

## Kandla SEZ Authority

Ref: KASEZ / Tender/ WF&amp;SF/ 1

Date: 13<sup>th</sup> January, 2021**TO**

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\_\_\_\_\_

**FROM**

The Chairman  
Kandla SEZ Authority,  
Office of the Development Commissioner  
Kandla Special Economic Zone,  
Gandhidham, Kutch – 370230  
Gujarat State, INDIA

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding Sysytem and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham Kutch.**

Ref: TENDER NO: KASEZA/ Tender/ WF&amp;SF/ 1

### NOTICE INVITING TENDER

Kandla SEZ Authority invites sealed tenders from the reputed and experienced contractors for Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading etc for Kandla SEZ Campus at Gandhidham Kutch vide Tender No: KASEZA/Tender/WF&SF/1.

<b>Key Details:</b>	
Completion Period	20 (Twenty) weeks for completion of Sign Design, Street Furniture Design, Manufacturing and Installation at site.
Documents on sale	Documents can be downloaded from website <a href="http://www.kasez.gov.in">www.kasez.gov.in</a>
Cost of documents	INR 21,000/- non-refundable (inclusive applicable taxes) through e-payment by RTGS/NEFT (Bank: Punjab National Bank Account No.159800VS00000015 IFS Code PUNB0159800). Payment details should be attached with technical bid.
Pre-bid Meeting	22/01/2021 at 11.00 Hours at Kandla SEZ Office and also on online platform which will be conveyed to interested tenderers.
Last date of submission of queries for pre-bid.	20/01/2021
Last date of issue of Addendum to tender documents, if any.	25/01/2021
Tender Security	INR 5.00 lakhs by RTGS/NEFT, as per procedure given in the tender.
Date & Time of submission of Tender	Till 12.00 Noon on 09/02/2021 in KASEZA's tender Box.
Date & Time of Opening of Tender	On 09/02/2021 at 15.00 Hours or as decided by the authority at Kandla Special Economic Zone, Gandhidham.

Interested Agencies may visit the KASEZ website "[www.kasez.gov.in](http://www.kasez.gov.in)".

## **Tender Documents comprise the following:**

### **Package-1: Pre- Qualification Package**

- 1.1 General Information for Pre Qualification
- 1.2 Form of Tender – Tender Submission Letter
- 1.3 Qualification Filter

### **Package-2: Technical Package**

#### **2.1 Volume-1:**

- 2.1.1 Instructions to Tenderers
- 2.1.2 Forms of Tender
- 2.1.3 General Conditions of Contract
- 2.1.4 Special Conditions of Contract with Schedules

#### **2.2 Volume-2:**

- 2.2.1 Technical Specifications (Part – 1)

#### **2.3 Volume-4:**

- 2.3.1 Reference Document (SHE Manual)

### **Package-3: Financial Package**

- 3.1 Preamble to BOQ
- 3.2 Pricing Document (Bill of Quantities)

1. The tender documents are available as shown above on payment of a non-refundable fee of Rs. 21,000 (Rupees Twenty one thousand only) either through online payment or via crossed Demand draft issued by an Indian Scheduled Bank (excluding Co-operative Banks) or from a Scheduled Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule drawn in favour of 'Kandla SEZ Authority', payable at Kandla, Gandhidham.
2. Tenderers are hereby cautioned that tenders containing any deviation from contractual terms, conditions, specifications and other requirements, same as provided for in "Instructions to Tenderers" and/or minor deviation without quoting the cost of withdrawal shall be considered as non-responsive and shall be liable for rejection.
3. The Tenderer has to submit the Tender security, Pre Qualification package, Technical package and Financial package in separate envelopes. Within the main envelope, there will be four envelopes, first containing Tender Security, second containing PQ document, third containing Technical document and fourth containing Financial documents. In case they are not separated/sealed properly, the bid of the said tenderer shall be summarily rejected. The Tender Security Envelope will be opened first and checked for its adequacies and acceptance. If it is acceptable, the PQ documents envelope shall be opened later. The Financial package will be kept in a sealed condition and placed in a secured place by Kandla SEZ Authority.
4. Applicant must not have been blacklisted or deregistered by any government agency or public sector undertaking during last five years. The applicant must not have resigned from the work after award of a contract. The Tenderer has to submit the undertaking in this regard in PQ documents.
5. Joint Ventures are restricted to two members only.
6. Tenders shall be valid for a period of 120 days from the date of submission of Tenders.
7. One set of tender documents consisting of PQ package, Technical package and Financial package shall be issued. The tender documents are to be submitted by the Tenderer un-tampered, duly signed and stamped on each page.
8. Please note carefully the requirements for submitting tenders and the date and time for submittal. The Tenders must be received in the office of Kandla SEZ Authority at the address specified above, not later than the date and time noted in Key Details referred above.
9. Kandla SEZ Authority requires that bidders should observe highest standard of ethics during the Tender and execution of contracts. Kandla SEZ Authority will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices while competing for the present contract.

sd/-

**(Satyadeep Mahapatra)**  
**Jt. Development Commissioner**  
**Kandla Special Economic Zone &**  
**Member, Kandla SEZ Authority**



## KANDLA SEZ AUTHORITY

(Government of India)  
Ministry of Commerce & Industry,  
Kandla Special Economic Zone, Gandhidham. Kutch-370230  
Phone (02836)-253300, 252475, 252273 Fax (02836) – 252250 & 252194  
E-mail: admn.kasez-gj@gov.in Website : www.kasez.gov.in

### TENDER DOCUMENT FOR

**Design, Fabrication, Supply and Installation Works of  
Wayfinding System and Street Furniture including all  
transportation, loading and un-loading, for Kandla SEZ  
campus at Gandhidham Kutch.**

**Tender No: KASEZA/TENDER/WF&SF/1**

**PRE-QUALIFICATION PACKAGE**

**JANUARY  
2021**

Office of the Development Commissioner  
Administrative Office,  
Kandla Special Economic Zone,  
Gandhidham Kutch – 370230.  
GUJARAT STATE INDIA

**QUALIFICATION DOCUMENT**

FOR TENDER NO:

**KASEZA / Tender/ WF&SF/1**

Tender for Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and un loading, for Kandla SEZ campus at Gandhidham Kutch.

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## **GENERAL INFORMATION FOR PRE QUALIFICATION**

- 1.1 If the Tenderer is a joint venture (**not exceeding two members**), his proposal should clearly state that all the group members in a joint venture will be jointly and severally responsible for the performance under the Contract. It should also state which member of the joint venture, consortium or partnership will be acting as lead member on behalf of the joint venture, consortium or partnership in all its relations and communications with KASEZA. A joint venture, consortium or partnership shall have at least one Indian member while other member may be a foreign firm. **The Indian firm should be lead member in such cases.**
- 1.2 A detailed Memorandum of Understanding (MOU) or Joint Venture / Consortium / partnership agreement between the members of the joint venture, consortium or partnership stating the inter-relationship and division of work between the members shall be submitted along with the Tender for examination by KASEZA. Powers of Attorney from each member shall authorise the lead member to submit the Tender and to discuss the proposal on behalf of the other member shall also be submitted along with the Tender.
- 1.3 Tenderers shall not have a conflict of interest. All Tenderers found to have a conflict of interest in this tender process shall be disqualified and their tenders shall be rejected. Tenderers shall be considered to have a conflict of interest if:
  - a) One firm submits for tender both as an individual firm and in a Group (joint venture/consortium/partnership).
  - b) Tenderers in two different tenders have controlling share holders in common.
  - c) An organisation submits more than one tender in this tender process.

## **2. QUALIFICATION REQUIREMENT:**

- 2.1 In PQ Package, the following document are to be accompanied.
  - a) Tender Submission Letter (page No. 7 of 22)
  - b) Power of Attorney to submit Tender (Form of tender-page 13 of 16)
  - c) Power of Attorney from each member of a joint venture or consortium or partnership
  - d) The Memorandum of Understanding in case of a joint venture, consortium, or partnership.
  - e) Permanent Account Number (PAN) and Details of valid GST No.
  - f) Pre qualification documents (page No. 9 of 23 to 23 of 23)
- 2.2 Tenderers or members of a joint venture shall submit a copy of their Permanent Account Number (PAN) details issued by the Income Tax Authorities.  
Indian members of a foreign joint venture shall also furnish details of valid Service Tax Code Numbers. Permanent Account Number (PAN).

### 3. QUALIFICATION EVALUATION

The evaluation committee appointed and approved by KASEZA will, keeping in view the contents of paragraph 2.1, carry out evaluation of the submitted qualification documents to determine whether the tenderer meets the qualification / eligibility Criteria and also has a full comprehension of the Design, fabrication, supply and Installation of Wayfinding System and Street Furniture. Where a tenderer does not meet the Prequalification Criteria and / or a tenderer submission has major inadequacies, the Tender will be considered to be non-compliant and will be rejected.

### 4. REJECTION OF TENDERS

KASEZA may reject tenders that are considered to be substantially unresponsive to the requirements of the Tender. Such matters may include:

- a) Incorrect or Fraudulent Power of Attorney
- b) Incorrect or Fraudulent Tender Guarantee.
- c) Inadequate qualifications relating to the Tender

### 5. ELIGIBILITY CRITERIA

The applicant or tenderer must meet the following eligibility criteria to be eligible for pre qualification. Necessary supporting documents or references should be enclosed to assess eligibility of the Tenderer.

#### A. WORK EXPERIENCE:

1.1 Tenderer in his/its name shall have relevant and proven experience of having successfully completed similar work (including finishing works and services) of Large Campuses / Metro Rail Systems / Airport terminals / Retail Outlets (Oil Industries)/ Multi Speciality Hospitals/Commercial Malls during the last seven (7) years ending **31.03.2020** as under:

- (i) At least one contract costing not less than **Rs. 3.50 Crore**  
**Or**
- (ii) At least two contracts costing not less than **Rs. 2.50 Crore each**  
**Or**
- (iii) At least three contracts costing not less than **Rs. 2.00 Crore each**

1.2 The Tenderer should have at least one -Wayfinding System and Street Furniture work of Large Campuses / Metro Rail Systems / Airport terminals / Retail Outlets (Oil Industries) Multi Speciality Hospitals/Commercial Malls which is completed in the preceding seven (5 years operational successfully after commissioning for a minimum period of one year.

#### Note:

1. *In case the applicant is a Group/JV/Consortium, participant member should have minimum 26% participation in previous Group/JV/Consortium and also minimum 26% participation in the present Group/JV/Consortium. However, the Lead Member must have 40 % participation in this group and should satisfy the requirement stipulated either in 1.1 or 1.2 above.*

#### B. FINANCIAL STANDINGS:

1.1 The Tenderer should have an Average Annual Turnover of not less than Indian



Rupees **5.00** Crores (Five Crore) from the “Signage works Contracts” during the last 5 years ending 31.03.2020. (in case of JV/Consortium weighted average will be taken in proportion to their participation percent in the JV/Consortium).

- 1.2 The Net worth for the last accounting year and in any two of the remaining four years should be positive for all members in case of JV/Consortium and it will be arrived by audited annual statements. (Net worth in Indian Rupees = Paid up Equity + Reserves - Revaluation Reserves - Miscellaneous Expenditure not written off)
- 1.3 Profitability-earnings before Interest and Tax should also be positive at least in any two financial years out of the last five years.

**Note:** *The Information of Financial Standings should certified by the Chartered Accountant*

- 1.4 The Lead Member of Tenderer must submit the Banking Reference and certificate from its Banker to demonstrate that it has access to, or has available liquid assets, lines of credit and other financial means sufficient to meet the required cash flow, after meeting its commitments for other contracts and other liabilities and as amounting to Indian **Rupees 1 Crore (One Crore)**.

### C. RESOURCES:

- 1.5 The Tenderers must have the following minimum key personnel to be deployed for the contract as indicated. The key positions should not be less than the Qualification and Experience and should cover disciplines as mentioed.

Sl. No	Key Personnel	Minimum Nos. required	Required Qualification	Required experience
1	Design and Project lead	1	Degree / Diploma from Grade-1 Design Institute	8 years as Project Lead in similar works. Total not less than 15+ years.
1	Project Manager	1	Degree / Diploma	5 years as Project Manager in similar works. Total not less than 10 years.
2	Production Supervisor (for Metal work, Plastic/Acrylic/Elect.	1	Diploma / ITI	5 years in similar work and total experience not less than 10 years
3	Site supervisors)	3	Diploma / ITI	5 years in similar work and total experience not less than 8 years

- 1.6 Tenderer must possess the following machineries and provide suitable records showing possession.

Sl. No	Machinery / Equipment (figures in brackets indicate minimum number required for the project)	Nos.
1	CNC Turret punching machine	1
2	CNC Bending machine	1
<u>3</u>	CNC Laser Cutting machine	<u>1</u>
<u>4</u>	CNC Plasma cutting machine	<u>1</u>
<u>5</u>	High resolution large format interior & exterior graphics printing machine	1
<u>6</u>	Plotter cutting machines for Retro reflective sheeting & Vinyl	<u>1</u>
<u>7</u>	Double Mitre Saw	1
<u>8</u>	Acrylic Laser Cutting machine	1
<u>9</u>	Acrylic heat bending	1
<u>10</u>	Powder coating plant	<u>1</u>
<u>11</u>	MIG/ TIG Welding machines	<u>1</u>
12	CNC Router for ACP works	<u>2</u>

Note:

1. The equipment and machinery indicated is minimum to be deployed for the above work. However depending on the requirement to complete the work/meet deadlines, contractor may have to deploy additional machinery as circumstances warrant.
2. In case of JV/Consortium, for eligibility criteria of plant and machinery, the group as a whole will be considered.

## 6. TENDER EVALUATION

### 6.1 Questionnaire

The evaluation committee appointed and approved by KASEZA will, keeping in view the contents of paragraph 5, carry out evaluation of the submitted qualification information to determine whether the tenderer meets the qualification / eligibility Criteria and also has a full comprehension of the Design, fabrication, supply and Installation of Wayfinding System and Street Furniture. Where a tenderer does not meet the Prequalification Eligibility Criteria and / or tenderers' submitted has major inadequacies his Tender will be considered to be non-compliant and will be rejected.

This process is to ensure that only acceptable tenders, as per prequalification eligibility criteria for fabrication, supply and Installation of Wayfindinging System and Street Furniture.

## 7. QUALIFIED CONTRACTORS

- 7.1 KASEZA is not bound to complete the process of qualifying of contractors who have submitted the tenders and reserves its rights without incurring any liability to any tenderer in doing so. KASEZA will not provide reasons for the acceptance or rejection of any tender.
- 7.2 The KASEZA will have clarifications/discussions, if required.

**8. CLARIFICATIONS**

- 8.1 Every effort will be made to provide additional information to tenderers that have been requested in writing or by e mail by due date shown in Notice Inviting Tender.
- 8.2 Any information provided/ requested by KASEZA that is not given in writing, in response to request for additional information, shall not be considered by KASEZA and shall not be accepted as a reason for late delivery of Tenders or a reason for delaying the submission of Tenders by the stated date.

**9. CORRUPTION AND FRAUDULENT:**

- 9.1 KASEZA will reject a tender for if it determines that a tenderer recommended for this contract has engaged in corrupt or fraudulent practices in competing for the present tender. Further KASEZA will recognize a tenderer as ineligible for a period to be determined by KASEZA, if it at any time determines that the tenderer has engaged in corrupt or fraudulent practices in this tender.

**TENDER SUBMISSION LETTER**

**PRO-FORMA for LETTER OF APPLICATION (To  
be submitted on Tenderer's Letter Head)**

Date: .....

To:

**The Chairman**  
(Govt. of India) Ministry of Commerce &  
Industry  
Kandla Special Economic Zone Authority  
Gandhidham,  
Kutch-370230,  
Gujarat State,  
India

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc. for Kandla SEZ Campus at Gandhidham Kutch.**

**Ref: TENDER NO: KASEZA / Tender/ WF&SF/1**

**GENTLEMEN,**

1. Having inspected the Site, examined the Employer's Requirements, General Conditions of Contract, Special Conditions of Contract, BOQ, Technical Specification document and Instruction to Tenderers and addenda thereto (if any) issued by the KASEZA for the above-mentioned Works, and the matters set out in Appendix FT-1 hereto, and having completed and prepared Appendices FT 2 to 8 hereto, we hereby (jointly and severally)\* offer to complete the whole of the said Works and remedying any defects therein, in conformity with the above documents for the sum stated in the Pricing Document as completed by us and appended hereto.
2. We undertake [jointly and severally]\* to complete and delivery the whole of the Works and achieve all key dates /stages, within the times stated in Appendix FT-1 hereto,
3. We undertake (jointly and severally)\*:
  - (a) To keep this Tender open for acceptance without unilaterally varying or amending its terms for the period stated in Notice of Invitation to Tender and Appendix FT-1 hereto (the withdrawal of any member or any other change in the composition of the partnership/joint venture/consortium on whose behalf this Tender is submitted shall constitute a breach of this undertaking)\*; and
  - (b) If this Tender is accepted, to provide Guarantees, Undertakings & Warranties for the due performance of the Contract as stipulated in the General Conditions of Contract, Special Conditions of Contract and Appendix FT- 1 hereto; and
  - (c) To hold in confidence all documents and information whether technical or commercial supplied to us at any time by or on behalf of the KASEZA in connection with this Tender or with the above-mentioned Works and, without your written authority or as otherwise required by law, not to publish or otherwise disclose the same ;and
4. We submit with this Tender a duly executed Tender Security in respect of our obligations under this Tender.
5. Unless and until a formal agreement is prepared and executed, this Tender together with your written acceptance thereof, shall constitute a binding contract between us.

- 6. We understand that you are not bound to accept the lowest or any tender you may receive.
- 7. We declare that the submission of this Tender confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services, or any other item of work related to the award and performance of this Contract. We further confirm and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price does not include any such amount. We acknowledge the right of the Employer, if he finds to the contrary, to declare our Tender to be non-compliant and if the Contract has been awarded to declare the Contract null and void.
- 8. This Tender shall be governed by and construed in all respects according to the laws for the time being in force in India. The courts at Kutch will have exclusive jurisdiction in the matter.

We are, Gentlemen,

Yours faithfully,

Signature:

Witness:

Date -----

Signature: -----

Name -----

Date -----

For and on behalf of .....

Name -----

Address .....

Address -----

Signature:

Witness:

Date -----

**(\*) Note:**

If the Tenderer comprises a Joint Venture;

- (a) The provisions marked with an asterisk are to be retained subject to deletion of the brackets and inapplicable descriptions (i.e. partnership, joint venture or consortium)
- (b) The liability of each member under the Tender, and under any contract formed upon its acceptance, will be joint and several.
- (c) An authorised representative of each member must sign the Tender.
- (d) Signature on the Tender submission letter shall be witnessed and dated.
- (e) Duly notarized Power of Attorney issued in favour of Authorised Representative of each member of Joint Venture shall be attached.
- (f) Duly notarized, irrevocable Power of Attorney issued by each member of Joint Venture / Consortium in favour of Leader of the Joint Venture for participation in this tender shall be attached.
- (g) Power of Attorney of the Authorized Representative of each member of Joint Venture who issues the Power of Attorney in favour of Leader of the Joint Venture, with clear evidence that the person is authorized to issue such Power of Attorney shall be attached.

## PRE QUALIFICATION

### INITIAL FILTER OF APPLICANTS – CHECKLIST

(Individual firm and each member in case of a JV should complete this checklist.)

Name of applicant/ Name of each member in case of JV.

S.N.	Criteria	Yes	No
1	Has the Applicant abandoned any work in the last five years ending <b>31.01.2020</b> ?		
2	Has the Tenderer any <b>litigation history</b> (annual average of more than one litigation case in the last 10 years) year ending <b>31.05.2020</b> ?		
3	Has the Tenderer suffered <b>bankruptcy / insolvency</b> in the last five years? Ending <b>31.5.2020</b> ?		
4	Has the Tenderer been <b>blacklisted</b> by any organization in the last five years ending <b>31.05.2014</b> ?		
5	Has the Tenderer been <b>penalized</b> for poor quality of work in the last five years ending <b>31.05.2020</b> ?		
6	Has any <b>misleading information</b> been given in the application?		
7	Has the Tenderer paid <b>liquidated damages</b> more than 5% of the contract value in a contract due to delay or penalised due to any other reason in the last five years ending <b>31.05.2020</b> ?		
8	Has the applicant certified that no agent / middleman has been or will be engaged or any agency commission been or will be paid? (Verification Statement No.27)		
9	Is the <b>Net Worth</b> of the Tenderer is positive for the last audited financial year and in any two of the remaining four years ?		
10	Has the Tenderer submitted duly signed <b>verification statement</b> ?		
<u>11</u>	<u>Has the tenderer submitted the record of machineries and resources committed to the project as per tender conditions</u>		
<u>12</u>	<u>Has the tenderer submitted the records of similar work experience executed by him as per the tender value and conditions mentioned in this tender</u>		

**Note:**

1. Answer “**YES**” to any one of the questions from 1 to 8 and answer “**NO**” to any one of the questions from 9 to 12 will be considered as “**FAIL**” and the Tender will not be considered for further evaluation process.
2. Net Worth - The complexity and time constraint of Kandala SEZ Authority is such that a financially weak Tenderer will not be able to complete the work. Net worth should be positive for the last audited financial year and in any two of the remaining four years.? (Annual Net worth= (Paid up equity + Reserves-Revaluation Reserves-Miscellaneous Expenditure not written off)
3. Only Pass / Fail criteria will be used for processing of Tender evaluation. If an applicant does not pass in the initial filter, he will be declared as not qualified and there will be no further evaluation.

**TENDERERS INFORMATION**

(Tenderer to fill the information and Attach the necessary supporting documents)

**Sub: Tender for Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham Kutch.**

**Ref: TENDER NO: KASEZA / Tender/ WS&SF/ 1**

1.	(applicants to tick /delete as appropriate) Individual firm <input type="checkbox"/> Joint Venture <input type="checkbox"/>
2.	For individual firm or lead member: Name of firm: .....PAN No..... Legal status: (e.g. incorporated private company, unincorporated business, etc.) ..... Registered address: ..... ..... .....  Telephone: ..... E-mail id: ..... Fax: : .....
3.	For second member of Joint Venture: As in 2 above Name of firm: .....PAN No..... Legal status: (e.g. incorporated private company, unincorporated business, etc.) ..... Registered address: ..... ..... .....  Telephone: ..... E-mail id: ..... Fax: : .....

## VERIFICATION STATEMENTS

1.	<p>I confirm to my best knowledge and belief the information contained in this questionnaire, and sections, any annexure, supporting documents and explanatory information is truthful and exact. I am aware that the Technical package will be considered only if I am qualified in PQ level</p> <p>Signed: .....</p> <p><b>(Same Signatory as on letter of application)</b></p> <p>Date: .....</p>
2.	<p>I confirm and verify to my best knowledge and belief that our firm has not submitted more than one tender as individual firm or as a member of a JV.</p> <p>Signed: .....</p> <p><b>(to be signed by applicant and each member of the group)</b></p> <p>Date: .....</p>
3.	<p>By virtue of my signature below, I confirm and verify to my best knowledge that the firm represented by me</p> <p>(a) has not suffered Bankruptcy/insolvency in the last three years</p> <p>(b) has not been blacklisted or deregistered by any government agency or PSU in the last three years.</p> <p>(c) has not resigned in the last three years from any project after having been awarded a contract under the project</p> <p>Signed : _____</p> <p><b>(to be signed by applicant and each member of the group)</b></p> <p>Date: _____</p>



**TENDERERS' DECLARATION**

For the purpose of your evaluation, study, review and decision making we are ready to let you inspect our premises/site/ previous completed works/works in progress/ bank references, etc.

We have prepared the tender entirely in accordance with all the requirements from the tender document and we agree entirely with them.

**Authorized Signatory**

**Note:**

**(To be signed by the applicant and each member of the group in case of JV/Consortium.)**

## ANNEXURE 1

( To be furnished for each such contract / work in separate sheets)

Tenderer's Name: .....

Work relating to Design, Fabrication, Supply and Installation Works of Wayfinding System and Street furniture including all transportation, loading and unloading etc for Large Campuses / Metro Rail Systems / Airport terminals / Retail Outlets for Oil Industries or Consumer Services / Multi Speciality Hospitals during the last 7 years ending 31.05.2020)

Project Title:	Location:						
Scope: (Give salient features of the work)	Client's Address:						
Client:							
Client's Representative:	Tel./ Fax:						
Type of Contract (a) Fabrication, Supply and Installation (b) Design. Fabricate, Supply and Installation							
Was the work carried out as a) Prime Contractor b) Member of a group c) Sub-Contractor  If, Member of a group, indicate percentage participation & area/s of participation. Ref. Page No.----- If Sub-Contractor, provide details: Ref. Page No.-----	<table border="1"> <tr><td>Y</td><td>N</td></tr> <tr><td>Y</td><td>N</td></tr> <tr><td>Y</td><td>N</td></tr> </table>	Y	N	Y	N	Y	N
Y	N						
Y	N						
Y	N						
Date of commencement of work	Date of completion of work						
Was the date of completion given in the original contract extended?	<table border="1"><tr><td>Y</td><td>N</td></tr></table>	Y	N				
Y	N						
If so, how much and why? Ref. Page No.-----							
Were any penalties imposed? If yes, give details  Were any penalties imposed for reasons other than delay. If yes, give details.	<table border="1"> <tr><td>Y</td><td>N</td></tr> <tr><td>Y</td><td>N</td></tr> </table>	Y	N	Y	N		
Y	N						
Y	N						
	Was arbitration/ litigation commenced? <table border="1"> <tr><td>Y</td><td>N</td></tr> </table> If answer is Yes, then give: a) Number of Arbitration cases _____ b) Number of Litigation cases _____ c) Details of Arbitration and litigation cases Ref. Page No.-----	Y	N				
Y	N						

<p>Contract Value*</p> <p>At the time of Award Indian Rupees.....</p> <p>As actual on <b>completion date (Mention completion date also)</b> Indian Rupees .....</p> <p><b>Details of work undertaken, indicate also year-wise break up of cost of Design, fabrication, supply and Installation of Wayfindinging System and Street Furniture indicating month wise best progress as constructed as on 31.05.2020, separately for each category.</b></p> <p>Ref. Page No.-----</p>	
<p>Were Quality Assurance obligations required in the contract? <input type="checkbox"/> Y <input type="checkbox"/> N</p> <p>If Yes whether they were fulfilled?</p> <p>If not, why?</p> <p>Ref. Page No.-----</p>	
<p>Has the Tenderer (or any member of a group) been blacklisted by the client?</p>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>If Yes why?</p> <p>Ref. Page No.-----</p>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Project description: (Clearly indicate, the part of the work assigned to the Tenderer (s) )</p> <p>Ref. Page No.-----</p>	
<p>Reference to Client's Certificate/credential of performance and completion of work.</p>	<p>The certificate is attached</p> <p>Ref. Page No.-----.</p>
<p><b>* Only the value of contract as executed by the Tenderers in his own name should be indicated. Where a work undertaken by a group, only that portion of the contract which is undertaken by the concerned Tender member should be indicated and the remaining done by the other members of the group be excluded.</b></p>	

## ANNEXURE 2:

## Works in hand

Name of the Tenderer .....								
Tenderer should provide information on their current commitments or all contracts that have been awarded or for which a letter of intent of acceptance has been received or for contracts approaching completion but for which a completion certificate is yet to be issued.								
List only 5 largest works (including similar works)								
Name and brief particulars of contract (Clearly indicate the part of the work assigned to the Tenderer(s))	Work being / to be executed as a Prime Contractor/member of a	Name of client with Telephone No. Telephone number And Fax Number	Contract Value in Rupees Equivalent as on 31.01.2014 (Give only the value of work assigned to the Tenderer(s)) (Assume inflation and multiplying factors)	Value of balance work yet to be done In Rupee equivalent as on 31.01.2014 (Assume inflation and multiplying factors)	Original Completion Date	Estimated Completion Date (Give reasons in case of delay)	Value of work to be done in 2018-19	Value of work to be done in 2019-20.

**ANNEXURE 3 ( Refers para 5 C (1.5) :****Summary information of qualifications and experience of Key Staff****Name of Tenderer:**

(member in case of group)

Discipline	Name and Qualifications	Member/ Group to which belongs in case of JV	Years with Company	Experience in similar works		Total Experience (Years)	
				Minimum for the Eligibility Criteria	Actual as per the C.V.	Minimum for the Eligibility Criteria	Actual as per the C.V.
Design & Project Lead (1)	1			8		15	
Project Manager (1)	1			5		10	
Production Supervisor (for Metal work, Plastic/Acrylic/Electrical (1)	1			5		10	
Site supervisors (3)	1			5		8	
	2			4		5	
	3			3		5	
Others (give details)							

**Note :-**

The figures indicated in the brackets against the Key Staff are minimum essential numbers of requirements.

**ANNEXURE 4 (Refers to para 5 C (1.6)**

**Equipment by Location**

Name of Tenderers (Name of Member in the group): .....								
Equipment type and Characteristics		Number owned in India which will be use or the proposed project						Number not owned but will be made available for the proposed work by means of hired / leased /out-sourced
S.No	(Equipment that can be made available for this work).	No	Manufacture	Capacity	Year of Manufacture	Current Location	Expected to be freed from current location	
1	CNC Turret punching machine (1)							
2	CNC Bending machine (1)							
3	CNC Laser Cutting Machine (1)							
4	CNC Plasma Cutting Machine (1)							
5	High resolution large format interior & exterior graphics printing machine (1)							
6	Plotter Cutting Machine for retro reflective sheeting & Vinyl							
7	Double Mitre Saw							
8	Acrylic Laser Cutting machine							
9	Acrylic heat bending							
10	Powder Coating plant							

<u>11</u>	MIG/TIG welding machine							
<u>12</u>	CNC Router for ACP Works							

**APPENDIX to Eligibility Criteria Para 5 A (1.1)**

Statement to demonstrate that the Tenderer has completed the cost of similar works relating to Design, Fabrication, Supply and Installation Works of Wayfindinging System and Street Furniture including all transportation, loading and unloading etc for Large Campuses / Metro Rail Systems / Airport terminals / Retail Outlets for Oil Industries or Consumer Services / Multi Speciality Hospitals during the last 5 years ending 31.05.2020.

**Client’s Completion Certificate to be submitted duly furnishing the required information in the table given below.**

Name of the Member, who executed the Similar Work	Name of the Similar Work / Project	Contract No. & Date.	Period of Similar Works completed		Cost of Similar works completed (In Rupees)	Name of the Client	% participation of the member in the completed similar work in case of JV/Consortium	Area / nature of the similar work completed by the member (Scope of Work)	Ref. Page No. of submission on which Client Certificate submitted
			From	To					

Signature of the Tenderer: .....

Name & Designation of Authorized signature: .....

Place , Date and seal/stamp of the Tenderer: .....



**APPENDIX to Eligibility Criteria Para 5 B (1.1)**

**(To be submitted each member seperatly in case of JV/Consortium)**

Statement to demonstrate that the Tenderer must have an average Annual Turnover of **Rs 5 crores** (Indian Rupees Five Crore) from the Wayfindinging and GStreet Furniture works only during the last 5 (five) financial year ending 31.03.2020. (in case of JV/Consortium weighted average will be taken in proportion to their participation percent in the JV/Consortium).

**Certificate to be submitted duly furnishing the required information in the table given below.**

Name of the Tenderer	Annual Gross Turnover( in INR)					Total Annual Gross Turnover for previous five years(in INR)	Average Annual Turnover for previous five years(in INR)	Ref .Page No: of submission on which Auditor / Chartered Accountant’s Certificate submitted
	2015-16	20016-17	2017-18	2018-19	2019-20			

Signature of the Tenderer: .....

Name & Designation of Authorized signature: .....

Place , Date and seal/stamp of the Tenderer: .....

**APPENDIX to Eligibility Criteria Para 5 B (1.2)**

**(To be submitted each member seperatly in case of JV/Consortium)**

Statement to demonstrate the net worth for the last accounting year and in any two of the remaining four years should be positive and it will be arrived by audited annual statements.

Name of the Tenderer	Financial Accounting Year	Paid up Equity (In INR)	Reserves (In INR)	Revaluation Reserves (In INR)	Miscellaneous expenditure not written off (In INR)	Net worth (In INR)	Net worth +ve (Positive) or – ve (Negative)	% participation of the member in the present Group	Ref .Page No: of submission on which Auditor/Chartered Accountant’s Certificate submitted
<i>A</i>		<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F=B+C-D-E</i>	<i>G</i>	<i>H</i>	<i>I</i>
	2015-16								
	2016-17								
	2017-18								
	2018-19								
	2019-20								

Signature of the Tenderer: .....

Name & Designation of Authorized signature: .....

Place , Date and seal/stamp of the Tenderer: .....

**APPENDIX to Eligibility Criteria Para 5 B (1.3)**

**(To be submitted each member seperatly in case of JV/Consortium)**

Statement showing the Profitability-earnings before Interest and Tax should also be positive at least in any two financial years out of the last five years and it will be arrived by audited annual statements

Name of the Tenderer	Profitability-earnings before Interest and Tax in INR					Years in which Profitability-earnings before Interest and Tax is +ve (Positive)	Ref .Page No: of submission on which Auditor/Chartered Accountant’s Certificate submitted
	2015-16	2016-17	2017-18	2018-19	2019-20		

Signature of the Tenderer: .....

Name & Designation of Authorized signature: .....

Place , Date and seal/stamp of the Tenderer: .....

---

## Kandla SEZ Authority

### Kandla SEZ

Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ campus at Gandhidham, Kutch.

TENDER NO: KASEZ/ Tender/ WF&SF/ 1

## TECHNICAL PACKAGE

Appendices to Form of Tender and Annexure to Form of Tender are to be completed by the Tenderer as Technical Package

### LIST OF CONTENTS

<u>Description</u>	<u>Pages</u>
Appendices to Form of Tender	2 to 12
Format For Power of Attorney For Signing of The Tender	13
Form of Bank Guarantee for Tender Security	14 to 16

---

## APPENDICES TO THE FORM OF TENDER

(Tenderer should complete the following documents)

Appendix FT-1	Contract Conditions
Appendix FT-2	Tender Index
Appendix FT-3	Form of certificate confirming site visit
Appendix FT-4	Form of certificate confirming receipt of all tender addenda/corrigenda
Appendix FT-5	Form of Letter of Undertaking.
Appendix FT-6	Establishment of Contractors Office in Gandhidham
Appendix FT-7	Form of Letter of Undertaking and Verification Statement
Appendix FT-8	Form of Letter of Undertaking for Conflict of Interest

Format For Power of Attorney For Signing of The Tender
Form of Bank Guarantee for Tender Security

**FORM OF TENDER****APPENDIX FT-1****CONTRACT CONDITIONS**

1	Amount of Performance Guarantee (GCC Sub-Clause 4.2)	10% of the Contract Price. In the event of variations and adjustments during the execution of the contract which result in payments to the contractor over and above the original contract price, the Performance Guarantee shall be suitably adjusted.
2.	Commencement date for commencement of the Works (GCC Sub-Clause 8.1)	Date of issue of "Letter of Acceptance"
3.	Time for Completion (GCC sub- Clause 8.2)	The whole of the works shall be completed and delivered within time stated in Key Dates attached to Appendix FT-1.
4.	Liquidated Damages (LD) (GCC Sub-Clause 8.5)	(i) Indian Rupees 5,000 per calendar day of delay for KD-1 to KD-7 except KD-6 as covered in Clause 32 in ITT (ii) For KD-6, Rs 10,000 per calendar day delay.  (iii) There is no maximum limit in levy of LD for delays in individual Key Dates. However, maximum limit for cumulative LD for complete Contract shall be in conformity with clause 8.5 of GCC.
5.	Defects Liability Period (GCC Sub-Clause 10)	12 months from the date mentioned in the Taking Over Certificate for whole of the Works.
6.	Amount of Advance (GCC Sub-Clause 11.2 and SCC Clause 20 to 22)	Mobilization Advance: 10% of the Contract Amount (with interest @12% per annum)
7.	Amount of Third Party Insurance (GCC Sub-Clause 15)	Rs. 5.00 Lakhs for any one incident.
8.	Amount of Professional Indemnity Insurance (GCC 15)	Not Applicable.
9.	Period in which all insurances have to be effected (GCC Sub-Clause 15)	To be effective Within two weeks from the date of issue of LoA.
10.	Stages and Key Dates	See Attachment to Appendix FT-1. (Form of Tender)
11.	Validity of Tender	<b>120</b> days from the latest date of submission of tender.

12.	Amount and validity of Tender security	Indian Rs. 5,00,000/- (Rupees Five lakh only) in the form of Bank Guarantee in favour of 'Kandla SEZ Authority', payable at Gandhidham to remain valid up to 60 days beyond the validity of tender as per Clause 13 of ITT in Package -2 – Technical Package.
13.	<p>Place for tender submission, tender opening and pre bid meeting</p> <p>Last date up to which clarification on tender conditions can be sought</p> <p>Date and time of Pre-bid Meeting</p> <p>Date and time of Tender Submission</p> <p>Date and time of Tender opening</p>	<p>Kandla SEZ Authority, Office of the Development Commissioner, Kandla SEZ, Gandhidham, Kutch-370 230 Gujarat State, India</p> <p>On or before 20<sup>th</sup> January, 2021</p> <p><b>All clarifications will be placed on website</b></p> <p>At 11.00 hrs (IST) on 22<sup>nd</sup> January, 2021</p> <p>Till 12.00 hrs (IST) on 9<sup>th</sup> February 2021</p> <p>At 15.00 hrs (IST) on 9<sup>th</sup> February, 2021 (Tender will be opened in two bid system as mentioned in the bid document)</p>
14.	Contractor's Name and Address (GCC Clause 18)* (tenderer to complete)	<p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>
15.	Employer's Name and Address	<p>The Chairman, Kandla SEZ Authority, Office of Development Commissioner, Kandla SEZ, Gandhidham, Kutch, -370230, Gujarat State, India</p>
16.	Presentation by bidders	<p>It will be desirable if a presentation is made before the Technical Committee of the firm's competence, previous experience, proposed drawings and installations in KASEZ. The bidders will be encouraged to visit the Zone on 18<sup>th</sup> &amp; 19<sup>th</sup> January, 2021 between 10:00 hrs and 13:00 hrs. They may contact Mr. Devaraj.C, Secretary, Mob.9426977306.</p>

**Attachment to APPENDIX FT-1**

The Contractor will be required to achieve the following Key Dates (KD) to be calculated from the date of issue of Letter of Acceptance.

Total duration of **20 weeks** starting from the date of Issue of Letter of Acceptance (LOA)

<b>KD No.</b>	<b>Item</b>	<b>Key Date</b> (weeks from the date of issue of Letter of Acceptance)
KD-1	Submitting all the material samples and Schedule of work	<b>3 Weeks</b>
KD-2	Approval on all signage samples and shop drawings	<b>4 Weeks</b>
KD-3	Fabrication of all Wayfinding System and Street Furniture internal structures at factory 60% quantity	<b>8 weeks</b>
KD-4	Fabrication of all Wayfinding System and Street Furniture external structures at factory 60% quantity	<b>10 weeks</b>
KD-5	Commence installation	<b>10<sup>th</sup> weeks onwards</b>
KD-6	C Commissioning of 100% Wayfinding System and Street Furniture, Completion and handover	<b>20 weeks</b>

**Penalties for Delay in Achieving Key Dates**

<b>KD No.</b>	<b>Penalties for Delay in Achieving Key Dates</b>
KD-1 to 7 <i>except</i> KD-6	Rs. 5,000 (Rupees five thousand) per day of delay.
KD-6	Rs. 10,000 (Rupees ten thousand) per day of delay.

**Notes:**

- 1) The Engineer will decide about achievement of Key Dates.
- 2) Any imposition of LD on account of delay in accomplishing key dates is non refundable even if the work as a whole is completed in time.
- 3) The Penalties against KD-1 to KD-7 are applicable for entire work. Maximum LD to be levied is as per Clause-8.5 of GCC and Form of Tender & Appendix to Form of Tender.
- 4) These penalties shall not relieve the Contractor from his obligation to complete the works or from any other obligations and liabilities under this Contract.



## FORM OF TENDER

### APPENDIX FT-2

## TENDER INDEX

I / We have included this index sheet which describes and refers all the documents that are enclosed in:

- Tender Envelope 1: **Tender Guarantee,**
- Tender Envelope 2: **PQ Package**
- Tender Envelope 3: **Technical Package** and
- Tender Envelope 4: **Financial Package**

**Tenderers to note that the “Tender Packages” submitted must be clearly presented. all pages numbered and laid out in a logical sequence with main and subheadings to facilitate evaluation.**

**SIGNATURE OF TENDER**

**FORM OF TENDER**

**APPENDIX FT-3**

**FORM OF CERTIFICATE CONFIRMING SITE VISIT**

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus Gandhidham, Kutch**

**Ref: TENDER NO: KASEZ / Tender/ WF&SF/ 1**

This is to certify that in connection with Tender No.KASEZ/TENDER/WF&SF/1 of Kandla SEZ Authority, Gandhidham, representatives of M/s \_\_\_\_\_ [\*] Name of the Company] have visited the sites of work and have become conversant with the local conditions of working.

**SIGNATURE OF TENDERER**

\* In case of a partnership, joint venture or consortium, to be submitted by each constituent member.

**FORM OF TENDER**

**APPENDIX FT-4**

**FORM OF CERTIFICATE CONFIRMING RECEIPT OF ALL TENDER  
ADDENDA/CORRIGENDA**

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus Gandhidham, Kutch.**

**Ref: TENDER NO: KASEZ / Tender/WF&SF/ 1**

This is to certify that we, M/s \_\_\_\_\_ [\*] Name of the Company] have received all Tender Addenda/ Corrigenda to Tender No: KASEZ/TENDER/WF&SF/1, as listed below and have included the effects of time and cost within the Tender(s):

- 1. No. ....
- 2. ....
- 3. ....
- 4. ....
- .....
- .....

**SIGNATURE OF TENDERER**

\* In case of a partnership, joint venture or consortium, to be submitted by each constituent member.

---

**FORM OF TENDER**

**APPENDIX FT-5**

**LETTER OF UNDERTAKING**

(To be submitted on Tenderer's Letterhead)

Dated:.....

To :

The Chairman,  
Kandla SEZ Authority  
Office of the Development Commissioner  
Kandla SEZ, Gandhidham  
Kutch – 370 230  
Gujarat  
**India,**

**LETTER OF UNDERTAKING**

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham, Kutch.**

**Ref: TENDER NO: KASEZ / Tender/ WF&SF/ 1**

We, (name of Tenderer/Joint Venture) hereby undertake that the tender drawings, both in hard copy and the tender documents purchased as a necessary part of our preparation of this tender shall be used solely for the preparation of the tender and that if the tender is successful, shall be used solely for the design of the temporary and permanent works.

