execution of the work on the site.

Within 15 days of issue of work-order the Contractor will have to furnish to the Deputy Executive Engineer-in-charge of the work the Name, Qualifications, copy of marksheet, Colour Photograph and the appointment order issued such engineers engaged for this contract work. If 15 days after issue of work order such designated Site Engineers do not resume or do not remain present on site of work, the recovery at the rate of Rs. 15,000-00 per month per Engineer will be made from the bills/deposit/dues of the contractor. Such recovery shall be non-refundable.

**SECTION - 2**  
**QUALIFICATION INFORMATION**

### **QUALIFICATION INFORMATION**

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

#### **1. For Individual Bidders**

##### **1.1 Constitution or legal status of Bidder (Attach Copy)**

Place of registration \_\_\_\_\_

Principal place of business \_\_\_\_\_

Power of attorney of signatory of Bid  
(Attach)

1.2	Total value of Civil engineering constructions	2024-2025
	Work performed in the last five years	2023-2024
	(in Rs. Lakhs)	2022-2023
		2021-2022
		2020-2021

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

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

\*Attach certificate(s) from the Engineer(s) in-charge

\*\* Immediately preceding the financial year in which bids are received.



#1.3.2 Quantities of work executed as prime contractor, work performed, in the past as a nominated sub-contractor, will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided, further that all other qualification criteria are called (in the same name and style) in the last five years\*\* and in current year before the submission of the bid.

Year	Name of the work	Name of the Employer	Quantity of work performed (Cum/MT)				Remarks* (indicate contract Ref)
			Cement Concrete (Including RCC, PCC & Composite span on Pile foundation)	Length & width of bridge	Earth Works (RE Wall/Retaining Wall)	Bituminous Work	
2024-2025							
2023-2024							
2022-2023							
2021-2022							
2020-2021							

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

(A) Existing commitments and on-going works:

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

\*Attach certificate (s) from the Engineer(s) in-charge

\*\* Immediately preceding the financial year in which bids are received.

1.5 Availability of key items of Contractors Equipment for carrying out the works (Ref. Clause 4.5.5). The Bidder should list all the information requested below.

Item of Equipment	Requirement		Availability Proposals			Remarks (From whom to be purchased)
	NO	Capacity	Owned/ Leased to be procured	Nos/. Capacity	Age/ Conditions	

- 1.6 Qualifications and experience of key personnel required for administration and execution of the contract. Attach biographical data. Refer also to Sub Clause 9.1 of the Conditions of Contract.

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

- 1.7 Proposed sub-contract and firms involved

Sections of the works	Value of Sub-Contractor	Sub-Contractor (Name & Address)	Experience in similar work

Attach copies of certificates on possession of valid license for executing water supply/ sanitary work/ building electrification works.

- 1.8 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporations), etc. List them below and attach copies.
- 1.9 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copied documents.
- 1.10 Name, address, and telephone, telex, and fax numbers of the Bidders bankers who may provide references if contacted by the Employer.
- 1.11 Information on Litigation history in which the Bidder is involved.

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

- 1.12. Statement of compliance under the requirements of Sub Clause 3.2 of the instruction to Bidders. (Name of Consultant engaged for project preparations is \* .....)

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

- 1.14 Programme

**2. Deleted**

**3. Additional Requirements**

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

- (i) Affidavit
- (ii) Undertaking

\* Fill the name of consultant

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

(CLAUSE 4.5.6 OF ITB)

**BANK CERTIFICATE**

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

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

\_\_\_\_\_  
(Signature)

Name of Bank

Senior Bank Manager

Address of the Bank

## AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s. \_\_\_\_\_ have not abandoned any work of Government of Gujarat/Government of India/any Board or Corporation under Government of Gujarat/Government of India nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request (s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding any (our) competence and general reputation.
4. The Undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/ Project implementing agency.

\_\_\_\_\_  
(Signed by an Authorized Officer of the Firm)

\_\_\_\_\_  
Title of Officer

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Date

## UNDERTAKING

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

\_\_\_\_\_  
(Signed by an Authorized officer of the firm)

\_\_\_\_\_  
Title of officer

\_\_\_\_\_  
Name of firm

\_\_\_\_\_  
DATE

**SECTION - 3**  
**CONDITIONS OF CONTRACT**

## Conditions of Contract

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## CONDITIONS OF CONTRACT

### A. GENERAL.

#### 1. Definitions

- 1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meaning.

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

**Compensation Events** are those defined in Clause 44 hereunder

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

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

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

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

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

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

**Days** are calendar days: **months** are calendar months.

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

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

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

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

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

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

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

**Plant** is any integral part of the work which is to have mechanical, electrical, electronic or chemical or biological functions.

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

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

**Specifications** means the Specifications of the works included in the Contract and any modification or addition made or approved by the Engineer.

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

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

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

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

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

## **2. Interpretation**

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

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

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

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with works
- (3) Contractor's Bid

- (4) Contract Data
- (5) Conditions of Contract including Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bills of quantities and
- (9) Any other document listed in the Contract Data as forming part of the Contract.

### **3. Language and Law**

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

### **4. Engineers Decisions**

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

### **5. Delegation**

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

### **6. Communications**

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

### **7. Sub-Contracting**

- 7.1 The Contractor may subcontract any portion of work, up to a limit specified in contract data, with the approval of the engineer but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations. **Sub-contracting of supply or specific items of work is not allowed.**
- 7.2 The sub-contractor must be registered in appropriate class and category for the part of work to be subcontracted.

### **8. Other Contractors**

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

**9. Personnel**

- 9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.
- 9.2 If the engineer asks the Contractor to remove a person who is a member of the Contractor Staff or his work force stating the reasons the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

**10. Employer's and Contractors Risks**

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

**11. Employer's Risks**

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

**12. Contractor's Risks**

- 12.1 All risks of loss of or damages to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

**13. Insurance**

- 13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract data for the following events which are due to the Contractor's risks:

- (a) Loss of or damage to the works, Plant and materials,
- (b) Loss of or damage to Equipment
- (c) Loss of or damages of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
- (d) Personal injury or death.

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

- 13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4 Alterations to the terms of an insurance shall not be made without the approval of the Engineer.
- 13.5 Both parties shall comply with any conditions of the insurance policies.
- 14. Site Investigation Report**
- 14.1 The Contractor in preparing the Bid shall rely on any site Investigation reports referred to in the Contract Data, supplemented by any information available to the Bidder.
- 15. Queries about the Contract data**
- 15.1 The engineer will clarify queries on the Contract Data
- 16. Contractor to Construct the Works**
- 16.1 The Contractor shall construct and install the works in accordance with the specification and Drawings.
- 17. The Works to be completed by the Intended Completion Date**
- 17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion date
- 18. Approval by the Engineer**
- 18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary works to the Engineer, who is to approve them if they comply with the Specifications and drawings.
- 18.2 The Contractor shall be responsible for design of temporary works.
- 18.3 The Engineer's approval shall not alter the contractor responsibility for design of the Temporary works.
- 18.4 The Contractor shall obtain approval of third parties to the design of the Temporary works where required.
- 18.5 All Drawings prepared by the Contractors for the execution of the temporary or permanent work are subject to prior approval by the Engineer before their use.
- 19. Safety**
- 19.1 The Contractor shall be responsible for the safety of all activities on the Site.

## **20. Discoveries**

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

## **21. Possession of the Site**

- 21.1 The Employer shall give possession of all parts of the site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be a Compensation Event.
- 21.2 If within 25% of the time limit of the project, 80% of possession of the site is not handed over to the Contractor, then contractor/ Employer may fore-close the contract. Contractor/Employer has to foreclose the work within 30 days after lapse of 25%-time limit and after 30 days foreclosure option will be closed.

## **22. Access to the Site**

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

## **23. Instructions**

- 23.1 The Contractor shall carry out all instructions of the Engineer pertaining to works which comply with the applicable laws where the site is located.
- 23.2 The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Employer, if so required by the Employer.

## **24. Disputes**

- 24.1 If the Contractor is of the view that a decision taken by the Engineer was either outside the authority given to the Engineer by the Contract or that the decision was wrongly taken, the decision shall be referred to **#Superintending Engineer (Higher Authority)** within 14 days of the notification of the Engineer's decision. If the issue is not resolved, any party can refer the matter for conciliation within 15 days from the decision given by the **#Superintending Engineer**.
- 24.2
- (a) For the work up to Rs.100 Cr., if any of the parties is not satisfied with the decision of the **#Superintending Engineer**, both the parties have to refer to the Chief Engineer concern for the conciliation process.
  - (b) For the work more than Rs.100 Cr., if any of the parties is not satisfied with the decision of the **#Superintending Engineer**, both the parties have to refer to the **#Secretary, Roads & Building Department, Government of Gujarat** for the conciliation process.

If the dispute is not resolved through the conciliation process, he may refer the dispute to Gujarat Public Works Contract Dispute Arbitration Tribunal. If the Contractor fails to refer a claim / dispute to the Higher Authority within 14 days of the notification of the Engineer's decision, the Contractor shall not be entitled to any additional payment/claim if he doesn't follow the above sequence in stipulated time and he should not stop the work.

**25. Procedure for Disputers**

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

**26. Deleted**

## **B. TIME CONTROL**

### **27. Programme**

- 27.1 Within the time stated in the Contract Data the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements orders, and timing for all the activities in the works along with monthly cash flow forecast.
- 27.2 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 27.3 The Contractor shall submit to the Engineer, for approval an updated programme at intervals no longer than the period stated in the Contract data. If the Contractor does not submit an updated programme within this period, the Engineer may withhold the amount stated in the Contract data from the next payment after the date on which the overdue programme has been submitted.
- 27.4 The Engineer's approval of the programme shall not alter the Contractor's obligations. The Contractor may revise the programme and submit it to the Engineer again at any time. A revised programme is to show the effect of Variations and Compensations events.

### **28. Extension of the Intended Completion Date**

- 28.1 The Engineer shall extend the Intended Completion Date if a compensation Event occurs or a variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.
- 28.2 The Engineer shall decide whether and by how much to extend the Intended Completion Date within 35 days of the Contractor asking the Engineer for a decision upon the effect of a compensation event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- 28.3 The Engineer shall within 14 days of receiving full justification from the contractor for extension of Intended Completion Date refer to the Employer his decision. The employer shall in not more than 21 days communicate to the engineer the acceptance or otherwise of the Engineer's decision. If the employer fails to give his acceptance, the Engineer shall not grant the extension and the contractor may refer the matter under Clause 24.1

### **29. Deleted**

### **30. Delays Ordered by the Engineer**

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



**31. Management Meetings**

- 31.1 Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 31.2 The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

**32. Early Warning**

- 32.1 The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract price or delay the execution of works. The Engineer may require the contractor to provide an estimate of the expected effect of the future event or circumstance on the contract price and completion date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- 32.2 The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

### C. QUALITY CONTROL

#### # 33. Identifying Defects/ Defect liability period

- 33.1: Defect liability period: The contractor shall be responsible to make good and remedy at his own expense any defect which may develop or may be noticed before the period mentioned hereunder from the certified date of completion. The Engineer in charge shall give the contractor a notice in writing about the defects and the contractor shall make good the same within 15 days of receipt of the notice. In the case of failure on the part of the contractor, the Engineer-in-charge may rectify or remove or re-execute the work at the risk & cost of the contractor. The Engineer-in-charge shall be entitled to appropriate the whole or any part of the amount of security deposit towards the expenses, if any, incurred by him in rectification, removal or re-execution. The Defects Liability period shall be as under....
- (a) For all works costing up to Rs. 50,000 (amount put to tender), the period shall be 3 Months from the certified date of completion.
  - (b) For all works costing more than Rs. 50,000 and up to Rs. 1 crore (amount put tender), the period shall be 12 (Twelve) months from the certified date of completion or one monsoon, whichever is later.
  - (c) For major projects costing more than Rs. 1 crore, the period shall be ~~60-36~~ **Months** from the certified date of completion which should include ~~Five-Three~~ **monsoon periods**.
  - (d) For original building works the defect liability period will be 4 years or elapse of 4 monsoon period following date of possession of building taken over by user agency following the certified date of completion, whichever is later. For the purpose of deciding the monsoon period, the 30th September shall be treated as the last date.

