

## VAPI GREEN ENVIRO LIMITED

Plot No.135, VIA House, GIDC Char Rasta, Vapi 396 195

Tel.: 91 260 2428950 Fax: 91 260 2429950

E Mail: dgm.purchase@vgelvapi.com

CIN: U74210GJ1997GAP031525

**NAME OF WORK: CONSTRUCTION OF COMPOUND WALL AT PROPOSED GREEN  
FIELD TSDF SITE, VAPI GREEN ENVIRO LTD PHASE: IV GIDC,  
VAPI - 396195**

### **TECHNICAL BID**

#### **VOLUME -I: PRE - QUALIFICATION BID**

#### **ONLINE TENDER PAPERS**

<b>1</b>	Estimated cost	:	
<b>2</b>	Tender fee	:	<b>To be paid directly to MSTC, as per MSTC terms.</b>
<b>3</b>	E.M.D.	:	<b>Rs. 1,50,000/-</b>
<b>4</b>	Last date on (or before) which the tender along- with DD for Tender fees & EMD (by scanning) and other required documents must upload on the web site of _____	:	<b>14-04-2025 to 30-04-2025 up to 12.30 PM</b>
<b>Note:-</b> Representation of prospective bidders on Delay / Non-submission of ONLINE Offer in time on account of technical fault or any on the part of service provider - website: _____ shall not be considered.			
<b>5</b>	Date on (or before) which DD in original for EMD and other required documents must reach in the office of the Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)	:	<b>02-05-2025 up to 12.30 PM</b>
<b>6</b>	<b>Prebid meeting (Offline / Online)</b> In the Office of Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)	:	<b>NIL</b>
<b>7</b>	Eligible class of Registered	:	<b>" B or above " class</b>

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NAME OF WORK: CONSTRUCTION OF COMPOUND WALL AT PROPOSED GREEN FIELD TSDF SITE, VAPI GREEN ENVIRO LTD PHASE: IV GIDC, VAPI – 396195

**Tender No.:** **VGEL/CSWP GIDC/Green Fild Projects/1/25-26/ET/1 (Compound wall)**

### **VOLUME -I: PRE - QUALIFICATION BID**

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### MEMORANDUM OF WORK IN BRIEF

1)	<b>Name of work:-</b> <b>CONSTRUCTION OF COMPOUND WALL AT PROPOSED GREEN FIELD TSDF SITE, VAPI GREEN ENVIRO LTD PHASE: IV GIDC, VAPI - 396195</b>
2)	<b>Estimated cost put to tender:-</b> <b>Rs. 1,50,00,000/- (Rupees one Crores Fifty lakhs only)</b>
3)	<b>Earnest Money Deposit (EMD):- Rs. 1,50,000.00 (One lakhs Fifty thousand only) 1% of the estimated cost put to tender in the form of DD</b> Payment of EMD <b>Rs. 1,50,000.00</b> in the form of Demand Draft with a validity period of not less than 03 month of Nationalized or schedule bank drawn in favour of Vapi Green Enviro Limited", payable at Vapi
4)	<b>Tender Validity Period:-</b> 120 days counted from the opening of the online Price Bid.
5)	<b>Security deposit (SD): Total 10% of the estimated cost put to tender to be paid by successful bidder in the manner set out as under:-</b> <b>I.</b> 2.5% of the estimated cost put to tender, Initial Security Deposit In the form of Cheque / DD in favour of <b>Vapi Green Enviro Limited"</b> , payable at Vapi, become payable to the contractor after Defect Liability Period <b>II.</b> 2.5% of the estimated cost put to tender, To be deducted from the R.A. bills that become payable to the contractor after Defect Liability Period. <b>III.</b> 5% of the estimated cost put to tender, Performance Bond in the form of BG from Nationalized Bank only in favour of <b>Vapi Green Enviro Limited"</b> , payable at Vapi , to be paid along with initial security deposit. This will be released after work completion certificate.

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<b>6)</b>	<p>Time for Completion: The entire scope of work shall be completed within <b>Three (03) calendar months</b> from the date of issuance of the <b>formal Work Order</b>, excluding days specifically notified as part of the official <b>monsoon season</b> by the Indian Meteorological Department (IMD).</p> <p><b>Note:</b> Any extension on account of monsoon shall be subject to prior written approval by VGEL, supported by documentary evidence and daily progress logs. No idle charges or delay-related compensation shall be entertained for monsoon-related downtime.</p>	
<b>7)</b>	<p>Liquidated Damages / Penalty for late work completion: If the contractor fails to complete the work within the stipulated time (excluding approved monsoon days), VGEL shall impose <b>liquidated damages at the rate of 0.5%</b> of the pending contract value <b>per week of delay, subject to a maximum of 5%</b> of the total project value.</p>	
<b>8)</b>	<p>Workers Welfare Cess: In compliance with the Building and Other Construction Workers Cess Act, 1996, <b>1%</b> of the total value of work executed shall be deducted from all running and final bills towards labour welfare cess.</p> <p>The contractor shall be solely responsible for compliance with all provisions of the Act and related rules.</p>	
<b>9)</b>	<p><b>Quality Assurance &amp; Testing Charges: -</b></p> <p>VGEL will deduct 1% of the Estimated Cost put to tender from each Running Account Bill against the testing charges of materials brought on site.</p> <p>The contractor shall be required to cooperate with all testing and sampling activities and shall not be entitled to dispute the deductions or claim re-testing expenses.</p>	
<b>10)</b>	<p><b>GST:-</b> Bidders are requested to submit their price bid offer considering the prevailing statutory taxation structure of Central as well as State Government as on last date of on line submission of the bid. Any variation (+) or (-) in the prevailing taxation structure as mentioned above, will be paid extra to the successful bidder /or recovered separately on production of the required document in this regard.</p>	
<b>11)</b>	<b>Schedule of E-Tendering:-</b>	
	<p>Last date on (or before) which the tender along-with DD for Tender fees &amp; EMD (by scanning) and other required documents must upload on the web site of <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a></p>	<p><b>14-04-2025 to 30-04-2025 up to 12.30 PM</b></p>

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	Date on (or before) which DD in original for EMD and other required documents must reach in the office of <b>The Chief Executive Officer,</b> <b>Vapi Green Enviro Ltd.,</b> <b>135, VIA House, Char Rasta,</b> <b>GIDC, Vapi 396 195, Gujarat (India)</b>	<b>02-05-2025</b> <b>up to 12.30 PM</b>
	Pre Bid Meeting (Off--line)/ On Line In the Office of <b>The Chief Executive Officer,</b> <b>Vapi Green Enviro Ltd.,</b> <b>135, VIA House, Char Rasta,</b> <b>GIDC, Vapi 396 195, Gujarat (India)</b>	<b>NIL</b>
<b>Note:-</b> Representation of prospective bidders on Delay / Non-submission of ONLINE Offer in time on account of technical fault or any on the part of service provider – website: <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a> shall not be considered.		
	<b>Opening of Pre-qualification Bid– Stage-1, Tender Fee &amp; EMD &amp; Stage-2, PQ Documents</b>	<b>30-04-2025 13:00 PM onwards</b>
	<b>Opening of Technical Bid of Pre-qualified bidder only – Stage-3, Data Sheet</b>	<b>30-04-2025 13:00 PM onwards</b>
	<b>Opening of Price Bid of Pre-qualified bidder only – Stage -4</b>	<b>30-04-2025 13:00 PM onwards</b>
<b>12)</b>	Tender to be opened by	<b>Chief Executive Officer,</b> <b>Vapi Green Enviro Ltd.,</b> <b>135, VIA House, Char Rasta,</b> <b>GIDC, Vapi 396 195, Gujarat (India)</b>
<b>13)</b>	<b>Contact Person:</b>	Ajay Bhatt, Dy. G. M. (Purchase).

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### **Notice Inviting Tenders** **E-TENDER NOTICE NO. 01/2025-26**

Sealed item-rate tenders are hereby invited for 'e-TENDER FOR SUPPLY AND CONSTRUCTION OF COMPOUND WALL AT CSWP Kocharva SITE for Vapi Green Enviro Limited, Plot No: 135, VIA House, GIDC, VAPI.

1. Tender Documents consisting complete specifications, schedule of quantities and set of conditions to be complied with by the Bidder, can be obtained from Website of MSTC [www.mstcecommerce.com](http://www.mstcecommerce.com) Or Vapi Green Enviro Limited website [www.vgelvapi.com](http://www.vgelvapi.com) between date 14-04-2025 to 30-04-2025 12:30 PM. VGEL shall not accept any change in any word or figure in tender document.
2. e-Tender shall be conducted on MSTC portal. Interested organizations with similar type of work experience who wish to participate in these e-tenders may visit [www.mstcecommerce.com](http://www.mstcecommerce.com) and [www.vgelvapi.com](http://www.vgelvapi.com)
3. Online Tender shall be submitted on or before 12:30 PM on 30-04-2025 being the last date for submission of tender on [www.mstcindia.co.in](http://www.mstcindia.co.in) or [www.mstcecommerce.com](http://www.mstcecommerce.com).
4. Technical bid shall be opened on 30-04-2025 at 13.00 PM at our head office address.

Submission of Technical & Financial Bid: Profile of the company including other details as listed on page – 2 (PART – A) of this document shall be placed in a sealed cover. It shall be accompanied by deposit of Earnest Money (Bid Security) of **Rs. 1,50,000 (Rs. one lakh Fifty Thousand only)** by DD or Bank Draft or Pay Order drawn in favour of "Vapi Green Enviro Limited", payable at Vapi.

Cheque or Bank Guarantee shall not be acceptable. Bids submitted with non-compliant EMD instruments shall be **summarily rejected** without recourse. Tender document (Financial Bid) (Part – B) superscripted with the name of work as given in Para (1) above shall be submitted in separate sealed cover. They should be submitted in the office of Vapi Green Enviro Limited at the address given above.

**Note:** The Earnest Money Deposit shall be **refunded** without interest in the event the bidder is not selected. However, the EMD shall be **forfeited without notice** in the following cases:

- a. The selected bidder fails to acknowledge the Work Order or sign the agreement within 7 calendar days of issuance.
- b. The selected bidder withdraws from the bid process post award.
- c. The bidder submits forged, fabricated, or misleading documentation.

**VGEL reserves the sole discretion to determine whether forfeiture conditions have been triggered and no representation shall be entertained.**

5. Any tender which does not fulfill any of the prescribed conditions outlined in this tender shall be rejected without the requirement of further clarification or justification.
6. This Tender Notice, including all instructions, terms, and conditions contained herein, shall form an **integral and enforceable part of the final contract agreement** executed with the successful

Sign and Stamp of Bidder

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bidder. Work Completion Period: The entire work shall be completed within Three (03) calendar months from the date of issuance of the Work Order, including Sundays and public holidays, but excluding the officially notified monsoon period, as declared by the Indian Meteorological Department (IMD).

Note: Extension of time on account of monsoon shall be considered only upon submission of daily progress reports, photographic evidence, and written request, and shall be subject to VGEL's sole discretion. No claims for idle charges, escalation, or consequential damages shall be entertained for monsoon-related delays.

7. The VGEL reserves the right to delete partly or fully any item not to be constructed by the Bidder if instructed by the Consultants / VGEL during the course of construction. The contractor shall have no claim whatsoever for loss of anticipated profits, mobilization costs, or overheads for any such omission or modification.

Chief Executive Officer  
Vapi Green Enviro Limited

E-tender for the following works of Vapi Green Enviro Limited (VGEL) are publically invited from the intending bidders registered in appropriate class with state Govt. of Gujarat R&BD/W.R.D/GIDC and other State Governments equivalent, by the **The Chief Executive Officer, Vapi Green Enviro Limited, 135, VIA House, Char Rasta, GIDC, Vapi 396 195, by E-tendering.**

The tenders for the below work is invited in two bid system (Technical Bid & Price bid) with PQ bid. The bids will be opened on schedule date and thereafter on evaluation thereof, the price bid of the pre-qualified bidders, will only be opened.

### GENERAL DETAILS OF WORKS:

Sr. No	Name of work	(1) Estimated cost (2) Earnest Money Deposit (3) Non-refundable Tender Fee (Inclusive of 18% G.S.T)	Class of registration
1	CONSTRUCTION OF COMPOUND WALL AT PROPOSED GREEN FIELD TSDF SITE, VAPI GREEN ENVIRO LTD PHASE: IV GIDC, VAPI - 396195	(1) Rs. 1,50,00,000.00 (2) Rs. 1,50,000.00 (3) As per MSTC	"B or above" Class

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### (A) SCHEDULE OF E-TENDERING

(i)	Downloading of Tender Documents from Web site of <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a> . (The tender document for this work is available only in electronic format which Bidder can download)	From 14-04-2025 to 30-04-2025 upto 12:30 PM
(ii)	<b>SUBMISSION OF TENDER</b> <b>(A) Online submission</b> I) Online submission of bid documents. II) Scanned copies of DD for EMD in electronic format only through online	From 14-04-2025 to 30-04-2025 upto 12:30 PM
	a) Other Documents required to be submitted by scanning in electronic format only through online <b>1) Required Class of registration</b>	From 14-04-2025 to 30-04-2025 upto 12:30 PM
	<b>(B) Submission in physical form</b> I) D.D./FDR in original (for Tender fee & EMD) Other documents mentioned in para C, Sr. No. 5 for the purpose of verification only (in physical form) by personally i.e by Speed Post / Courier / Hand delivery. <b>( Kindly refer C-1,2 &amp;3)</b>	From 01-05-2025 to 02-05-2025 upto 12:30 PM
(iii)	<b>Prebid meeting (Offline / Online)</b>	NIL
(iv)	<b>Opening of Technical Bid documents.</b>	The Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India) <b>On dtd. 30-04-2025 at 13.00 PM</b>

### (B) Online Submission of Tender

- 1) Bidders can prepare & edit their offers number of times before tender submission date & time. After tender submission date & time, bidder cannot edit their offer submitted in any case. No written or online request in this regard shall be granted.
- 2) Bidder shall submit their offer i.e. Pre-qualification document with Technical Bid & Price Bid in Electronic format on the above-mentioned website & date shown above after digitally signing the same.
- 3) **For the purpose of verification**, the original documents for Pre-qualification submitted in electronic format for **Sr. No. 02** should be submitted in physical form as under: -  
**For. Sr. No. 02** - Chief Executive Officer, Vapi Green Enviro Ltd.,135, VIA House, Char Rasta, GIDC, Vapi 396195, Gujarat (India) by Speed Post/ Currier /Hand delivery during office hours.
- 4) Offers submitted without digitally signed will not be accepted.



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5) Offers i.e. Pre-qualification document with Technical Bid & Price Bid in physical form will not be accepted in any case.

6) It is Bidder's responsibility to verify Online Corrigendum / Amendments until last submission date and time as well as before Final Submission of Bid.

7) Required documents for Pre-qualification document received later than the time specified will not be accepted in any case and the bid of that bidder shall be considered non-responsive.

### (C) Submission of Tender Fees, EMD

- Interested Bidders can view these tender documents online, but bidders who are interested in bidding these tenders can download tender documents from web site as mentioned above and bidder who wish to submit their offer shall pay non-refundable tender fee directly to MSTC as per their guideline

- EMD in the form of Account Payee Demand Draft payable at Vapi drawn on any Scheduled / Nationalized Bank in favour of Vapi Green Enviro Limited", payable at Vapi.

1) Demand Draft for E.M.D. & Tender Fee shall be submitted in Electronic Format only through Online (by scanning) while uploading the Bid. This submission shall mean that E.M.D. & Tender Fee are received. Accordingly, offer of those shall be opened whose E.M.D. & Tender Fee is received electronically as well as received in physical form. **For the purpose of realization of D.D. as stated above under para (C- 1 & C - 2). However, bidder shall send the D.D. in original along with other documents (as stated above) by Speed Post/ Courier /Hand delivery during office hours as per point No. B-3.**

2) **Required Documents mentioned as under (a), (b), (c) & (d) are mandatory for submitting scanned copies through ONLINE. Otherwise, tender offer shall be treated as NON-RESPONSIVE, without any further intimation.**

a) Scanned copy of tender fee and EMD

b) Required Class of registration, Latest Income Tax return filed, R.P.F.C registration certificate with latest challan, Pan Card & GST Registration certificate.

c) Fresh Valid Bank Solvency- (Calendar Year) -(20% value of the estimated cost put to tender)

d) Other documents if any mentioned in tender documents.

3) **For the purpose of verification, the original documents submitted in electronic format should be submitted in physical form for the works in the manner set out below by Speed Post/ Courier /Hand delivery during office hours.**

- O/o Chief Executive Officer, Vapi Green Enviro Ltd.,135, VIA House, Char Rasta, GIDC, Vapi - 396195, Gujarat (India) for work at Sr. No. 02

EMD in original and other required documents for verification received before or later than the time from **01-05-2025 to 02-05-2025 upto 12:30 PM** will not be accepted in any case and the bid of that

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bidder shall be considered non-responsive. VGEL will not be responsible for delay in receipt of such documents due to any reasons by the postal department or any other agencies.

**Any documents in supporting of tender bid shall be submitted in electronic format only through online (by Scanning etc.) and Hard copies of supporting documents shall not be accepted separately under any circumstances.**

### **(A) GENERAL:**

- (1) Intending bidders or their representative who wish to remain present at the time of tender opening may do so at the designated venue and time as notified in the tender schedule.
- (2) The tender fee paid for accessing and submitting the online tender shall be non-refundable under any circumstances, including bid withdrawal, rejection, or cancellation of tender..
- (3) EMD shall be submitted **strictly in the format specified** Demand Draft.
- (4) **Exemption certificate for Earnest Money Deposit should not be acceptable.**
- (5) Tenders without Registration Certificate, Special Category Certificate, Solvency Certificate, Tender fees, Earnest Money Deposit (EMD) and which do not fulfill all or any of the condition or submitted incomplete in any respect will be rejected.
- (6) This tender notice **and all terms and conditions contained herein shall constitute a binding part of the contract**, and shall be read in conjunction with the Agreement, Work Order, and other annexures issued to the successful bidder.
- (7) Conditional tender or bids containing modifications, assumptions, exclusions, or reservations shall be liable for rejection without recourse or negotiation.
- (8) Rules of VGEL are binding to the Tenderer. No deviation shall be permitted unless specifically approved in writing by VGEL.VGEL reserves the rights to reject any or all tenders without assigning any reason thereof.
- (9) Please stay touring above web sites for any corrigendum / addendum/ modification till last date of receipt.
- (10) If any clarification / query regarding these tenders is required, do not hesitate to contact our concern person through mobile.