We further undertake that the aforesaid tender drawings and documents prepared by the Kandla SEZ Authority, shall not be used in whole, in part or in any altered form on any other project, scheme, design or proposal that the joint venture, the joint venture parent companies or sub contractors of the joint venture are, or will be involved with either in India or any other country.

Signed.....

For on behalf of

(Name of tenderer/Joint venture)

---

**FORM OF TENDER**

**APPENDIX FT-6**

**ESTABLISHMENT OF CONTRACTORS OFFICE IN GANDHIDHAM**

(To be submitted on Tenderer's Letterhead)

Dated:.....

To :

The Chairman,  
Kandla SEZ Authority  
Office of the Development Commissioner  
Kandla SEZ, Gandhidham  
Kutch – 370 230  
Gujarat  
**India,**

**LETTER OF UNDERTAKING**

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham, Kutch.**

**Ref: TENDER NO: KASEZ / Tender/ WF&SF/ 1**

We hereby agree to establish our Project Office for the Tender No: **KASEZ/TENDER/WF&SF/1** to be in Kandla Gandhidham to have speedy and effective coordination with the Employer and Engineer, if our offer is accepted by the Employer.

Signed.....

For on behalf of

(Name of tenderer/Joint venture)

---

**FORM OF TENDER**

**APPENDIX FT-7**

**LETTER OF UNDERTAKING AND VERIFICATION OF STATEMENT**

(To be submitted on Tenderer's Letterhead)

Dated:.....

To :

The Chairman,  
Kandla SEZ Authority  
Office of the Development Commissioner  
Kandla SEZ, Gandhidham  
Kutch – 370 230  
Gujarat  
**India,**

**LETTER OF UNDERTAKING**

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham, Kutch.**

**Ref: TENDER NO: KASEZ / Tender/ WF&SF/ 1**

**We confirm and declare that virtue of my signature below, I / we confirm to the best of knowledge and belief that the information contained in this TENDER DOCUMENT, any Annex thereto and all supporting and explanatory information is truthful and exact.**

Signed.....

For on behalf of

(Name of tenderer/Joint Venture)

---

**FORM OF TENDER**

**APPENDIX FT-8**

**LETTER OF UNDERTAKING FOR CONFLICT OF INTEREST**

(To be submitted each member)

Dated:.....

To :

The Chairman,  
Kandla SEZ Authority,  
Office of the Development Commissioner  
Kandla SEZ, Gandhidham  
Kutch – 370 230  
Gujarat  
**India.**

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham, Kutch.**

**Ref: TENDER NO: KASEZ / Tender/ WF&SF/ 1**

It is confirmed that the Firm or the members of JV do not have any conflict of interest with respect to the following.(Clause 19 of the GCC may be referred in this regard).

We understand that Tenderers shall be considered to have a conflict of interest **if:**

- (a) One firm submits for tender both as an individual firm and in a Group (joint venture/consortium/partnership).
- (b) Tenderers in two different tenders have controlling share holders in common.
- (c) An organisation submits more than one tender in this tender process.

Signed.....

For on behalf of

(Name of tenderer/Joint Venture)

**FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF THE TENDER****(To be executed by the Tenderer)***(Ref. Cl. 16 of "Instructions to Tenderers")*

(On Non – judicial stamp paper of Rs 100/- if in India or such equivalent document duly attested by notary public)

**POWER OF ATTORNEY**

Know all men by these presents, we \_\_\_\_\_(name and address of the registered office of the Tenderer) do hereby constitute, appoint and authorize Mr. / Ms. \_\_\_\_\_R/o \_\_\_\_\_(name and address of residence) who is presently employed with us and holding the position of \_\_\_\_\_as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to the submission of the Tender Proposal for the work of construction of ----- (name of the work), (herein after referred as "Project"), including signing and submission of all documents, participating in meeting and providing information / documents / responses to Kandla SE Authority Gandhidham, Kutch representing us in all matters in connection with our Proposal for the said Project, and if successful, till the whole of the bid process.

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

Accepted

For

(Signature)

(Signature)

(Name, Title and Address of the Attorney)

(Name, Designation and Address)

**Note:-**

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.*
- *Also wherever required, the executants(s) should submit for verification the extract of the charter documents and documents such as resolution/ power of attorney in favour of the person executing this power of attorney for the designation of power hereunder on behalf of the tenderer.*



---

## FORM OF BANK GUARANTEE FOR TENDER SECURITY

(Reference Para 13 of the Instructions to Tenderers)

(To be stamped in accordance with Stamp Act, if any, applicable for the issuing bank. The Bank branch should be in Gandhidham city )

**Sub: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham, Kutch.**

**Ref: TENDER NO: KASEZ / Tender/ WF&SF/ 1**

KNOW ALL MEN by these presents that we \_\_\_\_\_ (Name of Bank) of India, having our registered office at \_\_\_\_\_ (hereinafter called "the Bank") are bound unto **Kandla SEZ Authority** (hereinafter called "the Employer") in sum of Rs. .... (Rupees .....only) for which payment will and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents.

WHEREAS \_\_\_\_\_ (Name of Tenderer) (hereinafter called "the Tenderer" ) has submitted his tender dated \_\_\_\_\_ for Tender for Tender No. KASEZ/TENDER/WF&SF/1 (hereinafter called "the Tender").

WHEREAS the Tenderer is required to furnish a Bank Guarantee for the sum of **Rs..... (Rupees .....only)** as Tender Guarantee against the Tenderer's offer as aforesaid.

AND WHEREAS \_\_\_\_\_ (Name and Address of the Bank) (from an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule) have, at the request of the Tenderer, agreed to give this guarantee as hereinafter contained.

We further agree as follows:

- (i) That the Employer may without affecting this guarantee grant time or other indulgence to or negotiate further with the Tenderer in regard to the conditions contained in the said tender and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between the Employer and the Tenderer.

- 
- (ii) That the guarantee herein before contained shall not be affected by any change in constitution of our Bank or in the constitution of the Tenderer.
- (iii) That this guarantee commences from the date hereof and shall remain in force till:
- a. *The Tenderer, in case his tender is accepted by the Employer, executes a formal agreement after furnishing the Performance Guarantee issued by an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule.*
  - b. *Thirty days after the date of validity or the extended date of validity of the Tender, as the case maybe;*
- Whichever is earlier.*

- (iv) That the expression "the Tenderer" and "the Bank" herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assigns.**

THE CONDITIONS of this obligation are:

- (i) If the Tenderer withdraws his Tender during the period of Tender validity specified in the Form of Tender, or**
- (ii) If the Tenderer refuses to accept the corrections or errors in his Tender, or if the Tenderer fails to unconditionally withdraw any deviations, conditions, qualifications etc; at the price indicated by him, or**
- (iii) If the Tenderer having been notified of the acceptance of his Tender by the Employer during the period of tender validity:**
  - a. *fails or refuses to furnish the Performance Guarantee and/or*
  - b. *fails or refuses to enter into a Contract within the time limit specified in paragraph 30.1 of the Instructions to Tenderers.*

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand provided that in his demand the Employer will

note that the amount claimed by him is due to him owing to the occurrence of any one or more of the conditions (i), (ii),(iii)a or (iii)b mentioned above, specifying the occurred condition or conditions.

The Bank Guarantee is payable at the designated branch ----- at Gandhidham.

	Signature of
	Authorised Official
	Of the Bank: _____
SIGNATURE OF WITNESS	Name of Official: _____
_____	Designation _____
NAME OF WITNESS	STAMP/SEAL OF BANK
_____	
Address of witness	

---

**Note: If the Bank Guarantee is issued from a branch outside Gandhidham, then the Bank Guarantee should be payable at a designated branch at Gandhidham.**

## GENERAL CONDITIONS OF CONTRACT

## CONTENTS

SI.No	Descriptions	Page No
<b>1</b>	<b>DEFINITIONS AND INTERPRETATION</b>	
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**GENERAL CONDITIONS OF CONTRACT (GCC)****1 DEFINITIONS AND INTERPRETATION**

- Definitions 1.1** The following contract terms and expressions as used in the contract defined shall have the meanings assigned to them, except where the context otherwise requires. Words indicating persons or parties include corporations and other legal entities except where the context requires otherwise.
- 1.1.1 Documents**
- 1.1.1.1** **“Appendix to Form of Tender”** means the completed pages in title Appendix, which are appended to and form part of the Tender.
- 1.1.1.2** **“Construction and/or Manufacture Documents”** means all drawings, calculations, computer software (programs), samples, patterns, models, operation and maintenance manuals, and other manuals and information of a similar nature, to be submitted by the Contractor.
- 1.1.1.3** **“Contract”** means the written Contract Agreement, the Letter of Acceptance, General Conditions of Contract, Special Conditions of Contract, the Employer’s Requirements, the Tender, the Notice of Invitation to Tender, Instructions To Tenderers, the Contractor’s Proposal, the Schedules, Clarifications issued and such further documents which are listed in the Letter of Acceptance or Contract Agreement (if completed).
- 1.1.1.4** **“Contract Agreement”** means the contract agreement pursuant to acceptance letter referred to in Sub-Clause 1.4. It shall also include all subsequent modifications/ amendments to record the Contract as a result of the communications or negotiation proceedings between the parties.
- 1.1.1.5** **“Contractor’s Proposal”** means the proposal submitted by the Contractor with the Tender, as modified and accepted by the Employer and included in the Contract. Such documents may include the Contractor’s preliminary Design of Temporary works.
- 1.1.1.6** **“Design Data”** means all specifications, plans, drawings, details, graphs, sketches, models, levels, setting-out dimensions, calculations duly checked by the Contractor and other documents relating to the Design of Temporary works prepared or to be prepared by or on behalf of the Contractor.
- 1.1.1.7** **“Drawings”** means the Employer’s Drawings and the Drawings submitted by the Contractor and any modification of such drawings as any, from time to time, be furnished or for which the Engineer has issued a Notice of No Objection.
- 1.1.1.8** **“Employer’s Requirements”** means the description of the scope, standard, specifications, drawings, programme of work, indigenisation programme (where applicable) as included in the Contract, and any alterations and modifications thereto in accordance with the Contract.
- 1.1.1.9** **“Letter of Acceptance”** means the letter from the Employer or the Engineer, or a person nominated by them on their behalf for this purpose, to the Contractor, conveying acceptance of the Tender, subject to any modifications agreed to between the parties and includes advance acceptance of the tender.



- 1.1.1.10 **“Safety, Health and Environmental (SHE) Manual”** means the Employer’s manual containing the requirements and conditions to be met during the execution of the Works by the Contractor.
- 1.1.1.11 **“Schedules”** means the information and data submitted with the Tender, as included in the Contract.
- 1.1.1.12 **“Tender or Bid”** means the completed offer made by individual, Firm, Company, Corporation, Joint Venture or Consortium for the execution of the works.  
**“Tenderer”** or **“Bidder”** means the person, firm or corporation submitting a tender against the notice of invitation of tender and includes his authorized agents or representatives. Tenderer shall mean ‘Contractor’ wherever the context so requires and vice-versa.
- 1.1.1.13 **Deleted**
- 1.1.1.14 **“Special Conditions of Contract”** means any special conditions of contract issued by the Employer prior to submission of the Tender or negotiated and agreed in writing by the Employer and the Contractor prior to and conditional upon acceptance of the Tender.
- 1.1.1.15 **“Works Programme”** means the programme showing the sequence, method and timing of investigations, Design of Temporary works, issue of No Objection Notices, execution, manufacture, delivery to site, erection, installation, testing, commissioning of the Works (including Integrated Testing and Commissioning), indigenisation (where applicable) and related activities in the form and content prescribed by the Employer’s Requirements, or any amended or varied version thereof, as submitted by the Contractor and for which the Engineer has issued a Notice of No Objection.
- 1.1.2 **Persons**
- 1.1.2.1 **“Party”** means the Employer or the Contractor as the context requires
- 1.1.2.2 **“Contractor”** shall mean the person, firm, association of firms, Company or Corporation identified as the Contractor and whose tender for the work has been accepted by the Company and responsible for carrying out the construction scope, in accordance with the Contract Documents and unless the context otherwise so requires shall include his/their executors, administrators, successors and permitted assignees.
- 1.1.2.3 **“Contractor’s representative”** means the person (if any) named as such in the Contract or other person appointed from time to time by the Contractor under Sub Clause 4.3.
- 1.1.2.4 **“Designated Contractors”** means any of the following whose activities or the works they are engaged to carry out, affect or are affected by the Works, in any way or at any time:  
(a) contractors, design consultants and utility authorities engaged on the Project from time to time by the Employer;  
(b) sub-contractors of any tier of the contractors above; provided that the definition shall exclude the Contractor and his sub-contractors of any tier in relation to the Works.
- 1.1.2.5 **“Designer”** means the Contractor, or part of the group forming the contractor, person, firm or company or group of companies, or any replacement, carrying out the Design of Temporary Works or part thereof.

- 1.1.2.6 **“Employer”** means Kandla SEZ Authority (KASEZ), its legal successors and assignees.
- 1.1.2.7 **“Engineer”** means any person/party nominated or appointed from time to time by the Employer to act as the Engineer for the purposes of the Contract and notified as such in writing to the Contractor.
- 1.1.2.8 **“Sub-Contractor”** means the Individual, Firm, Company, Corporation, Joint Venture or Consortium, having direct contract with the Contractor and to whom any part of the Work has been sublet by the Contractor, with prior permission of the Engineer or Employer and shall include his heirs, his executors, administrators, successors, legal representatives, as the case may be.
- 1.1.3 **Dates, Times and Periods**
- 1.1.3.1 **“Commencement Date”** means the date on which the Contractor shall commence the Works on the written instructions of the Employer contained in the Notice to Proceed (‘Letter of Acceptance’ itself is the “Notice to Proceed” unless otherwise mentioned in the Letter of Acceptance.).
- 1.1.3.2 **“Contract Period”** means the period from the Commencement Date to the end of final Defects Liability Period.
- 1.1.3.3 **“Day”** means a calendar day; **“Week”** means 7 calendar days and **“Year”** means 365 calendar days.
- 1.1.3.4 **“Effective Date”** means the date on which the Contract comes into force and effect.
- 1.1.3.5 **“Gazetted Holiday”** means every holiday which is observed by Kandla SEZ Authority as a gazetted holiday.
- 1.1.3.6 **“General Holiday”** means Sunday.
- 1.1.3.7 **“Key Date”** means a date identified as such in the Contract.
- 1.1.3.8 **“Stage”** means level of progress of the works identified as such and more particularly described in the Employer’s Requirements for which a Key Date for the achievement thereof is stipulated in the Contract.
- 1.1.3.9 **“Time for Completion”** means the time for completing the Works or a section or a part thereof (as the case may be), and passing the Tests on Completion, including Integrated Testing and Commissioning, as stated in the Contract, calculated from the Commencement Date.
- 1.1.4 **Tests and Completion**
- 1.1.4.1 **“Factory Tests”** means the tests required to be carried out in the factory premises on components, equipment, subsystem, system, etc. during and/or after manufacture in the factory.
- 1.1.4.2 **“Performance Certificate”** means the certificate issued by the Engineer under Sub-Clause 10.9.
- 1.1.4.3 **“Taking Over Certificate”** means a certificate issued under Clause 9.1.
- 1.1.5 **Money and Payments**
- 1.1.5.1 **“Contract Price”** or **“Contract Value”** means the sum stated in the Letter of Acceptance as payable to the Contractor for execution of the work including remedying of any defect during completion and maintenance period therein, subject to such additions thereto or deductions there from as may be made under the provisions of the Contract.

- 1.1.5.2 **“Cost”** means all expenditure properly incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.
- 1.1.5.3 **“Final Payment Certificate”** means the payment certificate issued by the Engineer under Sub-Clause 11.10.
- 1.1.5.4 **“Final Statement”** means the agreed statement defined in Sub-Clause 11.10.
- 1.1.5.5 **“Foreign Currency”** means a freely convertible international trading currency in which part of the Contract Price is payable, but not the Local Currency.
- 1.1.5.6 **“Interim Payment Certificate”** means any payment certificate issued by the Engineer under Sub-Clause 11.4, other than the Final Payment Certificate.
- 1.1.5.7 **Local Currency”** means Indian Rupees.7
- 1.1.5.8 **“Retention Money”** means the accumulated retention monies retained by the Employer under sub clause 11.6
- 1.1.6 **Other Definitions**
- 1.1.6.1 **“Contractor’s Equipment”** means all machinery, apparatus, appliances, other things of whatsoever nature required for purpose of the Contract, including without limitation, Contractor’s plant and equipment, or materials to or from the Site, but does not include Plant, or Materials intended to form or forming part of the Permanent Works.
- 1.1.6.2 **“Materials”** means things of all kinds (other than Plant) to be provided and incorporated in the Permanent Works by the Contractor, including the supply-only items (if any), which are to be supplied by the Contractor as specified in the Contract.
- 1.1.6.3 **“Plant”** means the machinery, equipment, and apparatus and the likes, intended to form or forming part of the Permanent Works, including the supply-only items (if any), which are to be supplied by the Contractor as specified in the Contract.
- 1.1.6.4 **“Section”** means a part of the Works specifically designated in the Appendix to Form of Tender as a Section (if any).
- 1.1.6.5 **“Site”** means the places provided by the Employer where the Works are to be executed and to which Plant and Materials are to be delivered, and any other place as may be specifically designated in the Contract as forming part of the Site.
- 1.1.6.6 **“Variation”** means any alteration and/ or modification to the Employer’s Requirements, which is instructed by the Engineer or approved as a variation by the Engineer, in accordance with Clause 12.
- 1.1.6.7 **“Works”** means the work to be executed in accordance with the Contract and shall include both Permanent Works and Temporary Works.
- 1.1.6.8 **“Permanent Works”** means the permanent works to be executed, completed and maintained in accordance with the Contract.
- 1.1.6.9 **“Temporary Works”** means all temporary and enabling works of any kind required for the execution and completion of the works and the remedying of any defect therein, and which subsequently be removed by the Contractor.
- 1.1.6.10 **“Project”** means Kandla SEZ Campus Wayfinding System and Street Furniture.
- Interpretation**     **1.2**     In the Contract except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular and
- (c) “written” or “in writing” means hand-written, type written, printed or electronically made and resulting in a permanent record.

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

<b>Law and Language</b>	<b>1.3</b>	The Contract shall be governed by the Acts and Laws of India, the rules, regulations and bye-laws of the concerned public bodies and authorities. Language of the Contract shall be English.
<b>Contract Agreement</b>	<b>1.4</b>	The Employer and the Contractor shall execute a Contract Agreement in the form annexed in Schedules to Special Conditions of Contract, with such modifications as may be necessary to record the Contract within 45 days from the date of issue of Letter of Acceptance by the Employer. The costs of stamp duties and similar charges imposed by law shall be borne by the Contractor.
<b>Priority of Documents</b>	<b>1.5</b>	<p>The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, the Engineer shall issue any necessary clarification or instruction to the Contractor, and the priority of the documents shall be unless otherwise specified in the Special Conditions of Contract, as follows:</p> <ul style="list-style-type: none"> <li>(a) The Contract Agreement;</li> <li>(b) The Letter of Acceptance;</li> <li>(c) The Tender;</li> <li>(d) The Employer’s Requirements: <ul style="list-style-type: none"> <li>(i) Technical Specification</li> <li>(ii) General Requirement-Construction</li> </ul> </li> <li>(e) The Special Conditions of Contract including Schedules;</li> <li>(f) The General Conditions of Contract;</li> <li>(g) any other document forming part of the Contract.</li> </ul>
<b>Care and Supply of Construction and/or Manufacture Documents</b>	<b>1.6</b>	<p>The Construction and/or Manufacture Documents shall be in the custody and care of the Contractor during the Contract. Unless otherwise stated in the Employer’s Requirements, the Contractor shall provide six copies for the use of the Engineer and assistants.</p> <p>The Contractor shall keep on Site one complete set of the documents forming the Contract, the Construction and/or Manufacture Documents, Variations, other communications given or issued from time to time and the documents/samples mentioned in Sub-Clause 5.3. The Employer, the Engineer and their assistants shall have the right to access these documents all reasonable times.</p>

On discovery of any technical error or defect in a document intended to be used for the purpose of Contract, the Contractor shall promptly give notice to the Engineer of such error or defect.

- Communications**     **1.7**     Communications between parties, unless otherwise specified shall be effective only when made in writing. A notice will be effective only when delivered.
- Employer's Use of Contractor's Documents**     **1.8**     As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.
- The Contractor shall be deemed (by signing the Contract) to give to the Employer a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This licence shall:
- (a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
  - (b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
  - (c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.
- The Contractor's Documents and other Design of Temporary works documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated, to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.
- Contractor's Use of Employer's Documents**     **1.9**     As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Employer's Requirements and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract.
- They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.
- Compliance with Statutes, Regulations and Laws**     **1.10**     The Contractor shall familiarise themselves and conform to the requirement in all aspects with:
- (a) the provision of any enactment in India as applicable from time to time
  - (b) the regulations or bye-laws of any local body and utilities including, but not limited to Electricity Supply Regulation Act, Indian Electricity Rules, Pollution Control Rules..
  - (c) The Contractor shall be bound to give all notices required by statute, regulations or bye-laws, as aforesaid and to pay all fees and bills payable in respect thereof. The Contractor will arrange necessary clearances and approvals before the Work is taken up.
- Ignorance of Rules, Regulations and Bye-laws shall not constitute a basis for any claim at any stage of work.
- The Contractor shall indemnify the Employer against all penalties and liabilities

of every kind of breach of any such enactment, laws, regulations, bye-laws or rules.

**Joint and  
Several  
Liability**

**1.11** If the Contractor is (under applicable Laws) a joint venture, consortium, or other incorporated grouping of two or more Parties:

- a) these parties shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract;
- b) these parties shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these parties; and

the Contractor shall not alter its composition or legal status without the prior consent of the Employer.

**Severability**

**1.12** If any clause, provision, section or part of the Contract is ruled invalid by a court of competent jurisdiction, then the parties shall: (a) promptly meet and negotiate a substitute for such clause, provision, section or part, which shall, to the greatest extent legally permissible, effect the original intent of the parties, and (b) if necessary or desirable, apply to the court which declared such invalidity for a judicial construction of the invalidated portion to guide the negotiations. The invalidity or enforceability of any such clause, provision, section or part shall not affect the validity or unenforceability of the balance of the Contract, which shall be construed and enforced as if the Contract did not contain such invalid or unenforceable clause, provision, section or part.

**2 The Employer**

**General  
Obligations**

**2.1** The Employer shall provide the Site and shall pay the Contractor in accordance with the Contract.

**Access to and  
Possession of  
the Site**

**2.2** The Employer shall grant the Contractor right of access to, and possession of, the Site progressively for the completion of Works (To access to site will be in form of issue of Letter of Acceptance to the successful contractor). Such right and possession may not be exclusive to the Contractor. The Contractor will draw/modify the schedule for completion of Works according to progressive possession/right of such sites.

If the Contractor suffers delay from failure on the part of the Employer to grant right of access to, or possession of the Site, the Contractor shall give notice to the Engineer in a period of 28 days of such occurrence. After receipt of such notice the Engineer shall proceed to determine any extension of time to which the Contractor is entitled and shall notify the Contractor accordingly.

For any such delay in handing over of site, Contractors will be entitled to only reasonable extension of time and no monetary claims whatsoever shall be paid or entertained on this account.

**Permits,  
Licences or  
Approvals**

**2.3** It shall be Contractor's exclusive responsibility to get approvals, permits or license required for the Contract. However, the Employer may (where he is in a position to do so) provide reasonable assistance to Contractor at the

		request and cost of the Contractor in getting Permits, License or Approvals required during the Contract. The rendering of such assistance by the Employer shall not be interpreted as a pretext by the Contractor as condoning of any delay or non-performance of any of the Contractors obligations. The following-up of all such applications shall be the responsibility of the Contractor.
<b>Assignment by the Employer</b>	<b>2.4</b>	The Employer shall be fully entitled without the consent of the Contractor, to assign the benefit of the Contract or any part thereof and any interest therein or there under to any third party.
	<b>3</b>	<b>The Engineer</b>
<b>Appointment of Engineer</b>	<b>3.1</b>	The Employer shall notify the Contractor in writing of the appointment and identity of the Engineer and of any replacement from time to time.
<b>Duties and Authorities of the Engineer</b>	<b>3.2</b>	The Engineer shall carry out the duties specified in the Contract. The Engineer shall have no authority to amend the Contract.  The Engineer may exercise the authority specified in, or necessarily to be implied from the Contract. If the Engineer is required to obtain the specific approval of the Employer before exercising such authority, such requirements shall be as stated in Special Conditions of Contract. Any requisite approval shall be deemed to have been given by the Employer for any such authority exercised by the Engineer.  The Engineer shall have no authority to relieve the Contractor of any of his duties, obligations, or responsibilities under the Contract. Any proposal, inspection, examination, testing, consent, approval or similar act by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility, including responsibility for his errors, omissions, discrepancies, and non-compliance with Sub-Clause 5.4.  The Engineer shall copy to the Employer all communications given or received by him in accordance with the Contract.
<b>Engineer's Authority to Delegate</b>	<b>3.3</b>	i. The Engineer, with the prior approval of the Employer may from time to time assign and delegate authority to Engineer's representatives/assistants and may also revoke such assignments and delegations. The delegation or revocation shall be in writing and shall be applicable only after same has been notified in writing to the Contractor.  ii. Each Engineer's representative/assistants to whom duties have been assigned or authority has been delegated shall be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any determination, approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test or similar act by an Engineer's representative/assistants shall have the same effect as though the act had been an act of the Engineer. However:  (a) any failure to disapprove any Plant, Material, design and workmanship shall not prejudice the right of the Engineer to reject such Plant, Material, Design of Temporary works and workmanship;

- (b) if the Contractor questions any determination or instruction of Engineer's representative/assistants, the Contractor may refer the matter to the Engineer within three days of such decision having been given, who shall confirm, reverse or vary such determination or instruction.

**Engineer's Instructions**

- 3.4** The Contractor shall comply with instructions given by the Engineer in accordance with the Contract.

The Contractor shall give reasonable notice to the Engineer of any instruction, which he considers necessary for the execution of the Works, to enable the Engineer to issue the instruction so that progress of the Works is not delayed. The Engineer shall not, however, be bound to issue any instruction which, in his opinion, is unnecessary.

No act or omission by the Engineer or Engineer's representative/assistants in the performance of any of the Engineer's duties or the exercise of any of the Engineer's powers under the Contract shall, in any way, operate to relieve the Contractor of any of the duties, responsibilities, obligations or liabilities imposed upon the Contractor by any of the provisions of the Contract.

**Engineer to Attempt Agreement**

- 3.5** When the Engineer is required to determine value, cost or extension of time, he shall consult with the Contractor and the Employer in an endeavour to reach agreement. If agreement is not achieved, the Engineer shall determine the matter fairly, reasonably and in accordance with the Contract, with the approval of Employer.

**4 The Contractor**

**General Obligations**

- 4.1** The Works as completed by the Contractor shall be wholly in accordance with the Contract and fit for the purposes for which they are intended, as defined in the Contract. The Works shall include any work which is necessary to satisfy the Employer's Requirements, the Contractor's Proposal and Schedules, or is implied by the Contract, or arises from any obligation of the Contractor, and all works not mentioned in the Contract but which may be inferred to be necessary for stability, or completion, or the safe, reliable and efficient operation of the Works.

The Contractor shall Design of Temporary works, manufacture, execute, install, complete, test (including Integrated Testing) and commission, the Works, including providing Construction and/or Manufacture Documents, within the Time for Completion and shall remedy any defects within the Contract Period. The Contractor shall provide all superintendence, labour, Plant, Materials, Contractor's Equipment, Temporary Works and all other things, whether of a temporary or permanent nature, required in and for such Design of Temporary works, manufacture, execution, installation, completion, testing (including Integrated Testing) and commissioning and remedying of defects.

Before commencing Design of Temporary works, the Contractor shall satisfy himself regarding the Employer's Requirements (including design criteria and calculations, if any) and the items of reference mentioned in Sub-Clause 4.8. The Contractor shall give notice to the Engineer of any error, fault or other defect in the Employer's Requirements or such items of reference. After



receipt of such notice, the Engineer shall determine whether Clause 12 shall be applied, and shall notify the Contractor accordingly.

The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations, of all methods of construction, manufacture, and of all the Works, irrespective of any approval or consent by the Engineer.

The Contractor shall be deemed to have satisfied himself before submitting his Tender as to the correctness and sufficiency of his Tender to cover all his risks, liabilities and obligations set out in or implied by the Contract and all matters and things necessary for the proper Design of Temporary works, manufacture, execution, installation, completion, testing (including Integrated Testing), commissioning of the Works and remedying of the Defects.

The Contractor acknowledges responsibility for ascertaining and securing at his own cost:

- (a) conditions bearing upon the proper transportation, disposal, handling and storage of materials (including but not limited to hazardous toxic substances and excavated materials);
- (b) availability of electricity, water and gas;
- (c) availability of skilled manpower;
- (d) the character of equipment and facilities needed preliminary to and during the manufacture, installation, execution, testing (including Integrated Testing), and commissioning of the Works and remedying of any defects;
- (e) the protection of the environment and adjacent structures which will be necessary preliminary to and during the manufacture, installation, execution, testing (including Integrated Testing), and commissioning of the Works and remedying of any defects;
- (f) the location of and the authorisation required for and the means of diversion of any services and facilities required for the purposes of the Works.

The Contractor shall whenever required by the Engineer, submit details of the arrangement and methods which the Contractor proposed to adopt for the execution of the Works. No alteration to these arrangements or methods shall be made without the approval of the Engineer.

**Performance  
Security,  
Guarantee,  
Warranties and  
Undertakings.**

**4.2**

**Amount of  
Performance  
Security**

**4.2.1**

- i. Within 30 days of receipt of the Letter of Acceptance, the successful Tenderer shall furnish Performance Security in the form of a bank guarantee from an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule for an amount of ten per cent of the Contract price in types and proportions of currencies in which the Contract Price is payable. The approved form provided in the "Special Conditions of Contract" or any other form approved by the Employer shall be used for

- Performance Guarantee. The Performance Security shall be valid up to 6 months beyond the final completion of Defect Liability Period.
- ii. Failure of the successful Tenderer to furnish the required Performance Security shall be a ground for the annulment of the award of Contract and forfeiture of the Tender Guarantee.
- Release of performance security**      **4.2.2**
- i. The whole or such portion of the Performance Security amount as he may consider fit shall be liable to be forfeited by the Employer at the discretion of the Employer, in the event of any breach of Contract on the part of the Contractor.
- ii. After completion of the entire Work, one half of the Performance Security shall be released to the Contractor, on issue of last Taking Over Certificate if more than one Certificate exist, by the Engineer, in accordance with Sub-Clause 9.1 and 9.2 of these Conditions. This shall not relieve the Contractor from his obligations and liabilities, to make good that may be detected during the final Defects Liability Period.
- iii. The balance amount shall be released to the Contractor, after the expiry of the final Defect Liability Period for the entire Work.
- Guarantees and Warranties**      **4.2.3**
- Within 30 days of the date of Letter of Acceptance of the Tender, the Contractor shall submit to the Employer:
- (a) An Undertaking in the approved format from a parent company, the identity of which shall have been submitted in writing to the Employer prior to acceptance of the Tender and against which the Employer shall have raised no objection.
- (b) A written Guarantee in the approved format from a parent company, the identity of which shall have been submitted in writing to the Employer prior to acceptance of the Tender and against which the Employer shall have raised no objection.
- (c) A warrantee in the approved format from the Contractor.
- The formats of Performance Guarantee, Parent Company Undertaking, Parent Company Guarantee and Contractor's Warranty are provided in the Schedule to Special Conditions of Contract.
- In the event that the Contractor shall comprise two or more members, corporations acting in partnership, joint venture, consortium or otherwise each such member or corporation shall submit a parent company Undertaking and Guarantee.
- Representation on Works**      **4.3**
- Unless the Contractor's Representative is named in the Contract, the Contractor shall, within 14 days of Notice to Proceed, submit to the Engineer for consent the name and particulars of the person the Contractor proposes to appoint. The Contractor shall not revoke the appointment of the Contractor's Representative without the prior consent of the Engineer. The Contractor's Representative so nominated shall have full authority to act on behalf of the Contractor. The Contractor's Representative shall give his whole time to directing the preparation of the Construction and/or Manufacture Documents and the execution of the Works. The Contractor's Representative shall receive (on behalf of the Contractor) all notices, instructions, consents, approvals, certificates, determinations and other communications under the Contract. Whenever the Contractor's Representative is to be absent from the Site, a suitable replacement person shall be appointed, with prior consent of Engineer.

Failure on part of the Contractor to comply with these provisions shall constitute a breach of Contract leading to action under Sub Clause no. 13.2.

The Contractor's Representative may delegate any of his powers, functions and authorities to any competent person, and may at any time revoke any such delegation. Any such delegation or revocation shall be in writing and shall not take effect until the Engineer has given prior consent thereto. The Contractor's Representative and such persons shall be fluent in the language of day to day communication and the Contractor shall be bound by and fully liable for the acts or omissions of the Contractor's Representatives or any of his employees and/or delegates, agents or nominees.

**Facilities for  
and  
Co-ordination  
with Others.**

**4.4**

The Contractor shall not impede and shall afford all necessary facilities, access and/or services to the Employer, Engineer, Designated Contractors, utility undertakings, other relevant authorities and other contractors (whether employed by the Employer or not) who are carrying out on, or in the vicinity of, the Site, works not included in the Contract but forming part of the Project:

a The Contractor shall take all reasonable steps to ensure that the Works are co-ordinated and integrated with the Design of Temporary works, manufacture, installation execution and testing of such other works and shall in particular (but without limitation):

- (i) comply with any direction which the Engineer may give for the integration of the Design of Temporary works with the design of any other part of the Project;
- (ii) consult, liaise and co-operate with those responsible for carrying out such other works, including where necessary, in the preparation of the respective designs, the preparation of co-ordinated programmes, method statements, co-ordination drawings and specifications together with arrangements of service priorities and zoning;
- (iii) Participate in Integrated Testing and Commissioning of the system with Designated Contractors and demonstrate to the satisfaction of the Engineer that the Works have been designed and constructed in a manner compatible with the works of Designated Contractors.

b The Contractor shall undertake Design of Temporary works co-ordination with other contractors who are carrying out works forming part of the Project as described in the Employer's Requirements. At the end of each such co-ordination period, the Contractor and the other contractor with whose works the interface period refers shall jointly state in writing that their design co-ordination activities are complete and that their respective designs are integrated and can be finalised without interference with each other's designs or the designs with which their designs have already been integrated. A copy of this joint written statement shall be provided to the Engineer within 7 days of the end of the said design co-ordination period. Unless and until copies of all relevant and necessary design co-ordination statements have been submitted to the Engineer, the Engineer shall be entitled to suspend any review or further review of the Contractor's or the

other contractor's design submissions. Such suspension shall not be grounds for the Contractor to claim nor shall be entitled to receive an extension of time or additional payments.

- c The Contractor shall share within the Site, staging, storage and unloading areas for the use of Designated Contractors, if any, who are undertaking track work, fare collection system, supply, testing and commissioning of Rolling Stock, escalators, lifts, signalling and telecommunications and traction power installation works, etc. Separate locations shall be provided for each such contractor. The exact size and location of these staging, storage and unloading areas, and the commencement date shall be co-ordinated and agreed during the design interface period with each Designated Contractor.
- d Any other contract which depends for its execution on the Contract or upon which the Contract is dependent for its own execution shall be identified by the Engineer as a "Designated Contract". The Contractor shall provide attendance on Designated Contractors in accordance with the Employer's Requirements and as instructed by the Engineer. The identity of the contractor for a Designated Contract may not be known before the execution of the Contract but this shall not be a ground for the Contractor to object to the subsequent appointment of a Designated Contractor.
- e The Contractor shall in accordance with the requirements of the Engineer co-ordinate his own Works with that of Designated Contractors through Co-ordinated Installation Programme (CIP) stated in the Employer's Requirements, or as the Engineer may require, and shall afford the Designated Contractors all reasonable opportunities for carrying out their works.
- f The Contractor shall afford all reasonable opportunities, for carrying out their work, to other contractors employed by the Employer and their workmen respectively and the workmen of the Employer who may be engaged on or near the Site of any work, ancillary to the Works, but, not included in the Contract and shall not cause them inconvenience.
- g If the Contractor shall suffer delay by reason of failure by any Designated Contractor to meet the specified installation interfacing and co-ordination, completion dates, which delay shall be caused otherwise than by fault of the Contractor, or, if compliance with sub-clause (f) herein shall involve the Contractor in delay beyond that which could be reasonably foreseen by an experienced contractor at the time of tender, then the Engineer shall take such delay into account in determining any extension of time to which the Contractor is entitled under the Contract.
- h It shall be the responsibility of the Contractor to ensure that the full extent of the Works under the Contract and the works to be carried out by Designated Contractors within the Works or, in, on, under, through and over the Site are co-ordinated and integrated in their design, manufacture, installation and construction. Such responsibility shall neither be mitigated nor in any other way affected by virtue of similar responsibilities being placed on other contractors.

The Contractor shall be deemed to have made adequate allowance in the Contract Price and in the Works Programme in respect of these obligations.

If any act or omission of the Contractor whether directly or indirectly results in the delay in the execution of the works of a Designated Contractor, the Contractor, in addition to his liability in respect of liquidated damages if they become due, shall pay to the Employer, or the Engineer may deduct from Interim Payment Certificates such amount as the Engineer shall have certified in respect of additional payments or costs to the Designated Contractor in respect of such delay.

**Sub Contractors 4.5**

The Contractor shall not sub-contract the whole of the Works. Unless otherwise stated in the Special Conditions of Contract:

- a) the Contractor shall not be required to obtain consent for purchases of Materials which are in accordance with the standards specified in the Contract or provisions of labour or for the sub-contracts for which the Sub-contractor is named in the Contract;
- b) the prior consent of the Engineer shall be obtained for other proposed Sub-contractors;
- c) not less than 28 days before the intended date of each Sub-contractor commencing work, the Contractor shall notify the Engineer of such intention; and
- d) the Contractor shall give fair and reasonable opportunity for contractors in India to be appointed as Sub-contractors.

The Contractor shall be responsible for observance by all Sub-contractors of all the provisions of the Contract. The Contractor shall be responsible for the acts or defaults of any Sub-contractor, his representatives or employees, as fully as if they were the acts or defaults of the Contractor, his representatives or employees and nothing contained in Sub-clause (a) of clause 4.5 shall constitute a waiver of the Contractor's obligations under this contract. The Contractor shall provide to the Engineer of sub contracts upon request of the Engineer. The Contractor shall Endeavour to resolve all matters and payments amicably and speedily with the sub-contractors.

**Assignment of Contractor's and Sub-contractor's Obligations 4.6**

The Contractor shall not assign a right or benefit under the Contract without first obtaining Employer's prior written consent, otherwise than by:

- a. a charge in favour of the Contractor's bankers of any money due or to become due under the Contract, or
- b. assignment to the Contractor's insurers (in cases where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.

If a Subcontractor's obligations extend beyond the expiry date of Defects Liability Period then the Contractor shall assign the benefits of such obligations to the Employer.

In the event that a sub-contractor of any tier provides to the Contractor or any other sub-contractor a warranty in respect of Plant, Materials or services supplied in connection with the Works, or undertakes a continuing obligation of any nature whatsoever in relation to such Plant, Materials or services (including without limitation an obligation to maintain stocks of spare parts)

		extending for a period exceeding that of the Defects Liability Period or where there is more than one Defects Liability Period exceeding that of the latest Defects Liability Period, and if the Engineer so directs in writing within 21 days of the expiry of the Defects Liability Period or the latest Defects Liability Period (as the case may be), the Contractor shall immediately assign or obtain the assignment of the benefit of such warranty or obligation to the Employer or at the direction of the Employer, to any third party referred to in Sub-Clause 2.4.
<b>Compensation for Breach</b>	<b>4.7</b>	Any breach of Sub-clauses 4.5 to 4.6 shall entitle the Employer to rescind the Contract under Sub Clause 13.2 of these conditions and also render the Contractor liable for loss or damage arising due to such termination.
<b>Setting Out</b>	<b>4.8</b>	
<b>Accurate Setting Out</b>	<b>4.8.1</b>	<p>The Contractor shall be responsible for</p> <ul style="list-style-type: none"> <li>(a) the accurate setting out of the Works in relation to the original points, lines and levels of reference given by the Engineer in writing</li> <li>(b) the correctness of position, levels, dimensions and alignments of all parts of the Works</li> <li>(c) the provisions of all necessary instruments, equipment, apparatus and labour in connection with the foregoing responsibilities</li> <li>(d) Carefully protecting and preserving all bench marks, sight rails, pegs and other things used in setting out the Works</li> </ul> <p>The checking of any setting-out or of any line or level by the Engineer shall not in any way relieve the Contractor of his responsibility for the accuracy or correctness thereof and the Contractor shall carefully protect and preserve all bench-marks, sight-rails, pegs and other things used in setting out the Works.</p>
<b>Errors in Setting out</b>	<b>4.8.2</b>	If at any time during the execution of the Work, an error appears in the positions, levels, dimensions or alignment of any part of the Works, the Contractor on being required to do so by the Engineer shall, at Contractor's cost, rectify such error to the satisfaction of the Engineer.
<b>Site Data</b>	<b>4.9</b>	<ul style="list-style-type: none"> <li>i. The Employer shall have made available to the Contractor with the Tender documents such relevant data in Employer's possession on Geo technical data and sub-surface conditions. The accuracy or reliability of the data/studies/reports and of any other information supplied at any time by the Employer or Engineer is not warranted with respect to the viability of his Design of Temporary works and execution of Works and the Contractor shall be responsible for interpreting all such data any error, discrepancies. The Contractor shall conduct further investigations considered necessary by him at his own cost and any error, discrepancies if found in Employer's data at any stage will not constitute ground for any claim for extra time and costs.</li> <li>ii. The Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works.</li> <li>iii. The Contractor shall also be deemed to have inspected and examined the Site, its surroundings, the above data and other available information</li> </ul>

with respect to the viability of his Design of Temporary works and execution of Works and to have satisfied himself before submitting the Tender, as to all the relevant matters including without limitation:

- (a) the form and nature of the Site, including the sub-surface conditions;
- (b) the hydrological and climatic conditions;
- (c) the extent and nature of the work, Plant, and Materials necessary for the execution and completion of the Works and the remedying of any defects;
- (d) the applicable laws, procedures and labour practices
- (e) The Contractor's requirement for access, accommodation, facilities, personnel, power, transport and other services.
- (f) the risk of injury or damage to property adjacent to the Site and to the occupiers of such property or any other risk.