Modified vide R & B D Circular No. PAC-11-102008-2076-N dated 31/8/2009, PRCH/102013(2976) 2759-N, dated 27/05/2013 and Circular No. TNC /10 / 2016/Clause 17A (Correction/ (1)C Dated 12/05/2016]

- 33.2 Free maintenance guarantee period for works of Road/Bridge construction
- (a) For resurfacing work of road free maintenance guarantee period one year from the date of completion.
  - (b) In case of widening of the road/strengthening of the road/bridge, the contractor shall have to give ~~Four~~ **Four** years free maintenance guarantee from the certified date of completion. During this period the contractor shall visit the site every six months along with the concerned Section Officer / Deputy Executive Engineer and will examine the work already carried out in this contract like road work, jungle cutting, side shoulders, side gutter, road furniture, patta etc. and will prepare Km. wise inspection report duly signed by all concerned and any defect observed shall be done within 15 days by the contractor at his risk and cost as per the direction of Engineer in charge. The contractor needs to do videography of these visits and require to submit at the time of release of FMG. If B.T. the surface during the maintenance period of **4** years is worn out then agency shall have to provide renewal coating as per tender item as directed by the Engineer-in-charge. The amount equivalent to 5% of each running bill shall be withheld and will be released after the free maintenance guarantee period (i.e. **4** years) is over.

However, this amount shall be released against fixed deposit or bank guarantee pledged in the name of Executive Engineer after completion certificate of work is issued.

(1) The flakiness and elongation index (combined) for coarse aggregates under no circumstances shall exceed the allowable limit set forth in the relevant clause for the material in question.

(2) 2% of the amount eligible for the payment of bituminous items shall be withheld till the miscellaneous items like earthwork in embankment / cutting for side shoulders, side gutters, kilometer / indicator / guard stones, sign boards etc. are completed in all respect by the contractor. After completion of the miscellaneous items, the above said 2% withheld amount shall be released.

(Govt. of Gujarat's G.R. No.: TNC-10-2013-3(Part-3)/C, Dtd. 13/12/2013).

(3) Videography for the surface under Maintenance Guarantee is to be done as per Govt. letter No.: SSR/10/2015-16/26/C, Dtd. 26/11/15 for the work costing more than Rs. 5.00 Crore.

(4) Setting up of adequate laboratory & deployment of quality engineers.

The contractor shall have to set up the laboratory with adequate equipment. Till the setting up of adequate laboratory is completed & reported of this to the engineer (subject to due verification by engineer's representative) by contractor in writing, Rs.2,00,000/- shall be withheld. The qualified quality Engineer shall be deployed exclusively for this contract by the contractors. If quality Engineer is not deployed by contractor within one month after the date of work order, the amount equivalent to Rs.20,000 per month shall be recovered till the actual deployment of quality engineer. The amount so recovered towards the deployment of quality engineers shall not be refunded.

(5) Asphalt work will have to be cross checked as per G.R. No.: RGN/60/2006/35/C, dtd.31/05/07 before final bill is paid.

(6) Maintenance during Construction Period

During the Construction Period, the Contractor shall maintain, at his own risk and cost, the existing lane(s) of the road so that the traffic worthiness and safety thereof are at no time materially inferior as compared to their condition 10 (ten) days prior to the date of the Agreement, and shall undertake the necessary repair and maintenance works for this purpose; provided that the Contractor may, at his cost, interrupt and divert the flow of traffic if such interruption and diversion is necessary for the efficient progress of works and conforms to Good Industry Practice; provided

further that such interruption and diversion shall be undertaken by the Contractor only with the prior written approval of the Executive Engineer which approval shall not be unreasonably withheld. For the avoidance of doubt, it is agreed that the Contractor shall at all times be responsible for ensuring safe operation of the road.

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

**34. Tests**

- 34.1 If the engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect the test shall be a Compensation Event.
- 34.2 #1% of the amount of work done should be deducted from R.A. Bill of the contractor for testing the quality of material workmanship, irrespective of actual charges.
- 34.3 Agency has to establish testing laboratory on site for the various test to be carried out in the work for this purpose agency shall construct a pukka laboratory building with all facility on site at location specified by the engineer in charge.

**35. Correction of defects**

- 35.1 The engineer shall give notice to the Contractor of any defects before the end of the defects Liability Period, which begins at Completion and is defined in the contract data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 35.2 Every time notice of a Defect is given; the Contractor shall correct the notified defect within the length of time specified by the Engineer's notice.

**36. Uncorrected Defects**

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

## **D. COST CONTROL**

### **37. Bill of Quantities**

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

### **38. Change in the Quantities**

- 38.1 The Engineer shall have power to make any alterations in or addition to the original specifications , drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instruction in this connection which may be given to him in writing signed by the Engineer and such alteration shall not invalidate the contract and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work and at the same rate as are specified in the tender for the main work.

Except that when the quantity of any item exceeds the quantity as in the tender by more than 130%, the contractor will be paid for the quantity in excess of 130%, at the rate entered in the SOR of the year during which the excess in quantity is first executed.

### **39. Variations**

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

### **40. Payments for Variations**

- 40.1 If the additional or altered work includes any class of work for which no rate is specified in this contract, then such class of work shall be carried out as under.
- (i) At the rate derived from the item within the contract which is comparable to the one involving additional or altered class of work; where there are more than one comparable items, the item of the contract which is nearest in comparison with regard to class or classes of the work involved shall be selected and the decision of the Superintending Engineer as to the nearest comparable item shall be final and binding on the contractor.
  - (ii) If the rate cannot be derived in accordance with (i) above, such class of works shall be carried out at the rate entered in the Schedule of Rates of the division

for the year in which the tender was received, increased or decreased by the percentage by which the tender amount is more or less as compared to the amount arrived at the rates in the "Schedule of Rates" of the Division in the year in which the tender was received. If the Schedule of rates of the Division does not contain all the items, the percentage increase or decrease of the tender shall be calculated considering such items which were included in the "Scheduled Rates" of the division for the year and for materials consumed on such item the rate to be charged would be the basic rate taken into account for fixing the rate in S.O.R. referred to above.

- (iii) If it is not possible to arrive at the rate from (i) and (ii) above, such class of work shall be carried out at the rate decided by the competent authorities on the basis of detailed rate analysis after hearing the contractor before a Committee of two Superintending Engineers stationed at the same place or the nearest place.

- 40.2 If the additional or altered work, for which no rate is entered in the "Schedule of Rates" of the Division is ordered to be carried out before the rate is agreed upon, then the contractor shall within seven days of the date of receipt by him of the order to carry out the work, inform the Engineer-in-charge of the rate, which it is his intention to charge for such class of work and if the Engineer in charge does not agree to this rates, he shall by notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider it advisable, provided always that if the contractor shall commence work or incur any expenditure in regard thereof before the rates shall have been determined as lastly herein before mentioned, then in such cases he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of the dispute, the decision of the Superintending Engineer of the Circle shall be final.

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

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

#### **41. Cash Flow Forecasts**

- 41.1 When the programme is updated, the contractor is to provide the engineer with an updated cash flow forecast.

#### **42. Payment certificates.**

- 42.1 The Contractor shall submit to the Engineer monthly statements of the estimated value of the work completed less the cumulative amount certified previously.
- 42.2 The Engineer shall check the Contractor's monthly statement within 14 days and certify the amount to be paid to the Contractor after taking in to account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 32.3 of the Contract Data (secured Advance).
- 42.3 The value of work executed shall be determined by the Engineer.
- 42.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- 42.5 The value of work executed shall include the valuation of variations and compensation events.
- 42.6 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information

#### **43. Payments**

- 43.1 Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate.
- 43.2 Payment of GST (prevailing rates) on the amount payable under the contract to the Contractor will be made by the Employer. Hence, it is the responsibility of the contractor to pay the GST to the concerned Authority.
- 43.3 Items of the works for which no rate or price has been entered in will not be paid by the Employer and shall be deemed covered by other rates and prices in the Contract.

#### **44. Compensation events**

- 44.1 The following are compensation Events unless they are caused by the Contractor:
  - (a) The Employer does not give access to a part of the Site by the site Possession date stated in Contract data to the Contractor
- 44.2 In case of compensation event occurs and it prevents the work being completed beyond the Intended Completion Date then Authority will approve EOT with eligible contractual price escalation.

**45. Tax**

- 45.1 The rates quoted by the Contractor must be inclusive of all taxes prevailing on due date of bid submission except GST. However, any subsequent changes in the tax structure by Government after due date of bid submission will be compensated (+/-) on availability or submission of actual documentation. Contractor will have to intimate Engineer regarding changes occurred in the tax structure after bid submission. If the contractor fails to provide such information and if any financial obligation may arise due to change in tax structure, same will be recovered from the contractor.
- 45.2 GST will be paid separately on the bills. Hence, it is the responsibility of the contractor to pay the GST to the concerned Authority.

**46. Currencies.**

- 46.1 All payment shall be made in Indian Rupees.

**47. Price Adjustment**

- 47.1 Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given in the contract data:
- (a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.
  - (b) The price adjustment shall be determined during each month from the formula given in the contract data.
  - (c) Following expressions and meanings during to the work done during each month  
R = Total value of work done during the month. It would include the amount of secured advance granted, if any, during the month less the amount of secured advance recovered, if any during the month. It will exclude value for works executed under variations for which price adjustment will be worked separately based on the terms mutually agreed.
- 47.2 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clause in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

**48. Retention**

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



- 48.2 On Completion of the whole of the Works half the total amount retained is repaid to the Contractor and half when the Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.
- 48.3 On completion of the whole works, the contractor may substitute retention money with an "on demand" Bank guarantee.