Chief Executive Officer,  
Vapi Green Enviro Ltd.,  
135, VIA House, Char Rasta, GIDC,  
Vapi 396 195, Gujarat (India)  
**M.No.:\_9714000828**

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### INSTRUCTIONS FOR ONLINE TENDER TO BIDDER

#### 1. Schedule of e-tendering is as under :

Sr. No.	Particulars	Date, Time & Website/Place
1	Uploading of tender documents on website.	From <b>14-04-2025</b> on Web site of <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a>
2	Downloading of tender documents.	From <b>14-04-2025 to 30-04-2025 up to</b> 12:30 PM on Web site of <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a>
3	Online submission of bid documents.	From <b>14-04-2025 to 30-04-2025 up to</b> 12:30 PM on Web site of <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a>
4	D.D. in original (for EMD) & required documents by <b>Speed post/ Courier Service.</b>	From <b>01-05-2025 to 02-05-2025 up to</b> 12:30 PM. During office Hours at the office of Chief <b>Executive Officer,</b> <b>Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)</b>
5	Opening of Online Tender – Pre-qualification Bid.	On <b>30-04-2025 13.00 PM.</b> at the office of Chief <b>Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)</b>
6	Opening of Online Technical Bid and Price Bid	Intimate later on to pre-qualified bidder only.
7	<b>Note:-</b> Representation of prospective bidders on Delay/Non-submission of ONLINE Offer in time on account of technical fault or any on the part of service provider – website: <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a> shall not be considered.	

#### 2. Date, time, venue & mode of submission of tender documents:

Sr. No.	Particulars	Submission Date & Time	Mode Of Submission	Place/Web Site
1	(*)Submission of tender with Scanned copies of DD for <b>tender fee &amp; EMD</b> in electronic format.	From <b>14-04-2025 to 30-04-2025 up to</b> 12:30 PM	Online by e-tendering process	On Web site <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a>

Sign and Stamp of Bidder

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2	D.D. in original (for EMD) & required documents.	From <b>01-05-2025 to 02-05-2025</b> up to 12:30 PM	Hand Delivery / Speed post / Courier Service	Office of the Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)
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### 3. Tender Notice:

The tender notice can be seen from the Website: [www.mstcecommerce.com](http://www.mstcecommerce.com)

### 4. Down loading of Tender Document:

- 4.1) Tender documents for downloading will be available on Website: [www.mstcecommerce.com](http://www.mstcecommerce.com)
- 4.2) Bidders who wish to participate in this tender will have to register on web site of [www.mstcecommerce.com](http://www.mstcecommerce.com)

### 5. Digital Certificate:

- 5.1) Bidders who wish to participate in online tenders will have to procure / should have legally valid Digital Certificate (Class III) as per Information Technology Act - 2000 using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India.

**Note:-** Representation of prospective bidders on Delay / Non-submission of ONLINE Offer in time on account of technical fault or any on the part of service provider – website: [www.mstcecommerce.com](http://www.mstcecommerce.com) shall not be considered.

- 5.2) Bidders who already have a valid Digital certificate need not procure a new Digital certificate.

### 6. Online Submission of tender with DD for Tender fee & EMD (by scanning):

- 6.1) Bidders can prepare and edit their offers numbers of time before tender submission date & time. After tender submission date & time, tenderer cannot edit their submitted offer in any case. No written or online request in this regard shall be granted.
- 6.2) Tenderer shall submit their offer in electronic format on above-mentioned web site on or before submission date & time of online tender shown above after digitally signing the same.
- 6.3) Scanned copies of DD for tender fee & EMD shall be submit in electronic format through online (By scanning) while uploading the bid. This submission shall mean that tender fee & EMD are received.
- 6.4) Offers submitted without being digitally signed will not be accepted. All bids must be **digitally signed using a valid Class III Digital Certificate** issued by a licensed Certifying Authority under the provisions of the Information Technology Act, 2000.

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- 6.5) **No part** of the bid, whether technical or financial, shall be accepted in physical form.
- 6.6) The Bidders shall submit a **strictly unconditional offer**, without deviating from, modifying, or qualifying any of the terms and conditions laid out in the tender documents.
- 6.7) Offers submitted without tender fee, EMD & other required documents will not be accepted.
7. **Submission of Tender fee, EMD, (DD/FDR in original) and other required documents by Hand Delivery / Speed post / Courier Service:**
- 7.1) Earnest Money Deposit (EMD) as mentioned in the Memorandum of work in brief.
- 7.2) Other required documents as mentioned below
- (1) Registration Certificate of Approved contractor.
  - (2) Bank solvency certificate. (20% value of Estimated Cost put to Tender)
  - (3) Partnership deed / Power of Attorney with certificate of registration of Firm (In case of partnership Firm)
  - (4) Latest Income Tax Return filed & PAN Card details.
  - (5) GST Registration & R.P.F.C. registration certificate
- 7.3) The documents received before or after the time specified in the tender notice shall not be accepted in any case and the bid of that bidder shall be considered non-responsive. All documents should be submitted without any conditions.

### 8. Opening of Tender:

Opening of bid documents will be held on date & time shown above in the office of Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)

### 9. Contacting Officer:

Further details / clarification if any required will be available from Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)

- 9.1) In case bidder needs any clarification / assistance or if training required for participating in online tender, they can contract at following office.

#### MSTC

Old Padra Road, Opp. Tubewell Company, Vadodara

Tel. No. 079-69066600, 0265-2310606 / 2339672 / 2330726 / 011-23217850

E-mail – <https://www.mstcecommerce.com>

**Note:-** Representation of prospective bidders on Delay / Non-submission of ONLINE Offer in time on account of technical fault or any on the part of service provider – website: [www.mstcecommerce.com](http://www.mstcecommerce.com) shall not be considered.

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### **10. General Instructions:**

- 10.1)** Tender documents with all schedules & annexure should be digitally signed by the tenderer.
- 10.2)** Offers which are not digitally signed will not be accepted
- 10.3)** No offer in physical form except specified documents will be accepted.
- 10.4)** The tender fee will not be refunded under any circumstances.
- 10.5)** EMD in the form specified in tender document shall only be accepted.
- 10.6)** Tenders without tender fee, Earnest Money Deposit (EMD) and other required documents specified in tender documents which do not fulfill all or any of the condition or submitted incomplete in any respect will be rejected.
- 10.7)** Conditional tender shall not be accepted.
- 10.8)** The Internet site address for e-tendering is <http://www.mstcecommerce.com>.
- 10.9)** VGEL reserves the rights to reject any or all tenders without assigning any reason thereof.

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### INFORMATION & INSTRUCTIONS FOR TENDERERS

#### 1.0 Mode of Submitting Tender:

The tenders shall be submitted in electronic format only on online Web site <https://www.mstcecommerce.com> till the date & time shown in Page No. 1.

Offers in Physical form will not be accepted in any case.

**Bidders who wish to participate in online tenders will have to procure / should have legally valid Digital Certificate (Class - III) as per Information Technology Act-2000 using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India.**

#### 2.0 Competency of Tenderer:

No contract will be awarded except to responsible bidders capable of performing the class of work completed. Before the award of the contract, any bidder maybe required to show that he has the necessary facilities, experience, ability and financial resources to perform the work in satisfactory manner within the time stipulated. Tenderer may be required to furnish the tender inviting authority with the statements as to their experience and their financial status. Tenderer shall be a registered contractor in appropriate class of registered contractors in the required class & category with Gujarat state R&BD/W.R.D./GIDC.

#### 3.0 Tenderer to inform Himself:

Tenderer will be deemed to have inspected the site and to have satisfied himself as to the nature of all works, local conditions, challenges posed by the terrain and community-related or site-specific issues, all existing roads, water-ways and other means of communications and access to and from the site of the work and the building that may be required for temporary purpose in connection with the construction, completion and maintenance of the works and must make his own inquiries as to work, yard sites and depot, and dumps as to acquisition of such additional sites, rates and areas as may be necessary for temporary purpose for constructing, completing and maintaining the works and availability of water for construction activities, power, quarries and labour. No claim whatsoever shall be entertained by VGEL on the grounds of lack of awareness or misunderstanding of site conditions.



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### 4.0 Payment of Tender fee and Earnest Money Deposit:

- 4.1)** Demand Draft for E.M.D. & Tender fee shall be submitted in electronic format only through online (by scanning) while uploading the bid. The submission shall mean that E.M.D. & tender fee is received for purpose of opening the bid. Accordingly offer of those shall be opened whose E.M.D. & tender fee is received electronically. However, for the purpose of realization of D.D. bidder shall be send the D.D. in original to the O/o Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India) from \_\_\_\_\_ to \_\_\_\_\_ up to 17:00 Hrs.

Any documents in supporting of tender bid shall be submitted in electronic format only through online (by scanning etc.)

- 5.0 Payment** - The tenderer must understand clearly that the rates quoted are for completed works and include all costs due to labour, scaffolding, Plant, supervision, service work, power, royalties and other Government levies etc. and include all extras to cover the cost of night work if and when required and no claim for additional payment beyond the price rates quoted will be entertained and the tenderers will not be entitled subsequently to make any claim on the ground of misrepresentation or on the ground that he was supplied with information given by any person. Any failure on his part to obtain all necessary information for the purpose of making his tender and filling the several prices and rates therein shall not relieve him from any risks or liabilities arising out of or consequent upon the submission of the tender.

- 6.0 Tender Forms:** This form will state work to be carried out as well as the date of submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender and the amount of the security deposit be paid by the successful tenderer and percentage, if any, to be deducted from bill. It will also state whether a refund of quarry fees, royalties, Octroi dues and ground rents will be granted. Copies of the specifications, designs and drawing and estimated rates, and any other documents required in connection with work which shall be signed by the Executive Engineer for the purpose of identification shall also be open for inspection by Contractor at the office of the Executive Engineer during office hours. However, every 'blank' in the form of the e-tender and in the Schedule and Annexure must be filled up by the tenderer and must be submitted online.

### 7.0 Quoting of Rates: -

The Tenderer shall quote the **Item rate for all items listed in Price Bid in both figures and words**. Thereafter the system will work out the total amount of each items in price bid. After striking the total of all items, he may give rebate if he desires on the total amount so worked out and thereafter express in the figures, as the net amount of his offer which will be termed as "Tendered Amount".

- (a) Tenderers are **not permitted** to alter the works specified in the tender form, the completion timeline, or any contractual conditions. If the tenderer **feels compelled** to submit any conditions, they must be clearly stated **only in the Technical Bid**, and shall be considered **subject to VGEL's sole discretion**. The tenderer will have to fill in necessary details online in 'technical bid' and 'price-bid' separately. No such tender shall include more than one work but contractors who wish to tender for two or more works shall submit a separate tender for each

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work online.

- (b) If price-bid contains any conditions, modifications, or assumptions, it shall be summarily rejected without evaluation or clarification.
- (c) The Technical Bid must pertain solely to technical aspects, and any condition having financial implications must be clearly linked to an accompanying financial evaluation, with **no pricing detail included in the Technical Bid**. Cross-referencing must be used to eliminate ambiguity. **The price bid of main tender should not be disclosed in the technical bid.**
- (d) The Pre-qualification bid will be opened first online on \_\_\_\_\_ @15.00 Hours or any other suitable time thereafter by the competent tender opening authority of the VGEL. Bidders who wish may remain present. The technical bid shall be evaluated first and wanting details, if any, and clarifications in respect of conditions if any will be called from the tenderers. In such case, the contractor will be required to submit clarification / details (including with respect to conditions if any) within the stipulated time allowed for the purpose. If the contractor does not furnish the wanting details/clarification in time, his tender would be liable for rejection.
- (e) The conditions specified in technical-bid should invariably be accompanied by proper financial evaluation with mode of calculation specifying assumptions, quantities, rate and ceiling amounts for each condition and shall also accompany the information in the form stating
  - (a) Sr. No.
  - (b) Description of the condition
  - (c) Financial evaluation. (Vide R & B.D.G.R. No. /TNC / 7777 / 281-C, dated 30-9-92)
  - (d) Ceiling amount to be added in price-bid, in case condition is not accepted.
- (f) Ceiling amounts provided by the tenderer shall be considered binding and enforceable, and are liable to be added to the tendered amount at VGEL's discretion if the condition is not accepted.
- (g) The evaluation as given by the contractor as modified by tender opening authority with the ceiling limit will then be intimated to all the tenders. No further opportunity shall be given to the contractors to modify/withdraw conditions at that stage. After completion of evaluation of the technical bid in all respects the competent authority will decide about date of opening of price-bid and the same will be intimated to the bidders. After opening of price-bid and their evaluation the tender inviting authority reserves the right to negotiate about the tender (s) further with any or all the contractors.

VGEL reserves the right to negotiate rates and terms strictly within the scope of the original bid, with one or more of the shortlisted contractors, without it constituting a right for any bidder to demand renegotiation.

### 8.0 Earnest Money: -

- 8.1 Earnest money in specified form @1% of the estimated cost must be sent as specified in Instruction No. 3.1 and 4 preceding electronically Tenderer may pay earnest money in the form of Crossed Demand Draft or fixed deposit with a validity period of not less than six months of Nationalized or Scheduled bank drawn in favour of **Vapi Green Enviro Limited**,

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Payable at Vapi. Earnest money by cheque & Bank Guarantee shall not be accepted.

- 8.2 The Earnest Money submitted in the form of Deposit-At-call receipt shall need minimum validity of six months from the last date of online submission of tender. Any tender not supported by valid Tender Fee, Earnest Money, and required documents submitted electronically (by scanning) at the time of bid upload shall be considered non-responsive and summarily rejected without evaluation.
- 8.3 The Earnest Money will be returned to the unsuccessful tenderers without interest. The Earnest Money will be returned to the successful tenderer after he furnishes security deposit and duly enters into the contract.
- 8.4 Within Ten days or within such time as maybe decided by the Tender Inviting Authority from date of receipt of the Letter accepting his tender, the successful tenderer shall furnish the required security deposit and attend the office of the Tender Inviting Authority for execution of the contract documents. If he fails to furnish the security deposit or execute the contract document, his Earnest Money shall be forfeited and initiation of blacklisting proceedings against the bidder without further notice.

### **9.0 Accompaniments of Tender: (to be submitted in electronic format only through online (by scanning) as duly certified true copies)**

#### **The contractor shall have to furnish:**

- (i) Demand Draft of Tender fee and Earnest Money.
- (ii) Copy of Partnership Deed or Memorandum as well as Articles of Association in case of the company and intimate permanent addresses of his partners/ Directors of Company. All copies submitted shall be duly attested.
- (iii) Copies of certificate regarding previous experience as required.
- (iv) Declaration showing all works completed during preceding 5 years and works on hand with the Contractor and the value of works that remained to be executed in each case.
- (v) A certificate of Registration as approved contractor of prescribed category from authorities stipulated in Notice Inviting Tenders.
- (vi) PAN issued by Income-Tax Department.
- (vii) Copy of Provident Fund Registration - Code no.
- (viii) Required Annexure duly filled in when prequalification is involved.

**Required documents are to be submitted in electronic format only as part of tender document Failing which the tender will be rejected outright and will be considered as NON-RESPONSIVE.**

### **10.0 Tender liable to be Invalid:**

It may please be noted that the tender is liable to be considered invalid especially, if the requirements as per Instruction No. (i) to (ix) above are not complied with.

### **11.0 Right of rejection of tenders.**

- (i) Right is reserved by the Tender Inviting Authority to reject any or all tender(s) without assigning any reason thereof.
- (ii) In addition to the above, the tender will also be liable to be rejected outright if:
  - (a) The tenderer proposes any alteration in the work specified or in the time allowed for Sign and Stamp of Bidder

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carrying out the work or in any condition.

- (b) The tenderer or in the case of a firm, each partner or the person holding the power of attorney thereof does not digitally sign section-2 or signatures is/are not attested by a witness.

### **12.0 Method of Tendering: -**

- 12.1 If the tender is made by an individual, it shall be digitally signed by the individual above his full name and current address.
- 12.2 If the tender is made by a proprietary firm, it shall be digitally signed by the proprietor above his full name and the full name of his firm with its current address.
- 12.3 If the tender is made by a firm of partnership, it shall be digitally signed by a partner of the firm holding the power of attorney. A certified copy of the power of attorney shall be provided in physical form along with other documents. A certified copy of the partnership deed, full name and current address of the firm and full names and the current addresses of all the partners of the firm shall also be provided along with other documents.
- 12.4 If the tender is made by a limited company or a limited corporation, it shall be digitally signed by a duly authorized person holding digital certificate for the company /corporation and power of attorney for signing the tender in which case a certified copy of the power of attorney shall be provided separately in physical form along with other documents. Such limited Company or Corporation may be required to furnish satisfactory evidence of its existence before the contract is awarded.
- 12.5 All digital signatures in the tender document shall be dated.

### **13.0 Eligibility and qualification requirement.**

To establish acceptability of the offer to the satisfaction of Tender Inviting Authority the tenderer shall provide the following:

- 13.1 Details of plant and machinery immediately available with tenderer for use on the works.
- 13.2 Details of plant and machinery proposed to be procured for the works
- 13.3 Details of technical, supervisory and administrative personnel already employed by the tenderer that he proposes to utilize for this work and such other personnel he proposes to employ further for this work
- 13.4 Copies of registration certificate and PAN allotted by income Tax Office.
- 13.5 Separate notes in sufficient details on each of the following:
- (i) Method and technique of construction
  - (ii) Sequence of execution of various important components of the work;

### **14.0 Deviation or modifications In Tender Documents:**

- 14.1 All tenderers are cautioned that tender containing any condition and/or deviation from tile contractual terms and conditions, specifications, quoting / offering rates/prices in different manner than specified in the tender and/or any other requirements of tender shall make the tender liable for outright rejection and shall be considered as non responsive for all practical purposes. The decision of the Tender inviting authority in this regard shall be final and binding to the tenderer.
- 14.2 Alternative tenders are not acceptable.

### **15.0 Submission of tender**

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15.1 Tender shall be submitted in an online manner only on website [www.mstcecommerce.com](http://www.mstcecommerce.com)  
Last date & time of online submission **12:30 PM of Dt. 30-04-2025**

15.2 Tender fee, EMD and other documents should be submitted in electronic format only through on line (by scanning) while uploading the bid. However for the purpose of realization of **D.D. the bidder shall send the D.D. in original to the O/o Chief Executive Officer, Vapi Green Enviro Ltd., 135, VIA House, Char Rasta, GIDC, Vapi 396 195, Gujarat (India)**

### 16.0 Evaluation of Tenders

16.1 Technical evaluation will be made of the tenderer's proposed method and technique of construction, construction programme, sequence of components of the work, proposed resources assigned to do the work to determine the acceptability, adequacy and reasonability of rates, his past performance and present resourcefulness.

16.2 To assist in the examination, evaluation and comparison of tender, the tender inviting authority may ask tenderer individually for clarification of their tenders including breakdown of unit rates. The request for clarification and response shall be in writing but no change in substance of the tender shall be sought, offered or permitted at that stage.

16.3 Award may be made to the tenderer whose responsive tender is determined to be the lowest evaluated tender and who meets the appropriate standards of capacity and financial resources.

### 17.0 Receipt of Payments:

Receipt of payment made on account of any work, when executed by a firm shall be signed by all the partners except where the contractors are described in their tender as firm in which case the receipt shall be signed in the name of the firm by one of the partners or by some other person having authority to give effectual receipts for the firm.

### 18.0 Opening of tenders:

The Authorized Officer/competent authority shall open tender online on website [www.mstcecommerce.com](http://www.mstcecommerce.com) on **30-04-2025 at 13:00 PM** or any other suitable time thereafter, in his office in the presence of intending Tenderers or their representative who wish to remain present at that time. He will enter the amount of the tenders in a comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall thereupon for the purpose of identification, sign copies of the specifications and other documents mentioned in his tender.