<b>Sufficiency of accepted Contract Amount</b>	<b>4.10</b>	The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Contract Price. Unless otherwise stated in the Contract, the Contract Price shall cover all his obligations under the Contract and all things necessary for the proper design of temporary works execution and completion of the Works, testing and commissioning (including Integrated Testing and Commissioning) and remedying of any defects.
<b>Access Route</b>	<b>4.11</b>	The Contractor shall be deemed to have satisfied himself as to the suitability and availability of the access routes he chooses to use. The Contractor shall (as between the Parties) be responsible for the maintenance of access routes. The Contractor shall provide at his cost signs or directions, which he may consider necessary or as instructed by Engineer for the guidance of his staff, labour and others. The Contractor shall obtain any permission concessions and related easement right that may be required from the relevant authorities for the use of such routes, signs and directions. The Employer will not be responsible for any claims which may arise from the use or otherwise of any access route. The Employer does not guarantee the suitability or availability of any particular access route, and will not entertain any claim for any non-suitability or non-availability for continuous use during construction of any such route.
<b>Rights of way and Facilities</b>	<b>4.12</b>	The Employer will acquire and provide land for Permanent Works and right of way (within KASEZ's land) for access thereto over routes established by the Contractor. The Contractor shall bear all cost and charges for special or temporary rights of way which he may require including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facility outside the Site which he may require for the purpose of the Works. The Employer reserves the right to make use of these service roads/rights of way for itself or for other contractors working in the area, as and when necessary without any payment to the Contractor.
<b>Programmes</b>	<b>4.13</b>	The Contractor shall submit a detailed programme to the Engineer after receipt of the Letter of Acceptance but not later than 28 days from the date of receipt of Letter of Acceptance. The Contractor shall also submit a revised programme whenever the Engineer finds that the previous programme is inconsistent with actual progress or with the Contractor's obligations.

Each programme shall include the following:

- a the order in which the Contractor proposes to carry out the Works (including each stage of Design of Temporary works, procurement, manufacture, delivery to Site, construction, erection, testing and commissioning),
- b all major events and activities in the production of Construction or Manufacture Documents; and
- c the sequence of all tests specified in the Contract including Integrated Testing and Commissioning.

Unless otherwise stated in the Contract, the programmes shall be developed using precedence networking techniques, showing early start, late start, early finish and late finish dates.

No significant alteration to the programmes, or to such arrangements and methods, shall be made without obtaining consent of the Engineer. If the progress of the Works does not conform to the programmes, the Engineer may instruct the Contractor to revise the programmes, showing the modifications necessary to achieve completion within the Time for Completion.

Consent by the Engineer to Programmes shall not relieve the Contractor of any of his responsibilities or obligations under the Contract. If the Programmes indicate that a Key Date has not, or will not be met, it shall not, by itself entitle the Contractor to an extension of time in relation to such Key Date.

**Progress Reports**                      **4.14**                      The Contractor shall submit to the Engineer by the end of each calendar month his Monthly Progress Report which shall, amongst other things, highlight actual or potential departures from the Works Programmes and/or the Design of Temporary works Submission Programme and state the measures which the Contractor proposes to take in order to make good or reduce any delay.

If requested by the Engineer, the Contractor shall submit to the Engineer, at weekly intervals, a written report as to the progress of off-Site manufacture of Plant, and Materials.

The Contractor shall also submit to the Engineer such other reports as may reasonably be required by him or any relevant authority or public body.

The progress reports shall conform to the Employer's Requirements.

**Contractor's Equipment**                      **4.15**

- 4.15.1** All Contractor's Equipment and Temporary Works provided by the Contractor shall, when brought on to the site, be deemed to be exclusively intended for execution of the Works and not be removed without the consent in writing of the Engineer. Such consent shall not be unreasonably withheld or delayed
- 4.15.2** Upon completion of the Works the Contractor shall remove from the Site all the said Contractor's Equipment, Temporary works and his unused materials
- 4.15.3** The Employer shall not at any time be liable for the loss or damage to any of the Contractor's Equipment, Temporary Works or materials save as mentioned in Clause 14.1
- 4.15.4** In respect of any Contractor's Equipment which the Contractor shall have



imported for the purpose of the Works, the Employer may assist the Contractor, where required, in procuring any necessary Government consent for re-export of the same after the completion of the Works.

- 4.15.5** The Employer may assist (but is not obliged to) the Contractor, where required, in obtaining clearance through the Customs of Contractor's Equipment, materials and other things required for the Works.

- Safety of Works 4.16** The Contractor shall throughout the execution of the Works including the carrying out of any testing, commissioning (including Integrated Testing and Commissioning ), or remedying of any defect:
- a. take full responsibility for the adequacy, stability, safety and security of the Works, Plant, Contractor's Equipment, Temporary Works, operations on Site and methods of manufacture, installation, construction and transportation;
  - b. have full regard for the safety of all persons on or in the vicinity of the Site (including without limitation persons to whom access to the Site has been allowed by the Contractor), comply with all relevant safety regulations, including provision of safety gear, and insofar as the Contractor is in occupation or otherwise is using areas of the Site, keep the Site and the Works (so far as the same are not completed and occupied by the Employer) in an orderly state appropriate to the avoidance of injury to all persons and shall keep the Employer indemnified against all injuries to such persons.
  - c. provide and maintain all lights, guards, fences and warning signs and watchmen when and where necessary or required by the Engineer or by laws or by any relevant authority for the protection of the Works and for the safety and convenience of the public and all persons on or in the vicinity of the Site; and
  - d. where any work would otherwise be carried out in darkness, ensure that all parts of the Site where work is being carried out are so lighted as to ensure the safety of all persons on or in the vicinity of the Site and of such work.

Contractor is required to take note of all the necessary provisions in Employer's Safety, Health and Environment Manual (SHE Manual) and the Contractor's price shall be inclusive of all the necessary costs to meet the prescribed safety standards as specified in the Special Conditions of Contract. In the case, the Contractor fails in the above; the Employer may provide the necessary arrangements and recover the costs from the Contractor.

- Protection of the Environment 4.17** The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to avoid injury, damage and nuisance to people and property resulting from pollution, noise and other results of his operations. The Contractor shall ensure that air emissions, surface discharges and effluent from the Site during the Contract Period shall not exceed the values indicated in the Employer's Requirements, and shall not exceed the values prescribed by law. The Contractor shall conform to the Employer's Requirements and shall indemnify the Employer against any liability or damages or claims arising out of his operations. The Contractor shall be responsible and liable for any stoppage, closure or suspension of the works due to any contravention of statutory requirements relating to the protection of the environment and shall indemnify and keep indemnified the Employer in this regard.

The Contractor's Site Environmental Plan shall be developed from his

Employer's Safety, Health and Environmental Manual (SHE Manual), as per the Employer's Requirements and the Special Conditions of Contract.

<b>Electricity Water and Gas</b>	<b>4.18</b>	The Contractor shall be responsible for making his own arrangements at his own cost to obtain supply of water, electricity or gas for the Works. The Employer where feasible may at his discretion assist the Contractor in giving recommendatory letters etc.
<b>Tools, Plants And Equipment Supplied By The Employer</b>	<b>4.19</b>	<p>Except for any specific item mentioned in the Special Conditions of Contract or in Employer's Requirements, the Contractor shall provide all tools, plants and equipment for the Works. In respect of such exceptional tools, plants or equipment committed to be provided by the Employer under terms and conditions specified in the Special Conditions of Contract, the Contractor shall take all reasonable care and shall be responsible for all damages or loss caused by him, his representatives, sub-contractors or his workmen or others while they are in his charge.</p> <p>On completion of the Works, the Contractor shall hand over the unused balance of the tools, plants and equipments to the Employer in good order and repair, fair wear and tear expected, and shall be responsible for any failure to account for the same or any damage done thereto.</p> <p>The decision of the Engineer as to the amount recoverable from the Contractor on this account shall be final and binding.</p>
<b>Employer's Materials</b>	<b>4.20</b>	Except for items mentioned in the Special Conditions of Contract, the Contractor shall provide all materials for the Works. Material if any, to be provided by Employer will be done only in a phased manner as per pre-approved program, against a Bank Guarantee for the value of the Material and at terms and conditions for issue, upkeep, usage, return and recovery of such Materials as specified in Special Conditions of Contract.
<b>Sheds, Stores, Yards</b>	<b>4.21</b>	It shall be the responsibility of the Contractor to provide at his own expense the required sheds, store houses, and yards for both Permanent and Temporary Works and provide free access to the Engineer and the Engineer's Representative who will have right of inspection including that of instructing the Contractor to remove a particular material from the stores and not to use the same on the Works.
<b>Temporary Works</b>	<b>4.22</b>	All temporary works necessary for the proper execution of the Works shall be provided and maintained by the Contractor at his cost and subject to the consent of the Engineer shall be removed by Contractor at his own expense when they are no longer required and in such manner as the Engineer shall direct. In case the Contractor fails to remove the temporary works on completion the Engineer is authorized to get the same removed and recover the cost thereof from the Contractor.
<b>Unforeseeable Physical Conditions</b>	<b>4.23</b>	<p>In this Clause "physical conditions" means natural physical conditions, which the Contractor encounters at Site while executing the Works excluding climatic conditions.</p> <p>If, during the execution of the Works, the Contractor shall encounter physical conditions, which, in his opinion, could not have been reasonably foreseen by</p>

an experienced Contractor, the Contractor shall forthwith give written notice thereof to the Engineer and if, in the opinion of the Engineer, such conditions could not have been reasonably foreseen by an experienced Contractor, then the Engineer shall certify and the Employer shall pay reasonable additional cost to which the Contractor shall have been put by reason of such conditions in the following cases:

- a. for complying with any instruction which the Engineer may issue to the Contractor in connection therewith, and
- b. for any proper and reasonable measures approved by the Engineer which the Contractor may take in the absence of specific instructions from the Engineer, as a result of such conditions or obstructions being encountered.

The decision of the Engineer as to the additional cost shall be final and binding.

**Access for Engineer**      **4.24**      The Contractor shall allow at all times the Engineer or the Engineer's assistant or any other person authorised by the Engineer access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured, fabricated and/or assembled for the Works. The Contractor shall ensure that sub contracts if any shall contain provisions entitling the Engineer or any person authorised by him to have such access.

**Access Road and Way Leaves**      **4.25**      Providing access roads/ way leaves to the site will be Contractor's responsibility.

**Contractor to keep Site Clear**      **4.26**      During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required.

On completion of the works, the Contractor shall clear away and remove from site all Constructional Plant, surplus material and Temporary Works. He should leave the whole of the site and Works in a clean, tidy and workman like condition to the satisfaction of the Engineer.

On completion of Work the Contractor shall also clear away the labour camps, hutments and other related installations and restore the land to its original condition to the satisfaction of the Engineer within 45 days of the physical completion of Work. The cost on account of delay in return of land and reinstatement of original condition within the stipulated time as determined by Engineer will be recovered from the Contractor's dues.

No final payment in settlement of the accounts for Works shall be made till, in addition to any other condition necessary for such final payment, site clearance and clearances of labour camps etc shall have been effected by him. Such clearance may be made by the Engineer through any other agency at the expense of the Contractor in the event of the Contractor's failure to comply with this provision within 7 days after receiving notice to that effect from the Engineer. All expenses on such removal / clearance shall be debitable to the Contractor as loans due from the Contractor to the Employer, and the

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		Employer shall be competent to recover the same from Contractor's on-account or final bills, or from Performance Security amount or from any other amount payable to the Contractor in any other Contract.
<b>Security of the Site</b>	<b>4.27</b>	The Contractor shall be wholly responsible for security of site and Works. Unless otherwise stated in Special Conditions of Contract a the Contractor shall be responsible for keeping unauthorised persons off the Site; and b Authorized persons shall be limited to the Employees of the Contractor, Subcontractor or persons authorized by the Engineer.
<b>Contractor's Operations on Site</b>	<b>4.28</b>	The Contractor shall confine his operations to the Site, and to any additional area which may be provided to the Contractor and agreed by the Engineer as working areas. The Contractor shall take all necessary precautions to keep his personnel and equipment within the Site and such additional areas, and to keep and prohibit them from encroaching on adjacent land.
<b>Discoveries</b>	<b>4.29</b>	All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest, in addition to oil and other minerals discovered on the Site shall be the absolute property of the Government of India and the Contractor shall take all the necessary precautions to prevent its workmen or its sub-contractors' workmen or any other person from removing or damaging any such article or thing and shall immediately upon discovery thereof, acquaint the Engineer of such discovery and carry out the instructions of the Engineer.
<b>Publicity</b>	<b>4.30</b>	The Contractor shall not publish or otherwise circulate alone or in conjunction with any other person, any articles, photographs or other materials relating to the Contract, the Site, the Works, the Project or any part thereof, nor impart to the press, or any radio or television network any information relating thereto, nor allow any representative of the media access to the Site, Contractor's Works Areas, or off-Site place of manufacture, or storage except with the permission, in writing, of the Employer. The Contractor shall ensure that his sub-contractors of any tier shall be bound by a like obligation and shall, if so required by the Employer, enforce the same at his own expense. The provisions of this Sub-Clause shall not exempt the Contractor from complying with any statutory provision in regard to the taking and publication of photographs.
<b>Disclosure Of Relationship</b>	<b>4.31</b>	If the Contractor or any partner of the Contractor or Director of the Contractor's company is closely related to any of the Officers of the Employer or the Engineer, or alternatively, if any close relative of an officer of the Employer or the Engineer has financial interest / stake in the Contractor's firm, the same shall be disclosed by the Contractor at the time of filing his tender. Any failure to disclose the interest involved, shall entitle the Employer to rescind the Contract, without payment of any compensation to the Contractor. The Contractor shall note that he is prohibited from developing such interest during the Contract period.
<b>Use Of Explosives</b>	<b>4.32</b>	Explosives if required on the Work shall be used by Contractor only with prior Approval of the Engineer and in the manner and to the extent permitted by him. The Contractor shall be responsible for safe upkeep of such explosives in a special magazine as per the law on explosives as well as for taking all the

precautions in the usage of the explosives with proper license and at Contractor's cost, sole risk and responsibility. The Contractor shall hold the Employer harmless and indemnify for the above.

<b>Corrupt or fraudulent practices</b>	<b>4.33</b>	
	<b>4.33.1</b>	<p>The Employer requires that the Tenderers/Contractors observe the highest standards of ethics during Tendering and execution of this Contract. In pursuance with this policy, the Employer:</p> <ol style="list-style-type: none"> <li>a. defines, for the purpose of these provisions, the terms set forth below as follows: <ol style="list-style-type: none"> <li>(i) "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to Employer, Engineer or any of their employees, influence in the procurement process or in Contract execution; and</li> <li>(ii) "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 Employer, and includes collusive practice among Tenderers (prior to or after tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.</li> </ol> </li> <li>b. Will reject the Tender for the Work or rescind the Contract if the Employer determines that the Tenderer/Contractor has engaged in corrupt or fraudulent practices.</li> <li>c. Will declare a Contractor ineligible, either indefinitely or for a stated period of time, to be awarded a Contract/s if he at any time determines that the Contractor has engaged in corrupt or fraudulent practices in competing for, or in executing the Contract.</li> </ol>
<b>Compensation to Contractor on rescission of Contract under this clause</b>	<b>4.33.2</b>	In the event of rescission of Contract under Sub-clause 4.33.1, the Contractor shall not be entitled to any compensation whatsoever, except for the work done up to the date of rescission.
<b>Quality Assurance</b>	<b>4.34</b>	<p>Unless otherwise stated in Special Conditions of Contract and/or Employer's Requirement, the Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. Such system shall be in accordance with the details stated in the Contract. Compliance with the quality assurance system shall not relieve the Contractor of his duties, obligations or responsibilities.</p> <p>Details of all procedure and compliance documents shall be submitted to the Engineer for his consent before each Design of Temporary works and execution stage is commenced.</p>
<b>Work by Persons Other</b>	<b>4.35</b>	If the Contractor shall fail to carry out any work required under the Contract or refuse to comply with any instruction or order given by the Engineer in

<b>than Contactor</b>		<p>accordance with the Contract within a reasonable time, the Engineer may give the Contractor 14 days' notice in writing to carry out such work or comply with such instruction. If the Contractor fails to comply with such notice, the Employer shall be entitled to carry out such work or instruction by his own workmen or by other contractors. Without prejudice to any other right or remedy, all additional expenditure properly incurred by the Employer in having such work or instruction carried out shall be recoverable by the Employer from the Contractor.</p> <p>If by reason of any accident or failure or other event occurring to, in, or in connection with the Works any remedial or other work shall, in the opinion of the Engineer, be urgently necessary and the Contractor is unable or unwilling at once to do such remedial or other work, the Engineer may authorise the carrying out of such remedial or other work by a person other than the Contractor. If the remedial or other work so authorised by the Engineer is work, which, in the Engineer's opinion, the Contractor was liable to do under the Contract, all expenses properly incurred in carrying out the same shall be recoverable by the Employer from the Contractor. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof in writing.</p>
<b>Confidentiality of Information</b>	<b>4.36</b>	<p>The Contractor shall not use or divulge, except for the purpose of the Contract or with the written permission of the Employer, any information relating to the Works or the Project provided in the Contract or otherwise provided by the Employer, or the Engineer. The Contractor shall ensure that his sub-contractors of any tier shall be bound by a like confidentiality undertaking. The Employer and the Engineer and any third party to whom an assignment has been made in accordance with Sub-clause 2.4 may use any information provided by the Contractor in accordance with the Contract. The Employer shall use reasonable Endeavour's to ensure that the Engineer and any third party- referred to in aforesaid Sub-Clause 2.4 shall not, divulge such information except for any purpose connected with the Contract</p>
	<b>5</b>	<b>Design of Temporary works</b>
<b>General Obligations</b>	<b>5.1</b>	<p>The Contractor shall Design of Temporary works and provide all necessary specifications for the Works in accordance with the site plans and Employer's requirements. Any Design of Temporary works detail, plan, drawing, specifications, notes, annotations, and information required shall be provided in such sufficient format, details, extent, size and scale and within such time as may be required to ensure effective execution of Works and/or as otherwise required by the Engineer.</p> <p>The Contractor holds himself, and his designers as having the experience and capability necessary for the Design of Temporary works. The Contractor undertakes that the designers shall be available to attend discussions with the Engineer at all reasonable times during the Contract Period.</p> <p>The designer shall be the same entity as proposed by the Contractor at the time of pre-qualification, unless otherwise approved by the Employer. The Contractor shall furnish Designer's Warranty in the format given in schedules to Special Conditions of Contract.</p>
<b>Contractor's</b>	<b>5.2</b>	<p>a. The Contractor shall be fully responsible, for the suitability, adequacy,</p>

**warranty of  
Design of  
Temporary  
works**

- integrity, durability and practicality of the Contractor's proposal.
- b. The Contractor warrants that the Contractor's Proposals meet the Employer's Requirements and is fit for the purpose thereof. Where there is any inadequacy, insufficiency, impracticality or unsuitability in or of the Employer's Requirements or any part thereof, the Contractor's Proposal shall take into account, address or rectify such inadequacy, insufficiency, impracticality or unsuitability at Contractor's own cost.
  - c. The Contractor warrants that the Works have been or will be designed, manufactured, installed and otherwise constructed and to the highest standards available using proven up-to-date good practice
  - d. The Contractor warrants that the Works will, when completed, comply with enactments and regulations relevant to the Works
  - e. The Contractor warrants that the Design of Temporary works of the Works and the manufacture of plant have taken or will have taken full account of the effects of the intended manufacturing and installation methods, Temporary Works and Contractor's Equipment
  - f. The Contractor shall also provide a guarantee from the Designer for the Design of Temporary works for suitability, adequacy, practicality of Design of Temporary works for Employer's Requirements
  - g. The Contractor shall indemnify the Employer against any damage, expense, liability, loss or claim, which the Employer might incur, sustain or be subject to arising from any breach of the Contractor's Design of Temporary works responsibility and/or warranty set out in this Clause.
  - h. The Contractor further specifies and is deemed to have checked and accepted full responsibility for the Contractor's Proposal and warrants absolutely that the same meets the Employer's Requirements:
    - i. Notwithstanding that such Design of Temporary works may be or have been prepared, developed or issued by the Employer, any of the Contractor's consultants, his sub contractors and/or his qualified personnel/persons or cause to be prepared, developed or issued by others.
    - ii. Notwithstanding any warranties, guaranties and/or indemnities that may be or may have been submitted by any other person.
    - iii. Notwithstanding that the same have been accepted by the Engineer.

The Contractor shall be fully responsible for the Plants, Materials, goods, workmanship, preparing, developing and coordinating all Design of Temporary works Works to enable that part of the Works to be constructed and/or to be fully operational in accordance with the Contract's requirements.

Apart from the Contractor, the above warranty shall also be applicable for his designer. This warranty shall be a part of his sub contract with the designer and should be made available at the time of signing of the Agreement.

No claim for additional payment or extension of time shall be entertained and/or the Contractor shall not be relieved from any obligation/liability under the Contract, for any delay, suspension, impediment to or adverse effect upon the progress of the Works due to any mistake, inaccuracy, discrepancy or omission in or between the Contractor's, the Definitive Design of Temporary works and the final design, or any failure by the Contractor to prepare any Design of Temporary works Data or submit the same to the Engineer in due time and the Contractor shall promptly make good any such defect at his own cost.

**Construction 5.3** The Manufacture Documents shall comprise the technical documents specified

**and/or  
Manufacture  
Documents**

in the Employer's Requirements, documents required to satisfy all regulatory approvals, documents described in Sub Clause 5.6 (As Built Document), and Sub Clause 5.7 (Operations and Maintenance Manuals). The Contractor shall prepare all Manufacture Documents in sufficient detail and shall also prepare any other document necessary to instruct the Contractor's personnel. The Engineer shall have the right to inspect the preparation of all these documents wherever they are being prepared.

Each of the Construction and/or Manufacture Documents shall, when considered ready for use, be submitted to the Engineer for pre-construction or pre-manufacture review. Unless otherwise stated in Employer's Requirements, each review by the Engineer shall not exceed 21 days, calculated from the date on which the Engineer receives the Manufacture Document.

The Engineer may during the review period, give notice to the Contractor that a Manufacture Document fails (to the extent stated) to comply with the Employer's Requirements, it shall be rectified, resubmitted and reviewed (and if specified, approved) in accordance with this Sub-Clause, at the Contractor's cost.

For each part of the Works, and except to the extent that the prior consent of the Engineer shall have been obtained:

- (a) In the case of a Construction and/or Manufacture Document which has (as specified) been submitted for the Engineer's approval
  - (i) The Engineer shall give notice to the Contractor that the Construction and/or Manufacture Document is provided with no objection, with or without comments, or that it fails (to the extent stated) to comply with the Contract
  - (ii) Execution of such part of the Works shall not commence until the Engineer has provided with no objection the Construction and/or Manufacture Document; and
  - (iii) The Engineer shall be deemed to have provided with no objection the Construction and/or Manufacture Document upon the expiry of the review periods for all the Construction and/or Manufacture Documents which are relevant to the Design of Temporary works and execution of such parts, unless the Engineer has previously notified otherwise in accordance with sub-paragraph (i)
- (b) construction and/or manufacture of such part of the Works shall not commence prior to the expiry of the review of the Construction and/or Manufacture Documents which are relevant to its Design of Temporary works and execution;
- (c) construction and/or manufacture shall be in accordance with such reviewed (and if specified, approved) Construction and/or Manufacture Documents; and
- (d) if the Contractor wishes to modify any Design of Temporary works or document which has previously been submitted for such pre-construction and/or pre-manufacture review, the Contractor shall immediately notify the Engineer, and based on Engineer's approval shall subsequently submit revised documents to the Engineer in accordance with the above procedure.

If the Engineer instructs that further Construction and/or Manufacture Documents are necessary for carrying out the Works, the Contractor shall promptly and at Contractor's cost prepare such documents,



Errors omissions, ambiguities, inconsistencies, inadequacies and other defects if found at any stage in construction or any operations manufacture documents, then shall be rectified by the Contractor at his own cost and any approval or consent or review (under this sub-clause or otherwise) by the Employer/Engineer of the Manufacture and Construction Documents under this Sub-clause shall not relieve the Contractor from any obligations or responsibility under the Contract.

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|---|------------|--|
| <b>Technical Standards and Regulations</b>        | <b>5.4</b> | The Design of Temporary works, the Construction and/or Manufacture Documents, the execution and the completed Works (including remedying of defects therein) shall comply with the specifications, technical standards, building construction, safety and environmental regulations and other standards specified in the Employer's Requirements applicable to the Works or defined by the applicable laws and regulations   |
| <b>Samples</b>                                    | <b>5.5</b> | <p>The Contractor shall submit at his own cost the following samples and relevant information to the Engineer for pre-construction and/or pre-manufacture review in accordance with the procedure for Construction and/or Manufacture Documents described in Sub-Clause 5.3:</p> <ul style="list-style-type: none"> <li>a manufacturer's standard samples of Materials,</li> <li>b samples (if any) specified in the Employer's Requirements.</li> </ul> <p>Each sample shall be labelled as to origin and intended use in the Works.</p>  |
| <b>As-Built Drawings and Documents</b>            | <b>5.6</b> | <p>The Contractor shall prepare, and keep up-to-date, a complete set of "as-built" records of the execution of the Works, showing the exact "as-built" locations, sizes and details of the Works as executed, with cross references to relevant specifications and data sheets. These records shall be kept on the Site and shall be used exclusively for the purposes of this Sub-Clause. Six copies shall be submitted to the Engineer prior to the commencement of the Tests on Completion.</p> <p>In addition, the Contractor shall prepare and submit to the Engineer "as-built drawings" of the Works, showing all Works as executed. The drawings shall be prepared as the Works proceed, and shall be submitted to the Engineer for his inspection. The Contractor shall obtain the consent of the Engineer as to their size, the referencing system, and other pertinent details.</p> <p>Prior to the issue of any Taking Over Certificate, the Contractor shall submit to the Engineer one microfiche copy, one full-size original copy and six printed copies of the relevant "as-built drawings", and any further Construction and/or Manufacture Documents specified in the Employer's Requirements. The Works shall not be considered to be completed for the purposes of Taking Over under Sub-Clause 9.1 until such documents have been submitted to the Engineer.</p> |
| <b>Intellectual Property Rights and Royalties</b> | <b>5.7</b> | The Contractor shall indemnify the Employer and the Engineer from and against all claims and proceedings on account of infringement (or alleged infringement) of any patent rights, registered designs, copyright, design, trademark, trade name, know-how or other intellectual property rights in respect of the Works, the Contractor's Equipment, machines, work method, or Plant, or Materials, or anything whatsoever required for the Works and from and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall pay all traffic surcharges and other royalties, licence fees, rent and other payments or   |

compensation, if any, for getting stone, sand, gravel, clay or other materials, machine, process, systems, work methods, or the Contractor's Equipment required for the Works. The Contractor shall, in the event of infringement of Intellectual Property Rights, rectify, modify or replace at his own cost the Works, Plant or materials or anything whatsoever required for the Works so that infringement no more exist or in the alternative shall procure necessary rights/license so that there is no infringement of Intellectual Property Rights.

The Contractor shall be promptly notified of any claim under this Sub- Clause made against the Employer. The Contractor shall, at his cost, conduct negotiations for the settlement of such claim, and any litigation or arbitration that may arise from it. The Employer or the Engineer shall not make any admission which might be prejudicial to the Contractor, unless the Contractor has failed to take over the conduct of the negotiations, litigation or arbitration within a reasonable time after having been so requested. In the event of the Contractor failing to act at the Engineer's notice, the Employer shall be at full liberty to deduct any such amount of pending claim from any amount due to the Contractor under this Contract or any other Contract.

Insofar as the patent, copyright or other intellectual property rights in any Plant, Design Data, plans, calculations, drawings, documents, Materials, know-how and information relating to the Works shall be vested in the Contractor, the Contractor shall grant to the Employer, his successors and assignees a royalty-free, non-exclusive and irrevocable licence to use and reproduce any of the works, designs or inventions incorporated and referred to in such Plant, documents or Materials and any such know-how and information for all purposes relating to the Works (including without limitation the design, manufacture, installation, reconstruction, Testing, commissioning, completion, reinstatement, extension, repair and operation of the Works) for the Employer's own use.

If any patent, registered design or software is developed by the Contractor specifically for the Works, the title thereto shall vest in the Employer and the Contractor shall grant to the Employer a non-exclusive irrevocable and royalty-free licence to use, repair, copy, modify, enhance, adapt and translate in any form such Software for Employer's own use.

If the Contractor uses proprietary software for the purpose of storing or utilising records the Contractor shall obtain at his own expense the grant of a licence or sub-licence to use such software in favour of the Employer and shall pay such licence fee or other payment as the grantor of such licence may require provided that the use of such software under the licence may be restricted to use relating to the Design of Temporary works, construction, reconstruction, manufacture, completion, reinstatement, extension, repair and operation of the Works or any part thereof.

The Contractor's permission referred to above shall be given, inter alia, to enable the Employer to disclose (under conditions of confidentiality satisfactory to the Contractor) programmes and documentation for a third party to undertake the performance of services for the Employer in respect of such programmes and documentation.

If any software is developed under the Contract or used by the Contractor for

the purposes of storing or utilising records over which the Contractor or a third party holds title or other rights, the Contractor shall permit or obtain for the Employer (as the case may require) the right to use and apply that Software free of additional charge (together with any modifications, improvements and developments thereof) for the purpose of the design, manufacture, installation, reconstruction, testing, commissioning, completion, reinstatement, extension, repair, modification or operation of the Works, or any part thereof, or for the purpose of any Dispute.

The Employer reserves the right to use other Software on or in connection with the Works.

## 6 Staff and Labour

### Engagement of Staff and Labour

6.1 The Contractor shall make his own arrangements for the engagement of staff and labour at his own cost. The Contractor shall, if required by the Employer, deliver to the Engineer or to his office, a return in detail, in such form and at such intervals as the Employer may prescribe, showing the number of labour employed in different categories by the Contractor on the Site.

### Rates of Wages and Conditions of Labour

6.2 Full compliance of statutory requirements apart, the Contractor shall pay rates of wages and observe conditions of labour not less favourable than those established for the trade or the industry where the work is carried out.

The Contractor shall make himself aware of all labour regulations and their impact on the cost and build up the same in the Contract Price. During the Contract Period no extra amount in this regard shall be payable to the Contractor, for whatsoever reason including any revision of rates payable to the labour due to revision of rates payable in Minimum Wages Act.

Labour provided by the Contractor, either directly or through sub-contractors, for the exclusive use of the Employer or the Engineer, shall, for the purpose of this Sub-Clause, be deemed to be employed by the Contractor.

In the event of default being made in the payment of any money in respect of wages of any person employed by the Contractor or any of its sub-contractors of any tier in and for carrying out of this Contract and if a claim therefor is filed in the office of the Labour Authorities and proof thereof is furnished to the satisfaction of the Labour Authorities, the Employer may, failing payment of the said money by the Contractor, make payment of such claim on behalf of the Contractor to the said Labour Authorities and any sums so paid shall be recoverable by the Employer from the Contractor.

### Persons in the service/retired of Employer/Engineer

- 6.3
- a) The Contractor shall not recruit or attempt to recruit staff and labour from amongst the Employer and the Engineer's personnel during the Contract period.
  - b) The Contractor either at the tendering stage or during construction stage will not employ any retired employee of Employer or Engineer of the Employer in any capacity unless such employee has completed at least two years post retirement period or has obtained the no-objection certificate from Employer for being employed with the Contractor. It will be responsibility of the Contractor to collect the Employer's no objection certification from such retired employee and submit the same back to the Employer.

		In case of non compliance of above, in addition to any or several of the courses, referred in Sub-clauses 13.2.1 and 13.2.2 being adopted by the Employer the Contractor on Termination of the Contract for the aforesaid reasons will have no claim whatsoever against the Employer except for actual value of the Work executed till the time of Termination.
<b>Labour Laws</b>	<b>6.4</b>	In dealing with labour and employees, the Contractor and his Sub-Contractors (including piece rate and petty Contractors) shall comply fully with all laws and statutory regulations pertaining to engagement, payment and upkeep of the labour in India.
<b>Working Hours</b>	<b>6.5</b>	The Contractor, if required, shall carry out work during night hours or in shifts with the approval of Engineer, unless specifically provided otherwise in the Contract. No increase in rates or extra payments shall be admissible for night work. The Contractor shall provide adequate lighting and safety arrangements.
<b>Facilities for Staff and Labour</b>	<b>6.6</b>	The Contractor shall provide and maintain all necessary accommodation and welfare facilities as stipulated in the Employer's Requirements for his (and his Sub-contractor's) staff and labour. The Contractor shall also provide the facilities specified in the Employer's Requirements, for the Employer's and Engineer's personnel. All accommodation shall be maintained in a clean and sanitary condition, by the Contractor at his cost.
<b>Health and Safety</b>	<b>6.7</b>	Precaution shall be taken by the Contractor to ensure the health and safety of his staff and labour. The Contractor shall, in collaboration with and to the requirements of the local health authorities, ensure that medical staff, first aid facilities, sick bay and ambulance service are available at the accommodation and on the Site at all times, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as per the Engineer's requirement and will ensure complete compliance with relevant clauses of Employer's Health, Safety and Environment Manual (SHE Manual). The Contractor's Site Safety Plan shall be developed from his Outline Safety Plan as per Employer's Requirements and SHE Manual of the Employer. The Contractor shall appoint a member of his staff at the Site to be responsible for maintaining the safety, and protection against accidents, of personnel on the Site. This person shall be qualified for his work and shall have the authority to issue instructions and take protective measures to prevent accidents.
<b>Contractor's Superintendence</b>	<b>6.8</b>	The Contractor shall provide all necessary superintendence during the Design of Temporary works and execution of the Works, and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. Such superintendence shall be provided by sufficient persons having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) for the satisfactory and safe execution of the Works.
<b>Contractor's Personnel</b>	<b>6.9</b>	The Contractor shall employ (or cause to be employed) only persons who are careful and appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or

cause to be removed) any person employed on the Site or Works, including the Contractor's Representative, who in the opinion of the Engineer:

- a. persists in any misconduct,
- b. is incompetent or negligent in the performance of his duties,
- c. fails to conform with any provisions of the Contract, or
- d. persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

**Preservation  
of Peace and  
orderly  
conduct**

- 6.10**
- 6.10.1** The Contractor shall be responsible for preservation of peace and orderly conduct at the site and its neighbourhood by Contractor's employees, Representatives, petty contractors, Sub Contractors etc. In case, deployment of a Special Police Force becomes necessary at or near Site, during the tenure of Works, the expenses for the same shall be borne by the Contractor.
- 6.10.2** The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his staff and labour, and to preserve peace and protection of persons and property in the neighbourhood of the Works against such conduct.

**Labour to be  
Contractor's  
Employee**

- 6.11** If, the Contractor directly or through petty contractors or Sub-Contractors supplies any labour to be used wholly or partly under the direct orders and control of the Engineer or the Employer, whether in connection with any work being executed by the Contractor or otherwise for the purposes of the Employer, such labour shall, for the purpose of this clause, be deemed to be persons employed by the Contractor

**Report of  
Accidents To  
Labour**

- 6.12** The Contractor shall be responsible for safety of all employees, employed by him on Works, directly or through petty contractors or Sub-Contractors, and shall report accidents to any of them, however, and wherever occurring on Works, to the Engineer and shall make every arrangement to render all possible assistance and to provide prompt and proper medical attention. The compensation for affected Workers or their relatives shall be paid by the Contractor in such cases with utmost expeditious in accordance with the Workmen's Compensation Act.

**Claim` on  
account of  
violation of  
Labour laws**

- 6.13** The Contractor shall be solely accountable for violation of any labour law by it, its petty contractors or Sub Contractors and will pay any such claim/damage to the authorities forthwith on demand. If any moneys shall, as a result of any instructions, directions or decisions from the Authorities or claim or application made under any of the labour laws or regulations, be directed to be paid by the Employer, such moneys shall be deemed to be moneys payable to the Employer by the Contractor and he will pay the same to the Employer forthwith on demand, without demur and without asking for any reasons/explanations from the Employer. On failure of the Contractor to repay the Employer any moneys paid or to be paid by it as aforesaid within seven days after the same shall have been demanded, the Employer shall be entitled to recover the amount from any moneys due or accruing to the Contractor under this or any other Contract with the Employer.

**7 QUALITY CONTROL**

<b>Manner of Execution</b>	<b>7.1</b>	All Plant and Materials to be supplied shall be manufactured, and all work to be done shall be executed, in the manner set out in the Contract. Where the manner of manufacture and execution is not set out in the Contract, the work shall be executed in a proper, workmanlike and careful manner, with properly equipped facilities and non-hazardous Materials, and in accordance with modern recognized good practice.
<b>Delivery to Site</b>	<b>7.2</b>	The Contractor shall be responsible for procurement, transport, receiving, unloading and safe keeping of all Plant, construction, Materials, Contractor's Equipment and other things required for the completion of the Works.
<b>Inspection</b>	<b>7.3</b>	<p>The Employer and the Engineer shall at all reasonable times</p> <ol style="list-style-type: none"> <li>a. have full access to all parts of the Site and to all places from which natural materials are being obtained, and</li> <li>b. during production, manufacture, fabrication and construction (at the site and elsewhere) be entitled to inspect, examine, measure and test the materials and workmanship, and to check the progress of manufacture, of all Plant and Materials to be supplied under the Contract.</li> </ol> <p>The Contractor shall give the Engineer full opportunity to carry out these activities including providing access, facilities, permissions and safety equipments. No such activity/inspection shall relieve the Contractor from any obligation or responsibility.</p>
<b>Testing</b>	<b>7.4</b>	<p>This sub- clause shall apply to all tests specified in the Contract.</p> <p>The Contractor shall provide all documents and other information necessary for all types of testing and such assistance, labour, materials, electricity, fuel, stores, apparatus and instruments as are necessary to carry out such tests efficiently.</p> <p>The Contractor shall agree, with the Engineer, the time and place for the testing of any Plant, Materials and other parts of the Works as specified in the Contract.</p> <p>The Engineer shall give the Contractor not less than 24 hours' notice of his intention to attend the tests.</p> <p>If the Engineer does not attend at the time and place agreed, or if the Contractor and the Engineer agree that the Engineer shall not attend, the Contractor may proceed with the tests, unless the Engineer instructs the Contractor otherwise. Such tests shall be deemed to have been made in the Engineer's presence.</p> <p>The Contractor shall promptly forward to the Engineer duly certified reports of the tests. If the Engineer has not attended the tests, he shall accept the readings as accurate. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect.</p>

The expense of conducting such Tests shall be borne by the Contractor. No such testing shall relieve the Contractor from any obligation or responsibility.

<b>Rejection</b>	<b>7.5</b>	<p>If, as a result of inspection, examination or testing, any Plant, Material, Design of Temporary works or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the same and by giving notice to the Contractor with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item after rectification complies with the Contract.</p> <p>If the Engineer requires such Plant, Material, Design of Temporary works or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If such rejection and retesting cause the Employer to incur costs, such costs shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due, or to become due, to the Contractor.</p>
<b>Liability after Inspection and Testing</b>	<b>7.6</b>	<p>The Contractor shall not be released from any liability or obligation under the Contract by reason of any such inspection or testing or witnessing of testing, or by the submission of reports of inspection or testing to the Engineer.</p>
<b>Ownership of Plant and Materials</b>	<b>7.7</b>	<p>Each item of Plant and Material shall become the property of the Employer, when it is delivered to Site or payment thereof, either in part or full, has been made. The Contractor shall however continue to bear the risk in respect of such items which continue to remain in his custody.</p>
<b>Cost of Employer's Attendance Including Travel</b>	<b>7.8</b>	<p>The Employer shall bear the costs of attendance including travel, boarding and lodging for the Employer, the Engineer or his assistant for the purposes of Sub-Clauses 7.3 and 7.4 above. The cost of attendance including travel, boarding and lodging for the Employer, Engineer or his assistants for the purpose of Sub-clause 7.5 shall be borne by the Contractor.</p>
<b>Covering up of Works</b>	<b>7.9</b>	
<b>Examination of work before covering up</b>	<b>7.9.1</b>	<p>No work or part of work shall be covered up or put out of view, without the prior approval of the Engineer or the Engineer's Representative.</p>

**Cost of uncovering the work already covered up**      **7.9.2**      The Contractor shall uncover any part or parts of the Works, or make openings in or through the same, as the Engineer may from time to time direct, and shall reinstate and make good such part or parts, to the satisfaction of the Engineer. If any such part or parts have been covered up, or put out of view after compliance with the requirement of Sub-clause 7.4 and the Works are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating and making good the same, shall be borne by the Employer, but if the Works are found to be defective, costs shall be borne by the Contractor.

In case after completion of a part of the Work, the part of Work is not fully consistent with the Employer's Requirements and there is no way to change the same, in that case, the same (provided it has no implication on safety and operation) shall be accepted only as a Contractor's deemed variation at lower negotiated price.

The decision of the Engineer in this regard shall be final and binding on the Contractor.

**Tests on Completion**      **7.10**

**Contractor's Obligations**      **7.10.1**

The Contractor shall carry out the Tests on Completion at his own cost in accordance with the Contract and shall provide the documents in accordance with Sub-Clauses 5.6 and 5.7. The Contractor shall give, to the Engineer, 21 days' notice of the date after which the Contractor will be ready to carry out the Tests on Completion. Unless otherwise agreed, such Tests shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

Unless otherwise stated in Special Conditions of Contract, the Tests on Completion shall be carried out in the following sequence

- (a) pre-commissioning test, which shall include appropriate instructions and ("dry" or "cold") functional tests to demonstrate that each item of the Plant and Work can safely undertake the next stage
- (b) Commissioning Test shall include the specified operational tests to demonstrate Works or Sections can operated safely and as specified under all available operating condition
- (c) trial operation which shall demonstrate that the Works or Section perform reliably and in accordance with the Contract

The Contractor at his own cost shall arrange all tools, equipments, gadgets, facilities or as deemed necessary by the Engineer for such tests, In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed the Tests on Completion described in sub-paragraphs (a), (b) or (c), the Contractor shall provide the Engineer and the Employer with a certified report of the results of all such Tests.