In case, Contractor requests for refund of the Retention Money deducted by the Employer under the provision of this clause, Employer shall consider the said request of the Contractor provided that the refund hereunder shall be made in tranches of not less than 1% (One Percent) of the Contract Price and Contractor furnishes an irrevocable and unconditional Bank guarantee for an equal amount substantially in the format of Bank Guarantee for Performance Guarantee enclosed with SBD and valid up to 60 day beyond the scheduled / extended Defects Liability Period. On completion of the whole works, the contractor has however an option to submit a fresh irrevocable and unconditional Bank Guarantee for an amount equal to 5% of the total value of work executed substantially in the format of Bank Guarantee for Performance Guarantee enclosed with SBD and valid up to 60 days beyond the Defect Liability Period and yet refund the Retention Money Bank Guarantee submitted for refund of Retention Money.

#### **49. Liquidated Damages**

- 49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole works or the milestone as stated in the contract data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payment due to the Contractor. Payment of liquidated damages does not affect the Contractor's liabilities.
- 49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall not be entitled for any interest on the over payment calculated from the date of payment to the date of repayment.
- 49.3 If the contractor fails to comply with the time for completion as stipulated in the tender, then the contractor shall pay to the employer the relevant sum stated in the Contract Data as Liquidated damages for such default and not as penalty for everyday or part of day which shall elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the contract data.

The employer may, without prejudice to any other method of recovery deduct the amount of such damages from any monies due or to become due to the contractor. The payment or deduction of such damages shall not relieve

the contractor from his obligation to complete the works on from any other of his obligations and liabilities under the contract.

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

## 50 Bonus

- 50.1 If the contractor achieves completion of the whole of the works prior to the intended Completion Date prescribed in Contract Data the Employer shall pay to the contractor a sum stated in Contract Data as bonus for every completed month **but subjected to maximum amount as stated in Contract Data**; which shall elapse between the date of completion of all items of works as stipulated in the contract, including variations ordered by the Engineer and the time prescribed in Clause 17.
- 50.2 Bonus shall be paid only to works amounting to above INR 5 crore with time limit of the works is equal or more than 6 months. The bonus would be paid as under

% of Time Saved	% of Initial Contract Price entitled for Bonus
50 %	5%
40 %	4%
30 %	3%
20 %	2%
10 %	1%
Less than 10%	0%

## 51. ~~Advance Payment.~~

- ~~51.1 The Employer shall make advance payment (not to be paid less than two instalments except in special circumstances for which the reason to be Recorded in writing) to the Contractor of the amounts stated in the Contract Date by the date stated in the Contract Date, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to be at least 110% of the advance payment. The guarantee shall remain effective until the~~

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~~advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. The Mobilization advance would be deemed as interest bearing advance at an interest rate of 10 % to be compounded, quarterly.~~

~~51.2 The Contractor is to use the advance payment only to pay for Equipment, plant and Mobilization expenses required specifically for execution of the Works. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the engineer.~~

~~51.3 The advance payment shall be repaid by deduction proportionate amount from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, variations, price adjustments, Compensation Events, or Liquidated damages.~~

51.4 Deleted

## 52. Securities

52.1 The performance Security (including additional security for unbalanced bids) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The performance Security shall be valid until a date 60 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 28 days from the date of issue of the certificate of completion.

53. Deleted

## 54. Cost of Repairs.

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

  
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## **E. FINISHING THE CONTRACT**

### **55. Completion**

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

### **56. Taking Over**

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

### **57. Final Account**

- 57.1 The Contractor shall supply to the Engineer a detailed final account of the total amount that the Contractor considers payable as full and final settlement of all claims under the Contract for items before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor's revised account.
- 57.2 If reversal in characteristic of tender (L1 becoming L2) on account of excesses and savings in final account is observed, the Engineer/Employer shall be at liberty to restrict the final payment of BOQ items to the lowest amount evaluated of the bids considering the final quantities and the rates quoted including the rebates if any. Payment of variation items shall however be made at the rates approved by the Employer, within 90 days from the physical completion of work.

### **58. Operating and Maintenance Manuals**

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

### **59. Termination**

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

59.2 Fundamental breaches of Contract include, but shall not be limited to the following:

1. The contractor stops work for 28 days when no stoppage of work is shown on the current programme and the stoppage has not been authorized by the Engineer
2. The Engineer instructs the Contractor to delay the progress of the Works and the instructions is not withdrawn within 28 days;
3. The Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstructions or amalgamation
4. A payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate
5. The Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
6. The Contractor does not maintain a security which is required;
7. The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
8. If the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

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

59.3 When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 59.2 above, the Engineer shall decide whether the breach is fundamental or not.

59.4 Notwithstanding the above, the employer may terminate the Contract for convenience.

## **60. Payment upon Termination**

60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a Certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to

deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

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

**61. Property**

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

**62. Release from Performance**

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

## **F. SPECIAL CONDITIONS OF CONTRACT**

### **63. LABOUR**

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

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

### **64. COMPLIANCE WITH LABOUR REGULATIONS**

During continuance of the contract, the Contractor and his sub-contractor shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notification and bye laws of the State or central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notifications that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to the construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for 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 the 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 to time.

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

- A) **Workmen Compensation Act 1923:** - The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- B) **Payment of Gratuity Act, 1972:** - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- C) **Employees P.F. and Miscellaneous Provision Act 1952:** - The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33% The benefits payable under the Act are:
1. Pension or family pension on retirement or death, as the case may be.
  2. Deposit linked insurance on the death in harness of the worker.
  3. 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 Building, Roads, Runways are scheduled employment.
- G) **Payments 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 remunerations 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 matter of transfer, training and promotions etc.
- I) **Payments 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 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 resolutions 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 State 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 the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have 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 process 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, is an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.
- 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 constructions work and employ 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 workplace etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officers appointed by the Government.

- P) **Factories Act 1948 :-** The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in the manufacturing process.
- Q) **Royalty charges-**The contractor shall pay the royalty to the competent authority as per rule. The **royalty** charges paid shall be borne by the contractor and shall not be reimbursed by the Employer.
- R) **Following Pollution control Acts and amendments made thereof from time to time shall be applicable.**
1. Water (Preservation and control of Pollution) Act, 1974
  2. Air (Prevention and Control of Pollution Act 1981
  3. Environmental (Protection) Act 1986

The contractor must commit to adopting Environmental management plan for best energy use, waste management, the reduction of pollution as in EMS (Environmental Management system) ISO-14001-2015

#### 65. ARBITRATION (GCC Clause 24)

The procedure for arbitration will be as follows: -

- 65.1 If the Contractor is of the view that a decision taken by the Engineer was either outside the authority given to the Engineer by the Contract or that the decision was wrongly taken, the decision shall be referred to **#Superintending Engineer** (Higher Authority) within 14 days of the notification of the Engineer's decision. If the issue is not resolved, any party can refer the matter for conciliation within 15 days from the decision given by the **#Superintending Engineer**.
- 65.2
- (a) For the work up to Rs.100 Cr., if any of the parties is not satisfied with the decision of the **#Superintending Engineer**, both the parties have to refer to the **#Chief Engineer** concerned for the conciliation process.
  - (b) For the work more than Rs.100 Cr., if any of the parties is not satisfied with the decision of the **Superintending Engineer**, both parties have to refer to the **#Secretary, Roads & Building Department, Government of Gujarat** for the conciliation process.
- If the dispute is not resolved through the conciliation process, contractor may refer the dispute to Gujarat Public Works Contract Dispute Arbitration Tribunal. If the Contractor fails to refer a claim / dispute to the Higher Authority within 14 days of the notification of the Engineer's decision, the Contractor shall not be entitled to any additional payment/claim if he doesn't follow the above sequence in stipulated time. However, during such period, he would not stop the work in any case.

**SECTION - 4**  
**CONTRACT DATA**

## #CONTRACT DATA

Clause Reference With  
respect to section 3

**Item marked "N/A" do not apply to this Contract.**

1. The Employers is [CL.1.1]  
 Name: R&B Department, Gujarat  
 Address: Executive Engineer, R&B Panchayat Division, Devbhumi Dwarka  
 Name of authorized Representative (will be intimated later)
2. **The Engineer is Executive Engineer, R&B Panchayat Division, Devbhumi Dwarka**  
 Name of Authorized Representative: Executive Engineer
3. The Defects Liability Period is **03 (Three) years** from the date [CL.1.1&33]  
 of completion which shall include **Five Monsoon Periods.**
4. The Start Date shall be **1<sup>st</sup>** days for the date of issue of the Notice [CL.1.1]  
 to proceed with the work.
5. The Intended Completion Date for the whole of the works is [CL.1.1,17&2]  
**14 Months** after start of work with the following milestones:  
 Milestone dates: [CL.2.2& 49.1]  
Physical works to be completed Period from the start date  
 Milestone 1 i.e. 10 % of work **105** days.  
 Milestone 2 i.e. 40% of work **210** days.  
 Milestone 3 i.e. 80% of work **315** days.  
 Milestone 4 i.e. 100% of work **420** days.
6. The Site is located as mentioned below [CL.1.1]
  1. Vasai Hamusar Road - Km.16/800 to 16/820 (ODR) – Taluka – Dwarka (Hume pipe Drain)
  2. Padali To Goriyali Road Km.4/600 To 4/800 (ODR) – Taluka – Dwarka (Hume Pipe Drain)
  3. Gaga Approach Road Km.3/000 to 3/600 (MDR) – Taluka – Kalyanpur (Hume Pipe Drain)
  4. Bhatvadiya Gokalpar Road Km.2/500 to 2/700 (ODR) – Taluka – Kalyanpur (Hume Pipe Drain)
  5. Dholamulavasar Nanabhavda Aniyaari Khatumba Road Km. 7/400 to 7/600 (ODR) – Taluka – Dwarka (Vented Causeway)
  6. Gaga Approach Road Km.3/600 to 3/800 (MDR) – Taluka – Kalyanpur (Hume Pipe Drain)
  7. Kenedi to Khakhara Road Km.0/400 to 0/600 (VR) – Taluka – Kalyanpur (Vented Causeway)
  8. Jambusar Joshipara To Join MDR Road Km.1/250 to 1/350 (VR) – Taluka- Bhanvad (Vented Causeway)
  9. Sanosari To Jamdevaliya Road Km.1/100 to 1/300 – Taluka – Kalyanpur (Vented Causeway)
  10. Vasai Hamusar Road Between Km.16/200 to 16/220 (ODR) – Taluka – Dwarka (Hume Pipe Drain)
  11. Premsar to Tankariya Road Km. 0/700 to 0/900 Taluka- Kalyanpur (Slab Drain)
  12. Raval to Gorana Road (VR) Km.2/60 to 2/70 -Taluka- Kalyanpur. (Box Culvert)
  13. Suryavadar to Sanidam Road Km. 1/800 to 2/0 (MDR) Taluka – Kalyanpur (Box Culvert)
  14. Reta Kalawad Sanakhla Road – Taluka – Bhanvad (Minor Bridge- Ch 7/600 to 7/700 & Pipe Culvert – Ch 1/800 to 2/00).
  15. Sajadiyali Gunda Road – Taluka – Bhanvad (Minor Bridge- Ch 0/900 to Ch 1/100 & Pipe Culvert- Ch 1/100 to 1/200)
  16. Vasai Makanpur road at Ch 3/80 to 4/00 – Taluka – Dwarka (Minor Bridge)
  17. Dangarvad Ashiyavadar Road Ch 2/800 to 2/700 – Taluka – Kalyanpur
  18. Haripar Paneli Road Ch 0/400 to 0/600 – Taluka – Kalyanpur (Box Culvert)
  19. Danta to Highway Road Ch 0/00 to 0/200 – Taluka – Khambhaliya (Minor Bridge)

7. The name and identification number of the Contract is: [CL.1.1]  
**RE-CONSTRUCTION OF MINOR BRIDGES, SLAB DRAINS, BOX CULVERTS & PIPE CULVERTS AT VARIOUS LOCATIONS IN DEVBHUMI DWARKA DISTRICT (PANCHAYAT) UNDER MMGSY, IN THE STATE OF GUJARAT. (PACKAGE - 2)**

8. The works consist of Bridge work & Road Diversion work with items as per B.O.Q. The works shall, inter alia, include the following, as Specified or as directed: [CL.1.1]

**(A) Road Works**

Site clearance; setting - out and layout; widening of existing carriageway and strengthening including camber corrections; construction of new road/ Parallel service road; bituminous pavements remodelling /construction of junctions, intersections, bus bays, lay-bays; supplying and placing of drainage Channels, flumes, guard posts and guard other related items; construction/extension of cross drainage works, bridge, approaches and other related stones; protective works for roads/bridge; all aspects of quality assurance of various components of the works; rectification of The defects in the completed works during the Defects Liability Period; submission of "As- built" drawings and any other related documents; and other item of work as may be required to be carried out for completing the work in accordance with the drawings and the provisions of the contract and to ensure safety.