### 19.0 General rules and directions:

19.1 No receipt for any payment made by a Contractor will be entertained by the VGEL in regard to any matter relating to this tender or the contract shall be valid and binding on the Employer unless it is signed by the Authorized staff members of the VGEL.

19.2 All works shall be measured net by standard measure and according to the rules. The measurements of work will be taken according to the usual method in use and no proposal to adopt alternative method will be accepted. The Chief Executive Officer's decision.

19.3 Under no circumstance shall any Contractor be entitled to claim enhanced rate for any item in

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this contract except as provided in contract conditions.

19.4 The contractor shall not be permitted to tender for the work in which his near relative is working as the officer in the sphere of his jurisdiction in the Tender inviting authority.

Note. By term "near relative" is meant wife, husband, parents, children, brothers, sisters, uncles, aunts, cousins, and in-laws.

19.5 The contractor should compulsorily furnish his latest addressees including the latest address of his partners and the place(s) of filing his/their income-tax returns along with the tender. Any changes, in such addresses, during the tenure of contract should invariably and forthwith be intimated by the Contractor to the VGEL Engineer.

### **20.0 Submission of additional information / documents:**

In addition to various specified documents and information required to 'be submitted along with tender, the bidder may be required to provide any other document/ relevant information as considered necessary by the tender inviting authority and the tenderer shall be required to provide the same as per the requirement of the tender inviting authority. Even the successful bidder may be required to provide the same as and when required by the authority during subsistence of the contract.

### **21.0 Bank:**

Wherever the word "Bank" is used in this document, it would mean Schedule or Nationalized Bank only.

### **22.0 Tender validity period:**

The tender for the work shall remain open for a period of 180 days counted from the stipulated last date of receiving of the tenders online for this work.

23.0 The successful contractor shall exhibit the board in prominent place of worksite showing the brief details of project! Work under execution, financier, cost of work and broad details of inputs specifications and targeted goals.

24.0 The contractor will not use the premises of project / work under construction for his staff, labourers or for any other purpose. If he does so, market rent for such unauthorized used will be recovered. The marker rent will be decided by the Engineer-in-charge.

25.0 All statutory taxes deductible at source under various acts and notifications by Government shall be deducted while making payment for which T.D.S. certificate shall be issued.

### **26.0 Declarations:**

The tenderer shall make all necessary declarations as prescribed in the Declaration Form annexed hereto and shall affix their authorized digital or physical signature on the form as a certification of the truth and correctness of the statements made therein.

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**DECLARATION FORM**

- (i) I/We hereby declare that I/we have personally visited the site and are fully acquainted with the all local conditions, including availability of materials, labor, accessibility, and all factors affecting the execution of the work before submitting this tender.
- (ii) I/We undertake to execute the work notwithstanding such conditions and agree that no claims shall be raised on grounds of local disruptions or site-related hindrances.
- (iii) I/We hereby declare that I/We have carefully examined the tender documents, including the General Conditions, Special Conditions, Technical Specifications, Drawings, and all related instructions and annexures, and undertake to execute the work strictly in accordance with the same.
- (iv) I/We hereby declare that my/our near relative are not working in Vapi Green Enviro Limited. In the event such a relationship is subsequently discovered, I/we agree that the contract may be terminated forthwith, and further action may be taken as deemed fit by VGEL.

Dated \_\_\_\_\_  
Place \_\_\_\_\_

\_\_\_\_\_

(Digital Signature of the Contractor with Seal)

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### GENERAL INFORMATION FOR TENDERERS

#### 1. DEFINITION

- 1.1 In this document the following words and expressions have the meaning hereby assigned to them.
- 1.2 **Bidder:** means individual, proprietary firm, firm in partnership, Limited Company, applying to become eligible to tender.
- 1.3 **Online:** Any activity that is done on website is referred as 'Online' activity for e.g., Submission of Price Bid online would mean that the Price Bid has to be submitted on website.
- 1.4 **Offline:** Any activity that is done in conventional route is referred as 'Offline' activity for e.g., Submission of Earnest Money Deposit in Offline fashion would mean the Earnest Money Deposit is to be Submitted in Form of Demand Draft and is to be physically sent to the Office of the concerned Executive Officer.
- 1.5 **E-Tender:** Tender in which you can participate online by means of log in on to the respective website is E-Tender.
- 1.6 **Digital Signature:** Any electronic documents, which contains encrypted message digest using hash algorithm and Tenders public key is known as Digitally Signed Documents and the process of generating such document is called digitally signing it.
- 1.7 **Scanned Copy:** Electronic Copy of any document generated using a Scanner is called scanned copy.
- 1.8 **System:** Means the computer which host's the website ([www.mstcecommerce.com](http://www.mstcecommerce.com)) where bidder can participate in the tendering.
- 1.9 **Upload:** The process of transferring electronic document from Bidder's computer using internet connection to the website is called uploading.

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### 2. BRIEF DESCRIPTION & SCOPE OF WORK UNDER THIS TENDER

#### **“CONSTRUCTION OF COMPOUND WALL” AT PROPOSED GREEN FIELD TSDF SITE, VAPI GREEN ENVIRO LTD PHASE: IV GIDC, VAPI – 396195**

- All other works and services ancillary or related to the full completion of the Construction Work of Compound Wall in accordance with the VGEL's requirements
- Site clearance, removal of tree stumps and dismantling of obstructions, encroachments, etc. before commencement of the works;
- True and proper setting out and line out of the works as per the instruction of Engineer-in-charge **at no extra cost**, setting of bench marks, provisions of all necessary labours, instruments, and appliances;
- Environmental protection measures as mandated by applicable norms and VGEL guidelines;
- Ensuring safe traffic movement at all times during construction.
- Any other item of work as may be required to be carried out for completing the works in all respects in accordance with the provisions of the Contract.
- Contractor shall, at their own cost, manage all local conditions, including disruptions arising from community objections, site access limitations, or any external agitation. VGEL shall provide administrative assistance only and shall not bear any cost or delay on these accounts.
- The Contractor shall co-ordinate and interfaces his works with that of all other contractors, subcontractors, utility services, statutory authorities, etc. and achieve the completion of the Works to the satisfaction of the Engineer-in-charge.
- All works specified shall include the provision of all labour, tools, equipment, material, traffic control, transport and everything else necessary for the satisfactory completion of the Work by the Contractor to the satisfaction of the Engineer-in-charge. No additional claims will be entertained post-award on the basis of misjudgement or ignorance of site realities.
- Description of the Works involved in this Contract is given in the specifications for the guidance of the Contractor. The Contractor shall be solely and fully responsible for investigating and ensuring the actual extent and nature of the Works comprised in this Contract prior to submission of his Tender.
- Construction, management and quality of the Works shall comply with the Drawings, Specifications and VGEL's requirement.
- **Water, if required during construction will be arranged by the Contractor at his own cost, no separate payment shall be made and the cost should be included**

### 3. PARTICULARS PROVISIONAL

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The particulars of the proposed works given herein as well as in the accompanying brief note are provisional and must be considered only as advance information to assist bidders.

### 4. SCOPE OF WORK

The VGEL is going to Proposed New TSDF Site in PHASE-IV of Vapi GIDC to accommodate the Hazardous waste from Industries. In connection to this new Site Development, the compound wall construction work encompasses the complete erection of a secure perimeter barrier, adhering strictly to the provided design drawings. This includes the construction of the compound wall to the specified height and aesthetic, utilizing common burnt clay bricks with a minimum crushing strength of 35 kg/cm<sup>2</sup>. Reinforcement and M-25 grade cement concrete will be employed for the RCC Beam/coping, ensuring durability and a smooth finish. Structural integrity will be further reinforced by constructing M-25 grade RCC columns at indicated intervals along the wall's length. Both sides of the wall will receive a decorative plaster finish, applied in two layers for enhanced weather resistance and visual appeal. Finally, Broken Glass Chipping will be provided and fixed on top of the wall to enhance security. Detailed material and item-wise specifications are outlined in Volume II, which should be consulted for comprehensive project requirements.

### 5. COMMUNICATION

#### **Airports**

Surat Airport is nearby the site.

#### **Railways**

The nearest Railway Stations are at Vapi, Valsad and Surat.

#### **Roads**

Surat -Vapi-Mumbai is connected by road with N.H. No. 8.

### 6. GENERAL FACILITIES

#### **Hotel / Guest House Facilities**

At Vapi Hotels are available. The Govt. Circuit houses are also available at Valsad, Private & Government Rest House / Panchayat rest house are also available at vapi which are near by the site of work.

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### **Housing**

The department has not envisaged providing for any housing colonies for bidders. The bidder, therefore, has to make his own arrangements for housing of his staff and labours.

### **Marketing Facilities**

Marketing facilities for day-to-day needs are generally available at Vapi.

### **Water Supply**

The bidder will have to make his own arrangement for water supply for work as well as for colonies or camps, which may be established by him. Wells of farmers exist in nearby area. Suitability for domestic and constructional use may have to be established in advance.

### **Medical Aids**

Government and private Hospital facilities are available at Vapi. However, the bidder will have to make his own arrangement for medical services for his labours and staff.

### **Post, Telegraph and Telephones**

Telegraph and Telephone services are available for public use at Vapi/ Valsad. Post offices are also available at the above places. Almost every village is covered by postal services.

### **Supply of Diesel, Petrol and Oil**

Petrol and Diesel pumps are installed by private agencies in the Vapi/Valsad.

## **7. CLIMATE AND WORKING SEASON**

### **Temperature**

Gujarat State has tropical climate. The daily minimum temperature ranges from 5 Degree Celsius in December - January and 27 Degree Celsius in April-May. The daily maximum temperature varies from 30 Degree Celsius in December - January to 45 degree Celsius in April-May.

### **Rainfall**

Annual rainfall in the region is 1500.3 mm. The area remains cloudy between June & September, which is the active period of the monsoon season. Generally cloud cover ranges from 3 - 6 OKTAS during the monsoon season. In the post monsoon season cloud cover mostly becomes 0 OKTAS. There is a working roof top Rainwater Harvesting Program considering significant rainfall (about 1500.3 mm per Annum) in the area of Sarigam with 2 nos. of recharge are present.

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### **Working Season**

Since rainfall is confined mainly to mid-June to end-September, it may become necessary to suspend concrete and certain site activities during monsoon.

**Note:** Any extension sought due to monsoon-related suspension shall be considered only if the work progress is otherwise satisfactory and documented daily progress reports are submitted. No escalation, idle charges, or delay-related compensation shall be admissible for monsoon-related work interruptions. It is the Contractor's responsibility to plan sequencing and resources accordingly.

### **COST OF BIDDING**

All costs and expenses incidental to preparation of the proposals, to attend discussion and conferences, if any, including pre award discussion with the successful bidder, technical and other presentation including any demonstration, etc. shall be borne entirely by the bidders and the Employer shall bear no liabilities whatsoever on such cost and expenses.

## **8. LANGUAGE OF TENDER**

Tender documents shall be submitted in prescribed form in English only. All literature or correspondence in connection with tender shall be made in English.

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### **SAFETY REGULATIONS**

#### **10.1 WORKING AND SAFETY REGULATIONS:**

The Contractor shall observe all statutory and legal requirements by central and state Governments applicable to the work as well as any local regulations applicable to the site issued by the VGEL/Consultant or other authority, and collaborate with the VGEL /Consultant in all a matter connected with safety.

#### **10.2 PARTICULAR ATTENTION IS DRAWN TO THE FOLLOWING:**

- a) In case of accident, the contractor assumes responsibility for such accident. However, the VGEL /Consultant shall be informed in writing forthwith. The Contractor shall strictly follow regulations laid down by factory inspector, Government and State authorities in this regard.
- b) Fencing all contractors' plant, platforms, excavations, etc.
- c) Compliance with all electricity regulations.
- d) Compliance with statutory requirements for inspection and test of all lifting appliances and auxiliary lifting gear.

**10.3** Staircases, doors or gangways must not be obstructed in any way that shall interfere with means of access or escape.

**10.4** No excavation shall be started without the permission of the VGEL /Consultant, who shall inform the contractor of the position of any pipes or cables known to be buried in the area. All excavations must be effectively railed off at all times or completely boarded over and property marked during the hours of darkness by red warning lamps, using flameproof warning lamps in nonsmoking areas. During the hours of darkness, heaps of debris or material which cannot be immediately removed must be heaped in such a way as to leave adequate passage way.

**10.5** The Contractor shall notify the VGEL /Consultant of this intention to bring on the site any equipment such as space heating or welding apparatus, or any container holding liquid or gaseous fuel or other substance which might create a hazard. The VGEL /Consultant shall have the right to prohibit the use of such equipment or to prescribe the conditions under which such equipment may be used.

The Contractor shall carry out his work without causing any hindrance to other work in site which may be carried out by the VGEL /Consultant or any other Contractor.

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The VGEL /Consultant shall have the right to inspect any construction plant, and to forbid its use if in his opinion, it is unsuitable or unsafe. No claim arising there from shall be made by the contractor.

The contractor or any one acting on his instruction shall not bring on to the site any radioactive substance or any apparatus using such substances or any x – ray apparatus until written permission and direction regarding the use of such equipment has been received from the VGEL /Consultant.

- 10.6** The Contractor shall meet all requirements and act on the instructions of the VGEL /Consultant where it is necessary to operate a “permit-to-work” system.
- 10.7** Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in petroleum ACT 1934, Explosives ACT 1948 and petroleum and carbide of calcium manual published by the Chief Controller of Explosives of India. All such storages shall have prior approval of the VGEL. In cash of any approvals are necessary from the Chief Controller of Explosives or any statutory authorities, the Contractor shall be responsible for obtaining the same.
- 10.8** The Contractor shall arrange and maintain adequate fire-fighting equipment and extinguishers at the work site at all times, at his own cost..
- 10.9** The Contractor shall be responsible for the provision of all safety notices and safety equipment required by both the relevant legislation and such as the Contractor may deem necessary.
- 10.10** The Contractor shall be repressible for the safe storage, handling, and security of any hazardous, flammable, or sensitive materials, whether his own or those of his subcontractors.
- 10.11** For bringing in or removing any material, equipment, or consumables from the VGEL premises, the Contractor must obtain prior approval through a Gate Pass issued by the authorized VGEL representative.

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### **ELECTRICAL SAFETY**

1. In no circumstances shall the Contractor interfere with fuses and electrical equipment belonging to the Consultant or the VGEL.
2. Before the Contractor connects any electrical appliances to any plug or socket belonging to the Consultants or the VGEL he shall:
  - a) Satisfy the VGEL /Consultant that the appliances is in good Condition;
  - b) Inform the VGEL /Consultant of the maximum current required, and the voltage and Phase of the appliance;
  - c) Obtain permission of the VGEL /Consultant detailing the sockets to the appliances may be connected.
3. The VGEL /Consultant shall not grant permission to plug in until he is satisfied that:
  - a. The appliance is in good working condition and is fitted with a certified and appropriate plug conforming to relevant safety standards;
  - b. The appliance is connected using a suitable cable, which must include two independent earth conductors, one of which shall be an earthed metallic sheath encasing the core wires.
4. No electric cable in use by the VGEL /Consultant shall be disturbed without prior permission of the VGEL /Consultant. No weight of any description shall be imposed on any such cable and no staging, ladder or similar equipment shall rest against or be attached to it.
5. No work must be carried out on any live equipment's. The equipment must be made safe by the VGEL / Consultant and a "permit-to-work" issued before any work is carried out.

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### TERM OF PAYMENT

8.1 No advance payment shall be made to the contractor for mobilization or any preparatory activities prior to commencement of actual work.

8.2 Progressive payment shall be released against Running Account (R.A.) Bills submitted by the contractor, based on actual work completed and duly certified by the VGEL.

8.3 Out of 10% security deposit, 5% Performance Bond shall be released after Total work completion and balance 5% shall be released after defect liability period. The remaining 5% Retention Amount shall be released only after successful expiry of the Defect Liability Period, which shall be defined as three (03) monsoon seasons from the date of the Completion Certificate.

VGEL shall have the right to utilize the retention amount for any corrective work, penalty, or dues recoverable from the contractor.

8.4 Necessary taxes (TDS) shall be deducted at source from the Running Bills.

### DEFECTS LIABILITY:

The contractor shall be solely and fully responsible for the defect liability hereunder during the defect's liability period pursuant to sub-clause (2) of this clause, if such defect or damage is caused by or arises from either

- a. Any defective materials, workmanship or others performed by the contractor or arranged through vendors, fair wear and tear excepted.
- b. Any act, failure to act or omission of the contractor, including his sub-contractor, made or committed during the period until the expiry of defects liability period pursuant to sub-clause (2) of this clause expires.

Even in case of disagreement as to the cause of such defect, etc., the contractor nevertheless shall promptly arrange to perform all necessary remedial works, provided that the contractor's right for making a claim thereof shall not be prejudiced.

The Contractor may, even if such damages are not attributable to the contractor, order the contractor to repair, replace or make good such damages, etc. at the VGEL/Consultant's cost and in such event, the contractor shall promptly comply therewith.

### 2.DEFECTS LIABILITY PERIOD:

Defects liability period shall mean the period in which the contractor shall remain fully liable for the repair, replacement, rectification, or making good of any and all defects, deficiencies, or damages, as referred to in Sub-Clause (1) of this clause.

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The Defects Liability Period shall commence from the date of issuance of the Completion Certificate, pursuant to Clause 6.4 "Completion" of this Contract, and shall continue until the expiry of three (001) full monsoon seasons thereafter.

During this period, the Contractor shall, at his own cost and within the time notified by VGEL, carry out all necessary remedial works to VGEL's satisfaction.

Failure to do so shall entitle VGEL to invoke the Retention Amount without further notice and to recover all associated costs, damages, or losses from any dues payable to the Contractor.

### **Force Major:**

In case of dispute, if any, the matter shall be subject to arbitration and the disputes shall be subject to Vapi / Valsad Jurisdiction.

The terms and conditions agreed upon with respect to this Contract shall be subject to Force Majeure. Force Majeure shall be deemed to be any cause beyond the reasonable control of the contractor of the Client/Consultant as the case may be, which prevents or impedes the due performance of the Contract and which by the due diligence the affected party is unable to avoid or overcome through its individual concerned effort "Force Majeure" shall include but shall not be limited to the following matters;

- a) Any war or war like hostilities,
- b) Any riots or civil commotion,
- c) Any earthquake, flood, tempest, lightning or other natural physical disaster
- d) Any accident, fire or explosion not caused by the negligence of the contractor.

e) Force Majeure shall not include any local disruption, labour unrest, protest, site access issues, or delays caused by third-party resistance or local community opposition. The Contractor shall be fully responsible for managing all such local conditions.

If, either party so prevented or inordinately delayed in the performance of any its obligations under the Contract by Force majeure and if affected party gives written notice thereof to the other party specifying the matter constituting Force Majeure with necessary evidence that a contractual obligation is thereby prevented or delayed, and the further period for which it is estimated that such prevention or delay shall continue then the affected party shall be excused the performance or delayed performance as the case may be of such obligation as from the date of such notice for so long as may be justified.