<b>Delayed Tests</b>	<b>7.10.2</b>	<p>If the Engineer opines that Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out such Tests within 21 days after the receipt of the notice. The Contractor shall carry out such Tests on such day or days as the Contractor may fix and of which he shall give notice to the Engineer.</p> <p>If the Contractor fails to carry out the Tests on Completion within 21 days, the Engineer may proceed with such Tests at the risk and cost of the Contractor. The Tests on Completion then shall be deemed to have been carried out in the presence of the Contractor and the results of such Tests shall be accepted as accurate.</p>
<b>Retesting</b>	<b>7.10.3</b>	<p>If the Works, or a part thereof, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 "Rejection" shall apply, and the Engineer or the Contractor may require such failed Tests and the Tests on Completion on any related work, to be repeated under the same terms and conditions.</p>
<b>Failure to Pass Tests on Completion</b>	<b>7.10.4</b>	<p>If the Works, or a part thereof, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 7.10.3, the Engineer shall be entitled to:</p> <ul style="list-style-type: none"> <li>(a) order further repetition of Tests on Completion under Sub-Clause 7.10.3;</li> <li>(b) reject the Works, or a part thereof, or a Section (as the case may be), in which event the Employer shall have the same remedies against the Contractor as are provided under Clause 13; or</li> <li>(c) issue a Taking Over Certificate if the Employer so requires. The Contract Price shall then be reduced by such amount as determined by the Engineer and as shall be appropriate to cover the reduced value to the Employer as a result of this failure. The Contractor shall then proceed in accordance with his other obligations under the Contract.</li> </ul>
<b>Integrated testing and system commissioning</b>	<b>7.11</b>	
<b>Integrated Testing</b>	<b>7.11.1</b>	<p>Tests on Completion shall also include Integrated Testing. The Contractor shall, following satisfactory completion of tests on his works, equipment, sub-systems or system, perform, at the direction of the Engineer, programme of tests to verify and confirm the compatibility and complete performance of his works, equipment, sub-systems or system with the works, equipment, sub-systems or system provided by others.</p>
<b>Compilation of Test Results</b>	<b>7.11.2</b>	<p>The results of the Integrated Testing and Commissioning shall be compiled and evaluated by the Engineer and the Contractor.</p>
<b>Retesting</b>	<b>7.11.3</b>	<p>If the Works, or a part thereof, or a Section, fail to pass the Integrated Testing and Commissioning, the Engineer shall require such failed Tests, to be repeated under the same terms and conditions. If such failure and retesting result from a default of the Contractor and cause the Employer to incur costs, the same shall be recoverable from the Contractor by the</p>

Employer, and may be deducted by the Employer from any monies due, or to become due, to the Contractor.

**Failure to Pass Test**      **7.11.4**      If the Works, or a part thereof, or a Section, fail to pass Integrated Testing and Commissioning and the Contractor in consequence proposes to make any adjustment or modification to the Works or a part thereof, or a section, the Engineer may, with the approval of the Employer, instruct the Contractor to carry out such adjustment or modification, at his own cost and to satisfy the requirements of Integrated Testing and Commissioning within such time as the Employer / Engineer may deem to be reasonable.

**Statutory Requirements**      **7.11.5**      The Contractor along with others shall carry out all statutory tests and trials, under the supervision of the Engineer, necessary for obtaining sanction of the competent authority for opening the system for public carriage of passengers as mentioned in the Special Conditions of Contract..

## **8 Commencement, Completion and Delay**

**Commencement of Works**      **8.1**      The Contractor shall commence the Works on the date specified in the Letter of Acceptance or if no date is specified in the Letter of Acceptance, on the date specified in the Notice to Proceed. Thereafter the Contractor shall proceed with due diligence, without delay, and in accordance with the programme or any revised or modified programme of the Works. Time is the essence of Contract and time for Completion shall run from the date the Contractor is to commence the Works under this Clause.

The Contractor shall not commence the construction, manufacture or installation of the Works or of any part of the Works unless and until the Engineer has endorsed the relevant Working Drawings in accordance with the Employer's Requirements.

**Time for Completion**      **8.2**      Time is the essence of Contract and will remain so at all times during the pendency of the Contract including the extended period of Contract. The Contractor shall ensure defect free completion and have passed the tests on Completion, including Integrated Testing and Commissioning of the whole of the Works and/or parts thereof before the same is taken over by the Employer.

**Delay**      **8.3**      In case of delay on the part of the Contractor, the Contractor shall be liable to pay liquidated damages and any other compensation for the damages suffered by the Employer as per Clause 8.5. This is without prejudice to the right of the Employer to rescind the Contract.

Failure or delay by the Employer or the Engineer, to hand over to the Contractor the Site necessary for execution of Works, or any part of the Works, or to give necessary notice to commence the Works, or to provide necessary Drawings or instructions or clarifications or to supply any material, plant or machinery, which under the Contract, is the responsibility of the Employer, shall in no way affect or vitiate the Contract or alter the character thereof, or entitle the Contractor to damages or compensation thereof but in any such case, the Engineer shall extend the time period for the completion of the Contract, as in his opinion is / are reasonable.

**Extension of Time for**      **8.4**

**Completion**

- Extension of Time**      **8.4.1** The Contractor may apply for an extension of the Time for Completion if the Work is or will be delayed either before or after the Time for Completion by any of the following causes:
- a. "Force Majeure" referred to in Clause 16.0
  - b. The Contractor's work held up for not being given possession of or access to the Site in accordance with the Contract
  - c. Instruction of the Engineer to suspend the Works and the Contractor not being in default as to reasons of suspension.
  - d. Acts or omissions of other Designated Contractors in executing work not forming part of this Contract and on whose performance, the performance of the Contractor necessarily depends.
  - e. Any act of prevention or Breach of the Contract by the Employer and not mentioned in this Clause
  - f. Any order of Court restraining the performance of the Contract in full or in any part thereof and the Contractor not being in default as to reason of such order of court.
  - g. Any other event or occurrence which, according to the Employer is not due to the Contractor's failure or fault, and is beyond his control without Employer being responsible for the same.
  - h. An Employer's Variation

However, the Contractor shall not be entitled to any extension of time where the instructions or acts of the Employer or the Engineer are necessitated by or intended to cure any default of or breach of Contract by the Contractor or where any delay is due to

- a. the failure of sub-contractor, to commence or to carry out work in due time,
- b. non-availability, or shortage of Contractor's equipment, labour, utility services, Plant and Materials,
- c. inclement weather conditions, and
- d. the Contractor not fulfilling his obligations under Sub-Clause 4.4.

If the Contractor considers himself to be entitled to an extension of time for Completion, he shall give notice to the Engineer of such intention as soon as possible and in any event within 28 days of the start of the event giving rise to the delay and full and final supporting details of his application within 21 days of the last day of delay, together with any notice required by the Contract and relevant to such Clause. If the cause of delay continued for a period exceeding 7 days, the Contractor shall submit interim details at intervals of not more than 28 days (from the first day of such delays).

The Engineer shall proceed in accordance with Sub-Clause 3.5 to agree or determine either prospectively or retrospectively such extension of the Time for Completion as may be due. The Engineer shall notify the Contractor accordingly.

- Extension of time for completion for other reasons**      **8.4.2** The Contractor shall not be entitled to an extension of time by reason of any delay to any activity in carrying out of the Works unless in the opinion of the Engineer such delay results in or may be expected to result in a delay to completion of the Works, or achievement of any Stage by the relevant Key Date. Whether or not the Contractor fails to achieve any Milestone by reason of any delay shall not by itself be material to the Contractor's entitlement to an extension of time.

Any extension to a Key Date shall not by itself entitle the Contractor to an extension to any other Key Date and the Time for Completion.

<b>Extension of time for delays due to Contractor</b>	<b>8.4.3</b>	<p>If the delay in the completion of the whole Works or a portion of the Works, for which an earlier completion period is stipulated, is due to the Contractor's failure or fault, and the Engineer is of the view that the remaining Works or the portions of Works can be completed by the Contractor in a reasonable and acceptable short time, then, the Engineer may allow the Contractor extension or further extension of time at its discretion with or without liquidated damages, for completion, as he may decide.</p>
<b>Liquidated Damages for Delay</b>	<b>8.5</b>	<p>Time is the essence of the Contract. Appendix to the Form of Tender shall include in respect of the Works and in respect of any Stage, a percentage of the total contract value which will be recoverable from the Contractor as liquidated damages for each day of delay in completion of the Works or in achievement of a stage by a particular Key Date. The total amount of liquidated damages in respect of the Works in all stages shall, however, not exceed the limit of liquidated damages stated in the Appendix to the Form of Tender. The aforesaid liquidated damages do not, however, include the sums payable by the Employer to Designated Contractors on account of delay caused by the Contractor to Designated Contractors which sums shall be recoverable from the Contractor in addition to any liquidated damages payable under this clause, the total ceiling limit of which is 15% (of Contract Price including Liquidated Damages levied under the provisions of Appendix 1 to the Form of Tender.</p> <p>The liquidated damages are recovered by the Employer from the Contractor for delay and not as penalty.</p> <p>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. In the event of an extension of time being granted under Sub- Clause 8.4, the amount due under this Sub-Clause shall be recalculated accordingly, and any over-payment refunded. The payment or deduction of such damages shall not relieve the Contractor from his obligations to complete the Works, or from any other of his duties, obligations or responsibilities under the Contract.</p> <p>The liquidated damages shall be recovered as specified in Appendix to the Form of Tender.</p> <p>The Contractor shall use and continue to use his best endeavours to avoid or reduce further delay to the Works, or any relevant Stages.</p> <p>At any time after the Employer has become entitled to liquidated damages, the Engineer may give notice to the Contractor under Sub- Clause 13.1, requiring the Contractor to complete the Works within a specified reasonable time. Such action shall not prejudice the Employer's entitlements to recovery of liquidated damages, under this Sub-Clause and to terminate under Sub- Clause 13.2.</p> <p>The decision of the Engineer as to the compensation payable by the Contractor under this Clause shall be final and binding.</p>
<b>Rate of Progress</b>	<b>8.6</b>	<p>If for any reason which does not entitle the Contractor to an extension of time, the rate of progress of the Works is at any time, in the opinion of the Engineer, too slow to ensure timely completion of the Works or achievement of any Stage by the relevant Key Date the Engineer may so notify the Contractor in writing. The Contractor shall thereupon take such steps as are necessary, or in default of</p>

taking such steps, shall take such steps as the Engineer may reasonably instruct in writing, to expedite progress so as to complete the Works or any Section in time or achieve any Stage by the relevant Key Date. The Contractor shall not be entitled to any additional payment for taking such steps.

If any steps taken by the Contractor in meeting his obligations under this Sub-Clause cause the Employer to incur additional costs, such costs shall be recoverable from the Contractor by the Employer, and shall be deducted by the Employer from any monies due, or to become due, to the Contractor.

**Suspension of Work** 8.7 The Engineer may at any time instruct the Contractor to suspend progress of part or all of the Works stating the grounds for such action. During suspension, the Contractor shall protect, store and secure such part or whole of the Works against any deterioration, loss or damage.

**Consequences of Suspension** 8.8 The Contractor shall not be entitled to extra cost (if any), incurred by him, during the period of suspension of Work, if such suspension is

- a. provided for in the Contract, or
- b. necessary for proper execution of Works or by reasons of weather condition or by some default on the part of the Contractor, or
- c. necessary for the safety of Works or any part thereof or
- d. necessary for the safety of adjoining public or other property or safety of the public or workmen or those who have to be at the site or
- e. to ensure safety and to avoid disruption of traffic and utilities, as also to permit fast repairs and restoration of any damaged utilities,

If suspension is ordered by the Engineer for reasons other than those mentioned in Sub Clause 8.8 then the Contractor's entitlement are in the table below

Sr. No.	Suspension Period	Extension of Time	Compensation for the suspension period	Remarks
1	Upto 14 days	NO	NO	Engineer may give extension of time in exceptional circumstances
2	15 – 30 days	YES	NO	Extension of time as considered proper by the Engineer
3	Above 30 days	YES	<p>☐ As per Daily rate of wages for idle labour/employees</p> <p>☐ 70% of the rate for hire charges for idle plant and machinery (excluding cost of fuel and lubricants)</p>	Compensation as assessed by the Engineer on submission of documentary proof by the Contractor to Engineer's

				15% above all these items to cover overhead costs	satisfaction
4	Above 90 days	NO		As per Clause no. 13.3.4	Contractor may ask for closure of the Contract, or deletion from the Contract of that part of Works which has been suspended

**Resumption of Work**      **8.9**      After receipt of permission or of an instruction to proceed, the Contractor shall, after notice to the Engineer, and together with the Engineer, examine the Works, Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works, Plant and Materials, which has occurred during the suspension.

**9      Employer's Taking Over**

**Taking Over Certificate**      **9.1**      The Works shall be taken over by the Employer when they have been completed in accordance with the Contract, have passed the Tests on Completion, including Integrated Testing and Commissioning, and a Taking Over Certificate for the Works has been issued. If the Works are divided into Sections, the Contractor shall be entitled to apply for a Taking Over Certificate for each Section.

The Contractor may apply by notice to the Engineer for a Taking-Over-Certificate not earlier than 14 days before the works or section (as the case may be) will, in the Contractor's opinion, be complete and ready for taking over. The Engineer shall, within 28 days after the receipt of the Contractor's application:

- (a) issue the Taking Over Certificate to the Contractor, stating the date on which the Works or Section were completed, including the Tests on Completion and Integrated Testing and Commissioning, in accordance with the Contract as specified in the Special Conditions of Contract (except for minor outstanding work that does not affect the use and safety of the Works or Section for their intended purposes); or
- (b) reject the application, giving his reasons and specifying the work required to be done by the Contractor to enable the Taking Over Certificate to be issued. The Contractor shall then complete such work before issuing a further notice under this Sub-Clause.

**Taking over of Parts of the Works**      **9.2**      The Engineer may, at the sole discretion of the Employer issue a Taking Over Certificate for any part of the Permanent Works.

If the Employer uses any part of the Works for revenue service before the Taking Over Certificate is issued:

- (a) the part which is used shall be deemed to have been taken over at the date

on which it is used, subject to the Contractor completing the works which remain outstanding in the opinion of the Employer;

- (b) the Engineer shall, when requested by the Contractor, issue a Taking Over Certificate after the Contractor has completed the outstanding Works and has carried out Tests on Completion, including Integrated Testing; and
- (c) the Contractor shall cease to be liable for the care of such part from such date, when responsibility shall pass to the Employer.

## 10 Defects Liability

### Completion of Outstanding Work and Remedying Defects

**10.1** "Defects Liability Period" shall mean the defects liability period stated in the Special Conditions of Contract calculated from the date of taking over of whole of the Works and not any sub-section or part thereof. Provided that, if any part of the Works or sub-systems or component of that part has been replaced, renewed or repaired, the "Defects Liability Period" in respect of that part or sub-system or components of that part shall start from the date of such replacement, renewal or repair has been completed to the satisfaction of the Engineer.

The Contractor shall remedy, at no extra cost to the Employer, the defect or failure (fair wear and tear excluded) after any part of the Work are taken over by the Employer until the end of Defects Liability Period.

In order that the Construction and/or Manufacture Documents and the Works shall be in the condition required by the Contract (fair wear and tear excepted) at, or as soon as practicable after the expiry of the Contract Period, the Contractor shall:

- (a) complete any work which is outstanding on the date stated in a Taking Over Certificate, as soon as practicable after such date, and
- (b) execute all such work of amendment, reconstruction, and remedying defects or damage, as may be instructed in writing by the Employer or the Engineer during the Contract Period.

### Cost of Remedying Defects

**10.2** All work referred to in Sub-Clause 10.1(b) shall be executed by the Contractor at his own cost, if the necessity for such work is due to:

- (a) the Design of Temporary works
- (b) Plant, Materials or workmanship not being in accordance with the Contract; or
- (c) failure by the Contractor to comply with any of his other obligations.

If in the opinion of the Engineer, such necessity is due to any other cause, he shall determine an adjustment to the Contract Price, with the approval of the Employer, and shall notify the Contractor accordingly. In this event, Sub-Clause 12.3 shall apply to such work.

### Extension of Defect Liability Period

**10.3** The Defect Liability Period shall be extended by a period, after the Works are taken over, during which the Works or any Section or item of Plant, cannot be used, for the purposes for which they are intended, by reason of a defect or damage.

When delivery of Plant, and/or Materials, or erection of Plant, or installation of Materials, has been suspended under Sub-Clause 8.7, the Contractor's obligations under this Sub-Clause shall not apply to any defects or damage occurring more than three years after the Plant and/or Materials would

otherwise have been delivered, erected and taken over.

<b>Failure to Remedy Defects</b>	<b>10.4</b>	<p>If the Contractor fails to remedy any defect or damage within such time as the Employer / Engineer may deem to be reasonable, the Employer or the Engineer may fix a date on or by which to remedy the defect or damage, and give the Contractor reasonable notice of such date. If the Contractor fails to remedy the defect or damage by such date and the necessity for such work is due to a cause stated in Sub-Clause 10.2(a), (b) or (c), the Employer may (at his sole discretion):</p> <ul style="list-style-type: none"><li>(a) carry out the work himself or by others, in a reasonable manner and at the Contractor's risk and cost, but the Contractor shall have no responsibility for such work: the costs incurred by the Employer in remedying the defect or damage shall be recoverable from the Contractor by the Employer;</li><li>(b) require the Engineer to determine and certify a reasonable reduction in the Contract Price; or</li><li>(c) if the defect or damage is such that the Employer has been deprived of substantially the whole of the benefit of the Works or parts of the Works, terminate the Contract in respect of such parts of the Works as cannot be put to the intended use, the Employer shall then be entitled to recover all sums paid for such parts of the Works together with the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor, and Sub-Clause 13.1 shall not apply.</li></ul>
<b>Removal of Defective Work</b>	<b>10.5</b>	<p>If the defect or damage is such that it cannot be remedied expeditiously on the Site and if the Employer gives consent, the Contractor may, remove from the Site for the purposes of repair any part of the Works, which is defective or damaged. This consent may require the Contractor to increase the amount of Performance Security by the full replacement cost of these items or to provide other appropriate security acceptable to the Employer.</p>
<b>Further Tests</b>	<b>10.6</b>	<p>If the remedying of any defect or damage is such that it may affect the performance of the Works, the Engineer may require that Tests on Completion, including Integrated Testing, be repeated to the extent necessary. The requirement shall be made by notice within 28 days after the defect or damage is remedied. Such Tests shall be carried out in accordance with Sub Clause 7.10 and 7.11.</p>
<b>Right of Access</b>	<b>10.7</b>	<p>Until the Performance Certificate has been issued, the Contractor shall have the right of access to all parts of the Works and to records of the working and performance of the Works, except as may be inconsistent with any reasonable security restrictions by the organisation responsible for operating the Works.</p>
<b>Contractor to Search</b>	<b>10.8</b>	<p>The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is one for which the Contractor is liable, the Cost of such search shall be added to the Contract Price.</p>
<b>Performance Certificate</b>	<b>10.9</b>	<p>The Performance Certificate shall be given by the Engineer by the date 28 days after the expiry of the Contract Period for the whole of the Works. Only the Performance Certificate shall be deemed to constitute approval of the Works.</p>



<b>Unfulfilled Obligations</b>	<b>10.10</b>	After the Performance Certificate has been signed by the Engineer and delivered to the Contractor, stating the date on which the Contractor completed his obligations to the Engineer's satisfaction, the Contract shall be considered to be complete. However, the Contractor and the Employer shall remain liable for the fulfilment of any obligation, which remains unperformed at that time. For the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force.
<b>Emergency defect rectification</b>	<b>10.11</b>	If any defect or damage is one requiring immediate attention from safety, environmental or operational viewpoint, the Engineer has the authority to proceed with rectification in any manner suitable and deduct such sums from the Contract Price.
	<b>11</b>	<b>Contract Price and Payment</b>
<b>The Contract Price</b>	<b>11.1</b>	
	<b>11.1.1</b>	<p>Unless otherwise stated in the Special Conditions of Contract, the Contract Price shall be accepted BOQ rates and amount subject to any adjustment thereto in accordance with the Contract. The Contract price shall be inclusive of all taxes, levies, duties, royalties and other charges leviable and payable to the authorities.</p> <p>The Contract price shall not be adjusted in respect of any increase or decrease of cost to the contractor in carrying out the work by reason including of;</p> <ol style="list-style-type: none"> <li>1) an alteration in the rates of wages or allowances payable to labour or a change in the conditions of employment thereof;</li> <li>2) a change in the cost of materials (whether for the permanent or temporary works), consumables stores, fuel or power;</li> <li>3) a variation in the rates of freight or insurance;</li> <li>4) variation in the incidence of landing charges;</li> <li>5) a variation in the cost of any other matter or thing of whatsoever nature except as stated in Special Conditions of Contract.</li> </ol> <p>Nothing extra shall be payable over the quoted rates, notwithstanding any provision to the contrary in any law for the time being in force, save and except what is specifically provided in General or Special Conditions of Contract.</p>
	<b>11.1.2</b>	The Contract Price shall not be adjusted to take into account any increase or decrease in cost resulting from any change in taxes, duties, levies from the last date of submission of the Tender to the completion date including the date of the extended period of Contract unless a contrary provision exists in Special Conditions of Contract.
<b>Advance Payments</b>	<b>11.2</b>	
<b>Mobilisation Advance</b>	<b>11.2.1</b>	The Employer shall pay mobilisation advance as specified in Appendix FT-1 of Form of Tender and Special Conditions of Contract. Mobilisation advance shall be payable against acceptable Bank Guarantee from an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule. The requisite Bank Guarantee shall be accompanied with the Contractor's written request for

mobilisation advance. Such bank Guarantee shall remain effective until the mobilisation advance has been repaid but its amount will be reduced at equal intervals upon request of the Contractor by the amount recovered by the Employer.

<b>Advance against Plant and Machinery</b>	<b>11.2.2</b>	Unless otherwise specified in the Special Conditions of Contract, Plant and machinery advance shall not be paid.
<b>Advance against Materials</b>	<b>11.2.3</b>	Unless otherwise specified in the Special Conditions of Contract, Material advance shall not be paid.
<b>Written Request for Advances</b>	<b>11.2.4</b>	Advances as admissible, shall be payable only on Contractor's written request to the Employer.
<b>Recovery of Advances</b>	<b>11.2.5</b>	The Commencement and the period of recovery of advance shall be as specified in the Special Conditions of Contract.
		The Contractor shall always have the option to have the recoveries commenced and/or completed earlier, and/or to have recoveries affected in statements of higher amount and also to repay part or whole of the advance by direct payment rather than through interim payments.
<b>Interest in Case of Delay in Repayment of Advances</b>	<b>11.2.6</b>	Should there be delay in the progress and completion of work, as a result of which it is not possible to recover the advance and interest thereon (if any), before the date of completion stipulated in the Contract, then the interest to be charged from the Contractor on the remaining portion of the advance beyond the original completion date specified in the Contract, shall be the State Bank of India prime lending Rate plus 2% (simple interest) per annum or 12% (simple interest) per annum whichever is higher.
<b>Advances to be Used only for This Work.</b>	<b>11.2.7</b>	The advances shall be used by the Contractor strictly for the purpose of the Contract, and for the purpose for which they are paid. Under no circumstances, shall the advances be diverted for other purposes. Any such diversion shall be construed as a breach of the Contract and the Contractor shall be asked to return the advance at once and pay interest at 15% per annum till the advance is recovered back from him. The Contractor shall return the advance and pay the interests in one go without demur. The Employer retains the right for any other remedy prescribed for breach of Contract in this regard. The Contractor, if required by the Employer shall provide the details of Mobilization advance expended or to be expended.
<b>Issue of Interim Payment Certificates</b>	<b>11.3</b>	No amount will be certified or paid until the Employer has received, and approved, the Performance Security and signing of the Contract Agreement. Thereafter, the Engineer shall, within 21 days of receiving a statement and supporting documents, deliver to the Employer, with a copy to the Contractor, an Interim Payment Certificate showing the amount which the Engineer considers to be due; if no payment is considered to be due, the Engineer shall promptly notify the Contractor accordingly.

Where only a part of the payment applied for is disputed, payment certificate

shall be issued for the undisputed amount.

The Engineer shall have the power to omit from any of the contractor's requests for payment the value of any work executed or Materials supplied or services rendered, with which he may for the time being be dissatisfied and for that purpose and for any other reason which to him may seem proper, may delete, correct or modify the sum(s) previously certified by him as being due to the Contractor.

**Payment-  
Interim and  
Final**

- 11.4** Unless otherwise stated in Special Conditions of Contract,
- (a) After scrutiny and certification by the Engineer, payment of the certified interim amount shall be made by the Employer within 10 working days from the date of issue of Interim Payment Certificate by the Engineer.
  - (b) The Employer shall pay the amount certified in the Final Payment Certificate within 56 days from the date of issue of the Final Payment Certificate.

Payments shall be made into the designated bank account(s) of the Contractor only in a bank unless otherwise permitted in Special Conditions of Contract.

**Retention  
Money**

- 11.5** Retention monies equal to 10 percent of the amount due to the Contractor from time to time will be retained, so as to maintain a reserve in the hands of the Employer equal to 5 percent of the Contract Price in respective currencies.

The Retention monies shall be held by the Employer without obligation to invest them or account for interest thereon or to place them in a designated account. No interest of whatsoever nature and type will be paid to the Contractor by the Employer in respect of Retention monies.

The Employer shall at six monthly intervals exchange retention monies held by him for a Bank Guarantee of like amount in respective currencies as per format given in schedule to the Special Conditions of Contract and issued by an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule.

One half of the Retention monies (Bank Guarantees and/or money) shall become due to the Contractor on the date of issue of the Taking Over Certificate for the whole of the works or the date of issue of last Certificate, if more than one Taking Over Certificate exist.

One half of the balance of the Retention monies (Bank Guarantees and/or money) shall become due to the Contractor on the date of issue of the Performance Certificate and the remainder shall become due to the Contractor upon the issue of Final Payment Certificate by the Engineer.

**Statement at  
Completion**

- 11.6** Not later than 60 days after the issue of the Taking Over Certificate for the whole of Works, the Contractor shall submit, to the Engineer, six copies of a statement at completion with supporting documents, showing in detail, in the form approved by the Engineer under Sub-Clause 11.3:
- (a) the final value of all work done in accordance with the Contract, up to the date stated in such Taking Over Certificate,
  - (b) any further sums which the Contractor considers to be due, and
  - (c) an estimate of amounts which the Contractor considers will become due to him under the Contract.

The estimated amounts shall be shown separately in such statement at completion. The Engineer shall certify payment under Sub-Clause 11.4.

**Application for Final Payment Certificate**      **11.7**      Not later than 56 days after the issue of the Performance Certificate, the Contractor shall submit to the Engineer six copies of a draft final statement with supporting documents showing in detail, in a form approved by the Engineer:

- (a) the value of all work done in accordance with the Contract, and
- (b) any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the Final Statement as agreed.

If, following discussions between the Engineer and the Contractor and any changes to the draft final statement which may be agreed between them, it becomes evident that a dispute exists, the Employer shall pay those parts of the draft final statement as certified by the Engineer as not being in dispute. The remainder of the dispute may then be resolved under Clause 17, in which case the Contractor shall then prepare and submit to the Engineer a Final Statement in accordance with the outcome of the dispute.

**Discharge**      **11.8**      When submitting the final statement, the Contractor shall submit a written discharge which confirms that the total of the Final Statement represents full and final settlement of all monies due to the Contractor under the Contract. Such discharge may state that it shall become effective only after payment due under the Final Payment Certificate has been made and the Performance security referred to in Sub-Clause 4.2 has been returned to the Contractor.

**Issue of Final Payment Certificate**      **11.9**      The Engineer shall issue to the Employer, with a copy to the Contractor, the Final Payment Certificate within 28 days after receiving the Final Statement and written discharge in accordance with Sub-Clause 11.8 and 11.9, stating:

- (a) the amount which is finally due, and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clauses 11.8 and 11.9, the Engineer shall request the Contractor to do so. If the Contractor fails to make such an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he considers to be due.

**Cessation of Employer's Liability**      **11.10**      In respect of any matter or thing arising out of (or in connection with) the Contract or execution of the Works before the issue of the Taking Over Certificate for the whole of the Works, the Employer shall not be liable to the Contractor unless the Contractor shall have included a claim for it in his

Statement at Completion described in Sub-Clause 11.7. For any such matter or thing arising after the issue of the Taking Over Certificate for the whole of the Works, the Employer shall not be liable to the Contractor unless the Contractor shall have included a claim for it in his Final Statement.

<b>Calculation of Payments in Foreign Currency</b>	<b>11.11</b>	All payments made by the Employer pursuant to the terms of the Contract shall be in the currency or currencies specified in the Contract. Wherever any sum in a foreign currency has to be converted into Indian Rupees for any purpose, the exchange rate to be employed for such conversion shall be the selling rate of exchange at the close of business of the State Bank of India 28 days before the latest date of submission of Tenders.
<b>Round off</b>	<b>11.12</b>	In every payment to the Contractor, sums of less than fifty paise shall be omitted and sums of fifty paise and more up to one rupee shall be reckoned as one rupee.
<b>Payment By Cheque and E-Payment</b>	<b>11.13</b>	All payments to the Contractor will be made by cheque and "E-Payment" as desired by the Employer.
<b>Tax Deduction at Source</b>	<b>11.14</b>	Tax deductions will be made at source as per statutory requirement from every payment made to the Contractor at rates notified from time to time.
<b>Production of Vouchers</b>	<b>11.15</b>	<ul style="list-style-type: none"> <li>i. The Contractor shall, whenever required by the Engineer, produce or cause to be produced for examination by the Engineer, any quotation, invoice, cost or other account books, vouchers, receipts, letters, memoranda or any copy of or extract from any such documents and also furnish information and returns, as may be required, relating to the execution of this Contract or relevant for verifying or ascertaining the cost of execution of this Contract or ascertaining the Materials supplied by the Contractor are in accordance with the Specifications laid down in the Contract. The Engineer's decision on the question of relevancy of any documents, information or returns shall be final and binding on the parties.</li> <li>ii. If any part or item of the Work is allowed to be carried out by a Sub-Contractor, assignee or any subsidiary or allied firm, the Engineer shall have power to secure the books of such Sub-Contractor, assignee or any subsidiary or allied firm through the Contractor, and shall have power to examine and inspect the same. The above obligations are without prejudice to the obligations of the Contractor under any statute, rules or orders.</li> </ul>
<b>Withholding And Lien For Sums Claimed</b>	<b>11.16</b>	<ul style="list-style-type: none"> <li>i. The Employer shall have lien on and over all materials of every description, tools, tackles, plant, equipment or any moneys due and/or that may become due and payable to the Contractor under the Contract, and / or on and over the deposit of Performance Security or other amount or amounts made under the Contract and which may become payable to the Contractor</li> <li>ii. And further, unless the Contractor pays and clears immediately on demand any claim of the Employer, the Employer shall at all times be</li> </ul>

entitled to deduct the amount of the said claim from the moneys, securities and / or deposits which may have become or will become payable to the Contractor under these presents, or under any other Contract or transaction whatsoever between the Employer and the Contractor even if the matter stands referred to Arbitration. The Contractor shall have no claim for any interest or damage whatsoever in respect of any amounts withheld or treated as withheld under the lien referred to above and duly notified as such to the Contractor.

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|--|--------------|--|
| <b>Signature On Receipts For Payments</b>    | <b>11.17</b> | Every receipt of payment to Contractor including refund of the Performance Security shall be signed by the person authorized to do so on his behalf. In the event of death of any of the Contractor's partners in case the Contractor is a partnership firm, during the currency of the Contract, it is hereby expressly agreed that every receipt by any one of surviving Contractor's partners, shall, if so signed as aforesaid, be a good and sufficient discharge as aforesaid, provided that nothing in this Clause shall be deemed to prejudice or affect any claim, which the Employer may hereafter have against the legal representatives of any Contractor's partner so dying, for or in respect of breach of any of the conditions of the Contract. Provided also that nothing contained in this clause shall be deemed to prejudice or affect the respective rights and obligations of the Contractor's partners, or of the legal heirs / representatives of any deceased Contractor / partner interest |
| <b>Post Payment Audit</b>                    | <b>11.18</b> | It is an agreed term of the Contract, that the Employer reserves to himself the right to carry out a post payment audit and / or technical examination of the Works, and the Final bill including all supporting vouchers, abstracts, etc., and to make a claim on the Contractor for the refund of any excess amount paid to him, if as a result of such examination, any over-payment to him is discovered to have been made in respect of any work done or alleged to have been done by the Contractor, under the Contract. If any under-payment is discovered, the same shall be paid by the Employer to the Contractor. Such payments or recoveries, however, shall not carry any interest.   |
| <b>Recovery of money due to the Employer</b> | <b>11.19</b> | All damages (including, without limitation, liquidated damages), costs, charges, expenses, debts, or sums for which the Contractor is liable to the Employer under any provision of the Contract may be deducted by the Employer from monies due to the Contractor under the Contract including, without limitation, and the Employer shall have the power to recover any balance not so deducted from monies due to the Contractor under any other contract between the Employer and the Contractor.<br>When the Contractor has assigned to a third party the right to receive monies due, or, to become due, under the Contract to the Contractor or charged such monies in favour of a third party, the Employer's right to deduct damages (including without limitation liquidated damages), costs, charges, expenses, debts or sums for which the Contractor is liable to the Employer from monies due to the Contractor under the Contract shall be limited to the right expressed above.                      |
|  | <b>12</b>    | <b>Variations</b>  |
| <b>Right to Vary</b>                         | <b>12.1</b>  | All Variations shall be recorded in a written instruction from the Engineer either as a Contractor's Variation or as an Employer's Variation, and shall not be   |

implemented by the Contractor without such an instruction in writing from the Engineer. No Variation shall in any way vitiate or invalidate the Contract. The Contractor shall not make any alteration and/or modification of the Works, unless and until the Engineer instructs or gives consent to a Variation. If the Construction and/or Manufacture Documents or Works are not in accordance with the Contract, the rectification shall not constitute a Variation.

<b>Contractor's Variations</b>	<b>12.2 Value Engineering or Innovation</b>	
<b>Value Engineering Proposals</b>	<b>12.2.1</b>	<p>The Contractor may submit to the Employer, in writing at his own cost, value engineering proposals for modifying the Employer's Requirements, provision of additional land, access or feasibility over and above that is provided in the Contract for the purpose of saving in time, construction or manufacture costs. The value engineering proposal shall not impair the essential character, functions or characteristics or the Work, including service life, economy of operation, ease of maintenance, desired appearance, or Design of Temporary works and safety standards.</p> <p>The Contractor shall provide his value engineering proposal in a time limit prescribed by the Engineer. The Engineer's decision in this regard shall be communicated to the Contractor within a reasonable period of time. If by any reason the time limit specified by the Engineer is exceeded, the proposal may not be considered.</p> <p>The decision of the Engineer in this regard shall be final and binding.</p>
<b>Value Engineering Proposals – Contents</b>	<b>12.2.2</b>	<p>If the Employer requires or accepts it, and if the Contractor wants to proceed with the proposal, the Contractor must provide (at no cost to the Employer) a detailed report prepared by a consultant acceptable to the Employer and which shall include:</p> <ol style="list-style-type: none"> <li>a. a general description of the original Contract requirements for the Works and the proposed changes</li> <li>b. any detail of all the proposed modifications to the drawings and specifications</li> <li>c. any detail of all Work and goods affected by the value engineering proposal</li> <li>d. a detailed estimate of the construction cost based on the original Contract requirements and based on the proposed changes</li> <li>e. any resultant time extensions or reductions for the Contract</li> <li>f. statement to the extent of minimum saving expected. The Contractor's cost of preparing value engineering proposal shall be excluded in determining the estimated net savings in construction costs.</li> </ol>
<b>Value Engineering Proposals- Employer Review</b>	<b>12.2.3</b>	<p>The Employer may in his sole discretion, accept or reject the value engineering proposal or any part thereof and determine the estimated net saving in the construction cost. The Employer shall not be liable for delays or damages to the Contractor due to any failure of the Employer to accept or act upon any value engineering proposal submitted pursuant to this Clause. If the submitted value engineering proposal is similar to a change / variation already under consideration by the Employer, the Employer may make such changes without respect to the value engineering proposal.</p> <p>Once, the Employer or the Engineer rejects the value engineering during</p>

proposition due to any reason, it shall not be pursued by the Contractor in any other form.

<b>Amendments- Employer Issuance</b>	<b>12.2.4</b>	If the value engineering proposal is acceptable to the Employer in whole or in parts, it will accept by execution of an amendment. Such amendment shall identify all the changes in the specifications, Contract Period etc, shall specify net savings on construction costs and shall provide that the Contractor be paid 30% of saved net savings amount based on the difference between the amount contained in the Contract and the estimated net savings both as determined by the Employer.
<b>Contractor's Acceptance and Payment</b>	<b>12.2.5</b>	The Contractor shall either accept or reject any proposed amendment executed by the Engineer pursuant to this section within 5 working days of its receipt date from the Employer. If the Contractor does not reject the same in the period stipulated above, the amendments shall be deemed to be accepted by the Contractor and shall become a variation to the Contract. The Contractor's acceptance shall be unconditional and compensation of 30% of the value shall constitute the full compensation. The Contractor will be paid this 30% or less but not more at the time of final payment on Engineer's certification that the net savings as intended by value engineering have been achieved.
<b>Employer's Variations</b>	<b>12.3</b>	<p>If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall submit at his own cost within 14 days or such period as the Engineer may allow of the receipt of such request of the Engineer</p> <ul style="list-style-type: none"> <li>a a description of the proposed work to be performed and a programme for its execution,</li> <li>b the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 4. 13, and</li> <li>c the Contractor's proposal for adjustment to the Contract Price, Time for Completion and/or modifications to the Contract.</li> </ul>
<b>Variation Procedure</b>	<b>12.4</b>	<p>The Engineer shall, as soon as practicable after receipt of proposals under sub-clauses 12.2 and / or 12.3, respond with approval, rejection or comments.</p> <p>After receipt of proposal, it will be the prerogative of the Employer, whether to instruct and proceed ahead with the variation or drop the proposal in part or full. In that case, no cost of preparing and submitting the proposal will be payable to Contractor.</p> <p>If the Engineer instructs or approves a Variation, he shall proceed in accordance with Sub-Clause 3.5 to agree or determine adjustments to the Contract Price, Time for Completion and Payments as per SCC Clause No:24.</p>
<b>Payment in Applicable Currencies</b>	<b>12.5</b>	If the Contract provides for payment of the Contract Price in more than one currency, and an adjustment is agreed or fixed as stated above, the amount payable in each of the applicable currencies shall be specified when the adjustment is agreed or fixed. In specifying the amount in each currency, the Contractor and the Engineer (or, failing agreement, the Engineer) shall take



account of the actual or expected currency proportions of the Cost of the varied work, without being bound by the proportions of various currencies specified for payment of the Contract Price.

### 13.0 Termination of the Contract

**Notice to Contractor** 13.1 If the Contractor fails to carry out any of his obligations, or if the Contractor is not executing the Works in accordance with the Contract, the Engineer may give notice to the Contractor requiring him to make good such failure and remedy the same within such time as the Employer / Engineer may deem to be reasonable.

**Termination Of Contract Due To Contractor's Default** 13.2

**Conditions Leading To termination Of Contract** 13.2.1 The Employer shall be entitled to terminate the Contract if the Contractor or any one of its constituents,

- a) fails to comply with a notice under Sub clause 13.1
- b) abandons or repudiates the Contract
- c) without reasonable excuse acceptable to the Engineer, fails to commence the Works in accordance with the Contract
- d) sub contracts the whole of the Works or assigns the Contract without approval of the Employer
- e) becomes bankrupt or insolvent or goes into liquidation except voluntary liquidation for the purpose of amalgamation or reconstruction
- f) persistently disregards instructions of the Engineer or contravenes any provisions of the Contract, or
- g) fails to adhere to the agreed programme of work on review weekly / fortnightly / monthly basis by margin of 10% or 60 days, whichever is earlier or fails to complete the Works or parts of the Works within the stipulated or extended period of completion, or is unlikely to complete the whole Work or part thereof within time because of poor record of progress; or
- h) fails to remove materials from the Site, or pull down and replace work, after receiving notice from the Engineer to the effect that the said materials or Works have been condemned or rejected, or
- i) fails to take steps to arrange and/or augment machinery, tools, plant and equipment or employ competent and/or additional staff and labour, or
- j) fails to afford the Engineer or his representative proper facilities for inspecting the Works or any part thereof, or
- k) indulges in corrupt or fraudulent practices as explained in Clause 4.33.1

In any one of the above events or circumstances, the Employer may upon giving 14 days notice to the Contractor, terminate the Contract in whole or in parts in so far as it is practicable to do so and expel the Contractor from the Site for that portion of the Work which is terminated. However, in case of sub-paragraph (e) or (k), the Employer may by notice terminate the Contract immediately.

The Employer's decision to terminate the Contract shall not prejudice any other rights of the Employer under the Contract.

After termination, the Employer may complete the works and/ arrange for any other entities to do so at the risk and cost of the Contractor. The Employer and his entities may then use, the roads, the Contractor's documents and his Design

of Temporary works document made by or on behalf of the Contractor.

On termination of Contract due to Contractor's default, the Employer shall be entitled to

- a. forfeit the whole or such portion of the Performance Security amount as he may consider fit, and
- b. recover from the Contractor the cost of carrying out the balance work in excess of the sum which he would have been paid according to the certificate of the Engineer, if the works had been carried out and completed by the Contractor under the terms of Contract. Such certificate shall be final and binding upon the Contractor. The amount to be recovered may be deducted by the Employer from any monies then due or which, at any time thereafter, may become due to the Contractor alone or jointly under this or any other Contract or otherwise.

For the purpose of this clause, a reasonable excuse shall be one, which in the opinion of the Engineer has resulted from,

Circumstance which

- is beyond the Employer's or Contractor's control and
- made the failure unavoidable and

It is evidenced by the Contractor to the satisfaction of the Engineer that the failure was remedied without unreasonable delay once that obstacle was out of the way.