**(B) Bridge Works**

Site clearance; setting out, provision of foundations, piers abutments and bearing; prestressed/reinforced cement concrete superstructure; wearing coat, hand railings, expansion joints, approach slabs, drainages spouts/ down take pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; providing wing/return walls; provision of road markings, road signs etc.; all aspects of quality assurance; clearing the site and handing over the works on completion; rectification of the defects during the Defects Liability Period and submission of "As-built" drawings and other related documents; and other items of work as may be required to be carried out for completing the works in accordance with the drawings and the provisions of the contract and to Insure safety

**SCOPE OF WORK: -**

1. Construction of Hume Pipes Drain on Dwarka Vasai Hamusar Road Between Km.16/200 to 16/220 (ODR) Ta. Dwarka.
  2. Construction of skew Slab Drain on Premsar to Tankariya Road Bet, Km. 0/700 to 0/900 Ta. Kalyanpur.
  3. Construction of Box Culvert on Raval to Gorana Road (VR) Km.2/60 to 2/70 Ta. Kalyanpur.
  4. Construction of Box Culvert on Suryavadar to Sanidam Road Between Km. 1/800 to 2/0 (MDR) Ta. Kalyanpur.
  5. Construction of New Minor Bridge on Local River at CH. 7/600 to 7/700 & Construction of Pipe Culvert at CH. 1/800 to 2/000 on Reta Kalavad-Sankhla Road Taluka Bhanvad District Devbhumi Dwarka.
  6. Construction of Box Type Minor Bridge at Ch. 0/900 to 1/000 & Pipe Culvert at Ch. 1/100 To 1/200 On Sajadiyali Gunda Road Tal. Bhanwad Dist. Devbhumi Dwarka.
  7. Construction Of New Minor Bridge on Vasai-Makanpur Road at Ch. 3/80 To 4/00 Taluka Dwarka District Devbhumi Dwarka.
  8. Reconstruction of Existing Bridge on Local River at Ch 2/800 to 2/700 on Dangarvad Ashiyavdar Road, Taluka- Kalyanpur, District - Dev Bhumi Dwarka.
  9. Construction of New Box Culvert on Local River at Ch. 0/400 To 0/600 on Haripur - Paneli Road Ta. Kalyanpur, Dist. Devbhumi Dwarka.
  10. Reconstruction of Existing Bridge on Local River at Ch. 0/000 To 0/200 on Danta to Highway Road Near Danta village Khambhalia.
  11. Construction of Hume Pipe Drain on Dwarka Vasai Hamusar Road Between Km.16/800 to 16/820 (ODR) Ta. Dwarka
  12. Construction of Hume Pipe Drain on Padali to Goriyali Road Between Km.4/600 To 4/800 (ODR) Ta. Dwarka
  13. Construction of Hume pipes Drain on Gaga Approach Road Between Km.3/000 to 3/600 (MDR) Ta. Devbhumi Dwarka
  14. Construction of Hume pipes Drain on Bhatvadiya Gokalpar Road Between Km.2/500 to 2/700 (ODR) Ta. Kalyanpur.
  15. Construction to Vented Causeway & P/W On Dholamulavasar Nanabhavda Aniyari Khatumba Road Between 7/400 to 7/600 (ODR) Ta. Dwarka
  16. Construction of Hume pipes Drain on Gaga Approach Road Between Km.3/600 to 3/800 Ta. Devbhumi Dwarka.
  17. Construction of High-level Vented Causeway on Kenedi to Khakhara Road Between Km.0/400 to 0/600 (VR) Ta. Kalyanpur
  18. Construction of Low-Level Causeway on Jambusar Joshipara to Join MDR Road Between Km.1/250 to 1/350 (VR) Ta. Bhanvad.
  19. Construction of Vented Causeway on Sanosari to Jamdevaliya Road Between Km.1/100 to 1/300 Ta. Kalyanpur.
- (Refer Tender GAD for further Detail)

**(C) Other Items**

- |   |             |
|---|-------------|
| Any Other Items as required to fulfil all contractual obligations as per the Bid documents.   | [CL.1.1]    |
| 10. The following documents also form part of the Contract:<br>_____As per clause 2-3_____  | [CL.2.3(9)] |
| 11. The law which applies to the Contract is the law of Union of India  | [CL.3.1]    |
| 12. The language of the Contract documents is English   | [CL.3.1]    |
| 13. Limit of subcontracting 25% of the Initial Contract Price   | [CL.7.1]    |
| 14. The Schedule of Other Contractors   | [CL.8]      |
| 15. The Schedule of Key Personnel As per Annex - II to Section I  | [CL.9]      |
| 16. The minimum insurance cover for physical property, injury and death is Rs. 5 lakhs per occurrence with the number of occurrences limited to four. After each occurrence, the contractor will pay an additional premium necessary to make insurance valid for four occurrences always. | [CL.13]     |
| 17. Site Investigation report   | [CL.14]     |
| 18. The Site Possession dates shall be from the <b>issue of letter of work order.</b>   | [CL.21]     |
| 19. The period for submission of programme for approval of the engineer shall be 21 days from the issue of Letter of Acceptance.  | [CL. 27.1]  |

20. The period between program updates will be ~~183 days~~ **30 days** [CL.27.3]
21. The amount to be withheld for late submission of an updated programme shall be ~~Rs. 2,69,000~~ **RS. 1,00 lac** [CL. 27.3]
22. The following events shall also be Compensation Events [CL. 44]
- Substantially adverse ground conditions encountered during the course of execution of work not provided for in the bidding document.
- (i) Removal of underground utilities detected subsequently
  - (ii) Significant changes in classification of soil requiring additional mobilization by the contractor, e.g. ordinary soil to rock excavation,
  - (iii) Removal of unsuitable material like marsh, debris dumps, etc. not caused by the contractor.

23. The currency of the Contract is Indian Rupees [CL. 46]  
 24. **The formula (e) for adjustment of prices are as under:** [CL.47]

- If any of the commodities like Cement, Steel or Bitumen are not found applicable in a work, the weight component of that commodities {i.e. 'Cement' (Pc), 'Steel' (Ps) or 'Bitumen' (Pb) as indicated in SBD for the purpose of Price Adjustment} shall be clubbed with the weight component of 'Other Material' (Pm), such that the gross % weight of the components shall remain as 100%.

R = value of work as defined in Clause 47.1 of Conditions of Contract

#### **Adjustment for labour component**

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

$$V_L = 0.85 \times (P_l/100) \times R \times (L_i - L_o)/L_o$$

$V_L$  = Increase or decrease in the cost of work during the month under consideration due to changes in rates for local labour

$L_o$  = The consumer price index for industrial workers for the State on 28 days preceding the scheduled date of opening of technical Bids as published by Labour Bureau, Ministry of Labour, Government of India

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

$P_l$  = Percentage of labour component of the work.

#### **Adjustment for cement component.**

- (ii) Prices adjustment for increase or decrease in the cost of cement procured by the contractor

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

$V_c$  = Increase or decrease in the cost of work during the month under consideration due to changes in rates for cement.

$C_o$  = The all-India wholesale price index for Ordinary Portland Cement on 28 days preceding the scheduled date of opening of technical bid as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

$C_i$  = The all-India average wholesale price index for Ordinary Portland Cement for the month under consideration as published by **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

$P_c$  = Percentage of cement component of the work



### Adjustment for steel component

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

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

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

$S_o$  = The all-India wholesale price index for steel (**Mild Steel - Long Products Rebars**) on 28 days preceding the date of opening of Bids as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

$S_i$  = The all-India average wholesale price index for steel (**Mild Steel - Long Products Rebars**) for the month under consideration as published by **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

$P_s$  = Percentage of steel component of the work

Note : For the application of this clause, the index of **Mild Steel- Long products Rebars** has been chosen to represent the steel group.

### Adjustments of bitumen component

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

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

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

$B_o$  = The official retail price of bitumen at the IOC depot at the nearest centre on the day 28 days prior to the scheduled date of opening of technical bid.

$B_i$  = The official retail price of bitumen of IOC depot at the nearest centre for the 15<sup>th</sup> day of the month under consideration.

$P_b$  = Percentage of bitumen component of the work

### **Adjustment of POL (fuel and lubricant) component**

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

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

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

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

$F_i$  = The official retail price of HSD at the existing consumer pumps of IOC at the nearest centre for the 15<sup>th</sup> day of the month of the under consideration.

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

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

### **Adjustment for Construction Machinery**

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

$$V_p = 0.85 \times (P_p/100) \times R \times (P_i - P_o)/P_o$$

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

$P_o$  = The all-India wholesale price index for **manufacturer of machinery for mining, quarrying and Construction** for the month under consideration as published **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

$P_i$  = The all-India average wholesale price index for **manufacturer of machinery for mining, quarrying and Construction** for the month under consideration as published **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

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

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

### Adjustment of other materials Component

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

$$V_m = 0.85 \times (P_m/100) \times R \times (M_1 - M_0)/M_0$$

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

$M_0$  = The All-Indian wholesale price index (all commodities) on 28 days preceding the scheduled date of opening of technical Bids, as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

$M_1$  = The All-India wholesale price index (all commodities) for the month under consideration as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

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

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

1. Labour - $P_l$	28.22%
2. Cement - $P_c$	20.81%
3. Steel - $P_s$	14.30%
4. Bitumen - $P_b$	00.98%
5. POL - $P_f$	06.49%
6. Plant & Machinery Spares - $P_p$	12.10%
7. Other Materials - $P_m$	17.10%
Total	100.00 %

25. The proportion of payments retained (retention money) shall be 6% {CL. 48} from each bill subject to a maximum of 5% of final contract price.
26. Amount of Liquidated damages for delay in completion of works
- For Whole of work {CL.49} (1/2000)<sup>th</sup> of the Initial contract price, rounded off to the nearest Thousand, per day. For sectional Completion (wherever specified In item 6 of Contract data) (1/2000)<sup>th</sup> of initial contract price for #5 km Section, rounded off to the nearest thousand per day.