Sign and Stamp of Bidder

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Any occurrence of force majeure shall be informed in writing within 15 days of occurrence otherwise it shall not be deemed as force majeure, Continuance if Force majeure shall be informed to the Client/Consultant every week. If by virtue of the preceding paragraphs either party shall be excused the performance of punctual performance of ; and obligation for a continuous period of three 9) Months the parties shall consult together with a view to agreeing what action should in the circumstances be taken and what amendments to the terms of the Contract ought to be made.

### **SETTLEMENT OF DISPUTE:**

#### **ARBITRATION:**

All disputes arising in connection with or arising out of this contract shall be settled by both the parties in a spirit of co-operation and good faith. In the event that such disputes cannot be resolved amicably, the same shall be referred to arbitration in accordance with the provisions of the Arbitration and Conciliation Act, 1996, including any statutory modifications or re-enactments thereof in force at the time of arbitration.

The Arbitrator shall be appointed mutually by both parties. In the absence of consensus within 30 days of a written notice invoking arbitration, the matter shall be referred to an appointing authority under the said Act. The decision of the Arbitrator shall be final and binding on both parties.

The venue of arbitration shall be at Ahmedabad or as decided by Arbitrator. The Arbitrator's award shall be a speaking order in respect of the award giving detailed reasons

#### **Workmen Compensation:**

All Govt. formalities and statutory liabilities such as ESIC / PF / workman compensation Policy, Labour Licenses etc. shall be in contractor's responsibility.

Copy of Workman Compensation Policy (WC policy) to be submitted to Safety and HR Department before starting of work.

#### **Instruction and Condition for Contractor:**

Requirements of all the following general instructions have to be fulfilled by the contractors in performance of the contract and nothing extra shall be payable to the Contractor on account of the same: -

3.1 This order is for the Construction work as specified in tender and as shall be modified from time to time based on design and other considerations,

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3.2 The quantities given in the tender are approx. at this stage. The rates offered by the contractor shall be firm & final for the variation.

3.3 All required tools & Tackles, Equipment, all required Materials for completing work to be arranged and supplied by Contractor. Delay in work completion will not be acceptable for unavailability of Tools and material.

3.4 DELETED

3.5 Final bill shall be prepared by the contractor, excluding cost of materials provided by the VGEL if any.

3.6 All Govt. formalities and statutory liabilities such as ESIC / PF / workman compensation Policy, Labour Licenses etc. shall be in contractor's responsibility.

3.7 The contractor shall submit detailed work schedule.

3.8 The work shall be carried out as per standards & good engineering practices as per instruction of site in-charge.

3.9 The contractor shall be responsible for the complete co-ordination of all the works Including that of sub-contractors and nominated sub-contractors for arranging runs of all services and working to the requirements and layouts of the specialist trades, execution of the works.

3.10 The contractor shall be required, if necessary, to work overtime at site for the Instructions of site in-charge to complete all the work by the stipulated date. No additional charges for overtime shall be admissible unless expressly approved in writing.

3.11 All drawings, tracings, photo prints and writings (except letter) shall be deemed to be the exclusive intellectual property of VGEL and must be returned in good condition on completion of the works. No part shall be reproduced or disclosed without VGEL's prior written consent.

3.12 The drawings maintained on the site are to be carefully mounted on boards of appropriate size and cover with a coat of approved varnish. They are to be protected from the ravages of termites, ants, silver fish and other insects.

3.13 The whole of the work must be carried out in sections and phases as may be directed by VGEL/Consultant. Any sequencing requirement so directed shall be binding and not subject to renegotiation.

3.14 The Whole of the material (Except where otherwise described), stores and equipment require for the faithful performance of the contract must be provided through normal trade channels and must include for GST and other charges . Materials must be of the best available

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quality at the time of procurement, and the contractor shall be solely responsible for ensuring proper and efficient execution of the work using such materials. Samples of all materials to be used must be submitted to the Consultant / VGEL or their representative on-site for prior approval. Approval of samples shall not absolve the contractor from liability for quality or performance thereafter.

3.15 The contractor shall provide and do everything necessary for the proper execution of the works according to the true intent and meaning of the drawings and specification taken together, whether the same may or may not be particularly shown on the drawings or described in the Schedule of Quantities. Interpretation by VGEL shall be final and binding.

3.16 It must be clearly understood that the whole of the conditions and specification are intended to be strictly enforced, and that no extra charges in respect of extra work shall be allowed unless they are clearly outside the spirit and meaning of the conditions nor unless such works shall have been ordered in writing by the Site Authority. Verbal claims or retrospective approvals shall not be entertained.

3.17 Any instruction given verbally shall be deemed instruction for the proper execution of the works not involving extra charges. However, if any extra charges are involved, the Contractor shall inform the Consultant / VGEL in writing and seek written instruction from the Consultant / VGEL.

3.18 The contractor shall conform to the provisions of any regulation and bye - laws of any water or lighting companies with whose system the structures are proposed to be connected, and shall before making any variations from the drawings that may be necessitated by so conforming give the Consultant / VGEL or his representative on the site written notice specifying the variations proposed to be made and the reason for making it and apply for instruction thereon. In case the contractor shall not in due course receive instruction, he shall proceed with the work, conforming to the provision regulation or Bye-Laws to the supply companies and shall provide for and pay all fees and charges.

3.19 The rates quoted by the Contractors include for providing all Material, Man power Machineries, scaffolding, hoists, tackle and other plants, shuttering profiles and apparatus etc. generally required for the proper execution of the work. The contractor shall provide without extra charge all labor and things required by the Consultant / VGEL for measuring the works and weighing, measuring, providing or testing the efficiency of any portion of the works and shall also at his own cost provide al planking, gangways, etc., necessary for affording access to every part of the works.

3.20 The contractor shall on the written request of the Consultant / VGEL or his Representative on the site immediately dismiss from the work any person employed by him thereon who may in the opinion of the Consultant / VGEL be incompetent or misconduct himself

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and such person shall not again be employed on the works without the written permission of the VGEL.

3.21 The contractor from the time of being placed in possession of the site, must make full provision for watching, guarding, lighting, and protecting the work, the site, and the surrounding property by day and night, including on Sundays and public holidays, at his own cost. Any damage arising from failure to do so shall be made good immediately without cost to VGEL.

3.22 Provide all artificial light required for the works and to enable the contractors and sub-contractors to complete the works in the specified time including that for the workman of any sub-contractor or special tradesman which must be provided by the contractor at on his own cost.

3.23 Include for providing a suitable temporary hut for the watchmen and clear when no longer required and provided all necessary attendance, light etc., required.

3.24 The contractor shall arrange and supply all water required for the execution of the works, including for subcontractors and special trades. Water used shall be clean, fresh, and suitable for construction. The contractor shall execute all necessary temporary plumbing arrangements and shall pay all associated fees and charges.

3.26 The contractor shall provide, fit up and maintain in at approved position proper offices shall be open at all reasonable hours to receive instructions, notices or communications and clear away at completion and make good all works disturbed.

3.27 The contractor shall provide adequate latrine accommodation and keep the same in a clean and sanitary condition to the satisfaction of the Public Health Authorities and shall cause such latrines and soil make good all works disturbed by these conveniences.

3.28 The contractor shall pay wages and observe working hours and employment conditions as per the laws and regulations in force from time to time. VGEL shall not be liable for any breach of labour laws by the contractor.

3.29 Should the work be suspended by reason of rain, strike, lockouts, or other cause the contractor shall take all precautions necessary for the protection of the work and at his own expenses shall make good any damages arising from any of these causes.

3.30 The Terms "Approved", "Directed" or "Selected" mean the approval, direction or selection of the Consultant / VGEL and wherever the word "Allow" occurs the cost of item or items is at the risk of the contractor.

3.31 The whole of the fences, paths, trees, shrubs, green and other surfaces about the buildings or approaches thereto, which are required to be maintained are to be kept free from damage due to the operations in connection with the works.

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3.32 The contractor shall provide such temporary road on the site as may be necessary and for his own convenience but not otherwise. Upon completion such roads shall be broken up and leveled where so required by the drawings unless the Consultant / VGEL shall otherwise direct.

3.33 All object of value or antiquity found on the site shall remain the property of the Owner and such findings shall be immediately reported to the Consultant / VGEL.

3.34 All savings, cutting and other rubbish as it accumulates from time to time during the progress of the works and at completion, including that of sub-contractors and special tradesmen to be cleared and carted away and all material condemned by the Consultant / VGEL representative to remove.

3.35 The rates quoted by the contractor cover for necessary transport of material from place of availability to the site of works.

3.36 Total station, level machine, prismatic compass, chain, steel and metallic tapes and all other surveying instrument found necessary on the works shall be provided by the contractors for the due performance of their contract as instructed by the Site Authority.

3.37 The contractors or their representatives shall accompany the Consultant / VGEL or his representative or the Engineer-in-Charge when required to do so, and assist in taking the measurements recorded on the spot.

3.38 The contractors shall provide suitable stone with flat tops and build the same in concrete for temporary bench marks. All the pegs for setting out the work and fixing the necessary levels required for the execution thereof shall if desired by the Consultant / VGEL, likewise be built in masonry at such places and in such manner as the Consultant / VGEL may determine.

3.39 The charges for testing of any materials shall be borne by the contractor from time to time including transport and handling charges.

3.40 Contractor should carefully study lift of materials, as he shall have to carry out the work at any and all levels at the quoted rates and lift shall not form the criterion for any extra amount on that cause, unless specifically stated otherwise in the wording of items specified in the Bill of Quantities.

3.41 The charges for testing of any materials / Soil etc shall be borne by the VGEL. 1% amount of total contract price or at actual testing charge + Expenses whichever is higher shall be deducted for this testing purpose. Bidder shall have to carry out site investigation and required tests to get preliminary data for construction work, with own cost. Bidder shall Study, the existing condition of site. Bidder shall provide technical personal for testing, handing and transportation for samples to laboratory.

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3.42 GST will be Extra on Quoted Rate. Not Required to Add in Basic Amount. **The contractor must ensure regular compliance with GST regulations. Payment of the GST component will be released only after the contractor has filed GSTR-1 and GSTR-3B for the respective period.**

Important Note:

Defects Liability Period : 3 Monsoon Season from Work completion date

Period of Final Measurement & Valuation: 1 Month.

Date of Commencement : Within 7 days from the date of work order

Work Completion Period: 3 Month. (Inclusive of Sundays and public holidays) excludes monsoon season

Agreed Liquidated damages : 0.5% amount per week subject to maximum 5% amount of the delayed work.

Retention Money percentage : Total 10 %. (5% amount of Performance Bond shall be return after work completion certificate and balance 5% amount shall be return after Defects Liability Period)

Testing and Analysis of Material:

It is required to make joint inspection of material by Contractor, Consultant, and VGEL at 3rd party Analysis laboratory as per VGEL decision. Contractor have to co-operate for Sample Preparation, Joint Inspection in presence of Consultant and VGEL Representative. It is joint responsibility of all participants for use of best material during Project work.

Guaranty of Work: Contractor have to provide Guarantee of work till Defect Liability period of 3 Monsoon from work completion date. 5% Retention money to be returned after Defect Liability period.

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### QUALIFICATION CRITERIA FOR PRE-QUALIFICATION APPLICATION PRE -QUALIFICATION CRITERIA

#### **(1.1) Eligible class of Registered: B Class Registration and above.**

Only those bidders shall bid whose names are borne on the approved list of registered contractors in the “\_B or above\_” class with Gujarat State R & B Department / W.R.D. / SSNNL / GIDC / GMB OR any other department / Board / Corporation of Government of Gujarat.

(1.1.1) Contractor should have Registered office in Gujarat.

The pre-qualification application received under this bid shall be assessed and evaluated based on the qualification criteria and evaluation procedure prescribed hereunder.

#### **1. Prequalification criteria for the Construction works**

##### **(1.1) Eligibility: -**

- i. Bidder should have valid registration with “\_B or above\_” class. (As per Para 2.1.1.2)

##### **(1.1.1) Bidder's registration: -**

- (1.1.1.1) Only those bidders shall bid whose names are borne on the approval list of registered contractors in the required class & category with Gujarat state R&BD/W.R.D./GIDC.
- (1.1.1.2) If the Contractor's registration in the required class & category with Gujarat state R&BD/W.R.D./ GIDC is expired on or before the last date of online bidding period of the tender, the bidder must submit through online in electronic form the application for renewal of the same with the concerned department along with receipt of fees paid for it. In such cases, the bidder at his own responsibility must produce valid renewed registration certificate in the required class & category with Gujarat state R&BD/W.R.D./GIDC before the date of opening of technical bid. Failing to which the bidder shall be disqualified for opening of his price bid. Bidder will solely be responsible for obtaining the required registration.
- (1.1.1.3) In context to above Para (2.1.1.2), it is clarified that the bidder who is having registration in class & category below than the minimum required class & category and the bidder have applied for up-gradation in required class and category with Gujarat state R&BD/W.R.D./ GIDC shall not be considered valid. In such cases the bidder shall not be considered eligible for bidding.
- (1.1.1.4) The bidder, who is registered in appropriate category of C.P.W.D., M.E.S., Railways and Indian state government, can also bid provided the bidder produce such registration certificate at the time of bidding and obtain registration in required class & category from the Gujarat state R&BD / W.R.D. / GIDC before issuing work order. Bidder will solely be responsible for obtaining the required registration.

## VAPI GREEN ENVIRO LIMITED

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CIN: U74210GJ1997GAP031525

### (1.2) Annual Turn Over:

(1.2.1) Average **Updated** Annual Financial Turnover during the last **five years**, i.e. **01/04/2020 to 31/03/2025** financial year shall be at least **50 % of the estimated cost, i.e.Rs.1,50,00,000/- (1.5 Crores).**

(1.2.2) For arriving at update value, total amount of Turn Over of any one financial year shall be multiplied by the enhancement factor corresponding to that financial year. Following enhancement factor will be applied to total amount of Turn Over in any one financial year and to bring them to the base year.

Year	Financial year	Enhancement factor
<b>Base (year of inviting tender)</b>	<b>2024 to 2025</b>	1.0
<b>-1</b>	<b>2023 to 2024</b>	1.1
<b>-2</b>	<b>2022 to 2023</b>	1.21
<b>-3</b>	<b>2021 to 2022</b>	1.33
<b>-4</b>	<b>2020 to 2021</b>	1.46

### (1.3) Successful experience:

(1.3.1) Bidder must have experience of successfully completed similar works during last five years ending last day of month previous to one in which applications are invited be either of the following.

#### I. Financial Criteria

1. The bidder must have completed at least **single work during last 5 years** of **Compound Wall Construction** having updated completion cost not less than **Rs. 120 Lakhs (80 % of estimated cost).**

**OR**

2. The bidder must have completed at least **two different work during last 5 years** of **Compound Wall Construction** having updated completion cost not less than **Rs. 75 Lakhs (50 % of estimated cost).**



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**Note:- Experience of Sub contractor, Back-to-Back work, Joint Venture will not be considered for Pre-qualification Criteria.**

### SCHEDULE-E

#### “EXPERIENCE ALL PROJECTS IN PROGRESS”

Give information about all projects which are in progress including the company has received a letter of intent / acceptance but a formal contract has not yet been awarded.

Employer	Engineer responsible for supervision	Location & description of works	Value of contract	Cost of work executed as on date of this bid	Remaining work to be executed as on date of this bid	Percentage of practical completion	Date of work order	Stipulated date of completion of work	Likely date of completion	Reasons for slow progress, if any.
1	2	3	4	5	6	7	8	9	10	11
Total										

**Note:** - Non-disclosure of any information in the schedule will result in disqualification of the bidder.

**(Signature of bidder)**

#### **1.5. Litigation history:**

(1.5.1) The applicant should provide true, complete, and accurate information regarding any litigation and/or arbitration arising from contracts completed or under execution by the applicant over the last five (5) financial years. A consistent history of adverse arbitration awards or court judgments against the applicant or any partner of a joint venture may result in disqualification from the proposed work at the sole discretion of VGEL. If it is later discovered that litigation history was concealed, misstated, or omitted, the bidder shall be disqualified immediately, and VGEL reserves the right to take any appropriate legal or contractual action, including blacklisting the bidder from future tenders.

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- (1.5.2) Information of litigation history in following statement to be submitted, if any other wise Nil / Not Applicable statement to be submitted. Failure to submit this information shall render the bid non-responsive.

### LITIGATION HISTORY

Sr.No.	Name of Contract	Work Completed or Under Execution	Financial Year	Brief Detail of the arbitration / Litigation Matter	Department in Opposition	Whether awards / Judgements is pending or made?	Details of result of Arbitration / Judgement	Whether Judgement in Favour or in Against

(Signature of bidder)

- (1.6) Affidavit regarding Termination / Blacklisting / Ban / Registration kept in Abeyance. :-**

- (1.6.1) The bidders shall be disqualified for opening of his price bid if he is under blacklist and / or under ban and /or his registration is under abeyance by any Central / State Government Department, Board, Corporation, Municipal Corporation, Municipality, Government Local Bodies, University etc.
- (1.6.2) The bidder shall have to submit prescribed notarized affidavit on appropriate stamp paper as under, failing to which the bidder shall be disqualified for opening of his price bid.

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**Affidavit regarding Termination / Blacklisting / Ban / Registration kept in Abeyance.**  
(To be submitted on Rs.300/- stamp paper & duly notarized.)

**Name of work :-**

**Tender ID :-**

I, \_\_\_\_\_, Age, \_\_\_\_\_, Resident of, \_\_\_\_\_ in the capacity of \_\_\_\_\_ Do hereby solemnly affirm and declare as under.

We are not under blacklist and / or under ban and /or our registration has not been kept under abeyance by any Central / State Government Department, Board, Corporation, Municipal Corporation, Municipality, Government Local Bodies, University etc. as on date of participating for this bid.

Date :-

Authorised signatory

Place :-

**(1.7) Machinery / Equipment: -**

Bidder shall have to submit a prescribed notarized undertaking on Rs.300/- stamp paper for deploying machinery/equipment for the work under tender as per below.

**Undertaking for deploying Machineries/Equipment/Tools & Plants**

(To be submitted on Rs.300/- stamp paper & duly notarized.)

To,

**(Authority Holding the digital key)**

Name of work: -

Tender ID: -

**APPENDIX -B**

List of minimum Machineries/Equipment/Tools &Plants to be deployed on contract work.

Sr. No	Type of Equipment	Minimum No. of equipment required
1		
2		
3		
	<b>Total Nos.</b>	

Sign and Stamp of Bidder

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I/We hereby undertake that if I/we awarded the above said work then i/we shall deploy all Machineries/Equipments/Tools & Plants etc. as shown in the Appendix-B in fully working condition and utilize the same while execution of the work.

We also undertake that i/we shall deploy other Machineries/Equipments/Tools & Plants etc. over & above shown in Appendix-B in working condition and utilize the same as per instruction of Engineer-In-Charge.

Failing to above we shall not object any action taken against us within the tender provision.

In case of any dispute, Superintendent Engineer's decision shall be final.

**Date :-**

**Authorised signatory**

**Place :-**

### **(1.8) Technical Staff:**

Bidder has to deploy minimum following persons of minimum qualification require for smooth execution of Capital work:

1) B.E (Civil) – 1 Nos.