<b>Valuation at the date of Termination</b>	<b>13.2.2</b>	The Engineer shall, as soon as possible after termination under Sub-Clause 13.2.1, determine and advise the Contractor of the value of the Construction and/or Manufacture Documents, Plant, Materials, Contractor's Equipment and works and all sums then due to the Contractor as at the date of termination.
<b>Payment after Termination</b>	<b>13.2.3</b>	After termination under Sub-Clause 13.2.1, the Employer shall not be liable to make any further payments to the Contractor until the costs of Design of Temporary works, manufacture, execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Employer, have been established.
		The Employer shall be entitled to recover from the Contractor the extra costs, if any, of completing the Works after allowing for any sum due to the Contractor under Sub-Clause 13.2.2. If there are no such extra costs, the Employer shall pay any balance to the Contractor.
<b>Non-exercise of power not to constitute waiver</b>	<b>13.2.4</b>	Provided always that in case any of the powers conferred upon the Employer by Sub-clause 13.1 and Sub Clause 13.2.1 above, shall have become exercisable, and the same may not have been exercised, the non-exercise thereof shall not constitute waiver of any of the conditions thereof.
<b>Termination by Contractor</b>	<b>13.3</b>	
<b>Default of Employer</b>	<b>13.3.1</b>	In the event of the Employer: <ol style="list-style-type: none"> <li>a. failing to pay the Contractor, without reasonable cause, the amount due under any certificate of the Engineer within 56 days after the expiry of the time stated in Sub Clause 11.4 within which payment has to be made, subject to any deduction that the Employer is entitled to make under the</li> </ol>

Contract, or

- b. becoming bankrupt or, being a company, going into liquidation, other than for the purpose of a scheme of reconstruction or amalgamation,

then, the Contractor may give notice requiring the Employer to remedy the default within 28 days after receipt of the notice. If the Employer fails to remedy the default or fails to propose steps reasonably acceptable to the Contractor to do so and in that case, the Contractor may terminate the Contract after issue of 14 days notice to the Employer with a copy to the Engineer. In this case, the Contractor shall be compensated as per Sub Clause no. 13.3.4.

The Engineer's decision on the amount payable on this account shall be final and binding.

**Contractor's  
Entitlement to  
Suspend the  
Work**

**13.3.2** The Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 56 days after the expiry of the time stated in **Sub-Clause 11.4**, within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days' prior notice to the Employer, with a copy to the Engineer, suspend work or reduce the rate of progress of work.

If the Contractor suspends work or reduces the rate of progress of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs costs the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- a. any extension of time to which the Contractor is entitled under sub-clause-8.4, and
- b. the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

**Cessation of  
Work by  
Contractor**

**13.3.3** After termination under Sub-13.3, the Contractor shall:

- a. cease all further work, except for such work as may be necessary and instructed by the Engineer for the purpose of making safe or protecting those parts of the Works already executed, and any Work required to leave the Site in a clean and safe condition,
- b. hand over all Construction and/or Manufacture Documents, Plant and Materials for which the Contractor has received payment,
- c. hand over those parts of other Works executed by the Contractor up to the date of termination, and
- d. remove all Contractor's Equipment which is on the Site and repatriate all his staff and labour from the Site.

Any such termination shall be without prejudice to any other right of the Contractor under the Contract.

**Payment on  
Termination**

**13.3.4** After termination under Sub-Clause 13.3.1 the Employer shall return the Performance Security, and shall pay the Contractor an amount calculated and certified in accordance with the following conditions:

- a. The value of approved materials actually brought to the site and reasonably required to execute the works during next three months, as per approved programme, and
- b. Value of work completed up to date by the Contractor at rates specified in the Contract, after taking into account any deductions, retentions,

setoff.

- c In addition a sum not exceeding 2% (two percent) of the value of the work remaining incomplete on the date of Termination notice taking effect.

The payment as above are full compensation for termination under this clause and the Contractor has no claim for damages or other entitlements whether under the contract or otherwise.

- 13.3.5** In case of termination/ foreclosure of the Contract under whatsoever circumstances, any remaining tools, plants, equipments and surplus materials of the Employer with the Contractor will be returned to the Employer at Employer's depot at the Contractor's cost. In case of the failure of the Contractor to do so, the Employer will be entitled to recover their cost from the Contractor from the amount becoming due to the Contractor or from any other money due in any other contracts. The decision of the Engineer of the amount to be recovered will be final decision and full credit at rates initially charged to the Contractor shall be allowed for such materials. Similarly the Employer shall be entitled to recover the cost of the unreturned material, plants, equipments and tools from the Contractor where such material have been supplied free of cost and plants, equipments and tools free of cost or on lease basis to the Contractor as stipulated in the Contract

#### Survival

- 13.4** Termination of this Contract
- a. shall not relieve the Contractor or the Employer of any obligations already incurred hereunder which expressly or by implication survives Termination hereof and
  - b. except as otherwise provided in any provision of this Contract expressly limiting the liability of either party, shall not relieve either party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

#### 14 Risk and Responsibility

#### Indemnity

- 14.1** The Contractor shall indemnify and hold harmless the Employer, the Engineer, the Designated Contractors, representatives and employees from and against all actions, suits, proceedings, claims, damages, losses, expenses and demands of every nature and description, by reasons of any act or omissions of the Contractor, his representative or his employees in the execution of the Works, including professional services provided by the Contractor or in the guarding the same.
- These indemnification obligations shall include but not be limited to claims, damages, losses, damage proceedings, charges and expenses which are attributable to:
- (a) sickness, or disease, or death of, or injury to any person; and
  - (b) loss of, or damage to, or destruction of any property (other than the Works) including consequential loss of use; and
  - (c) loss, damage or costs arising from the carriage of Plant and Materials and/or ownership or chartering of marine vessels by the Contractor, or any sub-contractor of any tier.

The Contractor shall also indemnify and save harmless the Employer from and against all claims and proceedings on account of infringements of patents rights, design, trademark name etc as detailed out in Sub Clause 5.8.

All sums payable by way of compensation under these conditions shall be considered reasonable compensation payable to the Employer, without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained. The decision of the Engineer as to compensation claimed shall be final and binding.

**Contractor's  
Care of the  
Works**

**14.2** The Contractor shall take full responsibility for the care of the Works, or any part thereof, including full responsibility for the care of any work being manufactured, or stored off-Site for inclusion in the Works, or in the course of transportation to the Site, and for the care of Contractor's Equipment, Temporary Works, Plant and any other Material, whatsoever, on the Site or delivered to or placed on the Site in connection with, or for the purpose of the Works.

The Contractor shall take this responsibility from the Commencement Date until the date of issue of the Taking Over Certificate, when responsibility shall pass to the Employer. If the Engineer issues a Taking Over Certificate for any Section or part of the Works, the Contractor shall cease to be responsible for the care of that Section or part from the date of issue of such Taking Over Certificate when responsibility shall pass to the Employer.

The Contractor shall take responsibility for the care of any outstanding work which is required to be completed prior to the expiry of the Contract Period, until the Engineer confirms in writing that such outstanding work has been completed.

If any loss or damage happens to the Works, any other property or person, arising from any cause other than the Employer's risks listed in Sub-Clause 14.3, during the period for which the Contractor is responsible, the Contractor shall rectify such loss or damage, at his cost, so that the Works conform with the Contract or at the option of the Employer, will pay or allow to the Employer the cost of rectifying such loss or damage. Notwithstanding such loss or damage, the Contractor shall proceed with the execution of Works in all respects in accordance with the Contract and the Engineer's instructions. The Contractor shall also be liable for any loss or damage to the Works caused by any operations carried out by the Contractor after the date of issue of the Taking Over Certificate.

**Employer's  
Risks**

**14.3** The Employer's risks of loss or damage to physical property in India and of death and personal injury occurring in India in consequence of the performance of obligations under the Contract are:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, revolution, insurrection, or military or usurped power, or civil war, within India,
- (c) riot, commotion or disorder by persons unless solely restricted to or caused by employees of Contractor or of sub-contractors currently or

formerly engaged in the Works,

- (d) Ionising radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly, except to the extent to which the Contractor may be responsible for the use of any radio-active material,
- (e) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds, and
- (f) use or occupation by the Employer of any part of the Works, except as may be specified in the Contract.

**Consequences of Employer's Risks**

**14.4** If an Employer's risk results in loss or damage, the Contractor shall promptly notify the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs cost from rectifying this loss or damage, the Contractor shall give notice to the Engineer and shall be entitled to claim:

- (a) extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4, and
- (b) amount of such cost, which shall be included in the Contract Price.

**Contractor's Risks**

**14.5** The Contractor's risks are all risks other than the Employer's risks given in sub-clause 14.3.

**Limitation of Liability**

**14.6** Except as provided otherwise in these Conditions, neither party shall be liable to the other party for loss of use of any Works, loss of profit, loss of any Contract or any other indirect or consequential loss or damage which may be suffered by the other party in connection with the Contract. The total liability of the Contractor to the Employer under the Contract shall not exceed the Contract Price. Except that this Sub-Clause shall not limit the liability of the Contractor:

- (a) under Sub-Clauses 4.18, 4.19, 5.7, 7.9, 7.10, and 8.6
- (b) under any other provisions of the Contract which expressly impose a greater liability,
- (c) in cases of fraud, wilful misconduct or illegal or unlawful acts, or
- (d) in cases of acts or omissions of the Contractor which are contrary to the most elementary rules of diligence which a conscientious Contractor would have followed in similar circumstances.

**15 Insurance**

**Insurance for 15.1** The Contractor shall insure the Plant, Materials and Works in the joint names of

<b>Works and Contractor's Equipment</b>		<p>the Employer, the Contractor and Sub-contractors (wherever applicable) against all loss or damage. This insurance shall cover loss or damage from any cause other than the Employer's risks listed in Sub-Clause 14.3 sub paragraphs (a), (b), (d) and (e). Such insurance shall be for a limit of not less than the full replacement cost (including profit) and shall also cover the costs of demolition and removal of debris. Such insurance shall be in such a manner that the Employer and the Contractor are covered from the commencement date until the date of issue of the Taking Over Certificate for the whole of Works. The Contractor shall extend such insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking Over Certificate, and for loss or damage occasioned by the Contractor or Sub-contractors in the course of any other operations (including Clauses 7.9, 7.10 and 10).</p> <p>The Contractor shall insure the Contractor's Equipment against all risks in the joint names of the Employer, the Contractor and Sub-contractors, (wherever applicable) against all loss or damage. This insurance shall cover loss or damage from any cause other than the Employer's risks listed in Sub-Clause 14.3 sub-paragraphs (a), (b), (d) and (e). Such insurance shall be for a limit of not less than the full replacement value (including delivery to Site). Such insurance shall be in such a manner that each item of equipment is insured while it is being transported to the Site and throughout the period it is on or near the Site.</p>
<b>Insurance against injury to Persons and Damage to Property</b>	<b>15.2</b>	<p>The Contractor shall insure against liability to third parties in the joint names of the Employer, the Contractor and Sub-contractors, (wherever applicable) for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 15.2) or to any person (except persons insured under Sub-Clause 15.4), which may arise out of the performance of the Contract and occurring before the issue of the Performance Certificate. Such insurance shall be at least for the amount specified in the Appendix to Form of Tender.</p>
<b>Insurance for Workers</b>	<b>15.3</b>	<p>The Contractor shall effect and maintain insurance against losses and claims arising from the death or injury to any person employed by the Contractor or any Sub-contractor (wherever applicable) in such a manner that the Employer and the Engineer are indemnified under the policy of insurance. For Sub-contractor's employees (wherever applicable), such insurance may be effected by the Sub-contractor, but the Contractor shall be responsible for compliance with this Clause.</p>
<b>Professional Indemnity Insurance</b>	<b>15.4</b>	<p>Professional indemnity insurance is not applicable to this contract since it is 'fabrication, supply and Installation Works of Signage and Graphics contract'.</p>
<b>General Requirements for Insurances</b>	<b>15.5</b>	<p>The Contractor shall, within the respective periods stated in the Appendix to Form of Tender (calculated from the Commencement Date), submit to the Employer:</p> <ul style="list-style-type: none"> <li>(a) evidence that the insurances described in this Clause have been effected, with an Indian Insurance Company, and</li> <li>(b) copies of the policies for the insurances described in Sub-Clause 15.2 &amp; 15.3.</li> </ul> <p>When each premium has been paid, the Contractor shall submit copy of receipts</p>

to the Employer. The Contractor shall also, when providing such evidence, policies and receipts to the Employer, notify the Engineer of so doing.

The Contractor shall affect all insurances for which he is responsible with insurers and in terms approved by the Employer. Each policy insuring against loss or damage shall provide for payments required to rectify such loss or damage. Payments received from insurers shall be used for the rectification of such loss or damage.

The Contractor (and, if appropriate, the Employer) shall comply with the conditions stipulated in each of the insurance policies. The Contractor shall make no material alteration to the terms of any insurance without the prior approval of the Employer. If an insurer makes (or purports to make) any such alteration, the Contractor shall notify the Employer immediately.

If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide satisfactory evidence, policies and receipts in accordance with this Sub-Clause, the Employer may, without prejudice to any other right or remedy, effect insurance for the coverage relevant to such default, and pay the premiums due. In such cases the premium paid by the Employer plus overheads (equal to 50% of the premium paid) shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due, or to become due, to the Contractor or recover the same as debt due from the Contractor. The Contractor shall not dispute the amount of premium paid by the Employer or the overhead charges thereon.

Nothing in this clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amount not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer accordingly, unless otherwise specified in the Special Conditions of Contract.

The Contractor shall submit to the Engineer, the details of all claims made with the insurer and claims accepted by the insurer or any other details as required by the Engineer on monthly basis.

## **16 Force Majeure**

### **Definition of Force Majeure**

**16.1** In this Clause, "force majeure " means an event beyond the control of the Employer and the Contractor, which makes it impossible or illegal for a party to perform, including but not limited to:

- (a) act of God;
- (b) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, mobilisation, requisition, or embargo;
- (c) rebellion, revolution, insurrection, or military or usurped power, or civil war;
- (d) contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear



- assembly or nuclear component of such an assembly;
- (e) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Sub-contractors currently or formerly engaged on the Works.

If a party considers that it may be affected by Force Majeure, the party shall promptly notify the other party and Engineer of such Force Majeure within 21 days of such occurrence. If neither party issues any notice regarding the event within 21 days of its occurrence, the said event shall be deemed not to have occurred and the Contract shall continue to have effect as such.

<b>Effect of Force Majeure Event</b>	<b>16.2</b>	Neither the Employer nor the Contractor shall be considered in default or in contractual breach to the extent that performance of obligations is prevented by a Force Majeure event which arises after the date of Notice to Proceed. Upon the occurrence of such Force Majeure, the affected party shall endeavour to continue to perform its obligations as far as reasonably practicable.
<b>Contractor's Responsibility</b>	<b>16.3</b>	If affected by such Force Majeure, the Contractor shall promptly notify the Engineer of any proposals for overcoming the consequences of the Force Majeure, including any reasonable alternative means for performance, but shall not carry out these proposals without the consent of the Engineer.
<b>Employer's Responsibility</b>	<b>16.4</b>	If affected by such Force Majeure, the Employer shall promptly notify the Engineer and the Contractor of any proposals for overcoming the consequences of the Force Majeure.
<b>Payment to Contractor</b>	<b>16.5</b>	If the Works shall suffer loss or damage due to such Force Majeure, the Contractor shall be entitled to have included, in an Interim Payment Certificate, the Cost of work executed in accordance with the Contract.
<b>Resumption of Work</b>	<b>16.6</b>	The obligations under the Contract shall be resumed as soon as practicable after the event has come to an end or ceased to exist.  In case of doubt or dispute, whether a particular occurrence should be considered an "event" as defined under this clause, the decision of the Engineer shall be final and binding.  Works that have already been measured shall be paid for by the Employer even if the same is subsequently destroyed or damaged as a result of the event. The cost of rebuilding or replacing any work that has been measured shall be borne by the Employer.
<b>Optional Termination, Payment and Release</b>	<b>16.7</b>	Irrespective of any extension of time, if a Force Majeure occurs and it's effect continues for a period of 6 months, after notice has been given under Sub-Clause 16.1, either party may give to the other party a notice of termination the Contract which shall take effect 28 days after the notice is given. Unless at the end of 28 days period the effect of the Force Majeure has ceased, the Contract shall terminate upon that date. Otherwise, the Contract shall remain in effect.

The Contractor shall be paid fully for the work done under the Contract, but

not for any defective work or work done which has been destroyed or damaged before its measurement. The Employer shall have the option to take over any Plant and Materials lying at site, at rates provided for in the Contract, failing that, as per rates, which are determined to be fair and reasonable by the Engineer.

**Release from Performance Under the Law**      **16.8** If under the law of the Contract the Employer and the Contractor are released from further performance, the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 16.7, if the Contract had been terminated under that Sub-Clause.

## **17 CLAIMS, DISPUTES, CONCILIATION AND ARBITRATION**

**Procedure for Claims**      **17.1** If the Contractor intends to claim any additional payment under any clause of these Conditions or otherwise, the Contractor shall give notice to the Engineer as soon as possible and in any event within 28 days of the start of the event giving rise to the claim.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at any other location acceptable to the Engineer. Without admitting the Employer's liability, the Engineer shall, on receipt of such notice, inspect such records and may instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer to inspect all such records, and shall (if instructed) submit copies to the Engineer.

Within 28 days of such notice, or such other time as may be agreed by the Engineer, the Contractor shall send to the Engineer an account, giving detailed particulars of the amount and basis of the claim. Where the event giving rise to the claim has a continuing effect, such amount shall be considered as interim. The Contractor shall then, at such intervals as the Engineer may reasonably require, send further interim accounts giving the accumulated amount of the claim and any further particulars. Where interim accounts are sent to the Engineer, the Contractor shall send a final account within 28 days of the end of the effects resulting from the event.

If the Contractor fails to comply with this Sub-Clause, he shall not be entitled to claim any additional payment.

**Payment for Claims**      **17.2** The Contractor shall be entitled to have included in any Interim Payment Certificate such amount for any claim as the Engineer considers due, after taking approval from the Employer. If the particulars supplied are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payment for such part of the claim as has been substantiated.

**No legal action Till Dispute Settlement Procedure is Exhausted**      **17.3** Any and all Disputes shall be settled in accordance with the provisions of Clause 17. No action at law concerning or arising out of any Dispute shall be commenced unless and until all applicable Dispute resolution procedures set out in Clause 17 shall have been finally exhausted in relation to that Dispute or any Dispute out of which that Dispute shall have arisen with which it may be or may have been connected.

- Notice of Dispute**      **17.4** For the purpose of Sub-Clause 17.5, a Dispute shall be deemed to arise when one party serves on the other party a notice in writing (hereinafter called a "Notice of Dispute") stating the nature of the Dispute provided that no such notice shall be served later than 28 days after the date of issue of Performance Certificate by the Engineer
- Two Stages for Dispute Resolution**      **17.5** Disputes shall be settled through two stages:
- a. Conciliation procedures as established by "The Arbitration and Conciliation Act-1996" (as amended from time to time) and in accordance with this Clause. In the event this procedure fails to resolve the Dispute then;
  - b. Arbitration procedures undertaken as provided by "The Arbitration and Conciliation Act -1996" (as amended from time to time) and in accordance with this Clause.
- Conciliation**      **17.6** Within 60 days of receipt of Notice of Dispute, either party shall refer the matter in dispute to conciliation.
- Conciliation proceedings shall be initiated within 30 days of one party inviting the other in writing to Conciliation. Conciliation shall commence when the other party accepts in writing this invitation. If the invitation is not accepted then Conciliation shall not take place. If the party initiating conciliation does not receive a reply within 30 days from the date on which he sends the invitation he may elect to treat this as a rejection of the invitation to conciliate and inform the other party accordingly.
- The Conciliation shall be undertaken by one Conciliator selected from a panel of Conciliators maintained by the Employer. The Conciliator shall assist the parties to reach an amicable settlement in an independent and impartial manner.
- Conciliation Procedure**      **17.7** The Employer shall maintain a panel of Conciliators with requisite qualifications and professional experience who shall be from serving or retired engineers of Government Departments, or of Public Sector Undertakings. Out of this panel, a list of three Conciliators shall be sent to the Contractor who shall choose one of them to act as Conciliator and conduct conciliation proceedings in accordance with "The Arbitration and Conciliation Act, 1996", of India. The party serving notice of dispute on the other party shall also serve such notice on the Conciliator chosen as per this Clause. The Employer at the time of offering the panel of Conciliators to be appointed as Conciliator shall also supply the information with regard to the qualifications of the said Conciliators nominated in the panel along with their professional experience, phone nos. and addresses to the Contractor.
- In the event of the Contractor not choosing the Conciliator from the panel furnished by the Employer, within a period of 30 days, the Employer is at liberty to choose and nominate a Conciliator from the same panel and communicate to the Contractor which will be final and binding on the Contractor.
- The Employer and the Contractor shall in good faith co-operate with the Conciliator and, in particular, shall endeavour to comply with requests by the Conciliator to submit written materials, provide evidence and attend meetings. Each party may, on his own initiative or at the invitation of the Conciliator, submit to the Conciliator suggestions for the settlement of the dispute.
- When it appears to the Conciliator that there exist elements of a settlement which may be acceptable to the parties, he shall formulate the terms of a

possible settlement and submit them to the parties for their observations. After receiving the observations of the parties, the Conciliator may reformulate the terms of a possible settlement in the light of such observations.

If the Parties reach agreement on a settlement of the dispute, they may draw up and sign a written settlement agreement. If requested by the Parties, the Conciliator may draw up, or assist the Parties in drawing up, the settlement agreement.

When the Parties sign the settlement agreement, it shall be final and binding on the parties and persons claiming under them respectively. The Conciliator shall authenticate the settlement agreement and furnish a copy thereof to each of the Parties.

As far as possible, the conciliation proceedings should be completed within 60 days of the receipt of notice by the Conciliator.

The Parties shall not initiate, during the conciliation proceedings, any arbitral or judicial proceedings in respect of a dispute that is the subject matter of the conciliation proceedings.

- Termination of Conciliation Proceedings**     **17.8**     The conciliation proceedings shall be terminated:
- a. by the signing of the settlement agreement by the Parties on the date of agreement; or
  - b. by written declaration of the Conciliator, after consultation with the Parties, to the effect further efforts at conciliation are no longer justified, on the date of declaration; or
  - c. by a written declaration of the Parties to the Conciliator to the effect that the conciliation proceedings are terminated, on the date of declaration; or
  - d. by a written declaration of a Party to the other Party and the Conciliator, if appointed, to the effect that the conciliation proceedings are terminated, on the date of declaration.
- Upon termination of the conciliation proceedings, the Conciliator shall fix the costs of the conciliation and give written notice thereof to the Parties. The costs shall be borne equally by the Parties unless settlement agreement provides for a different apportionment. All other expenses incurred by a Party shall be borne by that Party.
- Arbitration**     **17.9**     If the efforts to resolve all or any of the disputes through conciliation fails, then such disputes or differences, whatsoever arising between the Parties, arising out of touching or relating to construction/ manufacture, measuring operation or effect of the Contract or the breach thereof shall be referred to Arbitration in accordance with the following provisions:
- (a) Matters to be arbitrated upon shall be referred to a Sole Arbitrator where the individual claim does not exceed Rs.Five (5) million or the total value of claims does not exceed Rs. Fifteen (15) millions. Beyond the above limit(s), there shall be three Arbitrators. For this purpose the Employer shall maintain a panel of Arbitrators with the requisite qualifications and professional experience relevant to the field to which the Claims relate. In case of a Sole Arbitrator, the Panel will be of three Arbitrators, out of which the Contractor will choose one. In case three Arbitrators are to be appointed, the Employer will make out a panel of five. The Contractor and the Employer will choose one Arbitrator each from the above and the two so chosen will choose the third Arbitrator from the above Panel only who will act as the 'Presiding arbitrator' of the Arbitration Panel.

If in a dispute, the Contractor fails to choose the Arbitrator within thirty (30) days after the Employer has nominated the Panel, the Employer may apply to the Indian Council of Arbitration, New Delhi, to nominate an Arbitrator from the same panel of Arbitrators given by the Employer for the matter in dispute.

If, in a dispute, the two chosen Arbitrators fail to appoint third Arbitrator within thirty (30) days after they have been appointed, the Employer may apply to the Indian Council of Arbitration, New Delhi, to nominate the third Arbitrator from the same panel of Arbitrators given by the Employer for the matter in dispute.

Neither Party shall be limited in the proceedings before such Arbitrator(s) to the evidence or arguments put before the Engineer for the purpose of obtaining his decision. No decision given by the Engineer in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the Arbitrator(s) on any matter, whatsoever, relevant to dispute or difference referred to Arbitrator(s). The arbitration proceedings shall be held in GANDHIDHAM only. The language of proceedings, which of documents and communication shall be English.

- (b) The Employer at the time of offering the panel of Arbitrators to be appointed as Arbitrator shall also supply the information with regard to the qualifications of the said Arbitrators nominated in the panel along with their professional experience, phone nos. and addresses to the Contractor.
- (c) The award of the sole Arbitrator shall be binding on all parties.
- (d) In arbitral proceedings with more than one Arbitrator, any decision of the arbitral tribunal shall be made by a majority of all the members and shall be binding on all parties.

<b>Reasoned Award</b>	<b>17.1 0</b>	The Arbitrator(s) shall always give item-wise and reasoned award(s) irrespective of the value of claim(s) in the dispute in all cases.
<b>Interest on Arbitration Award</b>	<b>17.1 1</b>	Where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period, till the date on which the award is made.
<b>Cost of Arbitration</b>	<b>17.1 2</b>	The cost of arbitration shall be borne by the respective Parties. The cost shall, inter alia, include the fees of the Arbitrator(s) as per rates fixed by the Employer from time to time.
<b>Jurisdiction of Courts</b>	<b>17.1 3</b>	Where recourse to a Court is to be made in respect of any matter, the court at GANDHIDHAM shall have the exclusive jurisdiction to try all disputes between the parties.
<b>Suspension of Work on Account of Arbitration</b>	<b>17.1 4</b>	The reference to Conciliation / Arbitration shall proceed notwithstanding that the Works shall not then be or be alleged to be complete, provided always that the obligations of the Employer, Engineer and the Contractor shall not be altered by reasons of arbitration being conducted during the progress of the Works. Neither party shall be entitled to suspend the work or part of the work

to which the dispute relates on account of arbitration and payments to the Contractor shall continue to be made in terms of the Contract.

## 18 Service of Notices

- |  |             |   |
|--|-------------|---|
| <b>Notice to Contractor</b>            | <b>18.1</b> | <p>a. All notices to the Contractor shall be served by post or telex or telefax or by hand to the Contractor or his authorized representatives. In case of notices delivered by post, they will be deemed to have been delivered after 7 days of dispatch.</p> <p>b. The Contractor shall, on award of the Contract, furnish to the Engineer, the name, designation, address and telephone, telex and telefax numbers and e-mail address of his representative referred to in Clause 4.3.</p>   |
| <b>Notice to Employer and Engineer</b> | <b>18.2</b> | All notices to the Employer or Engineer shall be served by post or telex or telefax, or by delivering by hand to the address nominated for the purpose.   |
| <b>Change of Address</b>               | <b>18.3</b> | Parties to the Contract may change the nominated address with a notice to all concerned.  |
| <b>Conflict of Interest</b>            | <b>19</b>   | The remuneration of the Tenderer shall constitute the Tenderer's sole remuneration in connection with this Contract or the Services and, the Tenderers shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations hereunder, and the Tenderers shall use their best efforts to ensure that any Personnel either of them, similarly shall not receive any such additional remuneration |

Neither the Tenderer nor the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:

- (a) during the term of this Contract, any business or professional activities in India which would conflict with the activities assigned to them under this Contract

The tenderer shall not be one of the following:

- (i) A firm which has been engaged by the Employer to provide consulting services for the preparation related to procurement for or implementation of this project.
- (ii) Any association/affiliation (inclusive of parent firms ) of a firm or an organization mentioned in para (i) above.
- (iii) A Tenderer who lends, or temporarily seconds its personnel to firms or organizations which were engaged in consulting services for the preparation related to procurement for or implementation of the project, if the personnel would be involved in any capacity on the same project.

Jurisdiction of Court in case of dispute or differences arising on account of this tender: Any suit or application, arising out of any dispute or differences on account of this pre qualification tender shall be filed in a competent court at Gandhidham, Gujarat only and no other court or any other district of the country shall have any jurisdiction in the matter.

**Operation and Maintenance**    **20**    The tenderer is required to operate and maintain the Wayfinding signage and street furniture for a period of 5 years from the date of completion of the work.

## Instructions to Tenderers

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## INSTRUCTIONS TO TENDERERS (ITT)

### A. GENERAL

#### 1. INTRODUCTION

1.1 Kandla SEZ Authority (KASEZA) is Located at the port town Gandhidham. The Kandla Special Economic Zone (KASEZ) is the first in Aisa and Largest multi-product Special Economic Zone in India.

1.2 Kandla SEZ Authority (KASEZA) invites sealed percentage tenders from the reputed and experienced Tenderers for the Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham.

1.3 The successful Tenderer has to establish its office/gowdown at Kandla if it doesn't have at present. The cost and expenses will be deemed to have been included Price Document and no separate payment will be made on this account.

#### 1.4 Scope of work

1.4.1 General Scope of Design, Fabrication, Supply and Installation works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc is as below;

The contractor will Design, procure materials, fabricate, finish, print, assemble, execute illumination, install and erect the Wayfinding System at the designated locations within the specified time(s) based on finalised designs, specifications and drawings approved by Kandla SEZ Authority at Kandla SEZ Campus in Gandhidham.

(i) **Design:** Referring to BOQ and Technical Specification guidelines, Tenderer will conceptualise and present concept design (visual look and feel) of Wayfinding System and Street Furniture to Kandla SEZ Authority for finalisation and approval. Design Concept to be presented in the form of 3D renders mapped on site locations for selected signs only. Finalised concept's 3D visualisation should be Submitted in the form of soft & Hardcopy (3 sets each) for all the signs. The designs shall be part of the bid to be submitted by tenderer, without which the bid of the bidder will be rejected. Design and cost both are essential features of the final bid to be selected, thus bidders are advised to undertake the site visit before submission of the bid, so that they have complete understanding of site conditions, geographical and environment restrictions and conditions. The designs shall ensure that proposed elements are modular, rust resistant, vandal proof, safe, easy to maintain and cost effective. Unnecessary filigrees and unnecessary beautification, by way of adding elements to basic design shall be avoided. The bidder is solely responsible for the efficacy of design submitted, and would need to provide structural stability certificate from a reputed qualified structural engineer, along with the shop drawings, once the bid is accepted to proceed.

(ii) **Material procurement:** Procurement of all materials shall be as specified in performance specifications for each sign including special colour vinyl films, extrusions, electrical, luminaries, finishing and assembly accessories, structural steel etc.

- (iii) **Fabrication:** Fabrication should be based on the finalized design, drawings and specifications of various Wayfinding system and street furniture. Fabrication to include all the supporting elements like brackets, suspenders, frameworks, covers, inside structural details, etc.
  - (iv) **Finishing:** Finishing of the all signages including their internal structures and panelling as per specifications for colours etc. Protection against damage is required during handling, transportation and installation.
  - (v) **Graphic sign faces:** Making signs faces from the original master artworks finalized by Kandla SEZ Authority for the text, graphics, symbols using colours matching the specifications, and exact sizes as per finalized design and detailed out in the sign schedule.
  - (vi) **Illumination:** Internal illumination of signs to the specified light and specifications including all electrical accessories, connections, and installation. Tenderer shall provide all the cabling and ducting connecting to the nearest designated point. Illumination work also includes the integration of dynamic Wayfinding signs within some illuminated signs and integration of input devices and data cabling.
  - (vii) **Structural and civil work:** Detailing and designing for fabrication of structural steel work in Wayfinding system and Street Furniture requiring structural support and providing foundations of external street and totem signs including HD bolts and other necessary fixings.
  - (viii) **Installation of signs:** Finishing and final assembly of all Wayfinding System and Street Furniture at identified locations using the specified fixings.
  - (ix) **Coordination:** Tenderer to coordinate with Kandla SEZ Authority for Wayfinding System and Street Furniture Design and other designated contractors for the interface for civil works, electrical, system wide contractors and other requirements during installation at sites.
  - (x) **Shop drawings:** Tenderer to produce one prototype of each Wayfinding System and Street Furniture type to demonstrate an understanding and appreciation of the design details. Tenderer will also prepare the shop drawings for fabrication and installation of all signs at all locations in all stations. The tenderer to submit structural stability certificate for each of the item separately along with methodology statement, test results and signed and stamped certificate clearly specifying that the items are safe to use under all conditions.
  - (xi) **Testing and commissioning:** Tenderer will be required to produce test results of manufactured Wayfinding System and Street Furniture to demonstrate the quality and correctness of materials used for fabrication, finishing and assembly. Tenderer will apply for a taking over certificate for final commissioning and completion of installation work from Kandla SEZ Authority.
- 1.4.2 **After installation service:** The Tenderer shall provide guarantees against material defects, bad workmanship, and incorrect installation and shall also be liable for replacement of complete Wayfinding System and Street Furniture or any part installed at site, for a period of one year from the date of completion.

1.5 The successful Wayfinding System and Street Furniture Tenderer will have to liaise with Kandla SEZ Authority and all other designated Tenderers like Civil, Architecture and

**2. ELIGIBILITY REQUIREMENTS**

- 2.1. The tender documents consist of Pre Qualification package, Technical package and Financial package.
- 2.2. To qualify for award of Contract, the Tenderers shall submit a written Power of Attorney authorizing the signatory (ies) of the tender to commit the Tenderer or each member of the Joint Venture. In case of Foreign Partners, Power of Attorney(s) and Board Resolutions confirming authority on the persons issuing the Power of Attorney for such actions, shall be submitted duly notarized by the notary public in the country of origin and stamped by the Indian Embassy / High Commission.
- 2.3. Each page of tender document including Addenda, Corrigenda etc, if any shall be signed by the authorized signatory
- 2.4. During tender period, cancellation or creation of a document such as Power of Attorney, Partnership deed, Constitution of firm etc., which may have bearing on the tender/contract shall be communicated forthwith in writing by the Tenderer to KANDLA SEZ AUTHORITY.
- 2.5. Each Tenderer, members in case of joint venture, will be required to confirm and declare in the Tender submission that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract.

**3. COST OF TENDERING**

- 3.1. The Tenderer shall bear all costs associated with the preparation and submission of his tender.

**4. SITE VISIT**

- 4.1 Any site information given in this tender document is for guidance only. The Tenderer is advised to visit and examine the SEZ site and their surroundings at his/their responsibility, risk and cost and obtain for himself/themselves on his own responsibility, all information that may be necessary for preparing the tender and entering into the Contract.
- 4.2 The tenderer shall be deemed to have inspected sources of various Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, alternative sources etc., before hand on his own and taken it into account including all other relevant factors pertaining to the Site with respect to approach roads, time restrictions for carrying out the fabrication and installation, stacking grounds, availability of land for temporary works and labour camps etc., in the preparation and submission of the Tender and entering into a Contract. No claim will be entertained in respect of any of these matters nor will the lack of knowledge or ignorance of conditions be accepted as substantiating a claim.

**B. TENDER DOCUMENTS****5. CONTENTS OF TENDER DOCUMENTS**

Tender Documents comprise the following:

**Package-1: Pre- Qualification Package**

- 1.1 General Information for Pre Qualification
- 1.2 Form of Tender – Tender Submission Letter
- 1.3 Initial Filter

**Package-2: Technical Package****2.1 Volume-1:**

- 2.1.1 Instructions to Tenderers
- 2.1.2 Form of Tender
- 2.1.3 General Conditions of Contract
- 2.1.4 Special Conditions of Contract with Schedules

**2.2 Volume-2:**

- 2.2.1 Technical Specifications (Part – 1)

**2.3 Volume-3:**

- 2.3.1 Reference Document (SHE Manual)

**Package-3: Financial Package**

- 3.1 Preamble to BOQ
- 3.2 Pricing Document (Bill of Quantities)

- 5.1. The contents of tender/ specification sheets/ concept drawings are for general information only and any interpretation of the results shall be constructed opinions only and not as representations or warranties as to the actual work.

The accuracy or reliability of the documents and reports referred to above and of any other information supplied, prepared or commissioned at any time by the Employer or other in connection with Tender is not warranted.

- 5.2. The Tenderer is expected to examine carefully all the contents of the Tender Documents and take them fully into account before submitting his Tender. Failure to comply with the requirements as detailed in these documents shall be at the Tenderer's risk. Tenders which are not responsive to the requirements of the tender documents will be rejected.

**6. CLARIFICATION ON TENDER DOCUMENTS**

- 6.1. While all efforts have been made to avoid errors in drafting of the tender documents, the Tenderer is advised to check the same carefully and seek clarifications if necessary within scheduled period shown in NIT. No claim on account of any errors detected later in the tender documents shall be entertained.

- 6.2. A Tenderer requiring any clarification of the tender documents including any error or mismatch in the tender documents, may notify Secretary Kandla SEZ Authority in writing or fax at the mailing address indicated in NIT. The SEZ team will respond in writing to any request for clarification received in writing from Tenderers prior to deadline for seeking clarifications. Only written communications / clarification received shall be considered. Written copies of responses to the clarifications will be sent by post/email to all Tenderers who have purchased the tender documents.

**7. AMENDMENT TO TENDER DOCUMENTS**

- 7.1. During the tender period, the Employer may issue further instructions or any amendments to existing tender documents in the form of an addendum / corrigendum to tenderers. Such amendments will be sent in writing or by fax/email to all who have purchased the tender documents. Tenderers should acknowledge receipt of such amendments and list them in the tender submittal.
- 7.2. Without prejudice to the order of preference as specified in Clause 1.5 of General Conditions of Contract, the provisions in such addenda shall take priority over the Invitation to Tender and Tender Documents issued previously. discuss
- 7.3. In order to afford prospective Tenderers reasonable time for preparing their tenders after taking into account such amendments, the Employer may, at his discretion, extend the date for submission of tenders in accordance with Sub-clause 18 of Instructions to Tenderers.

**C. PREPARATION OF TENDERS**

**8. LANGUAGE OF TENDER**

**All documents shall be in English Language.**

**9. TENDER DOCUMENTS**

**9.1. Pre-Qualification Documents.**

9.1.1. The tenderer shall submit the following duly completed.

- a) Form of Tender – Tender Submission Letter
- b) Initial Filter
- c) Tenders information
- d) Verification statement
- e) Annexures 1 to 4 and Appendixes

9.1.2. Evaluation criteria and basis for qualifying are explained in the accompanying documents. The tenderers who are qualified in PQ evaluation will be considered for Technical evaluation.

## 9.2. TECHNICAL DOCUMENT

9.2.1. The Tenderer shall submit the following documents as “Technical Documents” duly completed.

- (a) Power of Attorney (in favour of the Authorized Signatory of the Tenderer) (\*) as per page 13 of 16 of technical package.
- (b) Power of Attorney from each member in case of a Joint Venture
- (c) Articles of Association
- (d) The Memorandum of Understanding (MOU) for the Joint Venture.
- (e) GST Clearance Certificate and Registration details of GST as per Govt. of Gujarat/India. In case of Joint Ventures/Consortia, ITCC and STCC is required to be submitted by all the Partners. For Foreign based consultants/contractors suitable certified similar documents from their country of origin, (similar to ITCC/STCC from the country of their origin), or a certified statement from their Auditors stating that Income Tax/Corporation Tax has been paid will be accepted. For STCC, the Foreign based contractors shall be required to submit the necessary documents as applicable to them according to GST and its Amendments/GST
- (f) The tenderers, or members of JV, are required to furnish the PAN number including all members of group.  
(\*) A Copy of the GPA duly notarized should be given. It should contain authority given by the Board of Directors that GPA holder as full powers to participate in tendering. The said GPA should have come into force prior to the date of submission of Tender.
- (g) Appendix FT-1 : Contract Conditions
- (h) Appendix FT-2 : Tender Index
- (i) Appendix FT-3 : Form of certificate confirming site visit
- (j) Appendix FT-4 : Form of certificate confirming receipt of all tender addenda/corrigenda
- (k) Appendix FT-5 : Form of Letter of Undertaking
- (l) Appendix FT-6 : Establishment of Contractors Office in Kandla Gandhidham
- (m) Appendix FT-7 : Form of Letter of Undertaking and Verification Statement
- (n) Appendix FT-8 : Form of Letter of Undertaking for Conflict of Interest
- (o) Tender work Schedule as explained in para 9.2.2.
- (p) Details of providers of guarantees and warranties **under sub-clause 4.2 of GCC.**
- (q) Design for the items as listed in the BOQ, with clearly showcasing the dimensions and the design intent. The Designs must be coherent to each other and must answer how they respond to:
  - 1. Functional and Technical requirements, including clearly mentioning the outer dimensions
  - 2. Weather and geographical considerations
  - 3. Modularity
  - 4. Rusting
  - 5. Vandalism
  - 6. Safety

7. Material specifications
8. Maintenance requirements
9. Structural stability
10. Any other feature that bidder wishes to highlight

**\*Note that bidder shall not mention any price or rate or any sort of indication of costs on the design sheets/ slides/ or any medium, while submitting the design along with the bid.**

- (r) Any further documents which have been requested by the Employer by writing.

*Note: All the documents detailed in the under Technical document' shall be submitted as duly filled in and as duly signed.*

#### 9.2.2. Tender Work Schedule

A brief overall Work Programme in terms of weeks from Commencement Date of Works and a bar chart indicating the duration and timing of all major activities shall be prepared and submitted along with the tender. Bar chart shall be made showing the activity to be performed along with duration of each activity. Broadly all the major activities required for carrying on the work should be shown.

The Works Programme given in the tender shall not in any event be construed as a submission of the Works Programme as required to be furnished according to the Employer's requirements during execution.

#### 9.2.3. No information relating to financial terms of service should be included in the Technical document.

#### 9.3. FINANCIAL DOCUMENTS:

- 9.3.1. The Tenderer shall submit as "FINANCIAL DOCUMENTS" the Pricing Document (Bill of Quantities) and Preamble to BOQ duly completed;
- 9.3.2. The financial document should be completed, each page duly signed and stamped and submitted in a separate sealed envelope. The percentages shall be entered at the prescribed place in the Price Document. These prices should include all costs associated with the contract for each unit.
- 9.4. Documents to be submitted by the Tenderer under Technical and Financial Documents have been described under the respective Clauses 9.2 and 9.3. This list of documents has been prepared for the convenience of the Tenderer and any omission on the part of the Employer shall not absolve the Tenderer of his responsibility of going through the various clauses in the Tender Documents including the specifications and to submit all the details specifically called for (or implied) in those clauses.

#### 10. TENDER PRICE

- 10.1. The Contract shall be for the whole works as described in scope of work, Tender Drawings, Specifications and Bill of Quantities. The Tenderer shall fill in tender percentage (i.e above or below w.r.t. Par Value) and the amount in the summary sheet of Pricing Document. Corrections if any shall be made by crossing out, initialing, dating and rewriting. The Tender prices shall be governed by **Clause 11.1 of General Conditions of Contract** and shall be subject to limitations of Special Conditions of Contract including **Clause – 19 of SCC** and nothing extra shall be payable which is not included in the contract price.