27. Maximum limit of liquidated damages For delay in completion work 10 percent of the Initial {CL. 49} Contract Price rounded off to the nearest thousand
28. Amount of Bonus for early completion Amount of bonus for early completion of work shall be given as per CL.50 of Section-3
29. Maximum limit of bonus for early Completion of work **5 percent** of the Contract {CL. 50} Price
30. ~~The amount of the advance payment are: {CL. 51 & 52}~~

#Nature of Advances	Amount (Rs.)	Conditions to Be fulfilled
i <del>Mobilization</del> 10% of the contract Price	<del>10% of the contract Price</del>	On submission of unconditional Bank Guarantee. (to be drawn before the end of 20% of the contract period). The contractor may furnish four bank guarantees of 2.5 % of each valid for the full period.
ii <del>Equipment</del> 90% for new and 50% of depreciated value for old equipment. Total amount will be subject to a maximum of 5% of the Contract Price	<del>90% for new and 50% of depreciated value for old equipment. Total amount will be subject to a maximum of 5% of the Contract Price</del>	After equipment is brought to site (provided the Engineer is satisfied That the equipment is required for performance of the contract) and on submission of unconditional Bank Guarantee for amount of advance
iii <del>Secured</del> Deleted Advance for Non-persish-able material Brought to site	<del>Deleted</del>	

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

31. ~~Repayment of advance payment for mobilization and equipment { CL. 51.3}~~  
~~The advance loan shall be repaid with percentage deduction from the interim payments certified by the Engineer under the Contract. Deduction shall commence in the next Interim Payment Certificate following that in which the~~

*[Handwritten signatures and initials]*

~~total of all such payments to the Contractor has reached not less than 20 percent of the Contract Price or 6 (six) months from the date of payment of first instalment of advance, whichever period concludes earlier, and shall be made at the rate of 20 percent (collectively for both Mobilization Advance and Equipment Advance) of the amounts of all Interim Payment Certificate until such time as the loan has been repaid, always provided that the loan shall be completely repaid prior to the expiry of the original time for completion pursuant to Clause 17 and 28.~~

32. Deleted

33. The securities shall be for the following minimum amounts equivalent {CL. 52}

As a percentage of the Contract Price:

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

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

34. The Schedule of Operating and maintenance Manuals.....N/A. {CL. 58}

35. The date by which "as- built" drawings (in scale as directed) in 2 sets {CL. 58} are required within 28 days of the issue of certificate of completion of the whole or section of the work, as the case may be.

36. The amount to be withheld for failing to supply "as built" drawings {CL. 58} by the Date required is Rs. ~~5.0 Lakhs per day.~~

37. The following events shall also be fundamentals breach of contract: {CL.59.2}  
"The Contractor has contravened Sub- clause 7.1 and Clause 9 of GCC"

38. The percentage to apply the value of the work not completed representing {Cl 60} the Employer's additional cost for completing the Works shall be 20 percent.

  
D.A

  
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**SECTION - 5**  
**TECHNICAL SPECIFICATION**

## **INDEX OF SPECIFICATION**

**Name of Work:** RECONSTRUCTION OF MINOR BRIDGES, SLAB DRAINS, BOX CULVERTS & PIPE CULVERTS AT VARIOUS LOCATIONS IN DEVBHUMI DWARKA DISTRICT (PANCHAYAT) UNDER MMGSY, IN THE STATE OF GUJARAT. (PACKAGE - 2)

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
1	Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (C) By mechanical means in area of light jungle.	As per separate sheet attached here with.	MORT&H Specification
2	Demarcation of road alignment including marking out road line by providing and fixing wooden pegs or steel rod of required size at every 25 M to 50 M. including excavating trenches on both sides of 0.30 m. x 0.30M. including supplying of labours and all materials for every work etc complete.	As per separate sheet attached here with.	--
3	Portable Barricade in Construction Zone (Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45 x 45 x 5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 450, 'A' frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001 )	As per separate sheet attached here with.	MORT&H Specification
4	Diversion of water course, providing cofferdam and bund or island as may be necessary for foundation and maintaining the same for the period as may be necessary.	As per separate sheet attached here with.	--
5	Earthwork for embankment including breaking clods, dressing with all lead and lift (Excluding watering and consolidation) (A) Selected soil should be from borrow area with all lead and lift and should have CBR not less than 6.00%.	As per separate sheet attached here with.	MORT&H Specification
6	Earthwork for embankment including breaking clods, dressing with all lead and lift and including watering rolling and consolidation of subgrade in layers at O.M.C. to required dry density including filling the depression which occur during the process using power roller 8T to 10T.(E) From Borrow area including all lead & lift	As per separate sheet attached here with.	MORT&H Specification
7	Earthwork in cutting including preparing slope and camber staking or utilizing the cutting stuff in bank as directed upto 200 meters from the end of the cutting with all required lead and lift. (iii) hard Rock.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
8	<b>"WBM Grading-2</b> Providing, laying, spreading, and compacting stone aggregate of 63mm to 45mm size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 KN in stage to proper grade and camber, applying and brooming, stone screening/binding material to fill-up the interstices of coarse aggregate, watering and compacting to the required density grading-2 as per Technical Specification Clause.405 By manual means."	As per separate sheet attached here with.	MORT&H Specification
9	Rolling and Watering of earthwork with vibratory roller including filling in depression which occur during the process and as directed.	As per separate sheet attached here with.	MORT&H Specification
10	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (B) Dense or hard soil.	As per separate sheet attached here with.	MORT&H Specification
11	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (C) Hard Murrum	As per separate sheet attached here with.	MORT&H Specification
12	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (D) Soft Rock	As per separate sheet attached here with.	MORT&H Specification
13	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (E) Hard Rock	As per separate sheet attached here with.	MORT&H Specification
14	Excavation of foundation in Sand gravel clay soft soil and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed. Depth upto 3.00mt.	As per separate sheet attached here with.	MORT&H Specification
15	Excavation of foundation in hard murrum and boulders and very stiff or sticky clays and other similar strata including shorting out and strutting and dewatering as necessary and disposing of the excavated stuff as directed.	As per separate sheet attached here with.	MORT&H Specification
16	Excavation in large boulders and soft rock by wedging including shoring, strutting, and dewatering as necessary and disposing of the excavated stuff as directed.	As per separate sheet attached here with.	MORT&H Specification
17	Excavation in hard rock by dry-wet blasting and chiselling including dewatering, preparing foundation base by proper benching, and stepping and disposing of the excavated stuff as directed (B) Blasting prohibited.	As per separate sheet attached here with.	MORT&H Specification



Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
18	Providing and fixing Mild steel dowel bar of minimum 32mm dia. For anchoring by drilling holes in foundation strata including necessary bending, hooking of dowel bars, and grouting the holes complete as per detailed drawing and as directed.	As per separate sheet attached here with.	MORT&H Specification
19	Providing and laying rubble for apron (Each stone weighting not less than 40kg) including and packing and filling in the interstices with quarry spall.	As per separate sheet attached here with.	--
20	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary vertical pin headers including formwork, vibrating, ramming, and curing complete.	As per separate sheet attached here with.	MORT&H Specification
21	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary pin headers including shuttering, scaffolding, laying vibrating, curing, and finishing complete Without V-Grooves For all Height.	As per separate sheet attached here with.	MORT&H Specification
22	Providing and filling in foundation with ordinary cement concrete M-100 mix and providing necessary vertical pin headers incl. Formwork, vibrating, ramming, and curing complete.	As per separate sheet attached here with.	MORT&H Specification
23	Providing and filling in foundation with ordinary cement concrete M-150 mix and providing necessary vertical pin headers incl. Formwork, vibrating, ramming, and curing complete.	As per separate sheet attached here with.	MORT&H Specification
24	Providing & laying rubble soling (hand packing) on prepared surface and filling interstice with sand including all material, spreading, watering etc completed as directed.	As per separate sheet attached here with.	--
25	"Providing and laying Rigid Flooring complete as per drawing and Technical specifications laid over cement concert bedding. (A) Rubble stone laid in cement mortar 1:3	As per separate sheet attached here with.	MORT&H Specification
26	Providing & laying 22.5 cm thick dry rubble stone pitching on side slope on existing earthwork on murrum bed 7.50 cm thick & filling interstice with murrum & providing Flush pointing in CM 1:3 etc complete including curing & preparing slope in Earth work as directed.	As per separate sheet attached here with.	MORT&H Specification
27	Providing parapet of ordinary cement concrete M-200 as per detailed drawing with necessary reinforcement including shuttering laying vibrating and finishing to line and level complete (ii) cast in situ.	As per separate sheet attached here with.	MORT&H Specification
28	Providing parapet of ordinary cement concrete M-30 as per detailed drawings with necessary reinforcement including, shuttering, laying vibrating and finishing to line and level complete. (ii) Cast in situ.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
29	Providing and casting in situ Controlled cement concrete M-200 for R.C.C. work in Piers, abutment, returns and riding returns as per drawing including centering, shuttering, scaffolding where necessary laying, vibrating curing, and finishing complete. (A) For all Height	As per separate sheet attached here with.	MORT&H Specification
30	Providing and casting in situ Controlled cement concrete M-30 for C.C. work in Piers, abutment, returns and riding returns as per drawing including centering, shuttering, scaffolding where necessary laying, vibrating curing and finishing complete. (A) For all Height	As per separate sheet attached here with.	MORT&H Specification
31	Providing and casting in situ Controlled Cement Concrete M-200 for R.C.C. Raft and cut-off walls including necessary shuttering laying, vibrating ramming of curing complete.	As per separate sheet attached here with.	MORT&H Specification
32	Providing and casting in situ Ordinary cement concrete M20 for C.C. Toe Wall and Curtain walls including necessary shuttering laying, vibrating, ramming, and curing complete.	As per separate sheet attached here with.	MORT&H Specification
33	Providing and casting in situ Controlled Cement Concrete M25 for R.C.C. Raft and cut-off walls including necessary shuttering laying, vibrating ramming of curing complete.	As per separate sheet attached here with.	MORT&H Specification
34	Providing and casting in situ Controlled Cement Concrete M30 for R.C.C. Raft and cut-off walls including necessary shuttering laying, vibrating ramming of curing complete.	As per separate sheet attached here with.	MORT&H Specification
35	Providing and casting in situ Controlled Cement concrete M20 mix for R.C.C. works in pier cap, abutment cap, and dirt wall including controlled cement concrete M 25 bed block or pedestals for required size below bearings as per detailed drawings, centering, shuttering, scaffolding wherever necessary laying, vibrating, curing and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
36	Providing and casting in situ Controlled Cement concrete M30 mix for R.C.C. works in pier cap, abutment cap, and dirt wall including controlled cement concrete M 35 bed block or pedestals for required size below bearings as per detailed drawings, centering, shuttering, scaffolding wherever necessary laying, vibrating, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
37	Providing and casting in situ Controlled cement concrete M25 for R.C.C. Solid slab including centering, scaffolding, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
38	Providing and casting in situ Controlled cement concrete M30 for R.C.C. solid slab including centering, scaffolding, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
39	Providing and casting in situ Controlled cement concrete-M20 for average 75/150 mm thick wearing coat laid as directed including, tamping, vibrating, finishing, curing, and filling in joints with bitumen complete.	As per separate sheet attached here with.	MORT&H Specification
40	Providing and casting in situ Controlled cement concrete M30 for average 75mm thick wearing coat laid as directed including, tamping, vibrating, finishing, curing, and filling in joints with bitumen complete.	As per separate sheet attached here with.	MORT&H Specification
41	Providing and casting in situ Controlled cement concrete M20 mix for Approach slab including formwork, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
42	Providing and casting in situ Controlled cement concrete-M25 mix for Approach slab including formwork, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
43	Providing and casting in situ Controlled cement concrete M-30 mix for Approach slab including formwork, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
44	Providing and casting in situ Controlled cement concrete-M-20 mix for kerbs/Kerb blocks including formwork, curing, and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
45	Providing and casting in situ Controlled cement concrete-M-30 mix for kerbs/Kerb blocks including formwork, curing and finishing complete.	As per separate sheet attached here with.	MORT&H Specification
46	Providing and laying weep hole in Abutment and returns by using A.C pipe of 100mm. Incl. fixing in proper grade and jointing the complete as per detailed specification.	As per separate sheet attached here with.	MORT&H Specification
47	Providing and laying filter media 600mm. thick directed at the back of abutments, returns and wing walls as per detailed specifications.	As per separate sheet attached here with.	MORT&H Specification
48	Providing and filling sand behind abutments and between riding return, square return in layers as directed.	As per separate sheet attached here with.	MORT&H Specification
49	Providing and fixing in position Mild steel dowel bars in pier cap or abutment caps for anchorage in fixed end as per detailed drawings including cutting bending and welding complete.	As per separate sheet attached here with.	MORT&H Specification
50	Providing and fixing in position Mild steel dowel bars in pier cap or abutment caps for anchorage in free end as per detailed drawings including cutting bending and welding complete.	As per separate sheet attached here with.	MORT&H Specification
51	Providing and laying in Position FE -500/550D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawings. For the RCC Raft footing, Open Footing.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
52	Providing and laying in Position FE -500/500D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawings for the following (A) Piers (B) Abutments (C) Returns (D) Walls etc.	As per separate sheet attached here with.	MORT&H Specification
53	Providing and laying in Position FE -500D/550D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawings for the following (A) Pier cap (B) Abutment cap & Dirt walls.	As per separate sheet attached here with.	MORT&H Specification
54	Providing and laying in Position FE -500D/550D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawings for the following (A) Solid slab	As per separate sheet attached here with.	MORT&H Specification
55	Providing and fixing in position FE-500/500D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawing (A)RCC kerb (B) RCC Footpath (B) RCC Solid Slab/ App. Slab / Wearing coat.	As per separate sheet attached here with.	MORT&H Specification
56	Providing and fixing in position FE-500D/550D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawing (A)RCC kerb (B) RCC Footpath (C) RCC App. Slab (D) Wearing coat.	As per separate sheet attached here with.	MORT&H Specification
57	Providing fusion bonded Epoxy coating not less than 175-micron thickness and up to 300 microns to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant.	As per separate sheet attached here with.	--
58	Providing 12mm. Thick Pre-moulded asphalt filler joints as per drawings	As per separate sheet attached here with.	--
59	Providing G.I. 100mm. Diameter water spouts including necessary iron gratings as per drawings.	As per separate sheet attached here with.	MORT&H Specification
60	Providing flood gauge marks on sub structure as per design including painting complete	As per separate sheet attached here with.	--
61	Painting Two Coats on New Concrete Surfaces (Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces) - For inner face of Kerb / Crash Barrier	As per separate sheet attached here with.	MORT&H Specification
62	Filling available excavated earth (excluding rock) in trenches plinth sides of foundation etc. in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering.	As per separate sheet attached here with.	MORT&H Specification
63	Numbering the CD work with approved paint including all materials for painting etc. complete.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
64	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (i) 600mm Dia.	As per separate sheet attached here with.	MORT&H Specification
65	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (i) 900mm Dia.	As per separate sheet attached here with.	MORT&H Specification
66	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (v) 900mm Dia.	As per separate sheet attached here with.	MORT&H Specification
67	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (i) 1200mm Dia.	As per separate sheet attached here with.	MORT&H Specification
68	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (To level of slops of I.S. 458 / 1971 Class NP4 of following internal diameter. (vi) 1200 mm dia.	As per separate sheet attached here with.	MORT&H Specification
69	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. Stone/Rubble masonry.	As per separate sheet attached here with.	MORT&H Specification
70	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. RCC Work.	As per separate sheet attached here with.	MORT&H Specification
71	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. Structural Steel.	As per separate sheet attached here with.	MORT&H Specification
72	Dismantling G.I. Pipes G.S.W. Pipes and A.C Rain water pipes with fitting and clamps including stacking the materials with all lead and lift (for any of pipe)	As per separate sheet attached here with.	MORT&H Specification
73	"Removing all type of Hume pipes and stacking including all lead of earthwork and dismantling of masonry works. (A) Up to 600 mm dia."	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
74	"Removing all type of Hume pipes and stacking including all lead of earthwork and dismantling of masonry works. (A) Above 900 mm dia.	As per separate sheet attached here with.	MORT&H Specification
75	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. (A) CC Work	As per separate sheet attached here with.	MORT&H Specification
76	Dismantling of Flexible Pavements (Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately) ii) By Mechanical means. A) Bituminous course	As per separate sheet attached here with.	MORT&H Specification
77	Dismantling of Cement Concrete Pavement (Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately).	As per separate sheet attached here with.	MORT&H Specification
78	Providing temporary all weather and fair-weather diversion suitable for traffic during the construction period of the bridge / Slab drain including providing necessary drains and all safety measures including red lamps / signals at night for traffic etc. complete.	As per separate sheet attached here with	
79	Providing and fixing Flood gauge post mark of 'C' angle size 100mm x 50mm x 6mm thick (in head wall 0.500mt. And 1.50mt. outside with painting and lettering with radium colour as directed.	As per separate sheet attached here with.	MORT&H Specification
80	Regulatory / Mandatory Sign: - Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 60 cms Dia Circle as per design of IRC-67-2012. Pretreated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflective sheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.6mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with best quality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
81	Distance Informatory/Destination Sign: - Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 180x120 cms. rectangular as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 4.0mtr long (2 Nos.) stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; painted with best quality epoxy coatings in black and white bends. The details of symbol foreach board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification
82	Diversion Ahead Sign: - Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 180x60 cms. rectangular as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.1 mtr long stand post (2 Nos.) of 50 x 50 x 5mm / 50NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with best quality epoxy coatings in black and white bends. The details of symbol foreach board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
83	Men at work (2' x 2') sign: - Providing and fixing sign boards made out of 2.0 mm aluminium sheet / 4 mm ACP(Aluminium composite Panel); size 60cm x 60cm square as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.3 mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification
84	Sign board per Square Meter: - Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 1meter x1 meter as per design of IRC-67-2012. Pretreated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 4 mtr long stand post (2 Nos.) of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification



Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
85	Cautionary Warning Sign: - Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 90 x 90 x 90 cms. equilateral triangle as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.6mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with best quality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification
86	Chevron sign: - Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminium composite Panel); size 60x50 cm as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.3 mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
87	Hazard Marker Sign: - Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminium composite Panel); size 90x30 cms. rectangular as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 1.8mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with best quality epoxy coatings in black and white bends. The details of symbol foreach board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification
88	"Hazard Marker Sign :-Providing and fixing sign boards made out of 2.0 mm aluminium sheet / 4 mm ACP (Aluminium composite Panel); size 90x30 cms. rectangular as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 1.8mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with best quality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60 Cms. for each leg including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
89	Cautionary Warning Sign : Providing and fixing sign boards made out of 2mm Aluminium sheet size 90x90x90 cms. Equilateral triangle as per the design of IRC-67-1977 pretreated with phosphating process and acid etching coated with one coat of epoxy primer and two coats of best quality epoxy paint reflectorised with retro reflective sheeting as per latest MOST specification 3.1 Mt. long stand post and frame fabricated from suitable size iron angle of 35x35x3mm, 75x75x6mm. as required painted with best quality epoxy coating in black and white bends the details of symbol for each board shall be as per the instruction of Engineer in charge the fixing at site shall be in 1:2:4 CC block of size 45x45x60cms. for each leg including excavation curing etc. complete under the supervision of engineer in charge (A) Engineering Grade.	As per separate sheet attached here with.	MORT&H Specification
90	MMGSY Project Information Board: Providing and fixing of typical PMGSY Project informatorily sign board with Logo as per 1700 of MORD specifications and drawing. The board will be a composite unit consisting of Three Plates ACM (Aluminium Composite Material), material specifications as per clause 17001.3. The top most plate will be of 3mm ACM in diamond shape of 600x600mm size, riveted with MS angle iron frame of 25mmx25mmx5mm size on back on edges. The middle 4mm ACM plate of will be 1200x150mm size riveted with MS angle iron frame of 25mmx25mmx5mm size on back on edges. The main 4mm ACM lower most plate will be 1500mmx600mm size, riveted with MS angle iron frame of 25mmx25mmx5mm size. Riveting of all the sheets over angle and flat iron frame will be done neatly to have plain surface on one side. The angle iron frame of lower most plate and flat iron frame of the middle plate will be welded to two nos. 75mm x75mm (12 SWG) sheet tubes posts placed at 1125mm apart centre to centre. the top of the middle plate will be flushed with the top of 75mm dia medium steel tube posts and these posts will be embedded in cement concrete M15 grade block of 450x450x600mm below ground level. The height of the bottom of the lower plate will be 1200mm from normal ground level and the bottom of the middle plate will be 100mm above the top level of the lower most plate. the diamond shaped plate mounted over flat angle iron frame will be connected to middle plate by square steel section of 47mmx47mm, thickness 12SWG having a spacing of 100mm between the diamond shaped plate and middle plate and this square section will be riveted to the bottom point of the diamond shaped plate. MMGSY logo, letters and numerals on the ACM should be made up of Retro Reflective sheeting of Type-1 AEGP Class-A grade as per the latest MORD section 1700 and IRC 67-2012 specifications. All the section of the frame and posts shall be painted with primer and two coats of epoxy paint. The design, painting and lettering shall be done as per the MMGSY Signage Guide and as directed by Engineer-In-charge. . A warranty for 5 years for the Retro reflective sheeting for Class-A respectively, from original manufacturer shall be submitted by contractor.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
91	Road marking with hot applied thermoplastic paints with reflectorising glass beads on bitumen surface providing and laying a hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250gms per sqm area, thickness of 2.5mm is excluding of surface applied glass beds as per IRC:35-2015. The finished surface to be level, uniform and free from streaks and holes. zebra patta /bump patta lane/center line/ edge line/cut patta. The white colour marking should provide luminance coefficient on cement road shall be min 130 mcd/m <sup>2</sup> /lux and Asphalt road shall be min 100 mcd/m <sup>2</sup> /lux during the service life during the day time. The marking should meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015. Warranty for the Retro reflectivity should be two years.	As per separate sheet attached here with.	MORT&H Specification
92	Cat Eye / Road Stud / RPM: Supplying of Molded Twin Shanks Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs. tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 DO III Dt 11.06. 1997. The height, width and length shall not exceed 20 mm, 130 mm and 130 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30 +/- 2 mm) from the body is to be a minimum value of 500 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin-based adhesive as per manufacturers recommendation and the colour of the marker should be as per the IRC 35-2015 and as directed by Engineer-in-charge.	As per separate sheet attached here with.	MORT&H Specification
93	Providing and applying anti-carbonation, anti-fading, mold resistant, heat insulating, and 100% acrylic breathable decorative external waterproof coating of approved shade for Pier/Abutment, Riding return, Square return, Protection wall, Pier / Abutment Cap, Dirt wall, Solid slab etc. having Viscosity @ Room Temperature by Ford cup No. B-4 (dilute 2 parts of product with 1 part of water) 18 to 30 sec. pH of 7.00 to 10.00 and Sp. Gravity @ Room Temperature 1.30+0.1, tested for carbon dioxide diffusion resistance properties for coating materials and coating systems for exterior masonry and concrete as per DIN EN 1062-6 (2002-2010) by a NBA Grade "A" accredited institution.	As per separate sheet attached here with.	MORT&H Specification
94	Carrying out load test of super structure as directed including all necessary materials plant equipment, instruments, labour and arrangements for test directed.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
95	Type - B, "THRIE" : Metal Beam Crash Barrier (Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 811)	As per separate sheet attached here with.	MORT&H Specification
96	Providing and fixing guard stone as per I.R.C. type design including white washing etc. complete	As per separate sheet attached here with.	MORT&H Specification
97	Providing and erecting a "W" metal crash barrier comprising of 3mm thick corrugated sheet metal beam rail, 70cm above Road/Ground level, fixed on ISMC series channel vertical post, 150x75x5mm spaced 2m center to center, 1.8m high, 1.1m below ground/road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS:1367 and IS:1364 metal beam rail to be fixed on the vertical post with a spacer of channel section 150x75x5mm, 330mm long complete as per clause 810.	As per separate sheet attached here with.	MORT&H Specification
98	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and deposit it as directed with all lead & lift .	As per separate sheet attached here with.	MORT&H Specification
99	Scarifying bitumen macadam surface 6 cm to 10 cm. depth including stacking useful materials on road side and disposing off remaining stuff (A) On Existing Road	As per separate sheet attached here with.	MORT&H Specification
100	Construction of Subgrade with approved material obtained from borrow pits with all lifts and leads, transporting to site spreading, grading to required slope and compacting to meet requirement to MoRTH table 300-2 in layers not more than 200 mm thick as directed by engineer in charge.(Effective CBR Minimum 8 % )	As per separate sheet attached here with.	MORT&H Specification
101	Construction of granular sub-base (Grade - 1) by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRTH clause 401.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
102	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam (in two layers) specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well-prepared surface and compacting with vibratory roller to achieve the desired density, complete as per MoRTH clause 406.	As per separate sheet attached here with.	MORT&H Specification
103	Providing and applying Prime coat with Slow Setting Bitumen Emulsion binder (SS- 1) @rate of 7.5 Kg./10 sq.m. of road surface using Emulsion pressure sprayer etc., cleaning the road surface complete including cost of material labour etc complete as directed by engineer in charge.	As per separate sheet attached here with.	MORT&H Specification
104	Providing and applying tack coat with Rapid Setting Bitumen Emulsion binder (RS- 1) @ rate of 2.5 Kg./10 sq.m. of road surface using Emulsion pressure sprayer etc., cleaning the road surface complete including cost of material labour etc complete as directed by engineer in charge.	As per separate sheet attached here with.	MORT&H Specification
105	Providing and laying 25 mm thick (Compacted ) Semi - dense Bituminous concrete on exiting bituminous surface and using specified graded black trapped machine crushed aggregate with 5% Bitumen Vg-30 - 60/70 grade bitumen by Wt of total mix as per MORTH specification including heating and mixing of asphalt with B.T. chips in continuous batch mix plant and transporting same at site and spreading by sensor paver finisher and consolidation the same with pair of 8 tonnes to 10 tonnes vibratory roller to achieve desire density and including flushing the stone dust @0.03 cum/10smt including cost of required tools , plants, all machineries, equipment fire wood , oil, kerosene, charges etc. complete.	As per separate sheet attached here with.	MORT&H Specification
106	Providing and laying compacted Bituminous concrete using BT aggregate as per MORTH gradation ,specification and asphalt Grade VG 30 mixing @54.00 Kg /MT of total Wt. of mix i.e. (5.40% of total weight mix) including heating and mixing aggregate & asphalt by batch mix plant spreading the same by sensor paver finisher including rolling & consolidation with 10-12 tonne vibratory roller, Tandem Roller ,PTR & providing all materials equipment's tools & plants, fire wood, oil , kerosene, labour charges , using contractor 's own machinery etc. Complete as directed by engineer in charge as per MoRTH Specification	As per separate sheet attached here with.	MORT&H Specification
107	Providing and laying 20 mm thick mix seal surfacing using specified graded crushed Black Trap stone @aggregates as per MORTH gradation using VG-30 bulk bitumen for mixing at the rate of 5.1 % (51.00 Kg./M.T.) by hot mix process and hot laid process using paver finisher to the required camber and grade, including rolling with vibratory roller to achieve desire density including cost of fire wood, oil, Kerosene, labour charges and hire charges of machineries etc. complete.	As per separate sheet attached here with.	MORT&H Specification

Sr. No. of Item	Item Description	Applicable Specification	Specification Booklet
1	2	3	4
108	Construction of 100mm thick dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be maintain during construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver compacting with 8-10 tonnes vibratory roller, finishing and curing as per MoRTH clause 601.	As per separate sheet attached here with.	MORT&H Specification
109	Construction of 200mm thick un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with in M-30 grade of concrete with 43 grade cement , coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site and mechanically laid with a fixed form / slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH clause 602.	As per separate sheet attached here with.	MORT&H Specification
110	Diversion works for Pipe culvert structure at CH 1/800 to 2/000 is part of agency's scope of work & the work is carried out as per R&B GR No. PRCh/10/2018/15/C and amount is including 70% credit which will be recovered in Final bill of RA.	As per separate sheet attached here with.	MORT&H Specification

*Bhp*  
DPR  
Bhamvach

*Bhp*  
DPR  
Khumbhadiya

*Bhp*  
Executive Engineer,  
R. & B. (Panchayat) Division  
RCC Dabhumi Dwarka

## **ITEMWISE SPECIFICATION**

### **Item No. 1**

**Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (C) By mechanical means in area of light jungle.**

#### **1. CLEARING AND GRUBBING**

##### **1.1. Scope**

This work shall consist of cutting, removing and disposing of all materials such as trees, bushes, shrubs, stumps, roots, grass, weeds, top organic soil not exceeding 150 mm in thickness, rubbish etc., which in the opinion of the Engineer are unsuitable for incorporation in the works, from, the area of road land containing road embankment, drains, cross-drainage structures and such other areas as may be specified on the drawings or by the Engineer. It shall include necessary excavation, backfilling of pits resulting from uprooting of trees and stumps to required compaction, handling, salvaging, and disposal of cleared materials. Clearing and grubbing shall be performed in advance of earthwork operations and in accordance with the requirements of these Specifications.

##### **1.2. Preservation of Property/Amenities**

Roadside trees, shrubs, any other plants, pole lines, fences, signs, monuments, buildings, pipelines, sewers and all highway facilities within or adjacent to the highway which are not to be disturbed shall be protected from injury or damage. The Contractor shall, provide and install at his own expense, suitable safeguards approved by the Engineer for this purpose.

During clearing and grubbing, the Contractor shall take all adequate precautions against soil erosion, water pollution, etc., and where required, undertake additional works to that effect vide Clause 306. Before start of operations, the Contractor shall submit to the Engineer for approval, his work plan including the procedure to be followed for disposal of waste materials, etc., and the schedules for carrying out temporary and permanent erosion control works as stipulated in Clause 306.3.

##### **1.3. Methods, Tools and Equipment**

Only such methods, tools and equipment as are approved by the Engineer and which will not affect the property to be preserved shall be adopted for the Work. If the area has thick vegetation/roots/trees, a crawler or pneumatic tire dozer of adequate capacity may be used for clearance purposes. The dozer shall have ripper attachments for removal of tree stumps. All trees, stumps, etc., falling within excavation and fill lines shall be cut to such depth below ground level that in no case soil within 500 mm of the subgrade. Also, all vegetation such as roots, under-growth, grass and other deleterious matter unsuitable for incorporation in the embankment/subgrade shall be removed between fill lines to the satisfaction of the Engineer. On areas beyond these limits, trees and stumps required to be removed as directed by the Engineer shall be cut down to 1 m below ground level so that these do not present an unsightly appearance.

All branches of trees extending above the trimmed as directed by the Engineer.

All excavations below the general ground level arising out of the removal of trees, stumps, etc., shall be filled with suitable material and compacted thoroughly so as to make the surface at these points conform to the surrounding area.

Ant-hills both above and below the ground, as are liable to collapse and obstruct free subsoil water flow shall be removed and their workings, which may extend to several metres, shall be suitably treated.



**1.4. Disposal of Materials**

All materials arising from clearing and grubbing operations shall be the property of Government and shall be disposed of by the Contractor as hereinafter provided or directed by the Engineer. Trunks, branches and stumps of trees shall be cleaned of limbs and roots and stacked. Also boulders, stones and other materials usable in road construction shall be neatly stacked as directed by the Engineer. Stacking of stumps, boulders, stones etc., shall be done at specified spots with all lifts and to any lead.

All products of clearing and grubbing which, in the opinion of the Engineer, cannot be used or auctioned shall be cleared away from the roadside in a manner as directed by the Engineer. Care shall be taken to see that unsuitable waste materials are disposed of in such a manner that there is no likelihood of these getting mixed up with the materials meant for embankment, subgrade and road construction.

**1.5. Measurements for Payment**

Clearing and grubbing for road embankment, drains and cross-drainage structures shall be measured on area basis in terms of hectares. Clearing and grubbing of borrow areas shall be deemed to be a part of works preparatory to embankment construction and shall be deemed to have been included in the rates quoted for the embankment construction item and no separate payment shall be made for the same. Cutting of trees up to 300 mm in girth including removal of stumps and roots, and trimming of branches of trees extending above the roadway shall be considered incidental to the cleaning and grubbing operations. Removal of stumps left over after trees have been cut by any other agency shall also be considered incidental to the clearing and grubbing operations.