Min. Experience of 3 years out of which 3 years for Site Supervision and Documentation works.

Or

2) D.C.E –1 Nos. Min. Experience of 5 years for Site Supervision of work.

- Bio- Data & C.V of above staff is to be furnished.
- Before work order the firm should appoint required staffs as mentioned clearly.

### **(1.9) Bidding in E-tendering: -**

(1.9.1) Submission of documents must be through e-tendering i.e. electronic form, unless specified in Para (1.10).

(1.9.2) All of the online submitted documents must be clearly readable, failing to which the same shall be considered as void.

(1.9.3) Bids of those bidders who have submitted all information, statistical details as required in the bid documents through E-Tendering will only be considered. If the employer desires any clarification, for verification/clarification, ambiguity of

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difference found in the documents/statistical details submitted online (by e-tendering) by the bidder the same shall be furnished within stipulated time otherwise further processing will be carried out in absence of above and the bidders shall be liable for any consequence.

(1.9.4) No bidder can participate in more than one bid for proposed work.

### **(1.10) Submission of Documents: -**

- (1.10.1) Following documents/papers shall form part of the bid & must be submitted through online in electronic form unless specified separately, failing to which the bidder shall be dis-qualified for opening of his price bid.
- (1.10.1.1) D.D. of require tender fee. (To be submitted in electronic form at the time of online submission of the bid & the same to be submitted in original during prescribed time period for submission of documents in physical form.)
- (1.10.1.2) DD/FDR & BG of required EMD. (To be submitted in electronic form at the time of online submission of the bid & the same to be submitted in original during prescribed time period for submission of documents in physical form.)
- (1.10.1.3) Copy of valid bank solvency certificate of minimum 20 % amount of the estimated cost put to the tender of the work. (Bank Solvency certificate issued during current calendar year is considered as valid up to end of the December of the current calendar year. 31<sup>st</sup> march of the next calendar year. In case, where solvency certificate is not obtained in time, the certificate of previous year will be considered valid up to the end of March of current calendar year. In some certificates date of validity is stated. In such cases the same stated date is considered for validation instead of end of December of the current calendar year.)
- (1.10.1.4) Copy of relevant required Registration Certificate / Certificates. (In case of renewal, copy of application & receipt of fee paid.)
- (1.10.1.5) Copy of annual turnover certificate issued by chartered accountant for last three financial years. (If turnover of any of the last three financial years is not shown in the certificate, then the same shall be considered as NIL and accordingly average annual turnover of last three financial years/years shall be calculated.)
- (1.10.1.6) Copy of form-3A / Experience certificate issued by employer (Government / Semi Government) showing all details as required as per Pre-Qualification criteria of successful experience of similar work and copy of letter of permission given by employer (Government / Semi Government) for subletting the work, if case may be of.

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- (1.10.1.7) Schedule-E "Experience all projects in progress" as under in prescribed format as Per Para (2.4).
- (1.10.1.8) **Litigation history as per Para (2.5).**
- (1.10.1.9) Affidavit regarding Termination / Blacklisting / Ban / Registration kept in Abeyance as per Para (2.6).
- (1.10.1.10) The undertaking for deploying machinery/equipment for the work under tender as per Para (2.7).
- (1.10.2) Following documents/papers shall also form part of the bid, but these documents are not mandatory to be submitted through online in electronic form. However, the same shall be submitted in physical form, if not submitted through online in electronic form, within time period given by authority holding the digital key, failing to which the bidder shall be dis-qualified for opening of his price bid.
- (1.10.2.1) Copy of registration certificate of firm / documents of public limited / private limited/partnership firm/proprietor firm, whichever is applicable. For example, Partnership Deed, Certificate of incorporation, Memorandum of association, Article of Association etc.
- (1.10.2.2) Copy of Power of Attorney, if any.
- (1.10.2.3) Copy of PAN Card.
- (1.10.2.4) Copy of latest income tax return certificate.  
(Note:- Latest income tax return certificate means the income tax return certificate of the last completed financial year for which pre-determined/extended time period by the Income Tax Department for filing income tax return is over on or before last date of online submission.
- (1.10.2.5) Copy of Goods & Services (G.S.T.) registration certificate.
- (1.10.2.6) Copy of RPFC registration certificate.
- (1.10.2.7) Copy of Workman Compensation Policy (WC policy)

**APPENDIX – C**  
**SELF EVALUATION SHEET**

Sr. No.	Reference	Particular / Provision	Mode of Submission	M/s.	Page No.	Remarks	
				..... DETAILS FURNISHED BY BIDDER			
1	Tender Notice	Tender Fees Rs. _____ .00+ 18 % GST = _____ .00	DD / FDR				
			Name of Bank				
			D.D. No. and Date				
			Amount in Rs.				
			Valid upto				
2	Memorandum Para No.03	EMD Rs. Rs. _____	<b>DD / FDR</b>				
			Name of Bank				
			D.D. No. and Date				
			Amount in Rs.				
			Valid upto				
		<b>OR</b>					
		Name of Bank					
		No. and Date					
		Amount in Rs.					
		Valid upto					

Sr. No.	Reference	Particular / Provision	Mode of Submission	M/s.	Page No.	Remarks
				..... DETAILS FURNISHED BY BIDDER		
4	Tender Notice and PQ (Eligibility)	Registration certificate & special category ("___"Class )	Name of Department			
			Authority			
			Date of issue			
			Valid upto			
	In case of Partnership Firm	Partnership deed / Power of attorney with certificate of registration of Firm.	Partnership deed			
5	Tender Notice	Valid Fresh (current calendar year) Bank Solvency Certificate (20% amount of Estimated Cost i.e. _____/-)	Name of Bank			
			Amount in Rs.			
			Date of issue			
			Valid up to Date.			
6	Tender Notice	Latest Income tax return filed and PAN Card Details	Year of Income tax Return filed (Assessment Year)			
			PAN Card No.			
			Name			
7	Tender Notice	GST & RPFC Registration certificate	(A) GST No.			
			(A)RPFC Registration Certificate no.			
			Name			



			(B)RPFC Challan of any of the completed last three months from the month of last of submission of the tender.			
			Name			
8	PQ	Pre-Qualification Application in Electronic Form	Application No. and Date			
9	PQ Criteria - Eligibility	<p>Only those bidders shall bid whose names are borne on the approved list of registered contractors in the "____" class with Gujarat State R &amp; B Department / W.R.D. / SSNNL / GIDC / GMB OR any other department / Board / Corporation of Government of Gujarat.</p> <p style="text-align: center;"><b>OR</b></p> <p>The contractors who are registered in appropriate category of Equivalent class mentioned above in C.P.W.D., M.E.S. Railways and Any State Government of India, can also bid, provided the bidder produce such valid registration certificate at the time of bidding and obtain registration in "_B_" class from any department/corporation/board of Government of Gujarat before issue of work order if his tender is approved. Bidder will solely be responsible for obtaining the required registration. On account of any delay in bidder's registration, VGEL will not be responsible for late issue of work order on</p>				

Sign and Stamp of Bidder

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		this account. Issuance of Work Order shall be strictly subject to the production of valid registration in “B” class, and any delay arising from non-compliance shall be entirely at the bidder’s risk.						
		Name of Department						
		Authority						
		Date of issue						
		Valid upto						
<b>10</b>	PQ Criteria - Annual Turnover	Average <b>Updated</b> Annual Financial Turnover during the last <b>five years</b> , i.e. <b>01/04/2020 to 31/03/2025</b> financial year shall be at least <b>30 %</b> of the estimated cost, i.e. _____ <b>lakh.</b>		Year	Turn Over	Enhancement Factor	Updated Value of Turn Over ( Lakhs)	C.A. Certified and Notarized Copy must be submitted.
				2024-25 Year of Inviting Tender		1.0		
				2023-2024		1.1		
				2022-2023		1.21		
				2021-2022		1.33		
				2020-2021				
<b>Sr. No.</b>	<b>Reference</b>	<b>Particular / Provision</b>	<b>Mode of Submission</b>	<b>M/s. .... DETAILS FURNISHED BY BIDDER</b>		<b>Page No.</b>	<b>Remarks</b>	

<b>11</b>	Successful Experience - Financial Criteria	I. The bidder must have completed at least <b>single work</b> of Compound Wall Construction having updated completion cost not less than <b>Rs. _____ Lakhs (80 % of estimated cost).</b>			
		<b>Name of Work</b>			
		Name of Department and Authority			
		Date of Completion			
		Completion Cost			
		Updated Completion Cost			
		<b>OR</b>			
		II. The bidder must have completed at least <b>two different work</b> of Compound Wall Construction having updated completion cost not less than <b>Rs. _____ Lakhs (50 % of estimated cost).</b>			
		<b>1. Name of Work</b>			
		Name of Department and Authority			
		Date of Completion			
		Completion Cost			
		Updated Completion Cost			
		<b>2. Name of Work</b>			
		Name of Department and Authority			
		Date of Completion			
Completion Cost					
Updated Completion Cost					

Sr. No.	Reference	Particular / Provision	Mode of Submission	M/s. .... DETAILS FURNISHED BY BIDDER	Page No.	Remarks
13	“Experience of all projects in progress” – Schedule -E	<b>As per Para 2.4 (Schedule -E)</b>				
14	<b>Technical Staff</b> <b>Technical Staff</b>	Bidder has to deploy minimum following persons of minimum qualification require for smooth execution of work				
		B.E (Civil) – 1 Nos. Min. Experience of 5 years out of which 3 years for Site Supervision and Documentation works				
		D.C.E –1 Nos. Min. Experience of 3 years for Site Supervision of work.				
15	Other Remarks	Declaration Form – H				
16	Litigation History	<b>As per Para 2.5</b>				
17	Affidavit regarding Termination / Blacklisting /Ban/ Registration kept in Abeyance.	<b>As per Para 2.6</b>				Details shall be given on Rs. 300/- stamp paper duly notarized

<b>Sr. No.</b>	<b>Reference</b>	<b>Particular / Provision</b>	<b>Mode of Submission</b>	<b>M/s. .... DETAILS FURNISHED BY BIDDER</b>	<b>Page No.</b>	<b>Remarks</b>
<b>18</b>	Machinery/Equipment: Proof of assured availability of required minimum Machinery / Equipment mentioned in Appendix-B	<b>As per Para 2.7</b>				Details shall be given on Rs. 300/- stamp paper duly notarized
<b>19</b>	Undertaking / Declaration	Truth fullness certificate				
<b>20</b>	Other Remarks					
<b>21</b>	Whether Qualified or not?					

**Signature of Bidder**

**Annexure - I**  
**Declaration regarding works on hand with bidder**

Sr. No.	Name of work	Place	Tendered amount Rs. in Crores	Date of issue of work order	Stipulated period of completion	Amount of work done up to the month previous to the month in which tender are invited Rs. in Lacs	Cost of remaining works	Brief detail of delay if any	Remarks
1.	2(a).	2(b).	3.	4.	5.	6.	7.	8.	9.

**Date :**

**SIGNATURE OF THE BIDDER**

**Note 1 :** Amount of work done in column 6 should be given up to the month previous to the months in which tenders are invited. In column No. 7 likely cost of remaining work shall be furnished.

**Note 2 :** Necessary certificates from the officer concerned shall be attached with the tender.

**Annexure -II**

**Additional Information and Litigation History**

Name of Bidder:

1. **Please describe:** Company's history of litigation or arbitration from contract executed in the last five years or currently under execution. Please indicate for each case the year, name of employer, cause of litigation, matter in dispute, disputed amount, and whether the award was for or against the company.
2. Please add any further information that you consider to be relevant to the evaluation of your application for qualification. If you wish to attach other documents, please list below:

**SIGNATURE OF THE BIDDER**

**FORM - A**

**DETAILS OF STRUCTURE OF ORGANIZATION**

1.	Name of bidder	
2.	Nationality of bidder.	
3.	Office Address Telegraphic Address Telephone Number Telex / Fax Number	
4.	Year of Establishment	
5.	Location of Establishment	
6.	Bid is submitted as a) An individual b) A proprietary firm c) A firm in partnership d) A limited Company or Corporation	
7.	Attach the Organization chart showing the structure of the organization including the names of the Directors and Position of officers.	
8.	Number of year of experience <b>a)</b> as a prime bidder (Bidder shouldering major responsibility) i) in own country ii) in other countries <b>(Specify country)</b> <b>b)</b> in a joint venture i) in own country ii) in other countries <b>(Specify country)</b>	
9.	For how many years has your organization been in business of similar work under its present name? What were your fields when your organization was established? Whether any new fields have been added in your organization? and if so, when?	
10	Whether you ever required suspend construction for a period of more than six months continuously after the work is started? if so, give the name of project and reasons thereof.	
11	Have you ever left the work awarded to you incomplete? (If so, give name of project and reasons for not completing work)	
12	In how many of your projects were penalties imposed for delays? (Please give details)	
13	Give details of experience in large scale Liquid waste management projects for Industrial and domestic.	

**SIGNATURE OF BIDDER**



**Form: B**

**DETAILS OF MACHINERY EQUIPMENTS AND WORK PLAN**

Bidder should give the machineries, equipments and other resources available with them along with proposed approach and work plan for implementation of the project in Form C.

<b>Sr. No.</b>	<b>Equipment type &amp; characteristic</b>	<b>Minimum number required</b>	<b>Available or Not-Available</b>
1	Back-hoe Loader (JCB Type)	2	
2	Hydraulic trucks	2	
3	Hydraulic Tractor with Tailor	2	
4	Water Tanker	1	
5	Niddle vibrator	2	
6	Automatic level instrument	1	
7	Steel formwork	Req. qty.	
8	Concrete Mixture	1	
9	Chap Saw Cutter	1	
10	Wooden Cutter	1	

**SIGNATURE OF BIDDER**

## Form - C

### DETAILS OF EXPERIENCE OF COMPLETED WORKS

Give details of the similar type of work completed during **Seven (07) years** in the following Performa separate Performa for each work.

1)	Name of Work	
2)	Agreement No. & Date	
3)	Country and location	
4)	Client's name and address	
5)	Total tendered cost of work (Rs. in Lacs)	
6)	Cost of completed work	
7)	Brief description of works including principal features and quantity of main items.	
8)	Annual achievement (duly supported by certificate <b>from Engineer - In - Charge</b> ) a) Of key quantities, total physical output of last seven years. (separately for each item) (For Pipeline, Electrical-Mechanical work for pumping, Switch Yard etc. for lift irrigation/Water supply project.) b) Financial Output in Rupees (Cost of Work) (Including cost of materials supplied by the Department)	
9)	Period of completion (a) Originally stipulated time limit. (b) Date of starting (c) Extended time limit if any, Actual time taken to complete the work Reasons for non completion of work in stipulated time limit/extended time limit if so.	
10)	Name of bidder's Engineer - in -charge of the work and his educational qualification	
11)	Were there any penalties/ fines / stop notice /compensation/liquidated damage imposed ? (Yes or No if yes, give case wise details)	
12)	Give the details of annual financial performance and your experience in execution in mobilizing water supply project with modern technology in Statement No. S1 & S2.	
13)	Details of litigation / arbitration cases, if any pertaining to work completed.	
14)	Attach Client's certificate in Form-G (Not below the rank of Executive Engineer or equivalent)	Attached (give information).

**SIGNATURE OF BIDDER**

## FORM -D

Signature of Contractor

Vapi Green Enviro Limited

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## General Information

The applicants are requested to provide the information in this schedule.

<b>1.</b>	<b>Name of firm</b>	
<b>2.</b>	<b>Head office Address</b>	
<b>3.</b>	<b>Telephones</b>	<b>Mobile number of the Contact Persons</b>
<b>4.</b>	<b>Fax</b>	<b>Email</b>
<b>5.</b>	<b>Place of incorporation / registration</b>	<b>Year of incorporation/ Registration</b>

FORM -E

**EXPERIENCE ALL PROJECT IN PROGRESS**

Given information about all project which are in progress including the company has received a letter of intent / acceptance but a formal contract has not yet been awarded.

Employer	Engineer responsible for supervision	Location & description of works	Value of contract	Cost of work executed as on date of this bid	Remaining work to be executed as on date of this bid	Percentage of practical completion	Date of work order	Stipulated date of completion of work	Likely date of completion	Reason for slow progress if any
1	2	3	4	5	6	7	8	9	10	11

Note:

Non-disclosure of any information in the schedule will result in disqualification of the bidder.

**(Signature of Bidder)**

**FORM -H**

**DECLARATION FORM**

Name of the Bidder: \_\_\_\_\_

- (i) I/We hereby declare that I/We have read the tender documents published on the website [www.mstcecommerce.com](http://www.mstcecommerce.com), including all terms, conditions, and corrigenda issued up to the final date of submission.
  
- (ii) I/We hereby declare that I/We have carefully studied the conditions of pre bid tender, including all instructions, eligibility requirements, and annexures, and agree to execute the same in full compliance with all provisions of the tender and the applicable laws and standards
  
- (iii) I/We hereby declare that my /our near relatives are not working in this division or its sub divisions as an Engineer of any category, Divisional Accountant, Store keeper, in VGEL as on today.
  
- (iv) I/We \_\_\_\_\_ declare that I/We have read the tender documents published on the website [www.mstcecommerce.com](http://www.mstcecommerce.com) accordingly submitted our Technical Bid for the work of \_\_\_\_\_ .
  
- (v) I/We confirm that all information provided is true and complete, and any misrepresentation or concealment shall render the bid liable for rejection and invite appropriate action by VGEL.