- 10.2. The percentage quoted (i.e. above or below w.r.t. the Par Value) shall be reasonable and balanced. Should the Employer come across any unbalanced percentage quoted, he may require the Tenderer to furnish detailed analysis to justify the same. If after its examination, the Employer still feel the percentage quoted are unbalanced, he may ask the Tenderer for additional Performance Security or other safeguards to protect Employer's interest against financial loss. If the tenderer fails to provide additional Performance Security, his tender shall be liable to be rejected by the Employer, who may award the Contract to any other Tenderer.
- 10.3. The Tenderer shall keep the contents of his tender and rates/percentages quoted by him confidential.
- 10.4. The Tenderer shall utilize Indian labour, staff and materials to the maximum extent possible in execution of Works.
- 10.5. The Tenderer should quote his rates inclusive of all taxes, duties, royalties etc. The successful Tenderer (the Contractor) shall maintain meticulous records of all the taxes and duties paid and provide the same as and when required by the Employer for record.
- 10.6. The tax on work contract as per the prevailing rate in Gujarat State shall be deducted from the Contractor's on Account Bill till their Final Contract Price and Contract Period.

## **11. CURRENCIES OF THE TENDER**

- 11.1. Tender prices shall be quoted in Indian Rupees only.

## **12. TENDER VALIDITY**

- 12.1 The tender shall remain valid and open for acceptance for a period of 120 days from the Last date of submission of tender as indicated in NIT and Appendix FT-1 to Form of Tender.
- 12.2 In exceptional circumstances, prior to expiry of the original tender validity period, the Employer may request the Tenderers for a specified extension in the period of Validity in writing or by Tele-fax. A Tenderer may refuse the request without forfeiting his tender security. A Tenderer agreeing to the request, shall not be required or permitted to modify his tender but will be required to extend the validity of his tender security correspondingly.

## **13. TENDER SECURITY**

- 13.1. The Tenderer shall furnish with his tender, tender security amount in the form of a Bank Guarantee in favour of Kandla SEZ Authority payable at Gandhidham from an Indian Scheduled Bank (excluding Co-operative banks) or from a Schedule Bank as defined in Section 2 9e) of RBI Act 1934 read with Second Schedule in the form given in Annexure-2 to Form of Tender. In case of joint venture, Tender security can be furnished by any one of the members of the joint venture. The Tender Guarantee shall remain valid for 30 days beyond the validity period of the tender. Bank Guarantee towards Tender Security can be submitted in multiple Bank Guarantees also.



- 13.2. The Tender Security shall be submitted in a separate envelope.
- 13.3. Any tender not accompanied by an acceptable tender security will be summarily rejected.
- 13.4. The tender securities of unsuccessful Tenderers shall be discharged/returned by the Employer as promptly as possible as but not later than 30 days after the expiry of tender validity period.
- 13.5. The tender security of the successful Tenderer shall be returned upon the Tenderer executing the Contract Agreement after furnishing the required performance guarantee as per the Contract.
- 13.6. The tender security shall be forfeited:
  - a) If a Tenderer withdraws his tender during the period of tender validity, or
  - b) If the Tenderer does not accept the correction of his tendered price in terms of Clause 26.0, or
  - c) In case of a successful Tenderer, if he fails to:
    - i. Furnish the necessary performance guarantee for performance.
    - ii. Enter into the Contract within the time limit specified.
- 13.7. No interest will be payable by the Employer on the tender security amount.

**14. Pricing of Conditions, Qualifications, Deviations etc.,**

The Tenderer shall submit his tender without any conditions, deviations etc. to the tender documents.

**15. PRE-BID MEETING**

Pre-Tender meeting will be held in Kandla SEZ Authority office at Kandla Gandhidham as well as Online session for people not able to travel. Date and time shall be as in NIT.

**16. FORMAT AND SIGNING OF TENDERS**

- 16.1. If the tender is submitted by a proprietary firm it shall be signed by the proprietor with the full name of his firm with its current address.
- 16.2. If the tender is submitted by a limited company or a limited corporation, it shall be signed by a duly authorized person holding the power of attorney for the firm. A certified copy of the power of attorney shall accompany the tender.
- 16.3. If a tender is submitted by a joint venture, it shall submit complete information pertaining to each firm in the joint venture and state along with the tender as to which one of the firms shall have the responsibility for tendering, for completion and due performance of the Contract. Also furnish evidence admissible in law in respect of the authority assigned to such firm on behalf of the joint venture for tendering, completion and due performance of the Contract. All members shall be jointly and severally responsible for all aspects of the Tender and the consequent Contract.
- 16.4. All amendments/corrections/ overwriting shall be initialled by the person or persons signing the tender.
- 16.5. All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be written below their signatures.

**D. SEALING AND SUBMISSION OF TENDERS**

**17. SEALING AND MARKING OF TENDERS**

**17.1. The Tenderer has to submit separately;**

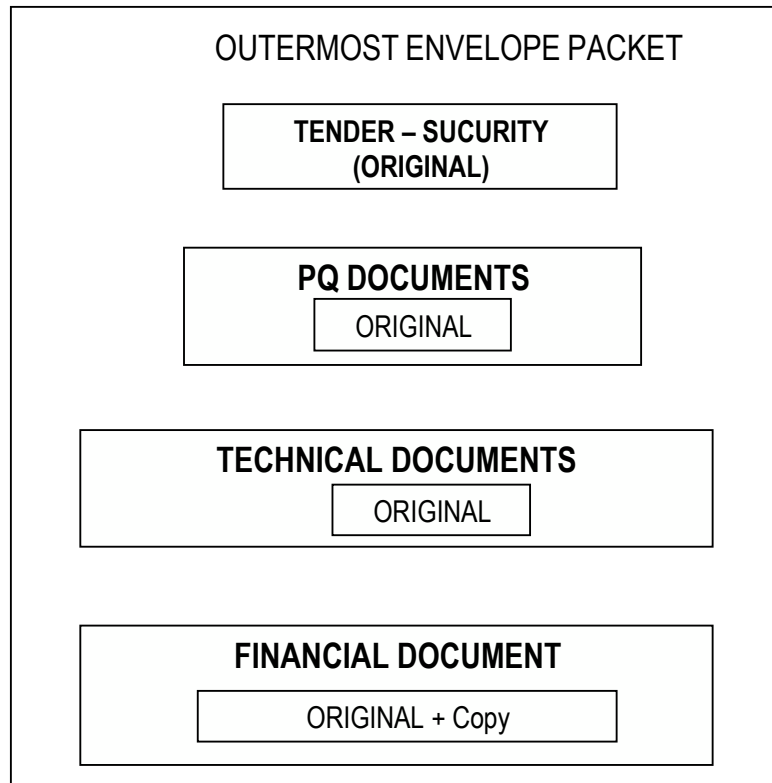
- (i) Tender Security envelope (original)
- (ii) PQ Documents envelope (original )
- (iii) Technical documents envelope (original)
- (iv) Financial Document envelope (original)

The above Four Tender envelopes shall be put in an outer envelope addressed to **The Chairman, Kandla SEZ Authority, Office of the Development Commissioner, Kandla SEZ, Gandhidham, Kutch- 370230**, Gujarat, India duly super scribing on top, tender number, name of work, time and date for submission and time and date for opening. The envelope should also bear the name and address of the Tenderer. Or Submission online on tender portal.

The contents of Technical Document and Financial Document shall be as detailed under Clauses 9.2 and 9.3 of ITT.

Tenderers to note that the 'Tender Security' shall be put in a separate envelope only.

Submission of tender comprising in the following manner



Note: Tender Drawings are required to be submitted in **Original only** duly signed in each page along with Technical documents

17.2. No responsibility will be accepted by the Employer/Engineer for the misplacement or premature opening of a tender, if not sealed or marked as per aforesaid instructions.

**18. SUBMISSION OF TENDERS**

18.1. Tenders should be submitted at the following address before scheduled time on date of submission.

**The Chairman,  
Kandla SEZ Authority,  
Office of the Development Commissioner  
AO Building, Kandla Special Economic Zone  
Gandhidham  
Kutch-370 230,  
Gujarat, India,**

The Employer/Engineer may, at his discretion, extend date of submission of tender by amending the Tender Documents in which case all rights and obligations of the Employer and the Tenderer previously subject to the original date shall thereafter be

subject to the new deadline as extended. If such nominated date for submission of tender is subsequently declared as a Public Holiday by the Employer, the next official working day shall be deemed as the date for submission of tender.

- 18.2. Tenders as sealed above shall be submitted in person to the designated office/online. The Employer cannot take any cognizance and shall not be responsible for delay in transit.
- 18.3. All documents including amendments, clarifications to the queries of the pre bid, corrigendum, addendum etc. shall be returned, duly signed by the tenderer.

#### **19. LATE TENDERS**

- 19.1. Any tender received by KANDLA SEZ AUTHORITY after the deadline prescribed for submission of tenders will be returned unopened to the Tenderer.

#### **20. MODIFICATION, SUBSTITUTION AND WITHDRAWAL OF TENDERS**

- 20.1. Except permitted by the instructions, the Tenderer shall not make any alteration, erasure or obliteration to the text of the documents prepared by the Employer.
- 20.2. The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the clause 18.1 of this Instruction to Tenderers, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as the case may be.
- 20.3. No modifications shall be permitted after expiry of date & time of submission of the Tenders. Withdrawal of the tender after deadline for submission of tenders but prior to the period of bid validity shall result in forfeiture of the Tender Guarantee.

#### **E. TENDER OPENING AND EVALUATION**

##### **21. TENDER OPENING**

- 21.1. On opening of the outermost Tender envelope, it will be checked whether it contains Tender security amount (as per NIT) envelope, PQ documents envelope, Technical document envelope and Financial Documents envelopes are separate or not (**In case they are not separate / sealed properly, the bid of the said tenderer shall be summarily rejected**). If it is in order, then the Tender security amount envelope will be opened first and checked for its adequacies as per clause 13 of ITT.
- 21.2. Then the Employer/ Engineer will open the PQ documents envelope, in the presence of Tenderers or their representatives of only those Tenderers whose EMD is found to be acceptable and valid. The Tender of any Tenderer who has not complied with one or more of the foregoing instructions may not be considered.
- 21.3. The Tenderers name, the presence or absence of the requisite tender security and such other details as the Employer or his authorized representative, at his discretion, may consider appropriate will be announced at the time of tender opening..
- 21.4. The sealed Financial Package will be kept in safe custody of the Employer and will be opened on a subsequent date after evaluation of PQ and Technical packages of Tenderers. If the tenderer does not meet the PQ and Technical requirements, Financial Packages of those Tenderers shall not be opened.
- 21.5. PQ package & Technical package meeting the entire Technical requirement of the Tender and found suitable only will be qualified for opening of their Financial Package.

The date and time of Financial Package opening shall be informed separately to the technically qualified tenderers.

- 21.6. The Financial Package will be opened in Kandla SEZ Authority Office in the presence of qualified Tenderers or their representatives who choose to attend. Bid Prices as quoted shall be read out by the Nominated Officials of the tender opening committee and recorded.

## **22. PROCESS TO BE CONFIDENTIAL**

- 22.1. Except the public opening of tender, information relating to the examination, clarification, evaluation and comparison of tenders and recommendations concerning the award of Contract shall not be disclosed to Tenderers or other persons not officially concerned with such process.
- 22.2. Any effort by a Tenderer to influence the Employer/Engineer in the process of examination, clarification, evaluation and comparison of tenders and in decisions concerning award of contract, may result in the rejection of the Tenderers tender.

## **23. CLARIFICATION / ADDITIONAL INFORMATION**

- 23.1. Evaluation of Tender documents submitted by Tenderers shall be undertaken based on details submitted in the tender documents. Employer reserves the right to ask any clarification / additional information from Tenderers for details submitted in the tender if it so desired during the evaluation.
- 23.2. To assist in the examination, evaluation and comparison of Financial Documents, the Engineer/ Employer may ask Tenderers individually for clarification of their tenders, including breakdowns of prices. The request for clarification and the response shall be in writing or by Tele-fax but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm correction of arithmetical errors discovered by the Engineer during the evaluation of tenders in accordance with Clause 25.0 herein.
- 23.3. **Delay / refusal to the request for clarification as referred in the above Para 23.1 and 23.2 may result in the rejection of the Tenderers tender.**

## **24. DETERMINATION OF RESPONSIVENESS**

- 24.1. Prior to the detailed evaluation of tenders, the Employer will determine whether each tender is responsive to the requirements as stipulated in the tender documents.
- 24.2. For the purpose of this Clause, a responsive tender is one, which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation which include exceptions, exclusions & qualifications. A material deviation or reservation is one which affects in any substantial way the scope, quality, performance or administration of the works to be undertaken by the Tenderer under the Contract, or which limits in any substantial way, the Employer's rights or the Tenderers obligations under the Contract as provided for in the Tender documents and / or is of an essential condition, the rectification of which would affect unfairly the

competitive position of other Tenderers presenting substantially responsive tenders at reasonable price.

- 24.3. If a tender is not substantially responsive to the requirements as stipulated in tender documents, it will be rejected by the Employer, and will not subsequently be permitted to be made responsive by the Tenderer by correction or withdrawal of the non-conformity or infirmity.
- 24.4. The decision of the Employer as to which of the tenders are not substantially responsive shall be final.

## **25. EVALUATION OF TENDER**

- 25.1. The evaluation of Financial Document by the Employer will take into account, in addition to the tender amounts, the following factors:
- a) Arithmetical errors corrected by the Employer
  - b) Pricing of unqualified withdrawal of Conditions, Qualification and Deviation etc.,
  - c) Such other factors of administrative nature as the Employer may consider having a potentially significant impact on contract execution, price and payments, including the effect of items or units rates that are unbalanced or unrealistically priced.
- 25.2. Offers, deviations and other factors which are in excess of the requirements of the tender documents or otherwise will result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.
- 25.3. Evaluation of financial offer will be based on the percentage quoted in each section of Pricing Document. Any alteration in Pricing Document will not be given any cognizance.

## **26. CORRECTION OF ERRORS**

- 26.1. Tenders determined to be technically acceptable after technical evaluation will be checked by the Employer for any arithmetical errors, in computation and summation during financial evaluation. Errors will be corrected by the Employer as follows:

Where there is a discrepancy between amounts in figures and in words, the amount in words will govern; and

- 26.2. If a Tenderer does not accept the correction of errors as outlined above, his tender will be rejected and the tender security forfeited.

## **F. AWARD OF CONTRACT**

### **27. AWARD CRITERIA**

- 27.1. Subject to Clause 25.0, the Employer will award, the Contract to the Tenderer, whose tender is responsive, complete and in accordance with the tender requirement, and who's Evaluated Price is determined to be the lowest.

### **28. EMPLOYER'S RIGHT TO ACCEPT ANY TENDER AND TO REJECT ANY OR ALL TENDERS**

- 28.1. Notwithstanding Clause 27.0, the Employer reserves the right to accept or reject any tender, and to annul the tender process and reject all tenders at any time prior to award of Contract, or to divide the Contract between/amongst Tenderers without thereby

incurring any liability to the affected Tenderer or Tenderers or any obligations to inform the affected Tenderer or Tenderers of the grounds for the Employer's action.

## **29. NOTIFICATION OF AWARD**

29.1. Prior to the expiry of the period of tender validity prescribed by the Employer, the Employer will notify the successful Tenderer by Tele-fax or email, to be confirmed in writing by registered letter, that his tender has been accepted. This letter (hereinafter and in the Conditions of Contract called 'the Letter of Acceptance') shall name the quoted percentage, sum which the Employer will pay to the Contractor in consideration of the execution, completion, maintenance and guarantee of the works by the Contractor as prescribed by the Contract (hereinafter and in the conditions of Contract called 'the Contract Price'). The "Letter of Acceptance" will be sent in duplicate to the successful Tenderer, who will return one copy to the Employer duly acknowledged and signed by the authorized signatory, within one week of receipt of the same by him. No correspondence will be entertained by the Employer from the unsuccessful Tenderers.

Details with regard to handing over of site will be given to the successful Tenderer along with LOA.

29.2. The Letter of Acceptance will constitute a part of the contract.

29.3. Upon "Letter of Acceptance" being signed and returned by the successful Tenderer as per Clause 29.1 above, the Employer will promptly notify the unsuccessful Tenderers and discharge / return their Tender Securities.

## **30. SIGNING OF AGREEMENT**

30.1. The Employer shall prepare the Contract Agreement in the form as prescribed in schedule 1 to the Special Conditions of Contract, with such notifications as may be necessary for duly incorporating all the Terms of Agreement between the two parties. Within 30 days from the date of issue of Letter of Acceptance, the successful Tenderer will be required to execute the Contract agreement. One copy of the Agreement duly signed by the Employer and the Contractor through their authorized signatories will be supplied by the Employer to the Contractor.

30.2. The successful tenderer shall submit the following documents within 30 days from the date of issue of the Letter of Acceptance:

- A. Performance Guarantee
- B. Power of Attorney(s) and Board Resolution (In case of Foreign Partners, to be duly notarized by notary public and stamped by the Indian Embassy/High Commission) in case of any change than submitted along with tender submittals.
- C. Detailed Consortium or Joint Venture Agreement (duly signed and executed) incorporating in case of any change than submitted along with tender submittals:
  - i. Percentage Participation of each member/partner
  - ii. Joint and several liabilities of the partners.

## **31. PERFORMANCE SECURITY**

31.1. The successful Tenderer shall furnish to the Employer a performance security in accordance **with sub clause 4.2.1 of the General Conditions of Contract**. The Form of Performance Security provided in Schedule-2 to Special Conditions of Contract shall be used.

**32. KEY DATES:**

<b>KD No.</b>	<b>Item</b>	<b>Key Date (weeks from the date of issue of Letter of Acceptance)</b>
KD-1	Submitting all the material samples and Schedule of work	<b>3 Weeks</b>
KD-2	Approval on all prototype samples and shop drawings	<b>4 Weeks</b>
KD-3	Fabrication of all Wayfinding System and Street Furniture internal structures at factory 60% quantity	<b>8 weeks</b>
KD-4	Fabrication of all Wayfinding System and Street Furniture external structures at factory 60% quantity	<b>10 weeks</b>
KD-5	Commence installation	<b>10<sup>th</sup> weeks onwards</b>
KD-6	Commissioning of 100% Wayfinding System and Street Furniture, Completion and handover	<b>20 weeks</b>

**33. CONTACT PERSON IN KANDLA SEZ AUTHORITY**

The contact person in Kandla SEZ Authority office, regarding this tender Sh. Binod Kumar Mandal, Public Relation Officer, Kandla Special Economic Zone, Gandhidham – Contact No. 7992375713, Email id:- admn.kasez-gj@gov.in.



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- 1      **Sub-Clause 1.5**      **Priority of Documents**
- The priority of the documents shall be as follows:
- (a)      The Contract Agreement;
  - (b)      The Letter of Acceptance;
  - (c)      The Tender;
  - (d)      The Employer's Requirements
  - (i)      Technical Specification
  - (ii)     General Requirement - construction
  - (e)      The Special Conditions of Contract including Schedules;
  - (f)      The General Conditions of Contract;
  - (g)      Any other document forming part of the Contract.
- All "Documents" and "Annexures" of tender booklet and clarifications of Prebid Queries will cover complete tender.
- 2      **Sub-Clause 3.2**      **Duties and authorities of the Engineer**
- The Engineer, In addition to the duties mentioned in Clause 3.2 of General Conditions of Contract:
- (i) shall watch and inspect the Works, monitor the test results and examine any material to be used and workmanship employed by the Contractor in connection with the Works;
  - (ii) shall carry out such duties and exercise such powers vested in the Engineer in accordance with the provisions of the Contract;
  - (iii) shall issue instructions which in his opinion are necessary for the execution of the Works; and
  - (iv) May issue any other instruction which in his opinion is desirable in connection with the Works.
3.      **Sub-Clause 4.5**      **Sub-contractors**
- The sub-contracting, is limited to 30% of the Value of Work.. The value of a sub-contract, as and when awarded, should be intimated by the Contractor to the Engineer and it should also be certified that the cumulative value of the sub-contracts awarded so far is within the aforesaid limit of 30%.
- At the request of the Engineer, a copy of the contract between the Contractor and Sub-Contractor shall be given to the Engineer and the Contractor shall not carry any modification without the consent in writing of the Engineer. The terms and conditions of sub-contracts and the payments that have to be made to the sub-contractors shall be the sole responsibility of the Contractor. Payments to be made to such sub-contractors will be deemed to have been included in the Contract price. it will be obligatory on the part of the Contractor to obtain consent of the Employer to the identity of the sub-contractor. The Employer will give his consent after assessing and satisfying himself of the capability, experience and equipment resources of the sub-

contractor. Decision of the Engineer is final and binding in this regard. The Contractor shall provide sufficient superintendence, whether on the site or elsewhere, to ensure that the work to be carried out by a sub-contractor complies with the requirements of the Contract.

In the case of sub-contracts for electrical and mechanical works, which the Contractor intends to procure on the basis of outline design, design briefs and performance specification, the Contractor shall, prior to inviting tenders from sub-contractors, submit such documents to the Engineer for review.

The proposed sub-contract terms and conditions shall impose on the sub-contractor such terms of the Contract as are applicable and appropriate to the part of the Works to be sub-contracted, to enable the Contractor to comply with his obligations under the Contract.

Notwithstanding any consent to sub-contract given by the Engineer, if in his opinion he considers it necessary, the Engineer shall have full power to order the removal of any sub-contractor from the Site or off-Site place of manufacture or storage, which power shall not be exercised unreasonably.

**4 Sub-Clause 4.8.1 Accurate Setting out**

The Contractor shall survey and fix the alignment, make pier location, maintaining vertical & horizontal clearances and keeping in view important site references and obligatory locations in consultation with Engineer.

The Contractor shall establish at his cost, at suitable points, additional reference lines and bench marks as may be necessary. The Contractor shall remain responsible for the sufficiency and accuracy of all his bench marks and reference lines. He shall take precautions to see that lines, pints and bench marks fixed by the Engineer are not distributed by his work and shall make good any damage thereto..

**5 Sub-Clause 4.9 Site Data**

The Geotechnical and other related data provided by the Employer are based on the investigation conducted by KASEZ and are for reference purposes only. The Tenderer should satisfy himself with the data furnished and make his own investigations if required before submitting his Tender Any change in design or methodology later during execution, cost towards redesigning on account of change if proposed to be carried out by KASEZ , it will be borne by KASEZ.

The Contractor shall not be relieved from any risk or obligation imposed on or undertaken by him under the Contract on any such ground or on the ground that he did not or could not foresee any matter which may affect or have affected the execution of the Works, or compliance with his other obligations under the Contract.

**6 Sub-Clause 4.11 Access Route**

All operations for the execution of the Works shall be carried out so as not to interfere unnecessarily with the convenience of the public or the access to public or private roads or footpaths or properties owned

by the Employer or by any other person.

The Contractor shall select routes, choose and use vehicles so that movement of Contractor's Equipment, Plant and Materials from and to the Site is limited so that traffic is not delayed and damage to highways and bridges is prevented. If there is any delay or damage or injury, the cost of rectification or reconstruction of highways or bridges shall be borne by the Contractor. The Contractor shall indemnify the Employer in respect of all claims, demands, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any such matters.

If during the execution of the Works the Contractor shall receive any claim arising out of the execution of the Works in respect of damage to highways or bridges, he shall immediately report the facts to the Engineer. The Contractor shall negotiate a settlement in respect of such claims and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses in relation thereto.

**7 Sub-Clauses 4.13 Programmes**

Within 14 days of the date of receipt of letter of acceptance, the Contractor shall submit to the Engineer, for consent, the Detailed Works Programme in the form and content prescribed in the Tender Documents.

The Contractor shall complete the work in phased manner fixing priorities to the different Stages of the work to give access to other interfacing contracts as per the requirement of project from time to time and as milestone indicated in appendix FT-1 of Package-2. (Technical Package).

The Engineer shall inform the Contractor in writing within 10 days after receipt of the above information;

- (a) that the programme has received his consent; or
- (b) that the programme is rejected, in which case reasons for such rejection shall be given; or
- (c) that further information is required to clarify or substantiate the programme or to satisfy the Engineer as to its reasonableness, or
- (d) that the programme has received his consent subject to incorporation of comments attached to the Notice of No Objection

Provided that if none of the above actions is taken within the 21 day period, the Engineer shall be deemed to have given consent to the programme submitted.

The Contractor shall, within 21 days of receiving notification under sub-paragraphs (c) or (d) above, provide further information requested or the programme shall be deemed to have been rejected. The Engineer shall, within 21 days of receipt of such further information, either reject the programme or give his consent.

In the event of a programme being rejected, or deemed to have been

rejected, the Contractor shall, within 21 days thereafter, submit a revised programme taking account of the reasons given for the rejection or incorporating further information requested by the Engineer, as the case may be.

The Contractor, following receipt of consent to the Works Programme, may at any time, submit to the Engineer an amended version. In the event that the Engineer grants an extension of time, instructs an Employer's Variation, or on the occurrence of any event or happening or situation, which could materially affect the progress of the Works, the Contractor shall submit a revised programme to the Engineer for his consent.

If the Engineer feels that there is a significant deviation between the actual or anticipated progress of the Works and the Works programme, the Engineer may require the Contractor to submit a revised/modified programme to ensure timely completion of Whole of Works or a milestone. The Contractor shall submit such revised programme within 14 days of the Engineer's instruction or within such other time as the Engineer will allow in writing.

Unless and until an amended version has the consent of the Engineer, the existing programme shall remain as the Works Programme for all purposes of the Contract.

Consent by the Engineer to a Works Programme shall not relieve the Contractor of any of his duties or responsibilities under the Contract, nor in the event that a Works Programme indicates that a Key Date has not or will not be met, constitute any form of acknowledgement that the Contractor is or may be entitled to an extension of time in relation to such Key Date.

### **Three Month Rolling Programme**

Within 30 days of the date of received of letter of acceptance, the Contractor shall submit to the Engineer his Fortnightly Rolling Programme for each agreed major section of Works in the Contract, in the form and detail prescribed in the Employer's Requirements, setting out the work to be carried out during the following months.

**8 Sub-Clauses Safety of Works, Health and Safety**  
**4.16 and 6.7**

In addition to Sub-clause 4.16 of the General Conditions of Contract, within 8 weeks of receipt of letter of acceptance, the Contractor shall submit a detailed and comprehensive contract-specific Site Safety Plan based on the Employer's Safety, Health and Environmental Manual (SHE Manual). The Contractor is required to make himself aware of all the requirements of the Employer's Safety, Health and Environmental Manual in this regard and comply with them. The Site Safety Plan shall include detailed policies, procedures and regulations which, when implemented, will ensure compliance with Sub-Clauses 4.16 and 6.7 of General Conditions of Contract and SHE Manual (Vol-3).

The Contractor shall, from time to time and as necessary or required by the Engineer, produce supplements to the Site Safety Plan such that it is at all times a detailed, comprehensive and contemporaneous statement by the Contractor of his site safety and industrial health obligations, responsibilities, policies and procedures (under the laws of India) or as stated in the Contract or elsewhere relating to work on Site.

If at any time the Site Safety Plan is, in the opinion of the Engineer, insufficient or requires revision or modification to ensure the security of the Works and the safety of all workmen upon, and visitors to the Site, the Engineer may instruct the Contractor to revise the Site Safety Plan. The Contractor shall, within 14 days, submit the revised plan to the Engineer for review.

Any omission, inconsistency or error in the Site Safety Plan or the Engineer concurrence or rejection of the Site Safety Plan and/or supplements thereto shall be without prejudice to the Contractor's obligations with respect to site safety and industrial health and shall not excuse any failure by the Contractor to adopt proper and recognised safety practices throughout the execution of the Works.

The Contractor shall adhere to the Site Safety Plan and shall ensure that all sub-contractors of all tiers have a copy of the Site Safety Plan and comply with its provisions.

The Contractor shall provide all necessary access, assistance and facilities to enable the Engineer and the Employer to carry out surveillance to verify that the Site Safety Plan is being properly and fully implemented.

The Contractor shall notify the Engineer immediately of any occurrence or incident that results in death or serious injury as defined in the Indian Penal Code. Such initial notification may be verbal and confirmed in writing thereafter and shall be followed by a comprehensive written report within 24 hours of the occurrence/incident. The Contractor shall duly complete standard forms as required by the Engineer and Statutory Authorities.

The Contractor shall provide and maintain all necessary temporary fire protection and fire fighting facilities on the Site during the construction of the Works in accordance with the statutory

regulations and as required by the Engineer. The Contractor shall ensure that all gases, fuels and other dangerous Materials and goods are stored and handled in a safe manner and in accordance with the statutory regulations and as required by the Engineer.

The obligations and requirements for safety and industrial health under this Contract are entirely without prejudice to, and do not derogate from, the Contractor's statutory obligations, with respect to safety and industrial health.

**First aid Base**

The Contractor shall provide a First Aid Base at his principal Works Area/ Construction Depot, suitable medical facilities for Workmen's Camps, suitable and sufficient first aid boxes at worksites for the Contractor's workforce and his Sub-contractors' workforce as further described in the Employer's Requirements.

**9 Sub-Clause 4.17 Protection of the Environment**

Outline Environmental Plan means the environmental plan forming part of the Tender, setting out, in summary form, the Contractor's proposed means of complying with his obligations in relation to environmental quality. Site Environmental Plan means the site environmental plan including all supplements thereto, or any amended or varied version thereof, as submitted by the Contractor in accordance with Employer's Safety, Health and Environmental Manual (SHE Manual), this Clause and which has received the Engineer's consent. The Site Environmental Plan shall include detailed policies, procedures and regulations which, when implemented, will ensure compliance with this Clause. The Contractor is required to make himself aware of all the requirements of the Employer's SHE Manual in this regard and comply with them.

Within 8 weeks of the receipt of Letter of acceptance, the Contractor shall submit a detailed and comprehensive Site Environmental Plan based on the Employer's Safety, Health and Environmental Manual (SHE Manual), and shall include such further material, which the Contractor considers necessary and relevant.

Upon the Engineer notifying his consent to the Site Environmental Plan, or any supplemental part thereof, the Contractor shall adhere to the principles and procedures contained in such document save to the extent that the Engineer may give his consent to any amended or varied version thereof.

The Contractor shall provide all necessary access, assistance and facilities to enable the Engineer and the Employer to monitor and conduct tests to verify that the Site Environmental Plan is being properly and fully implemented.

**10 Sub-Clause 4.19, 4.20 Tools, Plants and Equipment Supplied by the Employer and Employer's Materials**

No material, tools, plant and equipment shall be supplied by the

Employer. The Contractor has to arrange all tools, plant, equipment as well as construction materials required for the work.

**11 Sub-Clause 4.22 Temporary Works.**

The Contractor's proposals for erection of all ancillary and temporary works shall be in conformity with the proposals submitted along with the Tender and modifications thereto as approved by Engineer.

The Contractor shall submit drawings , supporting design calculations where called for by the Engineer and other relevant details of all such works to the Engineer for approval at least fifteen days before he desires to commence such works. Approval by the Engineer of any such proposal shall not relieve the Contractor of his responsibility for sufficiency of such works.

No extra payment will be made for complying with the provisions of this Clause and the cost of work under this element shall be deemed to be included in the Financial package.

**12 Sub Clause 4.25, Access Road and Way Leaves, Contractor to keep Site clear, 4.26, 4.27 and 4.28 Security of the Site & Contractor's Operations on Site**

This is in addition to provisions defined in General Conditions of Contract.

Existing roads and other public roads may be used by the Contractor at his risk and cost to carry out construction activities, with prior approval of the competent authority.

The Contractor's heavy construction traffic or tracked equipment shall not travel on any public road or bridge, unless the Contractor has made arrangements with the authority concerned and has obtained the approval of the Engineer to such arrangements. The Contractor shall include in his price the cost of strengthening any such public road or bridge if he considers it would be necessary.

The Contractor shall repair any damage to the road or bear the cost thereof due to movement of contractor's plants and equipment, vehicles etc. to the specifications and satisfaction of road authorities as well as of Engineer.

No claim whatsoever shall be entertained on this account. The transportation of certain equipments and materials and launching may not be possible during day and may have to be carried out within time schedule specified by traffic police.

No extra payment will be made for construction and maintenance of temporary haul roads if any needed including any special protection of strengthening required and all cost of such works shall be deemed to have been included in the fixed Contract price.

All garbage shall be removed from site daily or as they accumulate. All



surface and sub-soil drains shall be maintained in a clean, sound and satisfactory state of performance. No extra payment shall be made on this account.

The Contractor shall take all measures necessary to ensure such security, including exercising control over all persons and vehicles which are employed or engaged on the Site or in connection with the Works or the other works comprising the Project and with the security arrangements applicable to any other site within the Project.

The Contractor, after obtaining any necessary consent from any relevant authority, shall submit to the Engineer proposals showing the layout of pedestrian routes, lighting, signs, and guarding any road opening or traffic diversion which may be required in connection with the execution of the Works and which the Contractor intends to construct. Any consent given by the Engineer to such proposals shall not relieve the Contractor of any obligation under the Contract or absolve the Contractor from any liability for or arising from such proposals or the implementation thereof.

All lights provided by the Contractor shall be so placed or screened as not to interfere with signs, signals or lights. The Contractor shall not in any way obscure or affect signs, signals or lights, in use by any relevant authority. In the event that the Contractor does so, the Contractor shall pay all costs associated with the re-siting, re-instating or provision of alternatives for any sign, signal or light, obscured or affected.

For the purposes of this Clause only, "Site" shall include off-Site places of manufacture or storage and the Contractor's Work Areas and shall include, areas provided to the Contractor by others.

The Contractor shall follow relevant Safety and Security instructions issued by the concerned Authorities from time to time and shall work in close coordination with the concerned Authorities.

**13 Sub-Clauses 4.32 Use of Explosive**

In addition to the Sub-Clause 4.32 of the General Conditions of Contract, Explosives shall not be used on the Works or on the Site by the Contractor without the consent of the Engineer and shall be used in the manner and to the extent permitted by the Engineer. The explosives shall be handled and used under the strict supervision of persons licensed for this purpose under the requisite statutory rules and regulations. When explosives are required for the Works they shall be stored in a special magazine to be provided at the cost of the Contractor in accordance with the requisite statutory rules and regulations. The Contractor shall take all precautions in transporting and using the explosives and avoid damage to nearby structures and utilities. The Contractor shall also obtain necessary licence for the storage and the use of explosives. All operations, in which or for which the explosives are employed shall be at the sole risk and responsibility of the Contractor and the Contractor shall hold the Employer harmless and shall indemnify the Employer in respect thereof.

**14 Sub-Clause 5.1**

**Design – General Obligations**

**Drawings for Permanent works:**

Preliminary Drawings showing general dimensions & details elaborating the scope of work (not based on detailed design) will be supplied along with the Tender documents.

**Design, Drawings and Specifications:**

The Contractor shall Design the false work, form work, staging scheme etc. required to perform their work and shall get the same and related working drawings approved by the Engineer. The Contractor would supply 6 sets of these drawings to the Engineer for the latter's use.

**Shop Drawings**

Based on "Good for Construction "drawings issued by Engineer the Contractor shall prepare shop / fabrication drawings to scale as directed indicating the required detailed. The shop drawings shall be prepared before execution of work, after taking actual site dimensions and all existing and proposed services / structures etc. The shop / fabrication drawings shall be checked by independent consultant prior to submission to the Engineer for approval.

Shop drawings submitted by the Contractor shall be in sufficient detail to indicate the type, size, arrangement, breakdown for packing and shipment, the external connections, fixing arrangements required, the dimensions required for installation and interconnections with other equipment and materials, clearances and spaces required between various portions and any other information specifically called for. Approval of Engineer of any such proposal / drawings shall not relieve the contractor of his responsibility of sufficiency of such works.

It shall be the responsibility of the Contractor to promptly bring to the notice of the Engineer any error or discrepancy in the Contract documents and obtains his orders thereon. Only stated dimensions are to be taken and not those obtained from scaling drawings. In case any feature of the work is not fully described and set forth in the Drawings and Specifications, the Contractor shall forthwith apply to the Engineer for further instructions, Drawings or Specifications.

**15 Sub Clause 6.5**

**Working Hours:**

Where night working is permitted by the Engineer to facilitate the Contractor's Work operations, temporary lighting equipment as per approved layout shall be provided, installed, maintained for the duration of the Contract and removed after completion of Work by and at the expense of the Contractor.

**15.1 Sub Clause 6.6**

**Facilities for Staff and Labour :**

No staff and labour housing facilities will be allowed at the Site. The Contractor will have to make his own arrangement for the same at is

own cost.

**16 Clause 7.0**

**Quality Control**

Within 14 days of the issue of the Letter of acceptance, the Contractor shall submit to the Engineer, for his consent, his proposed Site Quality Plan based on the Outline Quality Plan and the Employer's Requirements. The quality manual should address the quality system as required by ISO 9001-1991. Any supplement to the Site Quality Plan shall be submitted at least 14 days before commencement of the relevant work.

Upon the Engineer notifying his consent to the Site Quality Plan, or any supplement thereto, the Contractor shall, adhere to the principles and procedures contained in such document, except where the Engineer gives his consent to any amended or varied version thereof. The Contractor shall cause any sub-contractors to adhere to this Plan.

The Contractor shall appoint a suitably qualified and experienced person, not otherwise engaged in the performance of the Contract, to act as manager of the quality assurance system and shall provide such other personnel and resources as required to ensure effective operation of the quality assurance system. The said manager shall carry out audits of the application of the quality assurance system, and ensure effective quality control and delivery of quality assurance.

The Contractor shall provide all necessary access, assistance and facilities to enable the Engineer to carry out surveillance visits both on and off the Site to verify that the quality assurance system is being properly and fully implemented. No extra payment shall be made in this regard and the cost of the Work under this element shall be deemed to be included in the Contract Price.

**17 Sub-Clause 8.5**

**Liquidated Damages for Delay**

The total contract value used in the GCC sub-clause 8.5 shall for the purpose of levy of liquidated damages mean the 'Contract Price'.

**18 Sub-Clause 10.1**

**Defects Liability**

"Defects Liability Period" shall mean the defects liability period as stated in the Appendix FT-1 to the Form of Tender or as extended under sub clause 10.1 and 10.3 of GCC. After any part of the works are taken over by the Employer until the end of Defect Liability Period the Contractor shall provide, free of cost, competent and skilled personnel round the clock as required and maintain adequate stock of spares so as to promptly fulfil his obligations to remedy the defects or failure as laid down in Employer's Requirements.

In addition to Sub clause 10.1 of the General Conditions of Contract, during the Defects Liability Period, the Contractor shall provide free of cost competent and skilled supervisory personnel, including all materials and spares required for the operation and maintenance (routine and breakdown) of the Works. The operating and maintenance staff other than the supervisory staff shall be provided by the Employer.

**19 Sub-Clause 11.1**

**The Contract Price**

**19.1**

**Taxes and Dues**

The Contractor shall maintain complete records of Custom duty, Excise duty, VAT, Work Contract Tax, Octroi/Entry Tax (if any) in the state of Gujarat and other levies/Cess etc as applicable and payable to various authorities and submit the receipts/records as and when demanded in writing by the Engineer for verification.

As per Integrated Goods and Service Tax (IGST) Act, 2017, 16 (1) (b), Supply of goods or services or both to a Special Economic Zone developer or to a Special Economic Zone unit is at “zero rated supply”. Kandla SEZ Authority being a Special Economic Zone developer, no taxes including GST shall be levied. Thus all the rates quoted under Financial Bid should be exclusive of GST or any other taxes and Kandla SEZ Authority is not liable to pay any taxes. Service provider shall be responsible for all the compliances under GST.

Presently there is ‘NO’ waiver and exemption from the Governments of Customs Duty, Excise Duty, Taxes, other royalties, duties, Cess, Octroi/Entry Tax, and levies payable to various authorities. In India in Indian Rupees.

The Contractor shall ensure full compliance with tax laws of India with regard to this contract and shall be solely responsible for the same. He shall submit copies of acknowledgement evidencing filling of returns every year and shall keep the Engineer fully indemnified against liability of tax, interest, penalty etc, of the Contractor’s in respect thereof, which may arise.

The Contract price shall be inclusive of all taxes, duties, cess and any other charges leviable including tax to be deducted at source

The Contractor shall provide a valid registration certificate and clearance certificate under Gujarat VAT Act, 2005 in absence of which no payment including release of any advance shall be made by the Engineer to the Contractor.

All the Fabrication for Signage work made in factory is to be treated as part of the Scope of work covered in the tender. These elements fabricated are fabricated at nominated places are a part and parcel of work covered under this agreement.

The quoted percentage in each section in financial package includes all taxes applicable in Gujarat for the work covered in the Tender. Any variation in Tax liability applicable on contract during the current period shall be on account of the contractor.

**19.2**

**Changes in cost due to legislation:**

“**Change in Law**” means the occurrence or coming into force of the following, at any time after the latest Date of submission of tender.

- (a) any new tax which is imposed after the due date of submission of tender and which impacts the performance of the Contractor with increased cost or which results in extra financial gains to the Contractor due to decreased cost in execution of Works.
- (b) change in any law pertaining to work having the above said impact.

However, change in the rate of any existing tax will not be considered a change in Law. Any risk of change of Tax rate what so ever of Tax rate to the work lies with the Contractor.

Then such additional or reduced cost shall be certified by the Engineer after examining records provided by the Contractor and shall be paid by or credited to the Employer.

Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if:

- (a) the same shall have been reflected in the indexing of any of the inputs to the Price Adjustment Formula in accordance with the provisions of “Price Variation” of “sub Clause Special Conditions of Contract,” or
- (b) the same shall have been taken into account under any other clause of the Contract, or
- (c) In case Price Variation formula based on Reserve bank of India Indices is proposed to be adopted, no addition/reduction in cost due to “Change in Law’ will be allowed.

**19.3**

**Price Variation Clause: Deleted**

**20**

**Sub-Clause 11.2.1**

**Mobilisation advance**

Mobilisation Advance Payment shall be paid in Indian Rupees up to **25% (with Interest @ 12%)** of the Contract Price in one instalment when the Contract becomes effective if the Contractor requests. This advance is not mandatory.

Mobilisation Advance Payment as stated in Appendix FT-1 to the Form of Tender will be paid with interest @ 12% against submission of **2** (two) separate Bank Guarantees for the like amount as per format given in schedule to SCC from an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule.

The Mobilisation Advance shall be paid within 30 days after receipt of the Contractor’s written request by the Employer and submission of the Performance Security and Advance Payment Bank Guarantees.

**23 Sub-Clause 11.2.5**

**Recovery of Advances**

**23.1**

**Mobilization Advance**

- a. The recovery of the Mobilization Advances shall be commenced in the 2<sup>nd</sup> month after commencement of the work and will be completed in subsequently Two monthly instalments of equal value each.

- b. Bank Guarantee shall be submitted as per SCC Clause 20 corresponding to 2 (two) equal value guarantees of the Mobilization advance payments. After recovery of equal value of mobilization advance by the Employer, a corresponding Bank Guarantee shall be released to the Contractor.