Cutting, including removal of stumps and roots of trees of girth above 300 mm and backfilling to required compaction shall be measured in terms of number according to the sizes given below: -

i) Above 300 mm to 600 mm

ii) Above 600 mm to 900 mm

iii) Above 900 mm to 1800 mm

iv) Above 1800 mm

For this purpose, the girth shall be measured at a height of 1 meter above ground or at the top of the stump if the height of the stump is less than one meter from the ground.

**1.6. Rates**

**1.6.1.** The Contract unit rates for the various items of clearing and grubbing shall be payment in full for carrying out, the required operations including full compensation for all labour, materials, tools, equipment and incidentals necessary to complete the work. These will also include removal of stumps of trees less than 300 mm in girth as well as stumps left over after cutting of trees carried out by another agency, excavation and back-filling to required density, where necessary, and handling, salvaging, piling and disposing of the cleared materials with all lifts to any lead. Unit rate based on Hectare basis.

**1.6.2** The Contract unit rate for cutting (including removal of stumps and roots) of trees of girth above 300 mm shall include excavation and backfilling to required compaction, handling, salvaging, piling and disposing of the cleared materials with all lifts and any lead.

**1.6.3.** Where a Contract does not include separate items of clearing and grubbing, the same shall be considered incidental to the earthwork items and the Contract unit prices for the same shall be considered as including clearing and grubbing operations.

**1.6.4** The mode of payment shall be in hectare basis.

**Item No. 2**

**Demarcation of road alignment including marking out road line by providing and fixing wooden pegs or steel rod of required size at every 25 M to 50 M. including excavating trenches on both sides of 0.30 m. x 0.30M. including supplying of labours and all materials for every work etc. complete.**

1. The centre line axis of the dual two-lane bridge is to be done for bridge and also for approaches / retaining walls in both ends shall be surveyed along their lengths. Centre line pegs for each two-lane bridge, ramps including foundation pegs at each location and at suitable distance of 3.0 m c/c along the approach on each side shall be fixed.
2. All deviation angles of the central line axis for both the two-lane bridge including tangent distances shall be demarcated with pegs fixed in to the ground.
3. The rate on Lump sum basis shall include all equipment, survey instruments, necessary survey party, supply and fixing of pegs including, fixing of pillars for intermediate stations established GTS bench mark at every 200 m distance, labour, materials required in completing the job as required, as per direction of Engineer-in-charge.
4. Contractor has to carry out full topographical survey including working of center line with total station instrument.
5. The measurement and payment shall be paid per Km.

**Item No. 3**

**Portable Barricade in Construction Zone (Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45 x 45 x 5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 45°, 'A' frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001 )**

1. Relevant specification for Fabrication and installation of barricades including painting with fluorescent paint, blinkers and fixing panelled plain MS sheets 20 SWG of 1.8 m height and M.S. Posts angle 40 x 40 x 5 mm at 2.5 m c/c and dismantling the same after completion of work as directed by Engineer and as per site requirements. (All materials will be property of contractor after demolishing including blinkers) shall apply to this item.
2. The measurement & payment shall be in Number basis.

**Item No. 4**

**Diversion of water course, providing cofferdam and bund or island as may be necessary for foundation and maintaining the same for the period as may be necessary.**

- 1.1 This item provides for the construction of cofferdam/Island which shall be temporary enclosure built to exclude water from the working area and to permit free access to the area during, the execution of work. It shall be vented at suitable locations for allowing river flow during the working season. The cofferdam may be made of earth, filling in suitable stable profile as per site conditions with enough working space all-round.
- 1.2 The contractor shall have to make his own arrangement for the procurement of each for the construction of cofferdam/ Island at his own cost.
- 1.3 The rate of the item includes the cost of construction and maintenance of any cofferdam approach bund or other devices etc. necessary for draining the flow of water or any such item of any sort whatsoever required to prevent water entering the foundation trenches.
- 1.4 The cofferdam/ Island shall have to be maintained till the completion of working period. The rates shall accordingly include the provision of reconstruction or making good the damages as per requirements for subsequent one or more working seasons if necessary. The contractor shall have no claim for any extra payment for such maintenance work due to such contingent requirements. The rate includes all arrangement for operations, excavations and earth work in embankment necessary plants, labour maintenance etc.
- 1.5 The payment for this item shall be Job/nos. basis.

**Item No. 5**

**Earthwork for embankment including breaking clods, dressing with all lead and lift (Excluding watering and consolidation) (A) Selected soil should be from borrow area with all lead and lift and should have CBR not less than 6.00%.**

- (1) MORT&H specifications as in section 305 & 900 (5<sup>th</sup> revision) shall be followed in connection with this item. All relevant provisions as have been included in the respective IRC and IS specifications are also applicable.
- (2) The land width on which the earthwork is to be done shall be cleared of all trees having a girth of 30 cm and less, loose stones, vegetation, bushes, stumps, and all other objectionable materials. All the materials cleared will be the property of Government. Useful material shall be arranged in convenient stacks along the road boundary or as directed at places within all lead & Lift. and handed over to the department in convenient section. Unsuitable material shall be burnt or otherwise disposed off by the contractor at his own cost without causing any nuisance, inconvenience or damage to the works property or people in the neighborhood. In all cases the materials shall be disposed off in a neat manner.
- (3) After clearing the site, the alignment of the road shall be properly set out true to line, curves, slopes, grades, and sections as shown on the plan or directed by the engineer in charge. The contractor shall provide all labors and materials such as lime, strings, pegs, nails, bamboos, stone, mortar, concrete, etc. required for setting out, establishing bench marks and giving profiles. The contractor shall be responsible for maintaining the BMs profile alignments and other marks as long as they are required for the work in the opinion of the engineer in charge. If the contractor defaults in this respect they may be restored by the department at the cost of the contractor.
- (4) When an existing embankment is to be widened, continuous, horizontal benches, each at least 0.30 meter wide shall be cut into the existing slope for ensuring adequate bond with the fresh embankment of the embankment. The dumping of material from trucks for widening operations shall be avoided except in difficult circumstances when the extra width is too narrow to permit the movement of any other type of hauling equipment.
- (5) The soil to be used for embankment shall be free from trees, stumps, roots, rubbish or any other objectionable materials. Only material considered suitable by the engineer-in-charge shall be used for the construction and that considered unsuitable other disposed off as directed by him. The selection of the materials to be used in the construction of embankment shall be made after soil surveys and investigations carried out by the department. The embankment shall consist of earth available from road side borrow pits on either side with all lead and all lifts.
- (6) Location, shape and size of borrow pits shall be as indicated by the engineer in charge. Pits shall not be dug continuously. Ridges of not less than 8 metres width should be left at interval not exceeding 300 metres. Small drain shall be cut through the ridges to facilitate drainage. The outer edge of borrow pits shall be so regulated that the bottom does not cut an imaginary line having a slope of 1 vertical to 4 horizontals projected from the edge of final section of the bank, the maximum depth in any case being limited to 1.5 metres. Also, no pits shall be dug within 5 metres of the toe of the final section of the road embankment.
  - 1.1. No borrow pits shall be allowed at the following sites along the road.
    - i.) Up to 30 metres on either side of CD works.
    - ii.) Up to 15 metres on either side of cart track crossing for which approaches are to be constructed.
  - 1.2. If there is top layer of black cotton or other objectionable soils, the same shall be removed and disposed off elsewhere and usable material found at lower level will only be used in the embankment.
- (7) The embankment shall be constructed in uniform layers not exceeding 250 mm in loose thickness. The soil shall be spread uniformly over the entire width of the embankment, unless

otherwise directed by the engineer in charge. The consolidation including watering and rolling of earthwork shall be carried out by the department. The operation of laying the successive layer of earth shall have to be suitably. All clods of hard lumps of earth shall be broken to have maximum size of 15 cm when being placed in the embankment and a maximum size of 5 cm when being placed in the top 45 cms of the embankment. The work of next layer shall be allowed only after the first layer below it has been thoroughly compacted.

- (8) Where an embankment is to be placed on sloping ground, the surface of the ground shall be benched in the steps of trenches or broken up in such a manner that the new material shall have perfect bond with the existing surface. Where the embankment is to be placed over an existing road surface, the surface shall be scarified to minimum depth of a 5 cm so as to provide ample bond between the old and new material. However, when the embankment is to be placed over an old concrete pavement and lies within 1 meter of new sub grade level the pavement shall be broken up in pieces not to exceed 0.1 m and may be left under the new embankment. If the existing road surface is of granulate or bituminous type and lies within 1 mt. of the new sub grade level, the same shall be scarified to a depth of minimum 50 mm, so as to provide ample bond between the old and the new material.
- (9) To avoid interference with the construction of abutment, wing walls or return walls of culverts/bridge structure, the contractor shall at point to be determined by the engineer in charge, suspend work on embankments forming approaches to such structures, until such time as the construction of the latter is sufficiently advanced to permit the completion of approaches without the risk of interference or damage to the bridge work. Unless directed otherwise, the filling ground culverts, bridges and other structures up to a distance twice the height of embankment. The fill material shall not be placed against any abutment or wing wall unless permission has been given for 14 days, the embankment shall be brought up simultaneously in equal layers on each side of the structure to avoid displacement and unequal pressure. The sequence of work in this regard shall be got approved from the engineer in charge. Where the provision of any filter medium is specified behind the abutment, the same shall be laid in layers simultaneous with the laying of fill material. The material used for the filter shall conform to the requirements for filter medium and will be aid extra in the relevant item.
- (10) The embankment shall be finished in conformity with the alignment, levels, cross sections and dimension shown on the plans or as directed by engineer in charge. Where the alignment of the road is in a curve, the top of the embankment shall be formed with the super elevation and the increased width shown on the drawings or as the engineer in charge may direct. Finishing operations shall include the work of shaping and dressing the shoulders, road bed and the side slopes to conform the cross section.
- (11) The earthwork measurements shall be paid on cross sectional measurements and computing the volumes of earthwork in cubic meters by average area method. The contractor shall sign day-to-day levelling work and also original cross section, longitudinal section, etc. in token of his acceptance. The working sections both longitudinal and cross of the ground shall be taken by the engineer in charge before the actual work is started. The contractor or his authorized representative shall attend day to day levelling work and sign with date the field book daily in token of his acceptance. If there is any disagreement the contractor shall inform of it in writing to the officer concerned with specific reference to the sections before starting further work. Once the work is started, no cognizance of any complaint will be taken. Merely not signing of level book shall not be deemed as disagreement. The executive engineer shall also verify levelling work to the extent of 5% before commencement of earthwork and on finalization. The contractor shall maintain the embankment by filling in ruts, rain cuts, depression due to shrinkage, etc. to proper formation and grade till this item is finally measured and accepted by the department. The measurements shall be taken on compacted earthwork. If the compaction as stipulated in Para above is not done by the department in that case shrinkage from such earthwork quantity shall be deducted as per norms i.e. 10% after monsoon and 15% before monsoon. However, the contractor shall have to bear loss of quantity due to all settlements as well as other types of deformations etc., if any, that might have taken place at the time of taking the final measurement of this item.