SIGNATURE OF THE BIDDER

Technical Specifications and Work Details  
VOLUME -II: TECHNICAL SPECIFICATION

Sr. No.	Particulars	Pages No.
	Technical Volume - II	
1	Civil Technical Specifications	
2	Item Wise Technical Specification	

CHAPTER-1  
CIVIL TECHNICAL SPECIFICATIONS  
GENERAL CONDITION

THE CONTRACTORS SHOULD READ THE FOLLOWING CONDITION VERY CAREFULLY AND SIGN EACH PAGE:

1. A work order book shall be maintained on the site. The contractor shall countersign the orders issued in it by the executive engineer in charge and shall carry them out promptly. Failure to comply shall be treated as a breach of contract.
2. The contractor shall provide all labors, peg strings, measured taps and other materials as required for lining and setting the out the work without any payment including theodolites / level instruments. VGEL shall not be responsible for any delay arising from failure to arrange these.
3. The contractor shall have to clear the entire site both prior to commencement and after completion of work at no additional cost. The clearance of site shall include removal of grass, extra trees, vegetation's, building and old construction work, debris and extra earth at site in order to level the site as Required. The contractor shall also be responsible to keep the site and its approaches clean and maintain them in perfect order during the course of construction and on completion of work. All disposal shall be at locations approved by VGEL and at contractor's cost.
4. The contractor shall at his own expenses make all necessary provisions for water supply and sanitary arrangement for his employees and shall pay direct, to the authorities concerned all rates, taxes, sales tax and other charges. Water required for the construction of the work shall also be entirely arranged by the contractor, without any claim for reimbursement.
5. The contractors shall prepare one complete sample unit incorporating all relevant items as per instructions of the Engineer-in-Charge. Only upon formal written approval of the sample unit, shall the contractor proceed to execute the corresponding items in the remaining works. Any deviations without such approval shall be rectified at the contractor's cost.
6. Whenever bricks are to be used in the works the same shall be kiln burnt of approved quality and other standard available sizes. Whenever sand is to be used in work the same shall be good and approved quality.
7. The sample of material shall be submitted for VGEL/Consultant approval prior to use. Satisfactory testing of such materials, as per relevant IS codes, shall be conducted. Unapproved materials, if used, shall be removed at contractor's cost without argument.
8. The present layout of structure may have to be altered to suit local conditions. The contractors shall be bound to agree to the revised layouts as may be finally decided and communicated to him by the VGEL . No extension of time or escalation shall be admissible on this ground.
9. Contractor will have to make his own arrangement to maintain the progress of work. No extension of time limit will be granted on this Account.
10. The reinforcement steel be used IS 1786:2008 TMT Bars all diameter confirming to relevant IS Fe - 500D grade confirming to relevant IS.
11. On starting of work, Agency along with VGEL Representative shall make a list of various items Required to be taken up in consultation with the beneficiary (occupant) and on attending to the same shall take a signature as a token of

- satisfactory completion such statements shall be produced for claiming payment for any work done completed during course of contract.
12. CEMENT REGISTER: A register in the prescribed form showing day receipt, consumption, and balance of cement on site of work will be maintained by the department, which shall invariably be signed daily by the contractor or his authorized representative in token of its correctness.
  13. Materials and Works Test Register: A Register in prescribed Performa showing test results of materials and works will be maintained at the site of work by the Department and every entry thereof shall invariably be signed by the contractor or his authorized representative in token of its correctness.
  14. Contractor shall submit a formal Request for Inspection (RFI) at least 24 hours in advance to the Engineer-in-Charge for inspection of any construction activity prior to proceeding to the next stage. Failure to obtain timely inspection and clearance shall render the corresponding work liable to rejection or rework at the contractor's cost.
  15. Contractor shall maintain a duly signed and sequential record of stage-wise inspections for all activities, with approvals from the designated VGEL representative. No activity shall be deemed complete without such recorded approval, and unsigned work shall not be considered for certification or payment.

**GENERAL:**

- I. In the specifications "as directed" / "approved" shall be taken to mean "as directed" / "approved by the Engineer-in-Charge".
- II. Wherever a reference to any Indian Standard appears in the specifications, it shall be taken to mean as a reference to the latest edition of the same in force on the date of agreement.
- III. In "Mode of Measurement" in the specifications wherever a dispute arises in the absence of specific mention of a particular point of aspect the provisions on these particular points, or aspects in the relevant Indian Standards shall be referred.
- IV. All measurements and computations, unless otherwise specified, shall be carried out nearest to the following limits:
  - (i) Length, width and depth (height) 0.01 meter
  - (ii) Areas 0.01 Sq. Mt.
  - (iii) Cubic Contents 0.01 Cu. Mt.In recording dimensions of work, the sequence of length, width and height (depth) or thickness shall be followed.
- V. The distance which constitutes lead shall be determined along the shortest practical route and note necessarily the route actually taken The decision of the Engineer-in-charge in this regard shall be taken as final.
- VI. Where no lead is specific, it shall mean "all leads"
- VII. Lift shall be measured from plinth level.
- VIII. Approval to the samples of various materials given by the Engineer-in-charge shall not absolve the contractor from the responsibility of replacing defective material brought on site or materials used in the work found defective at a later date. The contractor shall have no claim to any payment or compensation whatsoever on account of any such materials being rejected by the Engineer-in-charge.



- IX. Collection of approved materials shall be done at site of work in a systematic and organized manner. Materials shall be stored in such a way as to prevent any damage, deterioration, contamination, or intrusion of foreign matter, and to ensure the preservation of their quality, integrity, and fitness for the intended work.
- X. Materials, if and when rejected by the Engineer-in-charge, shall be immediately removed from the site of work.
- XI. All works shall be carried out in a workmanlike manner as per the best techniques for the particular item.
- XII. All tools, templates, machinery and equipment for correct execution of the work as well as for checking lines, levels, alignment of the works during execution shall kept in sufficient numbers and in good working condition on the site of the work.
- XIII. All necessary safety measures and precautions {including those laid down in the various relevant Indian Standards} shall be taken to ensure to ensure the safety of men. Materials and machinery on the works as also of the work itself.
- XIV. Approval to any of the executed items for the work does not in any relieve the contractor of his responsibility for the correctness, soundness and strength of the structure as per the drawings and specifications.
- XV. plaster work includes for all grooves, pattas, pattis as may be directed for.
- XVI. Cover blocks shall be preferred for R.C.C. works in slab, beams, columns, etc.

#### GENERAL STANDARD TECHNICAL SPECIFICATIONS OF MATERIALS

- (1) All materials to be used shall conform to the relevant specifications as per the latest edition of Indian Standard, unless otherwise stated in the detailed specifications of items of work.
- (2) Wherever a reference to any Indian Standard appears in the specification, it shall be taken to mean as a reference to the latest version of the standard.
- (3) Test for material shall be invariably carried out by the contractor, when the same are specified in the specifications. Tests shall also have to be carried out, even though the same are not specifically mentioned in the specifications but in the opinion of the Engineer-In-Charge, the same are required to be carried out. All such tests shall be carried out in Government Lab or laboratories approved by the Engineer-in-charge.
- (4) No collection of materials shall be made before it is got approved from the Engineer-In-Charge.
- (5) Collection of approved materials shall be done at site of work in a systematic manner. Materials shall be stored in such a manner as to prevent deterioration or intrusions of foreign matter and to ensure the preservation of their quality and fitness for the work.

- (6) Materials, if rejected by the Engineer-in-Charge, shall be immediately removed from the site of work. If they are not removed within twenty four hours of receiving such intimation, Engineer-In-Charge shall get the same removed at contractor's cost. The Engineer-In-Charge shall dispose off such materials in a manner as he chooses and the contractor shall not be entitled to any compensation for the cost of such materials.
- (7) Approval to the samples of various materials given by the Engineer-In-Charge will not absolve the contractor from the responsibility of replacing the defective material brought on site or materials used in the work found defective at a later date. The contractor shall have no claim to any payment or compensation whatsoever on account of any such materials rejected by the Engineer-In-Charge.
- (8) The contractor shall be responsible for observing the laws, rules and regulations imposed under the "Mines and Minerals (Development and Regulation) Act" and such other laws and rules prescribed by Government from time to time. VGEL shall not be liable for any breach, penalty, or prosecution arising from the contractor's non-compliance, and all such liabilities shall be borne entirely by the contractor.

#### M-1. Water

1.1. Water shall not be salty brackish and shall be clean, reasonably clear and free objectionable quantities of silt and traces of oil and injurious alkalis, salts, organic matter and other deleterious material which will either weaken the mortar of concrete or cause efflorescence or attack the steel in R.C.C. Container for transport, storage and handling of water shall be clean. Water shall conform to the standard specified in I.S. 456-2000.

1.2. If required by the Engineer-in-Charge it shall be tested by comparison with distilled water Comparison shall be made by means of standard cement tests for soundness time of setting and mortar strength as specified in I.S. 269-1976. Any indication of unsoundness charge in time of setting by 30 minutes or more or decrease of more than 10 percent in strength, of mortar prepared with water sample when compared with the results obtained with mortar prepared with distilled water shall be sufficient cause for rejection of water under test.

1.3. Water for curing mortar, concrete or masonry should not be too acidic or too alkaline .It shall be free of elements which significantly affect the hydration reaction or otherwise interfere with the hardening of mortar or concrete during curing or those which produce objectionable stains or other unsightly deposits on concrete or mortar surfaces

1.4. Hard and bitter water shall not be used for curing

1.5. Potable water will generally found suitable for curing mortar or concrete.

## 1.6 Permissible Limit for Solids

15		Tested as per	Permissible Limit Max.
16	Organic	IS: 3025	200 mg/lit
17	Inorganic	IS: 3025	3000 mg/lit
18	Sulphate (as SO <sub>3</sub> )	IS: 3025	400 mg/lit
19	Chlorides (as Cl)	IS: 3025	2000 mg/lit for concrete work not containing embedded steel and 500 mg/lit for pre-stressed /reinforced concrete work.
20	Suspended Matter	IS: 3025	2000 mg/lit

M-2. NIL

M-3. Cement

3.1. OPC (Ordinary Portland Cement) 53 Grade Cement to be used in all concreting work as per I.S.12269-1987

3.2 Fresh quality cement shall be procured only from approved manufacturer /Supplier and shall be subject to prior approval of the Engineer-in-charge and to the satisfaction of VGEL.

Following types of cement shall be used.

i. All cement used for the work shall ordinary Portland cement or such other cement as may be permitted by the Engineer-in-charge. Portland cement shall comply with the requirements of the latest issue of IS: 269. Such shall be in accordance with relevant IS codes.

ii. Cement which has remained in bulk storage at the mill for more than 6 months or which as remained in bags at the dealer's storage for over 3 months or which has been stored at project site for more than 3 months shall be re-tested before use. Cement shall also be rejected if it fails to conform to any of the requirements of these specifications.

iii. Different types of cement shall not be mixed.

iv. Make of Cement: Ambuja, Ultratech, Sangi, ACC, J K Laxmi

3.3 Cement shall be brought of approved make as per vendor list

M-4 Sand

4.1 Sand shall be natural sand, clean, well graded, strong, durable, and gritty particles free from injurious amounts of dust, clay, kankar nodules, soft or flaky particles, shale, alkali, salts, organic mater, loam, mica or other deleterious substances and shall be got approved from the Engineer-in-charge and to the satisfaction of VGEL. The sand shall not contain more than 8% of silt as determined by field tests. If necessary the sand shall be washed to make it clean.

4.2 Coarse Sand: The fineness modulus of coarse sand shall not be less than 2.5 and shall not exceed 3.0. The sieve analysis of coarse shall be as under:

I.S. Sieve Designation	%by weight passing sieve	I.S. Sieve Designation	% by weight passing sieve
4.75 mm	100	600 Micron	30 – 100
2.36 mm	90 – 100	300 Micron	5 – 70
1.18 mm	70 – 100	150 Micron	0 – 60

4.3 Fine Sand: The finesse modulus shall not exceed 1.0. The sieve analysis of fine sand shall be as under:

I.S. Sieve Designation	% by weight passing thru'	I.S. Sieve Designation	% by weight passing thru'
4.75 mm	100	600 Micron	40 – 85
2.36 mm	100	300 Micron	5 – 50
1.18 mm	75 – 100	150 Micron	0 – 10

M-5. NIL

M-6. NIL

M-7. NIL

M-8. Cement Mortar

8.1. Water shall conform to specification M-1, Cement : Cement shall conform to specifications M-3 and Sand :Sand shall conform to M-4

8.2 PROPORTION OF MIX: Cement and sand shall be mixed to specified proportions, sand being measured by measuring boxes. The proportion of cement shall be by volume on the basis of 50 Kg./Bag of cement being equal to 0.0342 Cu.M. The mortar may be hand mixed or machine mixed as directed.

8.3 PREPARATION OF MORTAR: In hand mixed mortar, cement and sand in the specified proportions shall be thoroughly mixed dry on a clean impervious platform by turning over at least 3 times or more till a homogeneous mixture of uniform colour is obtained. Mixing platform shall be so arranged that no deleterious extraneous material shall get mixed with mortar or mortar shall flow out. While mixing, the water shall be gradually added and thoroughly mixed to form a stiff plastic mass of uniform colour so that each particle of sand shall be completely covered with a film of wet cement. The water cement ratio shall be adopted as directed.

8.4 The mortar so prepared shall be used within 30 minutes of adding water. Only such quantity of mortar shall be prepared as can be used within 30 minutes.

## M-9 STONE COARSE AGGREGATE FOR NOMINAL MIX CONCRETE

9.1 Coarse aggregate shall be of machine crushed stone of black trap or equivalent and be hard, strong, dense, durable, clean and free from skin and coating likely to prevent proper adhesion of mortar.

9.2 The aggregate shall generally be cubical in shape. Unless special stones of particular queries are mentioned aggregates shall be machine crushed from the best black trap or equivalent hard stone as approved. Aggregate shall have no deleterious reaction with cement. The size of the coarse aggregate for plain cement concrete and ordinary reinforced cement concrete shall generally be as per the table given below. However, in case of reinforced cement concrete the maximum limit may be restricted to 6 mm less than the minimum lateral clear distance between bars or 6 mm less than the cover whichever is smaller.

IS Sieve Designation	Percentage passing (by weight) for nominal size of				
	40 mm	20 mm	16 mm	12.5 mm	10 mm
80 mm	-	-	-	-	-
63 mm	100	-	-	-	-
40 mm	85-100	100	-	-	-
20 mm	0-25	85-100	100	-	-
16 mm	-	-	85-100	100	-
12.5 mm	-	-	-	85-100	100
10 mm	0-5	0-20	0-20	0-20	85-100
4.75 mm	-	0-5	0-5	0-5	0-20
2.36 mm	-	-	-	-	0-5

*NOTE: This percentage may be varied somewhat by the Engineer-in-charge when considered necessary for obtaining better density and strength of concrete.*

9.3 The grading test shall be taken in the beginning and at the change of source of materials. The necessary tests indicated in I.S. 383-1970 and I.S. 456-2000 shall have to be carried out to ensure the acceptability. The aggregates shall be stored separately and handled in such a manner as to prevent the intermixing of different aggregates. If the aggregates are covered with dust, they shall be washed with water to make, them clean.

## BLACK TRAP OR EQUIVALENT HARD STONE COARSE

9.4 Aggregate for Design Mix Concrete: Coarse aggregate shall be of machine crushed stone of black trap or equivalent hard stone and be hard, strong, dense, durable, clean and free from skin and coating likely to prevent proper adhesion of mortar.

9.5 The aggregates shall generally be cubical in shape, unless special stones of particular quarries are mentioned, aggregates shall be machine crushed from the best, black trap or equivalent hard stones as approved. Aggregate shall have no deleterious reaction with cement.

9.6 The necessary tests indicated in I.S. 383-1970 and I.S. 456-2000 shall have to be carried out to ensure the acceptability of the material.

9.7 If aggregate is covered with dust it shall be washed with water to make it clean.

#### M-10. Bricks

10.1. The bricks shall be hand or machine molded and made from suitable soils and kiln burnt. They shall be free from cracks and flaws and modules of free lime they shall have smooth rectangular faces with sharp corners and shall be of uniform colour .The bricks shall be- moulded with a frog of 100 mm. x 40 mm. and 10 mm. to 20 mm. deep on one of its flat sides. The bricks shall not break when thrown on the ground from a height of 600 mm.

10.2. The size of modular bricks shall be 190 mm.x 90 mm.x 90 mm.

10.3. The crushing strength of the bricks shall not be less than 35 Kg/Sq. Cm. The average water absorption shall not be more the 20 percent by weight Necessary tests for crushing strength and water absorption etc. shall be carried out as per I.S. 3495 ( Part-I to IV ) – 1976

#### M-11. Mild Steel Bars

11.1 Mild steel bars reinforcement for R.C.C. work shall conform to I.S. 432 (Part-II)-1966 and shall be of tested quality. It shall also comply with the relevant part of I.S. 456-2000.

11.2 All the reinforcement shall be clean and free form dirt, paint, grease, mill scale or loose or thick rust at the time of placing.

11.3 For the purpose of payment the bar shall be measured correct upto 10 mm length and weight payable worked out as per the rate specified below :

i ] 6mm	0.22 Kg/Rmt.	viii] 20mm	2.47 Kg/Rmt.
ii ] 8mm	0.38 kg/Rmt.	ix] 22mm	2.98 kg/Rmt.
iii ] 10mm	0.62 kg/Rmt.	x] 25mm	3.85 kg/Rmt.
iv ] 12mm	0.89 kg/Rmt.	xi] 28mm	4.83 kg/Rmt.
v ] 14mm	1.21 kg/Rmt.	xii] 32mm	6.31 kg/Rmt.
vi ] 16mm	1.58 kg/Rmt.	xiii] 36mm	7.31 Kg/Rmt.
vii] 18mm	2.00 Kg/Rmt.	xiv] 40mm	9.86 Kg/Rmt.

#### M-12 Thermo Mechanically Treated Bars (TMT STEEL)

12.1 Thermo mechanically treated (TMT) Steel bars shall be as per IS:1786 2008 of grade Fe-500D.

12.2 Other provision and requirements shall conform to specification No. M-11 for Mild Steel Bars.

12.3 Reinforcing steel shall not be stored directly on the ground. These shall be stored under cover and shall be protected from rusting, oil grease and distortions as directed by the Engineer-in-charge.

- 12.4 All reinforcement shall be clean and free from loose mill-scales, dust, loose rust and coats of paints, oil or other coatings which may destroy or reduce bond at the time of fixing in position and concreting.
- 12.5 The Constructor shall purchase TMT bars only from government-approved manufacturers and ISI-certified Agencies.

NOTE: For the purpose of payment, the bars shall be measured correct up to 10 mm. length and weight payable worked out as specified below:

1.	8 mm	0.39 kg/Rmt
2.	10 mm	0.62 kg/Rmt
3.	12 mm	0.88 kg/Rmt
4.	16 mm	1.58 kg/Rmt
5.	20 mm	2.46 kg/Rmt
6.	22 mm	2.98 kg/Rmt
7.	25 mm	3.85 kg/Rmt
8.	28 mm	4.83 kg/Rmt

#### M-13. Mild Steel Binding Wire

13.1. The mild steel wire shall be of 1.63 mm. or 1.22 mm. (16 to 18 gauge) diameter and shall conform to I.S. 280-1972.

13.2. The use of black wire will be permitted for binding reinforcement bars. It shall be free from rust oil paint, grease loose mill scale or any other undesirable coating which may prevent adhesion of cement mortar.

#### M-14. Shuttering

14.1. The shuttering shall be either of wooden planking of 30 mm. minimum thickness with or without steel lining or of steel plates stiffened by steel angles. The shuttering shall be supported on battens and beams and props of vertical bulgies properly cross braced together so as to make the centering rigid. In places of bulgies props, brick pillar of adequate section built in mud mortar may be used

14.2. The form work shall be sufficiently strong and shall have camber so that it assumes correct shape after deposition of the concrete and shall be able to resist forces caused by vibration of live load of men working over it and other incidental loads associated with it. The shuttering shall have smooth and even surface and its joints shall permit leakage of cement grout.

14.3. If at any stage of work during or after placing concrete in the structure, the form work sags or bulges out beyond the required shape of the structure, the concrete shall be removed and work redone with fresh concrete and adequately rigid form work. The complete form work shall be got inspected by and got approved from the Engineer-in-charge, before the reinforcement bars are placed in position

14.4. The props shall consist of bulgies having 100 mm. minimum diameter measured at mid length and 80 mm. at thin end shall be placed as per design requirement. These shall rest squarely on wooden sole plates 40 mm. thick and minimum bearing area of 0.10 sq m laid on sufficiently hard base.