Provided that if the amounts of the each interim payment requests shall not be sufficient to enable the Employer to recover the respective mobilisation advance then the Employer at his discretion shall require the refund of the insufficient amount, or be entitled to enhance the subsequent recovery amount suitably at his option, so that the outstanding amount from any sums payable or due to be payable to the Contractor so as the total of the Mobilisation Advance is recovered within the original or approved extended period of Time for Completion of the Works.

23.2

**Payment and Recovery of Advance against Materials: Not Applicable**

**24 Sub-Clause 11.4 Payment-Interim and Final**

- (a) After scrutiny and certification by the Engineer, the payment of the certified interim amount (80 % of the certified value of work done) shall be made by the Employer within 3 working days from the date of issue of Interim Payment Certificate by the Engineer.
- (b) Balance 20% of the certified value of work done shall be made by the Employer within 7 working days of receipt of the same from Engineer duly certified.
- (b) In calculating the amount payable to the Contractor for the Rupee portion, for each item, sums of less than Fifty Paise shall be omitted and sums of Fifty Paise and more, up to one Rupee, shall be reckoned as one Rupee.
- (c) All payments to the Contractor for the Rupee portion shall be made by crossed cheque, but no cheque will be issued for an amount of less than Rs. 1000/-. This shall not apply to the final payment.

**False measurements or bills**

In the event of Contractor submitting false measurements or bills for the first time, the Engineer will issue a written warning to him to the effect that the facility of 80% payment without detailed check will be withdrawn in future. If the contractor repeats the offence for the second time, this 80% payment facility shall be completely withdrawn in respect of this contractor for all his assignments / contracts with KASEZ.

**25 Sub-Clauses 12.3 and 12.4**

**Employer's Variation and Variation Procedure.**

Employer's Variation" means a change in the Employer's requirements which makes necessary alteration or modification of the scope of Works as described by or referred to in the Employer's Requirements.

**26 VARIATION IN QUANTITY OF ITEMS COVERED BY THE BILL OF QUANTITIES**

26.1.0 The quantities of items shown in the Bill of Quantities is 1 no., and liable to vary during the final design and actual execution of the Work. The Contractor shall be bound to carry out and complete the stipulated work / group of works, irrespective of the variations in individual items or group of items, specified in the Bill of Quantities.

26.1.1 Such variations in quantities shall be paid for in the manner laid down below:

- a) At the accepted rates of the Contract for variation in quantities to the extent of 25% on either side i.e. increase / decrease, except in the case of foundation works. Unless otherwise specifically provided for in the Bill of Quantities or elsewhere in the Contract, the variation of  $\pm 25\%$  shall be applicable to a section / group of items mentioned therein and not to individual items
- b) In case the variation in individual items or the group of items, as stipulated above, is more than 25% on either side, the rate for the excess quantity beyond 25% shall be negotiated between the Engineer and the Contractor and mutually agreed rates arrived at. Provided further that:
  - i. the limit of 25% variation shall not apply to items individually costing up to or less than 1% of the value of the original Contract Price. All variations under such items, shall be payable at the accepted rates of the Contract, notwithstanding magnitude of the variation up to an overall value of 2% of the Contract, for each such item.
  - ii. in the case of foundation work, no variation limit applies and the Works shall be carried out by the Contractor on agreed rates irrespective of any variation.
  - iii. in the case of earthwork in excavation, the variation limit of 25% shall apply to the gross quantity of earthwork and variation in the quantities of individual classifications of soil shall not be subject to this limit.
  - iv. for items against which the quantity given in the Bill of Quantities is "if or as required", their shall be no increase / decrease of rates, whatever be the quantity finally executed.
  - v. the Contractor shall be bound to notify the Engineer at least 7 days before the necessity arises for the execution of quantities of any items or group of items, as the case may be, in excess of 25%. In case mutually agreed rate between the Engineer and the Contractor is not arrived at, before the execution of such works, the Contractor shall have no claim to be entrusted with the execution of extra quantities, and the Engineer shall be free to get such additional quantities beyond 25% executed through any other agency. However, if the Engineer or the Employer so directs, the Contractor shall be bound to carry out any such additional quantities beyond 25% of the original quantities, and the disagreement or the difference regarding rates to be paid for the same, shall be settled in the manner laid down under the conditions for the settlement of disputes under Relevant Clause.

**27 EXTRA ITEMS NOT IN THE BILL OF QUANTITIES**

**27.1 Operation of extra items of work**

If any item of work not provided for in the accepted Bill of Quantities is to be operated, the Contractor on receipt of instructions from the Engineer, shall be bound to carry out such works at the rates to be decided as per **Sub-clause 27.2**

**27.2 Derivation of rates for extra items of work**

If the Item is available in BOQ, then with the accepted Tender premium for BOQ, the item rate will be arrived. If not available, then the rate of such items shall be derived, wherever possible, from rate for similar items available in the Bill of Quantities of the accepted tender. In case this is not possible, the rate may be decided on the following basis:

- a. Cost of materials at current market rates, as actually utilised in the final finished permanent work, including a reasonable percentage for wastage and transportation.
- b. Cost of temporary works if any (unless provided for separately) worked out on the above basis but with relaxed specifications minus salvage value of serviceable material released after completion of work and cost of material released as scrap.
- c. Cost of labour actually used at the site of work at rates under Payment of Minimum Wages Act for the area of work for each category of worker, further enhanced by a percentage of 30% of the aforesaid rates to account for labour not directly utilised at Site and other ancillary and incidental expenses on labour.
- d. Hire charges for Plant & Machinery, scaffolding, shuttering, forms, etc., required to be used at the site of the work. The tools used by various trades shall not be counted as Plant & Machinery for this purpose.
- e. An amount of 25% of items (a), (b), (c) and (d) above to allow for Contractor's overheads, taxes, and profits. This percentage shall also apply to estimated cost of materials supplied free to the Contractor.

**27.3 Notice by Contractor**

- i. In all cases where extra items of work are involved, for which there are no rates in the accepted Bill of Quantities, the Contractor shall give a notice to the Engineer, of at least 7 days before the need for their execution arises.
- ii. Such a notice shall not, however, be necessary if the Engineer has already instructed in writing to take up such an item of work. To decide the rate, the Engineer may ask the Contractor to furnish detailed analysis of the new rates on the lines mentioned in **Sub-clause 27.2** above and / or attend a meeting with him to settle the rate. The Contractor shall be bound to furnish the requisite details and / or attend the meeting.



Kandla SEZ Authority

## Kandla SEZ

Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ campus at Gandhidham, Kutch.

**TENDER NO: KASEZ/ Tender/ WF&SF/ 1**

### SCHEDULES TO SPECIAL CONDITIONS OF CONTRACT

Schedule 1-	Contract Agreement	Refer Sub Clause-1.4 of GCC
Schedule 2-	Performance Guarantee	Refer Sub Clause-4.2 of GCC
Schedule 3-	Parent Company Undertaking	Refer Sub Clause-4.2 of GCC
Schedule 4-	Parent Company Guarantee	Refer Sub Clause-4.2 of GCC
Schedule 5-	Contractor's Warranty	Refer Sub Clause-4.2 of GCC
Schedule 6-	Sub-Contractor's/Vendor's Warranty (As Applicable)	
Schedule 7-	Form of Bank Guarantee for Advance Payments-Refer Sub Clause-11.2 of GCC	
Schedule 8-	Form of Bank Guarantee for Retention Money	

**Note: - The Schedules as above should be provided by the finalised vendor and may be modified as considered necessary at the time of finalization of the contract.**

## Kandla SEZ Authority

**Name of Tender:** Design, Fabrication, Supply and Installation Works of Way finding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ campus at Gandhidham Kutch.

**Tender No:** BMR/TENDER/WF&SF/1

### **PREAMBLE to BoQ**

1. The Bill of Quantities shall be read in conjunction with the instructions to Tenderers, Conditions of Contract, Notice Inviting Tender, Technical Specifications, Schedule, Annexure and Addendums.
2. The quantities given in the "Bill of Quantities" are 1 no. and provisional and are given to provide a common basis for tendering. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the quoted percentage on the estimated rate for each item in the accepted priced "Bill of Quantities", where applicable.
3. This is a percentage contract and percentages are to be quoted in all "Summary Sheets" separately as provided and carry forward the amounts of Summary sheets to the "Grand Summary Sheet". The percentage for "Works under CPWD Schedule of Rates – 2020-21" is to be quoted in respective "Summary Sheet". The quoted rates are for completed and finished items of work and complete in all respects. It will be deemed to have included all fabrication space, tools, machinery, labour, supervision, materials, fuel, consumables, electric power, water, transportation, all temporary works and scaffolding, packaging and protection of sign parts, lighting, night working, inspection facilities, safety measures at work sites/casting yard for workmen and road users, preparation of temporary design and drawings pertaining to the fabrication, supply and installation etc, establishment and overhead charges, insurance costs for labour and works, contractor's profit, all taxes, royalties, duties, cess, octroi, GST and other levies and other charges together with all general risks, liabilities and obligations set out or implied in the contract and including remedy of any defects during the Defect Liability Period, unless otherwise provided in BOQ. Reinforcement (supply, cutting, bending, placing in position, tying etc.) shall not be paid separately unless otherwise provided in BOQ
4. Providing concrete for all works is deemed to be inclusive of the cost towards production of concrete, transportation of concrete with all leads and lifts, form work, shuttering including staging as required, pouring of concrete by pump/tower crane to all heights /depths, tremie or other approved means, compaction by vibrators, curing by approved means such as water, steam or curing compound and all labour, tools, plants, machinery required for execution of work complete in all respects including de-shuttering after completion of work.
5. The quoted amount in the Bill of Quantities (Pricing document) and Various Summary Sheets shall be quoted in Indian Rupees both in **figures and in words**.

6. The whole cost of complying with the provisions of the Contract shall be deemed to have been included in the quoted rates.
7. All columns in the "Summary Sheets and Grand Summary Sheet"- shall be filled in ink or type written and the total tender amount shown in the bottom. The person authorized to sign on behalf of the tenderer shall sign in full at bottom of all pages and at the end of schedule with date, name and designation.
8. General directions and description of works and materials are not necessarily repeated or summarized in the Bill of Quantities.
9. The method of measurement of completed work for payment shall be in accordance with the requirements as stated in the individual sections of the Technical Specifications and Special Conditions of Contract (SCC).
10. Errors will be corrected by the Employer for any arithmetical errors in computation or summation as indicated in Contract Document.
11. Shuttering required for concrete work shall have steel except wherever there are site constraints as decided by Engineer.
12. In the defined grade of concrete mix, the first figure defines the strength of concrete and second figure defines the maximum size of coarse aggregates to be used for production of particular concrete mix. e.g. M 35/20 means "M-35" is the grade of concrete and "20" is the maximum size of coarse aggregate in mm to be used.
13. Tenderer may please note that to perform this contract, nothing extra shall be payable on account of field constraints, availability of front, preparation of detailed scheme for taking necessary clearance and approval from the concerned authority and other local bodies etc.
14. Tenderer's offer shall be inclusive of all Taxes, Levies, Duties and other charges leviable and payable to the authorities including taxes to be deducted at source. The Employer shall deduct Tax at source from the payments made to the Contractor, which the Employer will be required by law for deposition with statutory authorities in India. The Employer shall further furnish to the Contractor a certificate for such tax deducted at source.
15. Tenderer's offer shall be inclusive of all Taxes, Levies, Duties and other charges leviable and payable to the authorities including taxes to be deducted at source. The successful Tenderer shall maintain complete records of duties; levies, taxes etc., payable to various authorities in relation to the works and submit receipts/records for verifications, as and when demanded by the Employer.

16. Following list of items to be prototyped. Please note

- i. Directional Sign (minimum of four directions on the signage panel)-Single post
  - ii. Directional Sign (Minimum of four directions on the signage panel)-double post
  - iii. Information Sign with Map
  - iv. Statutory Sign
  - v. Public Seating (Bench)
  - vi. Cycle Stand
  - vii. Dustbin
  - viii. Prefabricated Modular Toilet
- a. No extra payments will be given on account of prototyping of given listed sign
  - b. Prototype Sign have to be installed at the specific location as Finalised and Marked.
  - c. Prototype, which will be approved, will remain at the place and shall be accepted as the sign installed against BOQ Quantity.
  - d. Prototype sign (rejected) has to be reinstalled after reworking or re-fabrication, modification and improvement required at the risk and cost of the contractor.
  - e. Prototypes or Sample signages will be approved by KANDLA SEZ AUTHORITY by 4<sup>th</sup> week from the issue of LOA.

17. Items considered as item rates and will be paid after on-site actual no. and measurements of elements installed. This specially applies to the sign fixings like Suspender, projected and post mounted signs.

**Important Note:**

The tenderer should quote his percentage against each section in summary sheet and to carry forward the amount in the "Grand summary sheet" only and nowhere else.

## KANDLA SEZ AUTHORITY

Name of Tender: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham Kutch.

### GRAND SUMMARY SHEET OF TENDER WF - 1 (Kandla SEZ Authority)

Sl. No.	Brief Description	Amount (INR) At Par Value	Quoted Amount (INR)	
			In figures	In words
1	<b>Section 1</b> BOQ Amount for Wayfinding System	<b>₹ 122,42,750</b>		
2	<b>Section 2</b> BOQ Amount for Street Furniture	<b>₹ 200,78,360</b>		
3.	<b>Section 3</b> BOQ Amount for Designing	<b>₹ 4,00,000</b>		
	<b>Total</b>	<b>₹ 327,21,110</b>		

## KANDLA SEZ AUTHORITY

Name of Tender: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham Kutch.

### SUMMARY SHEET OF TENDER WF - 1 (Kandla SEZ Authority)

Sl. No.	Brief Description	Amount (INR) At Par Value	Percentage Quoted above / below / At-par		Total Amount (INR) Including percentage above / below / At -par	
			In figures	In words	In figures	In words
1	<b>Section 1</b> BOQ Amount for Wayfinding System	<b>₹ 28,896,835.00</b>			**	**

**Note:** The Tenderer should quote his percentage in this Summary Sheet only and not elsewhere.

\*\* Carried forward to Grand Summary Sheet.

## KANDLA SEZ AUTHORITY

Name of Tender: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham Kutch.

### SUMMARY SHEET OF TENDER WF - 1 (Kandla SEZ Authority)

Sl. No.	Brief Description	Amount (INR) At Par Value	Percentage Quoted above / below / At-par		Total Amount (INR) Including percentage above / below / At -par	
			In figures	In words	In figures	In words
2	Section 2 BOQ Amount for Street Furniture	₹ 200,78,360.00				

**Note:** The Tenderer should quote his percentage in this Summary Sheet only and not elsewhere.

\*\* Carried forward to Grand Summary Sheet.

## KANDLA SEZ AUTHORITY

Name of Tender: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and unloading, etc for Kandla SEZ Campus at Gandhidham Kutch.

### SUMMARY SHEET OF TENDER WF - 1 (Kandla SEZ Authority)

Sl. No.	Brief Description	Amount (INR) At Par Value	Percentage Quoted above / below / At-par		Total Amount (INR) Including percentage above / below / At -par	
			In figures	In words	In figures	In words
2	Section 3 BOQ Amount for Designing	₹ 4,00,000.00				

**Note:** The Tenderer should quote his percentage in this Summary Sheet only and not elsewhere.

\*\* Carried forward to Grand Summary Sheet.



## Summary sheet of sign BOQ Item

Name of Tender: Deign, Fabrication, Supply and Installation Works of Wayfinding System including all transportation, loading and un loading, etc as mentioned in the pre qualification tender notification for Kanala SEZ.						
S.No	Item No	Description	Unit	Qty	Rate	Amount in INR
1		<b>Section 1</b>				
2		<b>Wayfinding System</b>				
3	1.0	<b>Over Head Sign/ Gantry Sign</b>				
4		<p>Providing and erecting over head signs including all operations from fabrication to installation all complete as per the approved drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge. All exterior signs should be manufactured considering harsh outdoor conditions, weatherproofing techniques and materials shall be used.&gt;&gt;</p> <p><b>Sign Pannel:</b> Providing and fixing sign face panels 3mm thick Aluminium sheet fabrication, Aluminium sheet fixed to horizontal structural truss. White retro-reflective vinyl pasted over edge to edge aluminium sheet. Graphics to be plotter in exterior grade overlay vinyl pasted over white retroreflective vinyl. The bidder must check the exact width of the area where the sign is located, no additional costs would be paid, if the width is more than 13m which is an approximate width)</p> <p><b>Sign Frame:</b> Providing and fixing sign frame (Horizontal Spanning truss) in M.S. square section hotdipped galvanised. Frame to be directly fixed to the sign structure. Frame to receive the sign faces. The frame and post to be properly finished as specified.</p>				

**KASEZ/TENDER/WF&SF/1**

**TECHNICAL SPECIFICTIONS**

5		<p><b>Sign Structure Full Width Gantry:</b> Providing a Square Sign post of 300 x 300 mm, 5.4mm thick MS hollow sections including welded Base plate in 8mm thick MS Plate and Gussets in 6mm thick MS Plate as per drawing with holes to fix it on holding down bolts anchored in concrete footing. The entire post assembly shall be hotdipped galvanised and P.U. Painted to match RAL 9006 as specified and approved by the Engineer-In-charge. The Post shall be always be a single continuous element without any joints. Cost to include all activities and temporary props used for a perfect vertical in plumb installation, shim Plates for adjustment of levels and filling the gap with concrete slurry etc required for fixing the sign in an external location. The actual structural design of the sign for its stability shall be responsibility of the contractor. Spanning truss shall be designed for each Mounting square section span and the wind loads. Contractor has to submit sign &amp; stamped structure drawing from a structure engineer.</p>				
6		<p><b>Sign Structure Cantilever Gantry:</b> Providing a Square Sign post of 300 x 300 mm, 5.4mm thick MS hollow sections including welded Base plate in 8mm thick MS Plate and Gussets in 6mm thick MS Plate as per drawing with holes to fix it on holding down bolts anchored in concrete footing. The entire post assembly shall be hotdipped galvanised and P.U. Painted to match RAL 9006 as specified and approved by the Engineer-In-charge. The Post shall be always be a single continuous element without any joints. Cost to include all activities and temporary props used for a perfect vertical in plumb installation, shim Plates for adjustment of levels and filling the gap with concrete slurry etc required for fixing the sign in an external location. The actual structural design of the sign for its stability shall be responsibility of the contractor. Spanning truss shall be designed for each Mounting square section span and the wind loads. Contractor has to submit sign &amp; stamped structure drawing from a structure engineer.</p>				
7		<p><b>Foundation:</b> Providing and laying foundation for the sign including its compaction and all activities like Excavation, PCC base layer, providing and fixing in position electrical connection wherever applicable and finished as per drawing. The item cost includes cutting and opening the floor finish at location, and making good the location to the match the original finish after fixing and installation of sign &gt;&gt;</p>				
8	1.1.1	<p><b>Full Width Gantry of size (panel size: 13mx1.8m) approximately, with 2 or more number of posts as required, the clear height of the bottom portion of gantry shall be 6m from the highest level of the road.</b></p> <p>Truss, sign frame, vertical Support, foundation all complete in all respect including all the ancillary works, equipments etc to complete the job.</p>	QTY	3		

		Double sided Sign panel-Aluminum Alloy plate with Retro reflective and overlay vinyl. The contractor to prepare the required artworks, with proper translations in regional language and fabricate sign panel post approval on artworks. No extras will be paid incase graphics/ content/ direction etc. is later found to be incorrect and contractor will have to amend and replace the correction at his own cost. No patchwork would be accepted.				
9	1.1.2	<b>Cantliever Gantry, with one post and approximate panel size (as specified), the clear height of the bottom portion of gantry shall be 6m from the highest level of the road.</b>				
		Truss and Vertical Support foundation all complete in all respect including all the ancillary works, equipments etc to complete the job.	QTY			
		Single sided Sign panel-Aluminum Alloy plate with Retro reflective and overlay vinyl. The contractor to prepare the required artworks, with proper translations in regional language and fabricate sign panel post approval on artworks. No extras will be paid incase graphics/ content/ direction etc. is later found to be incorrect and contractor will have to amend and replace the correction at his own cost. No patchwork would be accepted.				
10	1.1.2a	size: 3m x 1.5m	each	20		
11	1.1.2b	Size: 1.8m x 1.8m	each	40		
12	1.2.0	<b>Traffic Statutory Sign</b>				
13		<p>Providing and fixing of Traffic Statutory Signs including all operations from fabrication to installation all complete as per the approved drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge. All exterior signs should be manufactured considering harsh outdoor conditions, weatherproofing techniques and materials shall be used.&gt;&gt;</p> <p><b>Sign Face:</b> Providing and fixing single sided sign face panels 3 mm thick Aluminium sheet fixed to sign structure. White retroreflective vinyl pasted over edge to edge aluminium sheet. Graphics in plotter cut exterior grade pasted over white retroreflective vinyl.</p> <p><b>Sign Frame:</b> Providing and fixing sign frame in SS 316 square section . Frame to be welded to the sign structure. Frame to receive the sign faces</p>				
14		<p><b>Sign Structure:</b> SS 316 square post 50x50x2 grouted in ground. The actual structural design of the sign for its stability shall be responsibility of the EP Ccontractor. Secret fixing methods should be used to fix parts together.</p> <p><b>Foundation:</b> Providing and laying foundation M25 grade cement concrete 45x45x60cm,60cm below ground level as per approved drawing and all complete as per Technical specification sand as directed by the Engineer-in-charge.</p>				

## KASEZ/TENDER/WF&amp;SF/1

## TECHNICAL SPECIFICATIONS

15	1.2.1	750mm equilateral triangle	each	20.00		
16	1.2.2	750mm circular	each	20.00		
17	1.2.3	750mm x 600mm rectangular	each	20.00		
18	1.3.0	<b>Direction, Information and Identification Sign ( Double Post) (panel size of 1.8mx1.2m) the clear height of the bottom portion of sign shall be minimum 2.1m from the highest level of the footpath if sign is located on footpath or an area where people need to pass below it.</b>				
19		Providing and fixing of Double post Sign including all operations from fabrication to installation all complete as per the approved drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge. All exterior signs should be manufactured considering harsh outdoor conditions, weatherproofing techniques and materials shall be used.>> <b>Sign Face:</b> Providing and fixing single sided sign face panels 3 mm thick Aluminium sheet fixed to sign structure. White retroreflective vinyl pasted over edge to edge aluminium sheet. Graphics in plotter cut exterior grade pasted over white retroreflective vinyl. <b>Sign Frame:</b> Providing and fixing sign frame in SS 316 square section . Frame to be welded to the sign structure. Frame to receive the sign faces				
20		<b>Sign Structure:</b> SS 316 square post 70x70x2 grouted in ground. The actual structural design of the sign for its stability shall be responsibility of the EP Ccontactor. Secret fixing methods should be used to fix parts together. <b>Foundation:</b> Providing and laying foundation M25 grade cement concrete 45x45x60cm,60cm below ground level as per approved drawing and all complete asper Technical specification sand as directed by the Engineer-in-charge.				
21		Single sided Sign pannel-Aluminum Alloy plate with Retro reflective and overlay vinyl. The contractor to prepare the required artworks, with proper translations in regional language and fabricate sign panel post approval on artworks. No extras will be paid incase graphics/ content/ direction etc. is later found to be incorrect and contractor will have to amend and replace the correction at his own cost. No patchwork would be accepted.				
22	1.3.1	size: 1.8m x 1.2m	each	84		
23	1.3.2	Size: 1.8m x 0.9m	each	72		
24	1.3.3	Size: 1.5m x 1.5m	each	18		

25	1.3.4	Size: 1.5m x 1.2m	each	35		
26	1.4.0	<b>Direction, Information and Identification Sign (Single Post) the clear height of the bottom portion of sign shall be minimum 2.1m from the highest level of the footpath if sign is located on footpath or an area where people need to pass below it.</b>				
27		Providing and fixing of Single post Sign including all operations from fabrication to installation all complete as per the approved drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge. All exterior signs should be manufactured considering harsh outdoor conditions, weatherproofing techniques and materials shall be used.>> <b>Sign Face:</b> Providing and fixing sign face panels 3 mm thick Aluminium sheet fixed to sign structure. White retroreflective vinyl pasted over edge to edge aluminium sheet. Graphics in plotter cut exterior grade pasted over white retroreflective vinyl. <b>Sign Frame:</b> Providing and fixing sign frame in SS 316 square section . Frame to be welded to the sign structure. Frame to receive the sign faces.				
28		<b>Sign Structure:</b> SS 316 square post 70x70x2 grouted in ground. The actual structural design of the sign for its stability shall be responsibility of the EP Ccontactor. Secret fixing methods should be used to fix parts together. <b>Foundation:</b> Providing and laying foundation M15 grade cement concrete 45x45x60cm,60cm below ground level as per approved drawing and all complete as per Technical specification sand as directed by the Engineer-in-charge.				
29		Single sided Sign pannel-Aluminum Alloy plate with Retro reflective and overlay vinyl. The contractor to prepare the required artworks, with proper translations in regional language and fabricate sign panel post approval on artworks. No extras will be paid incase graphics/ content/ direction etc. is later found to be incorrect and contractor will have to amend and replace the correction at his own cost. No patchwork would be accepted.				
30	1.4.1	size: 1.2m x 2.4m	each	55		
31	1.4.2	size: 0.8m x 1.8m	each	200		
32	1.5.0	<b>Lane Marking for Cycle and Two wheelers</b>				
33		Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glassbeads@250gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surfacetobe level, uniform and free from streaksand holes all complete as per Technical specifications and as directed by the Engineer-in-charge.				
34	1.5.1	Lane, Centreline, Edge and other marking along strips	sqm	500.00		
35	1.5.2	Directional arrows and letters	sqm	500.00		

36		<b>Total of Section 1</b>				
37		<b>Section 2</b>				
38		<b>Street Furniture</b>				
39	<b>2.1.0</b>	<b>Cycle Parking Stand</b>				
40		Providing and fixing of the cycle stand including all operations from fabrication to installation all complete as per technical specifications and to the satisfaction of the Engineer-in-Charge.( the bidder to submit the detail design along with the bid and would be liable to provide the same complete in all respects once the bid is accepted and design approved)				
41		Design, Supply and Instalation of vandal resistant Cycle Parking stand made up of stainless steel 316 . one stand will suitable for two cycles at a time. Stand will be firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete. Multiple stand can be fixed at site to accommodate more cycles. The entire work shall be finished to the satisfaction of the engineer in charge.				
42	<b>2.1.1</b>	Cycle Parking Stand Size 620mm X 900mm for Two cycle	Each	500.00		
43	<b>2.2.0</b>	<b>STREET FURNITURE - BENCH</b>				
44		<b>SS sitting Bench &amp; Table ( the bidder to submit the detail design along with the bid and would be liable to provide the same complete in all respects once the bid is accepted and design approved)</b>				
45		Design, Supply and Instalation of SS 316 grade Sitting Bench and Table using 25mm dia and 50mm/ 75mm dia pipe. The Bench and Table will be firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete. The design and fabrication shall be vandal resistant. The entire work shall be finished to the satisfaction of the engineer in charge.				
46	<b>2.2.1</b>	Sitting Bench L 1500mm X W 350mm X H 550mm	Each	100.00		
47	<b>2.2.2</b>	Table L 1500mm X W 600mm X H 800mm	Each	20.00		
48	<b>2.3.0</b>	<b>SS Dustbin</b>				
49		<b>SS Dustbin( the bidder to submit the detail design along with the bid and would be liable to provide the same complete in all respects once the bid is accepted and design approved)</b>				

50		Design, Supply and Instalation of Stainless steel 316 grade using 1/2 inch dia pipe,pedestal mounted recycling units. The location of each dustbin would have to be verified for the refuse mix in that zone, and they may also be fixed near to benches and tables. The dustbins to be with closed lids, which shall operate without need of touching them. The dustbins shall be flea resistant, vandal resistant and no cats or dogs shall be able to spill over the refuse/ dirt. Each of the dustbin shall be properly etched for respective refuse collection type with chemical etching and PU colour inserted into it as per approved graphic. Design should co-ordinate with Table and Benches when installed closer to it. Size 30 litres.				
51	<b>2.3.1</b>	SS Dustbin	Each	200.00		
52	<b>2.4.0</b>	<b>Prefabricated Modular Toilets</b>				
53		<b>Modular Toilets ( the bidder to submit the detail design along with the bid and would be liable to provide the same complete in all respects once the bid is accepted and design approved)</b>				
54	<b>2.4.1</b>	Design, Fabrication, Installation, and Commissioning of Prefabricated Modular Toilets in Stainless steel 316 grade panelling or any latest material that can exhibit the functional properties similar to SS-316 grade, such as rust resistance, scratch resistance, germ resistant and are easy to sanatize. The Toilets shall be with provision for one WC+WB+child care for female and One WC+Urinal+WB for male. The toilet design, material and features shall be vandal resistant, scratch resistant, easy to clean and maintain hygiene. The toilets shall have self contained water storage for usage in toilet and shall have proper signage separately for male and female. The bidders are advised to visit the site to check the suitability of site for water and waste disposal connections etc. It is the responsibility of the bidder to hand over fully functional toilets with proper water and waste disposal provisions built in. The KASEZ Authority will provide the necessary connectivity of power, water and drain to the proximity of 2m within the outer location of the toilet. The connection to the toilet and commissioning of the toilet is complete responsibility of the bidder. The entire work shall be completed to the satisfaction of engineer in charge.	Each	6.00		
55	<b>2.5.0</b>	<b>Railing</b>				
56		<b>Railing ( the bidder to submit the detail design along with the bid and would be liable to provide the same complete in all respects once the bid is accepted and design approved)</b>				

57	2.5.1	Providing and fixing of SS railing made with 50mm SS round pipe with vertical spourts. The design of railing shall be such that it completely restricts the people jumping over it and the railing shall be completely vandal proof.	KG	1500.00		
58	2.6.0	<b>Kandla SEZ Landmark Entry</b>				
59		<b>Landmark Entry Gate ( the bidder to submit the detail design along with the bid and would be liable to provide the same complete in all respects once the bid is accepted and design approved)</b>				
60	2.6.1	Providing and construction of landmark entry structure at Kandla port entrance, sub structure made of metal and concrete clad with different finishes based on the design. Design to be premier with premier finishes including all the civil work. The actual gate measurements shall be as per the site condition. The lane separator and crowd management tools as turnstiles, railings, frisking area, frisking booth for females, holding area, collapsible barriers etc. shall be under the scope of the bidder. The bidders are advised to visit the site, understand the requirements and check the feasibility of size, design etc. No extras would be payable what so ever.	Each	2.00		
61		<b>Total of Section 2</b>				
63		<b>Section 3</b>				
64	3.1	<b>Design Development and Detailing Fee</b>	Each	1.00		
65		<b>Total of Section 3</b>				
66		<b>Total of Section 1, 2 &amp; Section 3</b>				
67		<b>Total</b>				



## **Annexure**

**Name of Tender: Design, Fabrication, Supply and Installation Works of Wayfinding System and Street Furniture including all transportation, loading and un loading, for Kandla SEZ campus at Gandhidham Kutch.**

**Tender No: KASEZA/TENDER/WF&SF/1**

## **Technical Specifications**

Kandla SEZ - Specifications:

All the Signage and Graphics for Kandla SEZ shall use the following Specification and in case there is any material requirement, which is not covered within these specifications then, "*IRC-67-2012 Code of Practices for Road Signs (Third Addition)*" shall be referred along with relevant IS codes meant for materials to be used in extreme, humid and dry weather conditions for coastal regions, and prior approval from Engineer in Charge, shall be undertaken in writing before production of any such item.

**Vinyl Films:** Vinyl films have been developed with manufacturers for the specific codes as per "*IRC-67-2012 Code of Practices for Road Signs (Third Addition)*" Sr. No. 3, 4, 5 and 6 with the desired specification for a minimum performance requirement. Only these films shall be used for all the signage execution after approval by the Engineer-In-Charge. All material and execution of vinyl films shall confirm to the detailed technical specifications and notes for quality of workmanship given in this document. Any other colour used in vinyl films shall be approved by the Engineer-In-charge prior to its use.

**Painting:** All painting shall confirm to the detailed technical specifications and notes for quality of workmanship given in this document.

**Printing:** Printing of graphics for information and safety signs shall be done as per specified printing process and workmanship quality as described in this document and samples of all colours shall be duly approved by the Engineer-In-charge for colour matching. Every batch of printing shall be approved for colour matching.

**Create and Print QR Code:** To create a dynamic library QR Codes, which point to the geographical location (latitude, longitude) of the sign board and all the locations mentioned on the sign board, which are to be scanned by google maps application to point the user in the direction of any of the mentioned places on the sign board. The said QR codes then need to be printed on respective signage boards in a high definition quality, so they can be scanned by any regular smartphone. It is the responsibility of the agency to update/change regularly the signages when there is a change in the location of a unit/data.

**All Materials and their workmanship specifications:**

For all other material required for the works, the approval of the Engineer shall be obtained by the Contractor prior to the use of the material in the works

**Contractors are expected to provide the standard warranty and the invoices from the manufacturers covering all the materials used.**

**1 Acrylic**

- 1.1 White Cast acrylic sheets with 40% light transmission shall be used as face of all illuminated signs.
- 1.2 The acrylic should have excellent weather-ability and UV stability for min 10 years.
- 1.3 Acrylics made from virgin polymers shall be used for the sign faces
- 1.4 A 8mm thick Acrylic sheet is proposed for illuminated sign faces with a +/- 0.6mm tolerance for the thickness
- 1.5 All the Acrylic sheets shall be from the approved vendor/supplier and shall be approved by the Engineer-in-charge before ordering.

**2 Polycarbonate**

- 2.1 All polycarbonate sheets should be UV stabilized outdoor grade
- 2.2 No visual defects are allowed by inspection from a close inspection and the material should offer a min 10years warranty against yellowing and loss of light transmission
- 2.3 Approved make shall be from the approved vendor/supplier and shall be duly approved by the Engineer-in-charge based on a sample presented to Engineer-In-charge.

**3 Workmanship for both Acrylic and Polycarbonate**

- 3.1 The surfaces of Acrylic come covered with a masking film on both surfaces for protection during transport, storage and fabrication. The masking film should be left in place during fabrication work and all marking-out drawn on the film. It is recommended not to remove the marking film until necessary to prevent dust collection and accidental surface scoring or scratching. However, care should be taken not to have the surface scratched during handling.
- 3.2 Before pasting the vinyl graphics it is advised to wash the sheet surfaces to be decorated with clean, fresh water using a soft cloth. This has the advantage of removing all traces of static charge from the sheet after removal of the film which might otherwise attract dust. For all general

purpose cleaning operations, acrylic should be washed simply with clean cold water to which a little detergent has been added. The use of any solvents such as methylated spirits, turpentine, white spirit or proprietary window cleaning products is neither necessary nor recommended.

- 3.3 Flatness of the sheets is very important for the signs to appear neat.
- 3.4 The cutting shall be done using powered saw to a tolerance of +/- 1mm. The edges shall be cleaned of any bur and chamfered to make the acrylic comfortably sit inside the frame.

#### 4 Vinyl Films

##### 4.1 Block out vinyl films

- 4.1.1 Cast films should to provide complete light blocking characteristics with less than 0.001% light transmission.
- 4.1.2 A luster/matt finish colour matching to Pantone 2677C and 667C on the outside and uniformly white on the adhesive side
- 4.1.3 A cast vinyl face film of thickness between 100 to 130 micron, with clear acrylic based permanent pressure sensitive adhesive.
- 4.1.4 The film shall provide strong adhesion to a wide variety of substrates with perfect dimensional stability and perform well as second surface media.
- 4.1.5 The films should have self extinguishable property.
- 4.1.6 Should have a performance guarantee against colour fading, peeling, cracking

##### 4.2 Translucent Vinyl film

- 4.2.1 Translucent Graphic Film to allow light transmission
- 4.2.2 Cast vinyl film of thickness (0.05 mm) with clear pressure sensitive adhesive
- 4.2.3 A cast vinyl film with a clear, permanent, pressure-sensitive adhesive and a translucent synthetic liner that does not split if wet
- 4.2.4 The films should have self extinguishable property.
- 4.2.4 Should have a performance guarantee against colour fading, peeling, cracking
- 4.2.5 Should be able to withstand temperatures in the range -45° to +77°C

##### 4.3 Protective overlaminate

Shall be a luster/semi-matt cast films resistant to chemicals and abrasion while cleaning

All other following listed below products, will have to be used with a maximum life specified within the range manufactured by supplier and all warranties for the above products shall apply.

- 4.4 Diffuser films
- 4.5 Frosted vinyls
- 4.6 Printable vinyls
- 4.7 Opaque vinyls
- 4.8 Retro Reflective vinyls

All the vinyl film shall be from the approved vendor/supplier and shall be approved by the Engineer-In-charge before ordering.

4.9 Vinyl colour should follow the standard as per IRC-67-2012 (Code of Practice for Road Signs) (Third Addition). "Section 8 Colour's of signs" For exact matching of colours vendor should follow the table 8.1 Chromaticity Coordinates (Daytime)A.

Table 8.1 Chromaticity Coordinates (Daytime)<sup>A</sup>

Colour	1		2		3		4	
	x	y	x	Y	x	Y	x	Y
White	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329
Yellow	0.498	0.412	0.5 57	0.442	0.479	0.520	0.438	0.472
Green <sup>B</sup>	0.026	0.399	0.166	0.364	0.286	0.446	0.207	0.771
Red	0.648	0.351	0.735	0.265	0.629	0.281	0.565	0.346
Blue <sup>B</sup>	0.140	0.035	0.244	0.210	0.190	0.255	0.065	0.216
Orange	0.558	0.352	0.636	0.364	0.570	0.429	0.506	0.404
Brown	0.430	0.340	0.610	0.390	0.550	0.450	0.430	0.390
Fluorescent Yellow -Green	0.387	0.610	0.369	0.546	0.428	0.496	0.460	0.540
Fluorescent Yellow	0.479	0.520	0.446	0.483	0.512	0.421	0.557	0.442
Fluorescent Orange	0.583	0.416	0.535	0.400	0.595	0.351	0.645	0.355

A The four pairs of chromaticity coordinates determine the acceptable colour in terms of the CIE 1931 Standard Colourimetric System measured with CIE Standard Illuminant D65.

B The saturation limit of green and blue may extend to the border of the CIE chromaticity locus for spectral colours.

## 5 Workmanship for Vinyl pasting (Plotter cut Vinyl sheet graphics/text)

- 5.1 Vinyl shall be pasted on Acrylic sheets, on Aluminium Sheets and on ACM after removing the masking film.
- 5.2 Proper preparation of application surface is essential to obtain high quality and long-lasting markings.
- 5.3 Application:
  - 5.3.1 Clean the substrate as per recommendation of vinyl manufacturer.
  - 5.3.2 Remove entire liner from adhesive side of film.
  - 5.3.3 Align the film and press one edge to surface with finger.

- 5.3.4 With a squeeze, apply remaining film using overlapping strokes. Hold the film away from surface to avoid pre adhesion.
- 5.4 The plotted vinyl sheet should be applied to the substrates with the use of approved application tape to insure correct placement and accuracy. Vinyl application should be done in a dust free environment.
- 5.5 Remove pre-mask:  
Remove application film from the face of the film by pulling tape back upon itself at a 180-degree angle. Application film should be removed after 24 hours of application.
- 5.6 Re-squeeze all edges to prevent edge lifting. This must be done after application of film removal. Use firm even pressure. If not thoroughly re squeezed after pre mask removal, the adhesion at edges of film loosened by pre mask removal may start peeling off due to dirt or moisture and subsequently lift or be susceptible to damage from pressure washing.
- 5.7 For all the sign faces - the film should be wrapped around the edge of acrylic with up to a min distance of 25mm on all sides.
- 5.8 Remove entrapped air:  
All film pasting on the surface including the over laminate should be free from air bubbles. Inspect the film in flat areas for bubbles. To eliminate the bubbles, puncture the film at one end of the bubble with a pin and press the entrapped air with the thumb or squeeze or moving towards the puncture.
- 5.9 Self matching and complementing films should be used for all situations involving layers of films laminated in a single sign.
- 5.10 The graphics for the Blockout Vinyl sheet should be plotted in accordance with specified artwork accurately on a computerized plotter cutter. The edges of the plotter cut vinyl sheet should be clean and smooth. Vinyl sheet should be plotted in a dust free environment.
- 5.11 The final applied graphics shall be free from any kinds of wrinkles, air bubbles and placement/orientation problems.
- 5.12 Contractors are expected to provide the standard warranty and the invoices from the vinyl manufacturers covering all the vinyl used.**

## 6 Printing

- 6.1 The graphics and text of the signage system shall be printed with inkjet printers
- 6.2 Ink type: solvent ink, designed for 2 years outdoor application
- 6.3 Provide a hard lamination film to resist scuffing, scratching

- 6.4 Ink color: cyan, magenta, yellow, black
- 6.5 Same colours of the signages shall be uniform as specified and shall not vary from sign to sign. Printer has to get approval on all printed colours in graphics matching to specified PANTONE colours and submit 3 copies of each swatch 100mm X 100mm
- 6.6 Facility of printing directly onto a variety of specially treated vinyls and other materials
  
- 6.7 Machine to accommodate media widths of up to 62 inches and offers resolution of 300dpi
- 6.8 Graphics and text shall be without any ink bleeding and smudging
- 6.9 The printer agrees to produce and maintain high quality standards

## 7 Aluminum Composite Material (ACM/ACP):

- 7.1 Composition:  
Low-density polyethylene (LDPE) core sandwiched between two skins of aluminum alloy.  
For exterior signs Overall thickness of ACM/ACP: 4 mm
- 7.2 Surface Finish :
  - 7.2.1 Front side: Factory pre-finished by the manufacturer with a PVDF Kynar 500 (70:30) or LUMIFLON or DURAGLOSS 5000 based coating.
    - ✓ The finished surface shall be factory protected with a self- adhesive peel-off-foil.
    - ✓ Peel-off-foil to withstand at least 6 months exposure to local weather condition without losing the original peel off characteristic or causing stains or other damages to the painted panel surface.
  - 7.2.2 Reverse side: Reverse side of the panel surface shall be coated in a factory applied protection lacquer or protective primer, without protective peel-off-foil. Total dry-film thickness of the protection lacquer/ protective primer shall be minimum 4 microns or mill finish if Marine grade Aluminum EN-AW-5005A (AlMg-1)/ EN-AW-3004 (AlMn1Mg1) is used.
- 7.3 Colour Definitions:  
The white colour panel to be used in all signs shall be approved prior to its use by presenting a sample to the Engineer-in-charge.
- 7.4 Warranty:  
ACM/ACP manufacturer shall provide a 10 (TEN) years Warranty against defects such as but not limited to :
  - ✓ De-lamination.
  - ✓ Color fading
  - ✓ Loss of gloss.