14.5. Double wedges shall further be provided between the sole plate and the wooden props so as to facilitate tightening and easing of shuttering without jerking the concrete.

14.6. The timber used in shuttering shall not be so dry as to absorb water from concrete and swell or bulge nor so green or wet as to shrink after erection. The timber shall be properly sawn and planed on the sides and the surface coming in contact with concrete. Wooden form work with metal sheet lining or steel plates stiffened by steel angles shall be permitted.

14.7. As far as practicable, clamps shall be used to hold the forms together and use of nails and spikes avoided.

14.8. The surface of timber shuttering that would come in contact with concrete shall be well wetted and coated with soap solution before the concreting is done. Alternatively coat of raw linseed oil or oil of approved manufacture may be applied in place of soap solution. In case of steel shuttering either soap solution or raw linseed oil shall be applied after thoroughly cleaning the surface. Under no circumstances black or burnt oil shall be permitted.

14.9. The shuttering for beams and slabs shall have camber of 4 mm per meter ( 1 in 250 ) or as directed by the Engineer-in-charge so as to offset the subsequent deflection. For cantilevers, the camber at free end shall be 1/50 of the projected length or as directed by the Engineer-in-charge.

#### M-15. Paints:

##### 15.1 Oil Paints

Oil paints shall be of the specified colour and shade, and as approved. The ready mixed paints shall only be used.

However, if ready mixed paint or specified shade or tint is not available white ready mixed paint with approved strainer will be allowed. In such a case, the contractor shall ensure that the shade of the paint so allowed shall be uniform.

All the paints shall need with the following general requirements ;

i] Paint shall not show excessive setting in a freshly opened full can and shall easily be re-dispersed with paddle to a smooth homogeneous state. The paint shall show no curdling, livening, caking or colour separation and shall be free from lumps and skins.

ii] The paint as received shall brush easily, possess good leveling properties and show no running or sagging tendencies.

iii] The paint shall not skin within 48 hours in a three quarters filled closed container.

iv] The paint shall dry to a smooth uniform finish free from roughness, grit unevenness and other imperfections.

v] Make of Paints :Berger/Asian



Ready mixed paint shall be used exactly as received from the manufacturers and generally according to their instructions and without any admixtures whatsoever.

## 15.2 Enamel Paints

The enamel paint shall satisfy in general requirements as mentioned in specification of oil paints. Enamel paints shall conform to I.S. 2933-1975.

## 20.3 Weather Exterior Emulsion

Weather Coat Texture Exterior Emulsion paint is formulated with special grade emulsion with high build fine texture coating. Formulated with tough flexible resin with many special types properties like unmatched anti-fungal, anti-flaking, anti-fading with excellent opacity and adhesion to ensure long term defense against all odd weather conditions. Weather Coat Texture Exterior Emulsion contains controlled quartz particle size distribution, finest chemical inertness, finest available pigments.

## CIVIL PARTICULAR TECHNICAL REQUIREMENTS

### 1.0 Land/Orientation

The land for proposed TSDF is in possession of VGEL and shall be provided clear and undisputed. The price to be quoted by bidder is considering the given site location mentioned in the tender. The bidder has to visit and review the location of proposed site and ascertain the topographical and geotechnical details at his own.

### 2.0 Buildings and Structures

All the structure works shall generally comply with the following Engineer In Charge's requirements unless otherwise specified elsewhere.

1. The bidder has to carry out his own survey to match the Road level and Required back filling of yellow soil to be done without any Extra cost. The filling material and the cost of filling shall be in bidder's scope.
2. Road Level connecting to Plant premises shall be kept same
3. Steel: TMT Bars all diameter confirming to relevant IS Fe - 500D grade
4. P.C.C.: Leveling course 100mm thick (1:3:6)
5. Brick masonry: vertical wall Min. 230mm Thick
6. Plaster: out side 20mm sand faced plaster.
7. Paint for Wall: Two coats of Plastic Emulsion paint
8. Reinforcement Shall be FE 500 D.

NOTE: CONTRACTOR SHOULD SUBMITT WEEKLY WORK PROGRESS REPORT RECORD OF CEMENT AND STEEL STOCK & CONSUMTION REPORT TO VGEL ENGINEER INCHARGE.

## GENERAL

(1) The method of the execution of the items shall conform to the relevant specifications as per the latest version of the Indian Standard unless specified otherwise and as far as is applicable.

(2) Wherever a reference to any Indian Standard appears in the code, it shall be taken to mean as a reference to the latest version of the Standard.

(3) Work Tests shall invariably be got carried out by the Contractor, when the same are specified in this Code. Tests shall also have to be carried out, even though the same may not have been specifically mentioned in the Code, if in the opinion of the Engineer-In-Charge, they are required to be carried out. All the tests shall be got carried out in Government or approved laboratories.

(4) Satisfactory test results shall not absolve the Contractor, from dismantling and re-doing any work revealed to be defective at a later date, whether during execution or within the Defects Liability Period. The contractor shall have no claim for any payment or compensation whatsoever on account of replacement of such defective work. Contractor shall take all precautions and care during dismantling and re-doing the work to ensure that any other work, so far executed does not get damage or affected. Any damage caused shall be repaired by the contractor at his own cost and to the satisfaction of VGEL.

(5) The work shall be carried out in true line and level, and in conformity with the detailed drawings and specified patterns.

(6) All work shall be carried out in a workman-like manner and as per the best techniques for the particular item.

(7) All tools, templates, equipments etc. for correct execution of the work, as well as for checking lines, levels alignments of the works, during execution shall be kept in sufficient numbers on the site of work.

(8) Scaffolding shall be provided by the Contractor at his own cost for such of the items for the execution of which it is essential.

### 3.0 Materials in General

The term "materials" shall mean all materials, goods and articles of every kind whether RAW, processed or manufactured and equipment and plant of every kind to be supplied by the Contractor for incorporation in the Works.

Except as may be otherwise specified for particular parts of the works the provision of clauses in "Materials and Workmanship" shall apply to materials and workmanship for any part of the works.

All materials shall be new and of the kinds and qualities described in the Contract and shall be at least equal to approved samples.

Materials shall be transported, handled and stored in such a manner as to prevent deterioration, damage or contamination failing which such damaged materials will be rejected and shall not be used on any part of the Works under this contract.

#### 4.0 Samples and Tests of Materials

The Contractor shall submit samples of such materials as may be required by Engineer In Charge and shall carry out the specified tests directed by Engineer In Charge at the Site, at the supplier's premises or at a laboratory approved by Engineer In Charge. Engineer In Charge may appoint separate third party inspection for the material testing to ensure the quality of the work. The Contractor shall replace the defective material as an outcome of these tests.

Samples shall be submitted and tests carried out sufficiently early to enable further samples to be submitted and tested if required by Engineer In Charge.

The Contractor shall replace, at his own expense, all defective materials identified as a result of these tests.

The provisions of this clause shall also apply fully to materials supplied under any nominated sub-contract as well.

#### 5.0 Standards

Materials and workmanship shall comply with the relevant Indian Standards (with amendments) current on the date of submission of the tender.

Where the relevant standard provides for the furnishing of a certificate to Engineer In Charge, at his request, stating that the materials supplied comply in all respects with the standard, the Contractor shall obtain the certificate and forward it to Engineer In Charge.

The specifications, standards and codes listed below are considered to be part of this Bid specification. All standards, specifications, codes of practices referred to herein shall be the latest editions, including all applicable official amendments and revisions.

In the event of any discrepancy between the Bid Specification and the referred standards, the Bid Specification shall prevail and govern.

##### a) Materials

IS : 383 Specification for coarse and fine aggregates from natural sources for concrete

IS : 428 Specification for distemper, oil emulsion, colour as required

IS : 432 Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement (Parts 1 & 2 )

IS : 650 Specification for standard sand for testing of cement

IS : 1077 Specification for common burnt clay building bricks

IS : 1786 Specification for high strength deformed steel bars and wires for concrete reinforcement

##### b) Tests

IS : 516 Method of test for strength of concrete

IS : 1199 Methods of sampling and analysis of concrete

- IS : 2386 Methods of test for aggregates for concrete(Parts 1 to 8)  
IS : 2720 Methods of test for soils (Parts 1 to 39)  
IS : 3495 Method of test for burnt clay building bricks(Parts 1 to 4)

c) Codes of Practice

- IS :456 Code of practice for plain and reinforced concrete  
IS : 800 Code of practice for general construction in steel  
IS : 2212 Code of practice for brickwork  
IS : 2395 Code of practice for painting, concrete, masonry and plaster surfaces (Parts1 & 2)  
IS : 2502 Code of practice for bending and fixing of bars for concrete reinforcement  
IS : 3558 Code of practice for use of immersion vibrators for consolidating concrete  
IS : 10005 SI units and recommendations for the use of their multiples and of certain other units

d) Construction Safety

- IS : 3696 Safety code for scaffolds and ladder (Parts 1 & 2)  
IS : 3764 Safety code for Excavation work

#### ITEM WISE DETAIL TECHNICAL SPECIFICATIONS

Item No.1: Clearing and Grubbing road land including uprooting rank vegetation grass bushes, shubs, sapling and tres girth up to 300mm rmoval of stumps of trees cut earlie and disposal of unserviceable materials (A) by mechanical means in area of light jungle

The site at which the construction is to be done and the areas required for setting out and other operations shall be cleared of all obstructions, loose stones, and rubbish of all kinds, stumps of trees, brushwood as well as all trees shall be removed as directed. The roots shall be entirely grubbed up.

- ◆ The products of the clearing to be stacked in such a place and in such a manner as directed by Engineer - in - Charge.
- ◆ In site clearing all trees not specially for preservation, bamboos, jungle wood and brushwood shall be cut down and their roots grubbed up. All wood and materials from the clearing shall be the property of VGEL and shall be arranged as directed by the Engineer - in - Charge or his authorized agent. The materials found to be useful by the Engineer - in - Charge shall be conveyed and properly stacked as directed within the specified limit. So less material will be burnt or otherwise disposed off as directed.
- ◆ All holes or hollows, whether originally existing or proceeded by digging up roots, shall be carefully filled up with earth, well rammed and leveled off, as may be directed.
- ◆ The contractor shall have to dismantle the existing concrete / steel structure obstructing in construction area above as well as below ground shall be removed and cleared of as directed.

- ◆ The contractor shall have to visit the site and familiarize themselves thoroughly with the site condition and all obstruction in construction of treatment plant before submitting the tender and shall have to quote the tender accordingly.
- ◆ No extra charge will be paid for removing any kind of obstruction

Item No.2 :Excavation for foundation upto1.50 Mt depth including sorting out and stacking of useful materials and disposing the excavated stuff up to estate limit lead in all kind of soil

A. Up to 1.50 mt. depth

General

Any soil which generally yields to the application of pickaxes and shovels or jumpers or scarifies phawaras rakes or any such implement or organic soil, gravel, silt sand turf loam, clay peat etc. fall under this category.

Clearing the Site

The site on which the structure is to be built shall be cleared, and all obstructions, loose stone, materials and rubbish of all kind, bush wood and trees shall be removed as directed. The materials so obtained shall be the property of the Corporation and shall be conveyed and stacking as directed within 200 Mts. lead. The roots of the trees coming in the sides shall be cut and coated with a hot asphalt. The rate of site clearance is deemed to be included in temperature of earth work for which no extra amount will be paid.

Setting Out

After clearing the site, the centre lines will be given the Engineer-in-charge. The contractor shall assume full responsibility for alignment, elevation and dimension of each and every part of the work. The contractor shall supply materials etc. required for setting out the reference material and bench marks and shall maintain them as long as required and directed.

Excavation

The excavation in foundation shall be carried out in traveling and level and shall have the width and depth as shown the drawings or as directed. The contractor shall do the necessary shorting and shuttering at his own cost and as approved by the Engineer-in-charge or his Consultant. The payment for much precautionary measures shall be included in this work. The bottom of the excavated area shall be leveled both longitudinally & transversely as directed by removing and watering as required. No earth filling will be allowed for bring it to level, if by mistake or any other reason or as directed. The extra depth or width shall be made up with concrete of the same proportion as specified for the foundation concrete at the cost of the contractor. The excavation up to 1.5 Mts. depth shall be measured under this Description. The site conditions may require excavation in parts as per schedule of excavation. No extra payment will be claimed for this operation schedule.

Disposal of Excavated Materials:

No materials excavated from the foundation trenches, of whatever kind they be, are to be placed even temporarily up to 1.5 Mts. or at the distance prescribed by the Engineer, from the outer edge of excavation. All materials excavated shall remain the property of the Corporation. Rate of excavation shall include sorting out of useful materials and stacking them separately as directed within the specified lead. Materials suitable and useful for backfilling or other use shall be stacked in convenient places but not in such a way as to obstruct free movement of men, animals and vehicles or encroach upon the area required for constructional purpose. The site shall be left clean of all debris on completion.

Disposal of excavated materials is subject to the following. Unsuitable materials obtained from clearing site and excavation shall be disposed off within a lead of 50 Mts. from the edge of plinth / building line as directed. Useful materials obtained from clearing site & excavation shall be slacked within lead of 50 Mts. beyond the building area as directed. Materials suitable for back- filling shall be stacked at convenient places within a lead of 50 Mts, and will be allowed to be used by the contractor on payment at rates laid down in the contract or if not so laid down, at scheduled rates of the Division or at mutually agreed rates if there are no such rate the schedule of rates.

#### Mode of Measurement and Payment

The measurement of excavation in trenches for foundation shall be made according to the sections of trenches shown on the drawing or as per sections by the Engineer-in-charge of as directed. No payment shall made for surplus excavation made excess or above requirements or due to stopping and sloping back as found necessary on account of conditions of soil and requirements of safety or construction schedule requiring excavation to be done in parts.

No extra payment shall be made for temporary pumping of water / sewage due to abnormal adverse conditions / climate.

The rate shall be for a unit of one cubic meter.

Item No. 3: Boring hole of 300 mm. dia., 3.0 mt. deep including under reaming inside the bore hole in ordinary soil & getting out the soil & disposal of the surplus excavated soil as directed with all lead and lift within estate limit including placing the reinforcement FE -500 inside bore and casting the pile including curing etc. complete.

#### 1.0. Workmanship

1.0. The ground shall be roughly leveled and after making the position of piles, the holes shall be bored with a spiral angle to the 3.0 M. depth and specified diameter using boring guide.

2.0. The bore holes shall be truly vertical and uniform bore through out of specified diameter, After boring to the required depth, the bore shall be cleared off the loose soil and disposal of surplus excavated stuff as directed within a lead of 50 M.

No extra payment shall be made for the formation of bulbs or under-reams in piles.

#### 2.0 Mode of Measurement & Payment

2.1. The rate for boring holes shall include :

- (a) roughly leveling the ground in positions where piles are to be provided
- (b) Making the position of piles by pegs and boring guide and also for shifting of boring guide.
- (c) Bailing out water, if any met with during boring,
- (d) Disposal or surplus excavated soil within a lead of 50 M and
- (e) All tools, plants, equipments and labour required for satisfactory completion of work.

2.2. The rate shall be for a unit of one Number.

Item No. 4: Providing & Casting in Situ Cement Concrete in Grade M10 ( Approx Prop. 1:3:6) Using Granite quartzite trap metal of Size 12mm to 25mm including the cost of form work and consolidation curing etc completed. Plain Cement concrete Work M10

Materials Water shall conform to M-1. Cement shall conform to M-3 Sand shall conform to M-4. Stone aggregate 40 mm nominal size shall conform to M-9.

Workmanship General Before starting concreting the bed of foundation trenches shall be cleared of all loose materials, leveled, Watered and rammed as directed.

Proportion of Mix The proportion of cement, sand coarse aggregate shall be one part of cement, 3 parts of sand 6 parts of stone aggregate shall be measured by volume.

Mixing The concrete shall be mixed in a mechanical mixer is the site of work. Hand mixing may however be allowed for smaller quantity of work if approved by Engineer-in-charge. When hand mixing is permitted by the Engineer-in-charge in case of break down of machineries and in the interest of the work, it shall be carried out a water tight platform and care shall be taken to ensure that mixing is continued until the mass is uniform in colour and consistency. However in such case 10% more cement than otherwise required shall have to be used without any extra cost. The mixing in mechanical mixer shall be done for a period 1 ½ to 2 minutes. The quantity of water shall be just sufficient to produce dense concrete of required workability for the purpose.

Transporting and placing the concrete The concrete shall be handed from the place of mixing to the final position in not more than 15 minutes by the method as directed and shall be placed into its final position, compacted and finished within 30 minutes of mixing with water i.e. before the setting commences The concrete shall be laid in layers of 15 cms to 20 cms.

Compacting The concrete shall be rammed with heavy iron rammer and rapidly to get the required compaction and to allow the interstices to be filled with mortar.

Curing After the final set, the concrete shall be kept continuously wet, if required by pending for a period of not less than 7 days from the date of placement.

Mode of Measurements and Payment

The concrete shall be measured for its length breadth and depth, limiting dimensions to those specified on plan or as directed. The rate shall be for a unit of one cubic meter.

Item No.5: Providing and Casting in Situ Cement Concrete in Grade M25 Proportion of ingredients as per mix design by weight batchin using granite, quartzite trap metal of size 12mm to 20mm and or 6mm to 12mm including the cost of scaffolding centering formwork, needle virated consolidation and curing etc. completed (excluding the cost of reinforcement).

- Workability of the concrete shall be controlled by maintaining a water - cement-ratio that is found to give a concrete mix which is just sufficient wet to be placed and compacted without difficulty with the means available.
- The maximum size of coarse aggregate shall be as large as possible within the limits specified but in no case greater than one fourth of the minimum thickness of the member provided that the concrete can be placed without difficulty so as to surround all reinforcement thoroughly and to fill the corners of the form.
- For reinforced concrete work; coarse aggregates having a nominal size of 20 mm. are generally considered satisfactory .
- For heavily reinforced concrete members as in the case of ribs of main beams, the nominal maximum size of coarse aggregate should usually be restricted to 5 mm. less than the minimum clear distance between the main bar or 5 mm. less than the minimum cover to the reinforcement whichever is smaller .
- Where the reinforcement is widely spaced as in solid slabs, limitations of size of the aggregate may not be so important, and the nominal maximum size may some times be as great as or greater than the minimum cover .
- Admixture may be used in concrete only with approval of Engineer-in-charge based upon the evidence that with the passage of time neither the compressive strength of concrete is reduced nor are other requisite qualities of concrete and steel impaired by the use of such admixtures.

#### Workmanship

Proportioning : Proportioning shall be done by volume, except which shall be measured in terms of bags of 50 kg. weight, the volume of one such bag being taken as 0.0342 cu. meter Boxes of suitable size shall be used for measuring sand aggregate. The size of boxes (internal) shall be 35 x 25 cms. and 40 cms deep while measuring the aggregate and sand the boxes shall be filled without shaking ramming or hammering. The proportioning of sand shall be on the basis of its dry volume and in case of damp saner , allowances for bulk age shall be made.

Note: The contractor shall obtain the concrete mix design for the specified grade of concrete from a government-approved and authorized laboratory. No concreting work shall commence until the mix design has been duly approved by the VGEL/Consultant or the relevant approving authority.