For this purpose Original of Manufacturers Warranty certificate in the name of the contractor to be submitted with the bill.

**7.5 Mandatory identification marks:**

7.5.1 Each ACM/ACP panels shall bear markings as follows:

On Peel-off-foil:

- Manufacturer's name/brand printed clearly for easy identification.
- Direction of grains for metallic colors, by way of an arrow.

The reverse side of the panel to have the following minimum information printed:

- Production batch identification number or Date & Time of production of ACM/ACP panel for establishing linkage with the batches.
- Any other information as per manufacturer's policy such as paint reference number etc.
- Manufacturer's name/brand printed clearly for easy identification.

**7.6 General Conditions:**

7.6.1 ACM/ACP supplier shall provide technical assistance to the selected converters using their material. The training/ assistance to include advice on the use of appropriate equipment and hardware for ACM/ACP fabrication and installation. The training/ assistance to include training to the selected ACM/ACP converters' personnel in India/ Abroad, for correct methodology to be adopted for ACM/ACP fabrication and installation.

7.6.2. Engineer-in-Charge may ask for training schedule/ report from the converter and/ or manufacturer under (inter-alia) following conditions :

- Inability to produce designs as per specifications despite efforts on the part of the converter.
- If the workmanship of signage elements is found to be unacceptable/ poor.
- No further application of paint by means of any method shall be permitted after first painting of ACM/ACP at the manufacturer's factory. No repair/ touch-up of factory finished paint coated surface shall be permitted at any time. Engineer-in-Charge may reject such sign elements at no cost to BMRCL.

7.7 ACM/ACP (Aluminum Composite material) panel should conform to following standards:

Table			
S. No.	Description	Standard Test	Acceptable Value/Result
A.	Physical Tests For ACM/ACP		
1.	Overall Thickness of ACMACP	Visual Check/ Measurement as per QAP	4mm (± 0.2mm) Exterior 3mm (± 0.2mm) Interior



Table			
S. No.	Description	Standard Test	Acceptable Value/Result
2.	Aluminium Skin Thickness (each side)	Visual Check/ Measurement as per QAP	0.5mm(+0.04mm)/(-.025 mm) Exterior 0.25mm(+0.04mm)/(-.025 mm) Interior
3.	Panel weight (ACM/ACP)	Visual Check/ Measurement as per QAP	5.5 Kg/m <sup>2</sup> ( $\pm$ 5%) Exterior 3.8 Kg/m <sup>2</sup> ( $\pm$ 5%) Interior
B.	Mechanical Properties of ACM/ACP		
1.	Peel off strength Drum Peel Test	ASTM D 1781 or ASTM D 903	> 72 mmN/mm or More than 4N/mm
C.	Properties of Aluminum Skin		
1.	Tensile strength (Rm)	ASTM E8	Minimum 110 N/mm <sup>2</sup>
2.	Modules of elasticity	ASTM E8	Min 68000 N/mm <sup>2</sup>
3.	Elongation	ASTM E8	A <sub>50</sub> $\square$ 2%
4.	0.2% proof stress	ASTM E8	Minimum 100 N/mm <sup>2</sup>
D.	Properties of Paint Finish (Front Side Only)		
1.	Coating Type	Using FTIR (instrument) or chemical method	DURAGLOSS – Cycloaliphatic Polymer Resin Cross-Linked with a specific melamine blend LUMIFLON – Fluoro Ethylene Alkyl Vinyl Ether PVDF – Polyvinylidenfluorid
2.	D.F.T. (Dry Film Thickness) of paint	ASTM D 1400 or ECCA T1	23.75 Micron to 45 Micron
3.	Specular Gloss	ASTM D 523 or ECCA T2	Solid Colors 25-40% Metallic Colors 20-35%
4.	Abrasion Resistance	ASTM D 968 or ASTM D 4060	>25 liters per unit or < 45mg/ 1000 cycles (weight loss)
5.	Gloss Retention	ASTM 523 or ECCA T2	Min 60% (after 10 years)
6.	Color Retention	ASTM D 2244 or ECCA T3	5 units (Max.) over 4000 hrs.
7.	Chalk Resistance	ASTM D4214 or ECCA T14	Max rating 8 units after 4000 hrs.
8.	Adhesion	ASTM D3359 or ECCA T6	No adhesion loss permitted

**8 CRCA M.S. Sheets**

The CRCA mild M.S sheets to be used in the work shall conform to IS 513 - normal D-grade type mild steel.

**9 Fabrication work for CRCA Mild Steel sheets**

- 9.1 The Metal handling and Fabrication work for CRCA Mild Steel sheets shall be got executed from a specialised agency.
- 9.2 CRCA mild Steel sheets Fabrication shall be executed with CNC bending, CNC Laser and punching machines with precise work control and quality generation. Besides the specified machines, the Metal handling and Fabrication must have in-house CO<sub>2</sub> welding and skilled CAD/CAM facilities, engineers and skilled and trained personnel and adequate storage facilities.
- 9.3 Sheet metal blanking shall be preferably done using laser cutting to save on material, reduce wastage, have less burr on cut blanks, speed of execution and achieve accuracy
- 9.4 All surfaces exposed to view shall be clean and free from dirt, stains, grease, scratches, distortion, waves, dents, buckles, tool marks, burrs and other defects which mark the appearance of finished work. Cutting edges shall be smooth and free from all defects.
- 9.5 All surfaces exposed to view shall be straight and true to lines or curves. Arises and angles shall be as sharp as practicable. Miter joints shall be formed in true alignment with profiles accurately intersecting and all joints carefully eased to a radius of approximately 1 mm unless otherwise shown. Metal corners shall be bent to the smallest radius possible without causing grain separation or otherwise impairing the work.
- 9.6 All exposed connections shall be formed with hairline joints flush and smooth. All face panels must be flat, true and free from weld stud witness or other surface imperfections/blemishes. Edges shall be machined and finished free from cutter marks (not guillotined). All fabrication should have dressed welds, bend radii, finish, permitted texture levels, squareness of construction, no twist or warp or sagging of shape.
- 9.7 The Tolerances in the fabrication work shall be as under :
- |                       |   |                 |
|-----------------------|---|-----------------|
| Linear dimensions     | : | +/- 0.5 mm      |
| Hole and Slot Punches | : | 0.3 mm          |
| Finished edge radius  | : | 0.3 mm – 0.5 mm |
- 9.8 If the work for sheet metal is done with specialized agency the contractor shall be required to submit to the BMRCL copies of all the vouchers received from the approved fabricator and cheques /drafts paid by him to the approved fabricator as well as the copies of the documents establishing the excise paid by the fabricator for this work.
- 9.10 Finish for sheet metal 0.062" (1.6 mm) CRCA
- 9.11 Surfaces indicated "A" finished to match sample
- 9.12 Surfaces without identification or indicated "C" to be unfinished.
- 9.13 Parts to be free of visible defects on "A" and "B" surfaces.
- 9.14 Flat surfaces to have: Flatness tolerance of 0.05 mm per 25 mm. Not to exceed 0.50 mm over the entire surface.

9.15 Each Part to be approved by Engineer-In-charge prior to production.

9.16 Definitions:

- ✓ "A" surface: The top or front, most often viewed surface by consumer.
- ✓ "B" surface: Generally the front edge/sides or back/bottom of a part. Not viewed as often as an "A" surface.
- ✓ "C" surface: Internal surfaces. Part surfaces not normally seen. Normally "c" surfaces are not inspected for cosmetic attributes.

#### 10 Aluminium Sections/ Sheets:

10.1 Aluminium plates and sections shall conform to Aluminium alloy of grade 63400 WP of IS-733.

10.2 For information signs off-the shelf Aluminium sections shall be procured which snap-close using a spring clip creating a hinged action holding the infill panels in place.

10.3 Vandal proof sections shall be used, which secure type is requiring a special tool to open. Image included below for reference.

10.4 These sections shall be capable to hold a total infill panel upto a maximum thickness of 8mm and shall have the rigidity to make A0 size panel frames.

10.5 All sections shall be perfectly straight free from surface damages, bends and twists.

10.6 Bent profiles shall not be forcefully straightened.

10.7 Straightness tolerance shall not exceed of 1.5mm per 1000 mm.

#### 11 Structural Steel

All structural steel shall be of tested quality and shall conform to one of the following standards

IS:226 Structural steel (Standard Quality)

IS:2062 Structural steel (Fusion welding quality) Grade A (1992)

IS:961 High Tensile Structural Steel (Ordinary)

IS:1161 Steel Tubes for Structural purposes Grade B (1992)

IS:4923 Hollow steel sections for Structural use

The Contractor shall supply to the Engineer copies of the manufacturer certificate that the steel brought to the site for incorporation in the works is of a quality fully complying with the specification. If required by the Engineer, the Contractor shall arrange for testing of the steel samples as per IS:1608 - 1599.

12 **Welding Electrodes:** Welding electrodes used for the works shall conform to IS:814/latest and shall be supplied by manufacturer approved by the Engineer and shall be of the grade approved by the Engineer. All Electrodes shall be kept under dry conditions. Any electrode which has part of its flux coating broken away or is damaged shall be rejected.

13 **Bolts and Nuts:** Bolts and nuts used for the works shall unless otherwise specified be black bolts and nuts supplied by manufacturer approved by the Engineer and shall conform to IS:1367 and 1367 (1980)

For the truss hot-dip galvanised (@300 gm/sqm) bolt sleeve of mild steel grade 'B' conforming to IS:2062 and 4 dia 12mm anchor bars welded to same as per detailed drawing and instruction of the engineer shall be provided. The Length and diameter of sleeve shall be 300mm and 60mm respectively. The sleeve shall receive hexagon head bolt IS:1363 (part-I)- ISO 4016-M-20x90-8.8. Hexagon head bolt shall be provided with galvanised spring washer as per the detailed drawing and instruction of the Engineer.

- 14 Washers:** Plain washers shall be made of mild steel conforming to IS:5369 (1975), unless otherwise specified. One washer shall be supplied with each bolt and, in case of special types of bolts, more than one washer as needed for the purpose shall be supplied. An additional double coil helical spring washer, conforming to IS:6755 (1980), shall be provided for bolts carrying dynamic or fluctuating loads and those in direct tension. Tapered washers, conforming to IS:5372 (1975) and IS:5374 (1975), shall be used for channels and beams respectively wherever required.

**15 Structural steel works:**

- 15.1 These specifications shall be read in conjunction with the CPWD specifications 1996 and other relevant reference specifications described in the section 1 of these specifications.

The Contractor will provide all materials and equipment required to complete the works in every respect, whether such materials are required as part of the permanent structures or temporary for fabrication or erection or maintenance including specifically structural steel plates, flats, bars, welding rods, rivets, bolts and nuts, paint, welding sets in the shop and at site, all workshop facilities, derricks, cranes, pulley blocks, wire ropes, hemp or manila ropes, winches, erection cleats and temporary braces or supports and all other materials required to deliver the Works complete in every respect.

All labour required for fabrication and erection for any cleaning, making good, rectifying, hauling, painting and for any other ancillary work required to complete fabrication and erection.

The Contractor shall observe all safety requirements for erection of structural steelwork as covered in IS:7205.

**15.2 Drawings:**

- 15.2.1 The Contractor will supply to the client profile drawings showing sizes of all structural members and typical connection details.
- 15.2.2 Should there be any discrepancy in the drawings the Contractor is to refer the matter to the Engineer. The Contractor shall further provide a drawing showing the accurate setting out to line and level of all the anchor bolts intended for the work in sufficient time for their inclusion in the work so as to maintain the building program.
- 15.2.3 The Contractor is to prepare all the necessary fabrication shop drawings and these shall be submitted to the Engineer in duplicate and be approved by him before fabrication is commenced. All such drawings shall show the dimensions of all parts, method of construction, welding and bolting. A further set of all approved fabrication drawings shall be supplied by the Contractor for use of the Engineer as required.

15.2.4 Approval by the Engineer of drawings or any other particulars submitted by the Contractor shall not relieve the Contractor of full responsibility for any discrepancies, errors or omissions therein. The Contractor shall at his own expense supply such additional copies of his working drawings as are required for the use of the interested parties.

### **15.3 Workmanship and Fabrication:**

- 15.3.1 For all the works, workmanship shall be of first class quality, throughout, In conformity with IS:800 (latest), and true to line, level and dimension as shown in the drawings or instructed by the Engineer.
- 15.3.2 All parts assembled for bolting shall be in close contact over the whole surface and all bearing stiffeners shall bear tightly at top and bottom without being drawn or caulked. The component parts shall be so assembled that they are neither twisted nor otherwise damaged as specified cambers if any shall be provided. Drilling done during assembling shall not distort the metal or enlarge holes. The butting surfaces at all joints shall be so cut and milled so as to butt in close contact throughout the finished joints.
- 15.3.3 Cutting shall be done automatically. Hand flame cutting will not be permitted.
- 15.3.4 The edges and ends of all cut/sheared flange plates, web plates of plate girders, and all cover plates, and the ends of all angles, tees, channels and other sections forming the flanges of plate girders, shall be planed/ground.
- 15.3.5 Holes for bolts shall be drilled to conform to clause 10 of IS:7215 (1974). Punching of holes will not be permitted. All drilling shall be free from burrs. No holes shall be made by gas cutting process.
- 15.3.6 All welding for the works shall be carried out by first class welders and shall be in accordance with IS:816, IS:819, IS:1024, IS:1261, IS:1323 and IS:9595. The Engineer may at his discretion order periodic tests of the welder and/or of the welds produced by them. All such tests, shall be carried out by the Contractor at his cost. Safety requirements should conform to IS:7205, IS : 7273 and IS : 7269 as applicable and should conform to safety, economy and rapidity.
- 15.3.7 As much work as possible shall be welded in shops. The pieces shall be manipulated to ensure down hand welding for all shop joints as far as possible. All parts to be welded shall be arranged so as to fit properly on assembly. After assembly and before the general welding is to commence the parts are to be tack welded with small fillet or butt welds as the case may be. The tack welding must be strong enough to hold the parts together but small enough to be covered by the general welding. The welding procedure shall be so arranged that the distortion and shrinkage stresses are reduced to a minimum.

- 15.3.8 All joints required in structure to facilitate transport or erection shall be shown on the drawings or as specified by the Engineer. Should the Contractor need to provide joints in locations other than those specified by the Engineer he shall submit his proposals and obtain the prior sanction of the Engineer for such joints. The lengths of structural shall be the maximum normally available in the market jointing of shorter length in order to make up lengths required shall not be permitted.
- 15.3.9 Each piece of steel work shall be marked distinctly before delivery, indicating the position and direction in which it is to be fixed. Three copies of a complete marking plan are to be supplied to the Engineer before erection commences.
- 15.3.10 In the case of welded fabrication any distortion remaining in the member after welding operations are completed shall be rectified by and/or at the expense of the Contractor to the approval of the Engineer.
- 15.3.11 All members of trusses and lattice girders shall be straight throughout their length, unless shown otherwise on the drawings, and shall be accurately set to the lines shown on the drawings. Sheared edges of gussets or other members to be straightened and dressed where necessary.
- 15.3.12 Templates and jigs used throughout the work shall be all steel. In cases where actual materials have been used as templates for drilling similar pieces, the Engineer shall decide whether they are fit to be used as parts of the finished structure.
- 15.3.13 Apart from the requirements of welding specified under the above sub clauses, sections above, the Contractor shall ensure the following requirements in the welded joints.
- Strength-quality with parent metal.
  - Absence of defects
  - Corrosion resistance of the weld shall not be less than that of parent material in an aggressive environment.
- 15.3.14 No gasket or other flexible material shall be placed between the holes. The holes in parts to be joined shall be sufficiently well aligned to permit bolts to be freely placed in position. Driving of bolts is not permitted. The nuts shall be placed so that the identification marks are clearly visible after tightening. Nuts and bolts shall always be tightened in a staggered pattern and, where there are more than four bolts in any one joint, they shall be tightened from the centre of the joint outwards.

#### 15.4 Testing of Welds :

- 15.4.1 Butt welds - Radiographic testing of 5% of welds as per IS 1182.
- 15.4.2 Fillet Welds- Ultrasonic testing of 5% of welds.
- 15.4.3 All welded connections shall be inspected as per IS:822.
- 15.4.4 All welds shall be tested by "dye penetration test" as per current practices.
- 15.4.5 Agency for testing of weld shall be approved by the Engineer prior to testing.

- 15.4.6 Defected welds shall be repaired or replaced as decided by the engineer. The repaired or replaced welds shall be tested using the same methods as above. Additionally, when defective welds are found, the cause of the defective welding shall be determined and the contractor shall institute immediate corrective action.
- 15.4.7 No extra payable shall be made for the tests indicated above.

**15.5 Protection of Steel Works (IS:8629) :**

- 15.5.1 Sand blasting where specified shall be carried out in accordance with IS:1477.
- 15.5.2 Painting work shall be carried out in accordance with IS:8629 (Parts I to III).  
Painting shall be applied under the temperature requirement specified by the manufacturer.
- 15.5.3 The steel work, prior to delivery, shall be cleaned from scale, rust, dirt and grease etc., but means of chipping, scraping and wire brushing using skilled operators as described in the painting systems below. The cleaning shall proceed each day over the extent of surfaces which can be painted on that day. The paint shall be applied by brushing or spraying as per approval of the Engineer.
- Paint brushes round/oval and flat shall be conforming to IS:487 and IS:384 codes respectively, if painting with brushing is approved by Engineer.
- The spraying equipment shall be compatible with the paint material, fitted with necessary gauges and controls and approved by the Engineer.
- 15.5.4 Site weld locations shall be left free from paint within 50mm of the weld position, and contact surfaces in connection using High Strength Friction Grip Bolts shall not be painted. Immediately after completion of erection all damaged paint shall be scraped off and made good to the approval of the Engineer.  
The Steelwork specialist shall also clean down and apply one coat of primer to all site bolts, site bolted connections and site weld locations and the paint work generally shall be left in sound condition for any subsequent painting.
- 15.5.5 All paints and primers shall be of best quality and in original sealed containers as packed by the paint manufacturer conforming to the relevant Indian Standards and shall be procured directly from the manufacturers. All paint to be used shall be stored under cover in such conditions as will preserve it from extreme of temperature and the paint shall be used and applied strictly in accordance with the manufacturer's instructions.
- 15.5.6 In addition, the following specification shall apply to the shop painting of contact and inaccessible surfaces:

- Surfaces to be painted shall be thoroughly cleaned from scale, rust, dirt, grease etc. by means of sand/grit/shot blasting or other equivalent means.
  - Surfaces which are to be brought permanently into close contact or made inaccessible either in the shops or upon erection shall, after cleaning, be given two coats of Red Lead Priming Paint. The surfaces shall be brought into contact while the paint is still wet.
  - Contact surfaces in connection using High Strength Friction Grip bolts shall not be painted or oiled and shall be free from dirt, loose scale, burrs, pits and any other defects which would prevent the solid seating of the parts and would interfere with the development of friction between them.
  - All enclosed surfaces of box members shall be completely sealed by oiling or by coating with approved bitumen paint and all such members and tubes shall have their ends closed by suitable plates welded in position.
- 15.5.7 Surfaces in contact during shop assembly shall not be painted. Surfaces which cannot be painted, but require protection, shall be given a rust inhibitive grease conforming to IS:958 (1975), or solvent deposited compound conforming to IS:1153 (1975) or IS:1674 (1960), or treated as specified in the drawings.
- 15.5.8 Surfaces to be in contact with concrete shall not be painted.
- 15.5.9 The Contractor shall take all precautions to prevent dust and dirt coming in contact with freshly painted surfaces or with surface being painted. The second coat of paint shall only be applied when the first coat has dried.
- 15.5.10 Surfaces not in contact but inaccessible after shop assembly shall receive the specified protective treatments before assembly.
- 15.5.11 Exposed machined surfaces shall be adequately protected.
- 15.5.12 A uniform film thickness of paint is to be ensured throughout the work.
- 15.5.13 Surfaces, which have not been shop coated, but require surface treatment shall be given necessary surface preparation and coats at site as specified in the painting system.

**15.6 Erection & Site Work:**

- 15.6.1 The Contractor shall be responsible for checking the alignment and level of foundation and correctness of foundation bolt centers, well in advance of starting erection work, and shall be responsible for any consequences for non-compliance thereof. Discrepancies if any shall immediately be brought to the notice of the Engineer for his advice.



The structure should be divided into erectable modules as per the total scheme. This should be pre-assembled in a suitable yard/platform and its matching with members of the adjacent module checked by trial assembly before erection.

Immediately prior to erection any rust in the paint area shall be removed by power wire brushing to a standard equivalent to SA3.

- 15.6.2 During erection the rough handling of fabricated materials such as bending, straining or pounding with sledges shall be avoided. Any damage to the structure during transportation or erection shall be immediately rectified by the Contractor at his own cost. The straightening of bend edges of plates, angles and other sections shall be done by methods which will not cause fracture. Following the completion of the straightening, the surface of the member shall carefully be inspected for damage and got approved by the Engineer before further use.
- 15.6.3 The Contractor shall be responsible for accurately positioning, leveling and plumbing of all steelwork and placing of every part of the structure in accordance with the approved drawings and to the satisfaction of the Engineer. All stanchion base, beam and girder bearings etc. shall be securely supported on suitable steel packs. All reference and datum points shall be fixed near the work site for facilitating the erection work.
- 15.6.4 All equipment used by the Contractor shall be sufficient for the purpose and for the erection of the steel work, in the time specified in the contract. Any lifting or erecting machinery shall be to the approval of the Engineer and shall be removed from the site if he considers such appliances dangerous or unsuitable for their functions. The approval of the Engineer shall not relieve the Contractor of the responsibilities for the loads to which the erection equipment shall be called upon to carry. Adequate arrangement shall be made to resist wind loads and lateral forces arising at the time of erection.
- 15.6.5 The Contractor is entirely responsible for the stability of the structure during erection and shall arrange that sufficient tack bolts, braces or guy ropes are used to ensure that work will remain rigid until final bolting, riveting or welding is completed. The Contractor shall supply and fix, without extra charge, any temporary bracing which may be necessary.
- 15.6.6 All steelwork shall be erected in the exact position as shown on the drawings. All vertical members shall be truly vertical throughout and all horizontal members truly horizontal, fabrication being such that all parts can be accurately assembled and erected. No permanent bolting, welding or grouting shall be done until proper alignment has been obtained and checked by the Engineer.
- 15.6.7 At stanchion splices and at other positions where concrete cover to the steel is liable to be restricted, bolts will be placed with their heads on the outside of the members.
- 15.6.7 All field assembly bolting and welding shall be executed in accordance with the requirements for shop fabrication excepting such as manifestly apply to shop conditions only. Where steel has been delivered painted the paint shall be removed before field welding for a distance of at least 50mm on either side of the joints. The number of washers on permanent bolts shall not be more than two for the nut and one for the bolt head.

**15.7 Inspection:**

- 15.7.1 The contractor shall inform the Engineer of the progress in fabrication and as to when individual pieces are ready for inspection. All gauge templates necessary to satisfy the Engineer shall be supplied by the contractor. The Engineer may at his discretion check the results obtained at the contractor's works by independent tests and should the material so tested be found unsatisfactory, the cost of such tests shall be borne by the contractor. During Inspection, the component/member shall not have any load or external restraint.
- 15.7.2 Structural steel and components viz. bolts, nuts, washers, welding consumables, etc. should be tested for mechanical and chemical properties as per the requirement of the relevant IS or any other specified codes/standard.

**15.8 Holding down and Anchor bolts :**

- 15.8.1 The holding down and anchor bolts should conform to the requirements laid down in IS:624 or as directed by the Engineer.
- 15.8.2 Installation:** Individual bolts in groups of holding down bolts shall be positioned accurately within a tolerance of +6mm. The bolts shall be set vertically to a tolerance of not more than 1 in 250.
- 15.8.3 During the casting of concrete the contractor shall ensure that space between the bolt and sleeves is kept clean after removal of shuttering. The contractor shall provide and fix timber plugs to maintain this space in a clean condition. The projecting threads of bolts shall be protected by approved wrapping materials.
- 15.8.4 Grouting of bolt tubes shall be carried out after the steelwork or equipment have been aligned, plumbed and leveled.

**15.9 Tolerances :**

- 15.9.1 All tolerances shall be in accordance with IS:7215 unless otherwise specified.
- 15.9.2 The maximum deviation for line and level shall be + 3.0mm for any part of the structure including for location of column centers.
- 15.9.3 The maximum deviation from plumb for columns shall be +3.0mm in 10.0m height subject to a maximum of +6.0mm in a total height of 30.0m.
- 15.9.4 The deviation at the centre of the upper chord member from vertical plane running through the centre of the bottom chord shall not be more than 1/1500 of span but in no case more than 10.0mm. The lateral displacement of top chord at centre of span from vertical plane running through centre of supports shall not be more than 1/250 of the depth of truss but in no case more than 20.0mm.

15.9.5 Tolerances for anchor fasteners shall be as specified by respective manufacturers in their Technical and Specifications publication booklets.

**16 Lamps and fixtures:**

16.1 LED luminaries shall be used in all the illuminated signs.

16.2 All lamps shall be supported using clips to ensure no damage and facility to easily replace them when required.

16.3 In case of single ended lamps the free end of LED shall be duly supported by supporting clamps/ brackets of approved makes.

**16.4 Contractors are expected to provide the standard warranty and the invoices from the manufacturers covering all the lights used.**

**17 Specifications for electrical works:**

**17.1 Wiring for Indoor Signs:**

**Illuminated direction and emergency signs**

17.1.1 All lights mounted in an individual internally lit sign shall be switched ON & OFF in group, through a switch and controlled through a M.C.B. ( The switches controlling circuits and M.C.Bs. are not in the scope of this tender.) The contractor shall provide a Bakelite connector on each sign for connection to feeding wire outside, which shall be extendable in flexible conduit upto a distance of 2.0 M. from the sign. This extendable wiring shall either be laid within the provision made in the supporting structure or in flexible conduit.

For all the suspended and projected signs this provision shall be made through one of the suspender or the connection member to the sign respectively.

17.1.2 The contractor shall also ensure that all the connections inside the sign are made through Bakelite connectors and thimbles & screws are used for end terminations of wires. Thimbles wherever installed shall be properly covered with insulated sleeves and no temporary taping is done at any point. All the connectors shall be ISI marked.

17.1.3 All connectors and joints shall be mounted or fixed to the internal structures of signs with insulating fixtures

17.1.4 The interconnecting wiring between light fixtures within the sign shall not be less than 1.5 Sq.mm and shall be FRLS, PVC insulated 1.1 KV grade, with multi-stranded copper conductor.

17.1.5 If specified - An earth terminal shall be provided on each of the lit sign which shall be connected with the earthing conductor laid along with incoming circuit wiring.

17.1.6 All wiring within the sign enclosure shall be covered with flexible conduit which shall be properly fixed with clamps, saddles etc. in such a way that no shadow is cast on the illuminated surfaces. In no case any loose wiring shall be left inside the sign enclosure.

## 17.2 Wiring for Outdoor Signs:

17.2.1 The pole box proposed within the stone pedestal of **sign** shall have provision of one SPN M.C.B. of 6A (10 KA breaking capacity ) for control / Isolation of incoming and outgoing cables / wires. The wiring within the sign from pole box shall be provided by the contractor which shall be of 2.5 sq.mm. FRLS, PVC insulated 1.1 KV grade, with multi-stranded copper conductor for phase and neutral and 1.5 sq.mm. with solid copper conductor wire for earth. The incoming cable upto pole box shall not be in the scope of this tender, but its terminations shall be the responsibility of the contractor. An earth terminal for connecting the earth wire shall be provided in the pole box.

Pole box (junction box) shall be made out of polycarbonate/compressed molded fiberglass polyester and designed to insulate and protect the controller and component in outdoor/indoor application making it water proof. It shall be Lockable with a universal lock/ quarter turn lock and UV stabilized for outdoor usage. This Junction box shall have a front openable hinged door provided with appropriate gasket And all metal components/fittings should be non corrosive made of brass to withstand moist condition.

17.2.2 The Junction Control Box proposed for **sign** shall have provision of mounting 2 Nos. S.P. M.C.Bs. of 6A (10 KA breaking capacity) for control / Isolation of incoming and outgoing cables / wires along with separate neutral link and earth link. This junction box shall be of size 150x225x100 mm. Fabricated out of 16 S.W.G M.S. sheet duly painted of same shade and as per specifications specified for painting of structure . This shall have a front openable hinged door, provided with Neoprene gasket and double screwed knobs for closing. The complete junction control box shall be weatherproof and shall have Index of Protection of I.P. – 53.

Two separate out-going circuits shall emanate from the Control Junction Box. Each of them shall control 3 Nos. Alternative luminaires by looping the main circuit wiring. All the interconnecting wiring from junction control box to luminaires shall be laid in Heavy Duty M.S. conduits. The phase and neutral wires of each circuit shall be of size 2.5 sq.mm. FRLS, PVC insulated 1.1 KV grade, with multi-stranded copper conductor and earth wire shall be of 1.5 sq.mm. with solid copper conductor laid along with circuit. The size of wire for looping at each luminaire shall not be less than 1.5 sq.mm. FRLS, PVC insulated 1.1 KV grade, with multi-stranded copper conductor for phase & neutral and 1.0 sq.mm. with solid copper conductor wire for earth.

The PVC conduits for wiring shall be properly fixed with clamps, saddles, nut-bolts etc. The complete conduiting shall be duly painted as per specified shade of the supporting structure. The jointing in the PVC. conduit with T-Junction boxes, sockets, bends, etc. shall be done by threading. All the threaded joints, outlets of wires etc. shall be sealed so as to resist entrance of Moisture, Dust and Vermin's etc.

### 17.3 Index of Protection:

Since most of the lights/ luminaries are to be installed within the signs the following Index of Protection are proposed for different locations to ward off ingress of dust, vermins and moisture :

1. Indoor signs	-	I.P. – 54
2. Lights fixtures for Outdoor signs	-	I.P. – 65
3. Pole Box	-	I.P. – 65

### 17.4 Typical Items use in signing

#### Table

Item	Color temperature	Code/ Specific No.
LED	4100 K ( Cool white)	24 W
LED	4100 K ( Cool white)	34 W
Electronic Ballast		Appropriate for the above
G5 sockets switches for LED, and connectors 6/15 Amp.		rated for 600 volts
Junction box		Polycarbonate/ compressed molded fiberglass polyester

- ✓ ISI marked connectors shall be used
- ✓ Switch boxes etc. shall be got fabricated at approved workshops only
- ✓ The tenderer shall quote a specific make from approved make above, in absence of this Information, the tenderer will be asked to supply first approved material.
- ✓ For items not covered in the above list, the sample shall be got approved by The Engineer-In-Charge. Makes offered should comply with technical specification of tender.
- ✓ **Glass**  
Glass used for signages shall be laminated safety glass as per the specifications for fire exit signs Approved make shall be duly approved based on a sample presented to Engineer-In-charge.

**18 CONCRETE WORKS****18.1 General**

These specifications shall be read in conjunction with the CPWD specifications 1996 and other relevant specifications described in the Section 1 of these Specifications. Relevant IS and BIS codes will have to be referred to for detailed specification of concrete work.

**18.2 Blending of aggregates**

In order to obtain optimum workability, individual aggregates of nominal size 20mm, 10mm, 4.75mm and 2.36mm will be blended in such a way that the grading curve for all in aggregates will be a smooth curve from size 0.15mm to 25mm falling within the established envelop grading curve. Contractor shall establish envelop grading curve for each grade of concrete for given maximum size of aggregates and get it approved by Engineer before finalising the mix design.

**18.3 Grade of Concrete**

The concrete is designated as follows :

Concrete M 25

The letter M refers to the mix

The number 25 represents the characteristic compressive strength of 15cm cubes at 28 days in MPa (Mega Pascals : 1 MPa : 10 kg/cm<sup>2</sup> approximately). M25 concrete thus has a characteristic strength of 250 kg/cm<sup>2</sup>. Other design mixes will also be denoted in same way.

**18.4 Mix Design**

It is the complete responsibility of the Contractor to design the concrete mixes by approved standard methods and to produce the required concrete conforming to the specifications and the strength, workability requirements approved by the Engineer.

The approved mix design will contain strength requirements, grade of concrete, type of cement, maximum size of aggregates, workability, quality of water and admixture, if allowed.

Mix Design once approved must not be altered without prior approval of Engineer. However, should the contractor anticipate any change in quality of future supply of materials than that used for preliminary mix design, he should inform the Engineer quite in advance and bring fresh samples sufficiently in advance, to carry out fresh trial mixes. Design mix will indicate by means of graphs and curves etc., the extent of variation in the grading of aggregates which can be allowed.

Limits of Water and Cement Contents

Maximum water/cement ratio

For RCC members - 0.45

**Cement Content**

Cement content in concrete shall not be less than 380 kg/ cum for RCC under normal exposure. Ordinary Portland cement (OPC) of 43 and 53 grade conforming to IS: 8112 and IS: 12269 respectively shall be used. However for nominal mixes, CPWD specification and DSR will be followed. The requirement of the relevant codes, standards and directions of the Engineer shall be followed.

**18.5 Finishes :**

Unless otherwise instructed the face of exposed concrete placed against formwork shall be rubbed down immediately on removal of the formwork to remove irregularities. The face of concrete for which formwork is not provided other than slabs shall be smoothed with a float to give a finish equal to that of the rubbed down face, where formwork is provided. The top face of a slab which is not intended to be covered with other materials shall be leveled and floated to a smooth finish at the levels or falls shown on the drawings or as directed. The floating shall be done so as not to bring an excess of mortar to the surface of the concrete. The top face of a slab intended to be surfaced with other material shall be left with a spaded finish. Faces of concrete intended to be plastered shall be roughened by approved means to form of a key.

**18.6 Grouting of base plates & bolt holes:****Mixing:**

Dry grout should be mixed in a mechanical mixer: the conventional 200/400-litre capacity concrete mixer can be used to mix four bags of dry grout; alternatively, paddle type mortar mixers can be used. The quantity of grout to be mixed at one time should not exceed that amount which can be placed in approximately 10 to 15 minutes.

**Cleaning and preparation of the surface:**

The base concrete should be clean and strong, and its surface should be properly hacked; all dust should be removed suction or compressed air. The surface should be thoroughly wetted with water for several hours. Before the grout is poured, all free water should be removed and the flat surfaces coated with thin cement slurry.

**Curing:**

The grout should not dry out where external restraint is provided in the form of form-work, the top opening and all stray openings should be covered with wet sack for at least 7 days.

**18.7 Reinforced Concrete****18.7.1 Materials:**

Formwork shall be of timber, plywood (including marine plywood), steel or any other suitable material capable of resisting damage to the contact faces under normal conditions of erecting forms, fixing steel and placing concrete. The selection of materials suitable for formwork shall be made by the Contractor based on the quality consistent with the specified finishes and safety. For designated areas prominently in public view such as piers, caps, portals, viaduct, parapets etc., preferably steel shuttering will be used. The material shall be approved by the Engineer before erected at site. However, the choice of material shall be decided by the Engineer. The entire responsibility of planning, designing, erection, dismantling, shifting and safety of false work lies with the contractor.



All formwork supports (centring, props, scaffolds etc.) shall only be in structural steel and preferably of pipes conforming to IS:806, IS:1161, IS:1239, IS:2750. Wooden ballies shall not be permitted as props/formwork supports. All props shall be properly braced using x & k bracings.

**18.7.2 Timber:**

Timber used for formwork shall be easily workable with nails without splitting. It shall be stable and not liable to warp when exposed to sun and rain or wetted during concreting.

**18.7.3 Plywood:**

Plywood used for formwork shall be minimum 12 mm thick. Shuttering quality plywood complying with IS:4990 and of make approved by the Engineer. Suitable stiffeners and walkers shall be provided depending on the shuttering design.

**18.7.4 Steel:**

Steel formwork shall be made of minimum 4 mm thick black sheets stiffened with angle iron frame made out of M.S. angles 40 mm x 6 mm supported at suitable spacing.

**19 Powder Coating**

**19.1 Powder coating on Aluminum Plates**

19.1.1 Wherever specified the aluminum plates shall be coated in approved colour and shade with pure polyester powder of reputed brand to a minimum thickness of 75 microns.

**19.1.2 The pure polyester powder coating shall be got executed from specialized agency.**

The pure polyester powder shall have following properties:-

- ✓ Free Flow-ability : Satisfactory
- ✓ Particle size : < 50-70 microns suitable for electrostatic spray.
- ✓ Specific gravity : 1.1 to 1.5 depending on the colour.
- ✓ Self life : 6 months.
- ✓ Stoving Schedule : 200° C for 10 mins. (metal temp.)
- ✓ Test Certificates from approved laboratory for the representative samples shall be submitted by the Contractor. Testing will be done in presence of Employer's representatives at the cost of contractor.

19.1.3 The curing schedule shall be as specified by the manufacturer of pure polyester powder.

19.1.4 The properties of cured powder films shall be:-

- Scratch hardness: Equal to or more than 4 Kg.
- Impact resistance: Min 150 Kg cm
- Pencil hardness: 3H to 4H
- Salt spray resistance: 500 Hrs.
- Water soak at room temperature: No change after 500 Hrs.
- Detergent resistance: No attack after 500 Hrs.
- Cross Hatch adhesion : GT= O (ASTM D-3359)
- Cured Film thickness: Min 75 microns.

19.1.5 Tests for properties of cured film as given above shall be carried out at frequency specified in relevant IS/BS/ASTM codes or as specified by the Engineer – in-charge.

19.1.6 The surface of aluminum shall be prepared and pretreated as follows before powder coating:-

- Removal of all foreign matter.
- Chromatisation of aluminum surface as specified by the manufacturer of pure polyester powder by at least a five stage process consisting of alkali degrease, rinse and chromate conversion followed by two rinses. The chromate coating and alkali degrease shall be as per requirement of the pure polyester powder manufacturer.
- Proper curing at required temperature shall be done for specified time period so as to achieve the desired properties.

19.1.7 The pure polyester coated surface shall be of uniform texture, colour and gloss and shall be free from cracks, warps and other imperfections.

19.1.8 The pure polyester powder is to be used within its shelf life from the date of manufacturing as specified by the manufacturer.

## **19.2 Powder coating on M.S and CRCA MILD Steel sheets**

19.2.1 Wherever specified the M.S and CRCA mild Steel plates and sections shall be coated in approved colour and shade with pure polyester powder of reputed brand to a minimum thickness of 75 microns.

19.2.2 The pure polyester powder coating shall be got executed from specialized agency as given in 19.1.2 to 5, 19.1.7 and 8. edit as per number in Aluminum above

19.2.3 The surface of steel shall be prepared and pretreated as follows before powder coating:-

- Removal of all foreign matter.

- Low weight Zinc Phosphate conversion treatment of M.S and CRCA mild Steel surface as specified by the manufacturer of pure polyester powder by at least a seven stage process consisting of oxide and scale removal, alkali degrease, rinse twice and Zinc Phosphate conversion treatment followed by two rinses. The Zinc Phosphate conversion treatment and alkali degrease shall be as per requirement of the pure polyester powder manufacturer. Last wash shall be from diluted acid and immediately after that powder coating process shall be started without wasting much time.
- Proper curing at required temperature shall be done for specified time period so as to achieve the desired properties.

19.2.4 The pure polyester coated surface shall be of uniform texture, colour and gloss and shall be free from cracks, warps and other imperfections.

## 20 Galvanising

Galvanising, wherever specified, shall be minimum 80 microns thick and shall conform to IS-4759.

## 21 Polyurethane Painting

- 21.1 The Polyurethane painting, wherever specified, shall conform to CPWD Specifications 1996, volume I – VI), relevant IS codes and standard specifications.
- 21.2 PU paints matched to shades as per colour specifications shall be of reputed brand.
- 21.3 PU paint applications shall be done in following steps or as instructed by the each manufacturer.
- **Surface cleaning:** Remove grease, oil and other contaminants by using a degreasing solvent using mechanical tools. Ensure that all the dust particles are removed by suction or air blast and surface is fully dry and cleaned.
  - **Application of primer:** Stir the components thoroughly and then mix base and catalyst in proportions by volume as instructed in the product specifications to uniform consistency. Avoid agitation of mixing. Add 10 % thinner immediately before application. However additional thinner may be added if required to achieve a good workability. For Airless spray use any standard equipment having pump ratio 45:1. This requires an over coating interval of minimum one over night and a dust free environment.
  - **Application of the final finish:** Stir the base thoroughly and then mix base and catalyst by volume as instructed in the product specifications to uniform consistency. Allow the mixture to mature for 30 minutes and stir again before use and application. Apply using a conventional spray .Add 10 % thinner depending on conditions. Use any standard equipment at an atomizing pressure of 3.5 – 4.9 kg/cmsq. Two coats could be applied for a good result.
  - **Contractors are expected to provide the standard warranty and the invoices from the manufacturers.**

## 22 EPDM Gasket

**Description:** Ethylene Propylene Diene Monomer in the form of a strip with required thickness. This This could be glued to one surface .The gasket would get compressed in between two surfaces and gives the right sealing.

**EPDM gaskets** manufactured by Hanu Industries/Anand Lescuyer/Tremco **or equivalent** shall be used.

## 23 Mechanical Fasteners

**Dash Fasteners** of required diameter and length manufactured by HILTI/FISCHER **or equivalent** standard shall be provided.

The Contractor shall make arrangements with the Dash Fastener suppliers – HILTI/FISCHER or other approved suppliers to carry out random pull out tests at site of work to the satisfaction and directions of Engineer-in-charge.

Entire work has to be carried out as per laid down specifications of 'HILTI India Private Limited'. Specification Book published by HILTI will have to be referred to in this respect.

## 24 Photoluminescent signs

All Photoluminescent signs shall be procured from specialized agency providing signs with following specifications but not limited to:

- 24.1 Water proof Non corrosive (Tested as per IMO Specifications)
- 24.2 Withstand temperatures from 30<sup>o</sup> C up to 65<sup>o</sup> C.
- 24.3 Non corrosive (Tested as per IMO Specifications).
- 24.4 Tested to ASTM G53-88 Standard (Accelerated UV weathering test)
- 24.5 Non reactive to Dilute Alkalis and Acids.
- 24.6 Glow time in excess of 2 mcd/m<sup>2</sup> after 60 minutes
- 24.7 UV-stable and weather-resistant for outdoor applications.
- 24.8 Ability to absorb energy from almost any light source (sunlight, fluorescent, incandescent) and then to emit light when ambient darkness occurs.
- 24.9 The light produced is yellow-green in color and is highly visible, lasting up to 10 hours.