#### Mixing :

1. For all work, concrete shall be mixed in a mechanical mixer which along with other accessories shall be kept in first class working condition and so maintained throughout the construction. Measured quantity of aggregate, sand and cement required for each batch shall be poured into the claim of the mechanical mixer while it is continuously running. After half a minute of dry mixing measured quantity of water required for each batch of concrete mix shall be added gradually and mixing continued for another one and a half minute. Mixing shall be continued till materials are uniformly distributed and



uniform colour of the entire mass is obtained and each individual particle of the coarse aggregate shows complete coating of mortar containing its proportionate amount of cement. In no case shall the mixing be done for less than 2 minutes after oil ingredients have been put into the mixer.

2. Mixers which have been out of use for more than 30 minutes shall be thoroughly cleaned before putting in a new batch. Unless otherwise agreed to by the Engineer in-charge the first batch of concrete from the mixture shall contain only two thirds of normal quantity of coarse aggregate. Mixing plant shall be thoroughly cleaned before changing from one type of cement to another.

Consistency:

1. The degree of consistency which shall depend upon the nature of the work and methods of vibration of concrete, shall be determined by regular slump tests in accordance with I.S. 1199-1959. The slump of 10 mm. to 25 mm shall be adopted when vibrators are used and 80 mm. when vibrators are not used.

Inspection:

1. Contractor shall give the Engineer-in-charge due notice before placing any concrete in the forms to permit him to inspect and accept the work and forms as to their strength, alignment and general fitness but such inspection shall not relieve the contractor of his responsibility for the safety of men machinery materials and for results obtained immediately before concreting all forms shall be thoroughly cleaned.

2. Centering design and its erection shall be got approved from the engineer-in-charge. One carpenter with helper shall invariably be kept present throughout the period of concreting. Movement of labour and other persons shall be totally prohibited for reinforcement laid in position. For access to different parts suitable mobile platforms shall be provided so that steel reinforcement in position is not disturbed. For ensuring proper cover, mortar blocks of suitable size shall be cast and tied to the reinforcement. Timber kapachi or metal pieces shall not be used for this purpose.

Transporting and laying:

1. The method of transporting and placing concrete shall be as approved. Concrete shall be so transported and placed that no contamination, segregation or loss of its constituent material takes place. All form work shall be cleaned and made free from standing water dust, snow or ice immediately before placing of concrete. No concrete shall be placed in any part of the structure until the approval of the engineer-in-charge has been obtained.

2. Concreting shall proceed continuously over the area between construction joints. Fresh concrete proper contraction joint is formed. Concrete shall be compacted in its final position within 30 minutes of its discharge from the mixer. Except where otherwise agreed to by the engineer-in-charge, concrete shall be deposited in horizontal layers to a compacted depth of not more than 0.45 meter when internal vibrators are used and not exceeding 0.30 meter in all other cases.

3. Unless otherwise agreed to by the Engineer-in-charge concrete shall be dropped in to place from a height exceeding 2 meters. When trucking or chutes are used they shall be kept close and used in such a way as to avoid segregation. When concreting has to be resumed on a surface which has hardened, it shall be roughened, swept clean, thoroughly wetted and covered with a 13 mm. thick layer of mortar composed of cement and sand in the same ratio as in the concrete mix itself. This 13 mm. layer of mortar shall be

freshly mixed and placed immediately before placing of new concrete. Where concrete has not fully hardened, all laitance shall be removed by scrubbing the wet surface with wire or bristle brushes, care being taken to avoid dislodgement of any particles of coarse aggregate. The surface shall then be thoroughly wetted, all free water removed and then coated with neat cement grout. The first layer of concrete to be placed on this surface shall not exceed 150 mm. in thickness and shall be well rammed against old work, particular attention being given to corners and close spots.

4. All concrete shall be compacted to produce a dense homogeneous mass with the assistance of vibrators, unless otherwise permitted by the Engineer-in-charge for exceptional cases, such as concreting under water, where vibrators cannot be used. Sufficient vibrators in serviceable condition shall be kept at site so that spare equipment is always available in the event of breakdowns. Concrete shall be judged to be compacted when the mortar fills the spaces between the coarse aggregate and begins to cream up to form an even surface. Compaction shall be completed before the initial setting starts i.e. within 30 minutes of addition of water to dry mixture. During compaction, it shall be observed that needle vibrators are not applied on reinforcement which is likely to destroy the bond between concrete and reinforcement.

Curing:

Immediately after compaction, concrete weather including rain, running water, shocks, vibration, traffic, rapid temperature changes, frost and drying out process. It shall be covered with wet sacking hessian or other similar absorbent material approved, soon after the initial set, and shall be kept continuously wet for a period of not less than 14 days from the date of placement. Masonry work over foundation concrete may be started after 48 hours of its laying but curing of concrete shall be continued for a minimum period of 14 days.

Sampling and testing of concrete:

Samples from fresh concrete shall be taken as per I.S. 1199-1959 and cubes shall be made, cured and tested at 7 days or 28 days as per requirements in accordance with I.S. 516-1959. A random sampling procedure shall be adopted to ensure that each concrete batch shall have a reasonable chance of being tested i.e. the sampling should be spread over the entire period of concreting and cover all mixing units. The minimum frequency of sampling of concrete of each grade shall be in accordance with the following ---

The average strength concrete in grade M-15, M-20, M-25, M-30 and M-35 of the group of cubes cast for strength of 150, 200, 250 300 and 350 Kg/Cm<sup>2</sup> respectively at 28 days. 20% of the cubes cast for each day may have value less than the specified strength provided the lowest value is not less than 85% of the specified strength. If the concrete made in accordance with the proportions given for a particular grade does not yield the specified strength, such concrete shall be classified as belonging to the appropriate lower grade. Concrete made in accordance with the proportions given for a particular grade shall not, however, be placed in a higher grade on the ground that the test strength are higher than the minimum specified.

Quantity of concrete	No. of samples
1-5 cmt.	1
6-15 cmt.	2
16-30 cmt	3
31-50 cmt. & 51 and above	4
1 samples of 6 Nos. of cube.	

Note : At least one simple shall be taken from each shift, Six test specimens shall be made from each sample, Three for testing at 7 days and the remaining Three at 28 days. The samples of concrete shall be taken on each day of concreting as per above frequency . The number of specimens may be suitably increased as deemed necessary by the Engineer-in-charge when procedure of tests given above reveals a poor quality of concrete and in other special cases.

The average of the group of cubes cast for each day shall not be less than the specified cube strength of 150 K/g Cm<sup>2</sup> at 28 days. 20% of the cubes cast for each day may have value less than the specified strength provided the lowest value is not less than 85% of the specified strength. If the concrete made in accordance with the proportions given for a particular grade does not yield the specified strength, such concrete shall be classified as belonging to the appropriate lower grade. Concrete made in accordance with the Proportions given for a particular grade shall not, however be placed in a higher grade on the ground that the test strength are higher then the minimum specified.

Stripping:

1. The Engineer-in-charge shall be informed in advance by the contractor of har intention to strike the form work. While fixing the time of removal of form work, due consideration shall be given to local conditions, character of the structure, the weather and other conditions that influence the setting of concrete and of the materials used in the mix. In normal circumstances (generally where temperatures are above 20.C) and where ordinary concrete is used, forms may be struck after expire or periods specified in item No.9.1 (A) for respective item of form work.

2. All form work shall be removed without causing any shock or vibration as would damage the concrete. Before the soft and struts are removed, the concrete surface shall be gradually exposed, where necessary in order to ascertain that concrete has sufficiently hardened. Centering shall be gradually and uniformly lowered in such a manner as to permit the concrete to take stresses due to its own weight uniformly and gradually . Where internal metal tiles are permitted, they or their removable parts shall be extracted without causing any damage to the concrete and remaining holes filled with mortar . No permanently embedded metal part shall have less than 25 mm. cover to the finished concrete surface. Where it is intended to re-use the form work, it shall be cleaned and made good to the satisfaction of the Engineer-in-charge. After removal of form work and shutting, the Executive Engineer shall inspect the work and satisfy by random checks that concrete produced is of good quality .

3. Immediately after the removal of forms, all exposed bolts etc. passing through the cement concrete member and used for stuttering or any other purpose shall be cut inside the cement concrete member to a depth of at least 25 m. below the surface of the concrete and the resulting holes be filled by cement mortar

, all fins, caused by form joints, all cavities produced by the removal of form tiles and all other holes and depressions, honeycomb spots, broken edges or comers and other defects, shall be thoroughly cleaned", saturated with water and carefully pointed and rendered true with mortar of cement and fine aggregate mixed in proportions used in the grade of concrete that is being furnished and of as dry consistency as is possible to use. Considerable pressure shall be applied in filling and pointing to ensure through filling in all voids. Surface which are pointed shall be kept moist for a period of 24 hours. If rock pockets/honeycombs in the opinion of the Engineer-in-charge are of such an extent or character as to effect the strength of the structure materially or to endanger the life of the steel reinforcement, he may declare the concrete defective and require the removal and replacement of the portions of structure affected.

#### Formwork

##### WORKMANSHIP

#### 1 Formwork

The form work shall conform to the shape lines and dimensions as shown on the plans and be so constructed as to remain sufficiently rigid during the placing and compacting of the concrete. Adequate arrangements shall be made by the contractor to safeguard against any settlement of the form work during the course of concreting and after concreting. The form work of shuttering, centering, scaffolding, bracing etc. shall be as per design. Stripping Time In normal circumstances and where ordinary cement is used forms may be struck after expiry of following periods ---

a. Sides of walls columns & vertical faces of beams	2-4 Days
b. Beam soffits (props. left under)	7 Days
c. Removal of props slabs	
i. Slabs spanning upto 4.5 Mts.	7 Days
ii. Spanning over 4.5 Mts.	14 Days
d. Removal of props to beams and Arches	
i. Spanning upto 6 Mts.	14 Days
ii. Spanning over 6 Mts.	21 Days

#### Procedure when removing the form work:

All form work shall be removed without such shock or vibration as would damage the reinforced concrete surface. Before the soffit form work and struts are removed, the soffits and the concrete surface shall be exposed where necessary in order to ascertain that the concrete has sufficiently hardened.

#### Centering:

The centering to be provided shall be got approved. It shall be sufficiently strong to ensure absolute safety of the form work and concrete work before, during and after pouring concrete. Watch should be kept to see that behavior of centering and form work is satisfactory during concreting. Erection should also be such that it would allow removal of forms in proper sequence without damaging either the concrete or the forms to be removed.

#### Scaffolding:

All scaffolding, hoisting arrangements and ladders etc. required for the facilitating of concreting shall be provided and removed on completion of the work by the contractor at his own expenses. The scaffolding, hoisting arrangements and ladders etc. shall be strong enough to withstand all live, dead and impact loads expected to act and shall be subject to the approval of the Engineer-in-charge. However, the contractor shall be solely responsible for the safety for the scaffolding, hoisting arrangements, ladders, work and workmen etc. The scaffolding, hoisting arrangements and ladders shall allow easy approach to the work spot and afford easy inspection.

Reinforcement:

The bars shall be kept in position by the following methods-

i In case of beam and slab construction, sufficient number of pre cast cover blocks in cement mortar 1:2 (1 cement, 2 coarse sand) about 4 x 4 cms. section and of thickness equal to the specified cover shall be placed between the bars and shuttering as to secure and maintain the requisite cover of concrete over the reinforcement.

ii In case of columns and walls, the vertical bars shall be kept in position by means of timber templates with slots accurately cut in them, the templates shall be removed after concreting has been done below it. The bars may also be suitably tied by means of annealed steel wires to the shuttering to maintain their position during concreting.

All bars projecting from pillars, columns beams slabs etc. to which other bars and concrete are to be attached or bounded to lateron, shall be protected with a coat of thin neat cement grout, if the bars are not likely to be incorporated with succeeding mass of concrete within the following days. This coat of thin neat cement shall be removed before concreting.

SLUMP TEST:

WORKABILITY:

Slump test is used to determine the workability of fresh concrete. Slump test as per IS: 1199-1959 is followed. The apparatus used for doing slump test are slump cone and tamping rod.

WORKMANSHIP :

The internal surface of the mould is thoroughly cleaned and applied with a light coat of oil. the mould is placed on a smooth, horizontal, rigid and nonabsorbent surface. The mould is then filled in four layers with freshly mixed concrete, each approximately to one fourth of the height of the mould. Each layer is tamped 25 times by the rounded end of the tamping rod (strokes are distributed evenly over the cross section). After the top layer is rodded, the concrete is struck off the level with a trowel. The mould is removed from the concrete immediately by raising it slowly in the vertical direction. The difference in level between the height of the mould and that of the highest point of the subsided concreting is measured. This difference in height in mm is the slump of the concrete.

Results: The slump measured should be recorded in mm of subsidence of the specimen during the test. Any slump specimen which collapses or shears off laterally gives incorrect result and if this occurs, the test should be repeated with another sample. If in the repeat test also, the specimen shears, the slump should be measured and the fact that the specimen sheared, should be recorded.

In case of a dry sample ,slump will be in the range of 25-50 mm that is 1-2 inches. But in case of a wet concrete, the slump may vary from 150-175 mm or say 6-7 inches. So the value of slump is specifically mentioned along the mix design.slump depends on many factors like properties of concrete ingredients-aggregates etc. also temperature has its effect on slump value. So all these parameters should be kept in mind when deciding the ideal slump. Value of slump can be increased by the addition of chemical admixtures like mid-range or high range water reducing agents without changing the water cement ratio.once the cone is failed and topped off (excessive concrete from top is cleared) raise the cone with in 5-10 seconds.

The dimensions are

Top diameter: 10cm

Bottom diameter: 20 cm

Hight: 30 cm

#### EXPANSION JOINTS:

Providing, applying, fixing in position expansion joint board of approved make as per I.S. 1838/latest amendment and filler (scaling) compound as per I.S.1934/latest amendment as per the direction of Engineer-in-charge.

##### a General:

Normal practice in runways, bridges, buildings, and road constructions, is to provide expansion joints of 12 mm, 18 mm or 25 mm width between butting slabs of reinforced concrete at designed interval and at intersections with other constructions. These joint fillers are then covered with sealing compounds offer the complete set of products in this area.

##### b Expansion joints:

It consists of a fiber board impregnated with bituminous material of render it durable and waterproof. It is compressible, resilient and non-extrudible. It shall conform to IS:1838-P(1)/1983 with latest amendment.

#### Construction Joints :-

Concreting shall be carried out continuously upto construction joints, the position and details of which shall be as indicated on the drawings or predetermined by the Engineer-in-charge. When the work has to be resumed on a surface which has hardened, such surface shall be roughened. The surfaces shall then be thoroughly cleaned, and all laitance removed with wire brushes and compressed air. In addition to that, the surface shall be completely wetted and slushed with a coat of neat cement grout immediately before placing of new concrete. The first layer of concrete to be placed on these surfaces shall not exceed 150mm in thickness and shall be well rammed against old work, particular attention being paid to corners and close spots. Shear keys shall be provided to all construction joints. Reinforcing rods shall be extended 35 diameters beyond construction joints unless otherwise indicated. Joints in beams shall be kept at places where the shear force is minimum and these shall be at right angles to the direction of main reinforcement. In the case of columns, the joints shall be horizontal and about 150mm below the bottom of the deepest beam framing into the column head, and the portion of the column between the stopping off level and the top of the slab shall be concreted with the beam. Joints in the R.C.C. slab shall be provided parallel to main reinforcements, or slabs supported thereon. Beams, girders, brackets, columns capitals and branches shall be considered as part of the

floor system and shall be monolithically placed therewith. Construction joints in water retaining structure: Construction joints for the water retaining structures and underground storage area and lift pits in water logged areas shall be constructed as detailed out in the drawings and/or as determined by the Engineer-in-charge prior to taking up any work of this type. Work shall conform to I.S. 3370 unless shown otherwise. Reinforcement in the walls or otherwise shall normally be continued unless otherwise indicated in the drawings. Standard key joints should, however, be provided if so directed, in addition to the water stoppers in the concrete as specified and shown in the drawing.

The water stoppers shall be PVC or rubber type. Whenever required the transverse joints of the sheets shall either be welded or brased, or overlapped. In case of overlapping of the stoppers the overlap should be minimum and equal to the width of such water stoppers. In case of the PVC or rubber water stoppers, the stoppers can be of approved make. Deposition and compaction of concrete prior and after the construction joint should be very carefully done, so as to avoid internal honey combing. Before the next pour of concrete, the joints should be cleaned of the loose mortar, aggregates dust, preferably by hosing down the water. The surface of the old concrete which is coming in contact with the next pour should be wire brushed and reasonably sprinkled with thick cement slurry so as to ensure proper bond.

Item No. 6 : Providing and fixing T.M.T (Thermo Mechanically Treated) bars conforming to relevant IS Fe 500 grade for R.C.C. works including bending, binding and placing in position etc. incl. cost of binding wire etc. complete up to floor two level .

#### Materials

Thermo Mechanically Twisted (TMT) steel bars (High yield strength steel deformed bars) shall conform to M-12. Mild steel bars shall conform to M-11, mild steel binding wires shall conform to M-13. the steel shall be of Fe-500 grade of TATA or SAIL Make.

#### Workmanship

The work shall consists of furnishing and placing reinforcement to the shape and dimensions shown as on the drawing or as directed. Steel shall be clean and free rust and loose mill scale at the time of fixing in a positions and subsequent concreting. Reinforcing steel shall conform accurately to the dimensions given in the bar bending scheduled shown on relevant drawings. Bars shall be bent cold to specified shape and dimensions or /directed using a proper bar bender, operated by hand or power to attain proper radius of bends, Bars shall not be bent or straightened in matter that will injure the material. Bars bent during transport of handling shall be straightened before being used on the work. They shall not be heated to facilitate bending. Unless otherwise specified a " type hook at the end bar shall invariably be provided to main reinforcement. The radius of the bend shall not be less than twice the diameter of the bar beyond the end of the curve shall be at least four time the diameter of the round bar. In case of bars which are not round and in case of deformed bars, the diameter shall be takes as the diameter of circle having an equivalent effective area. The hooks shall be suitably excused to prevent any splitting of the concrete.

All the reinforcement bars shall be accurately placed in exact position shown on the drawings, and shall be securely held in position during placing of concrete by annealed binding wire not less than 1 mm in size and by using stay blocks or metal

chair spacers, metal hanger supporting wires or other approved devices at sufficiently close intervals. Bars shall not be allowed to sag between supports nor displaced during concreting or any other operations of the work. All devices used for positioning shall be of non-corrodible material. Wooden and metal supports shall not extend to the surface of concrete except where shown on drawings. Placing bars on layers of freshly laid concrete as the work progresses for adjusting bar spacing shall not be allowed. Pieces of broken stone or brick and wooden blocks shall not be used. Layers of bars shall be separated by spacer bars, precast mortar blocks or other approved devices, reinforcement after being placed shall be maintained in a clean condition until completely embedded in concrete. Special care shall be exercised to prevent displacement of reinforcement in concrete already placed. To prevent reinforcement from corrosion, concrete cover shall be provided as indicated on drawings. All the bars protruding from concrete and to which other areas are to be spliced and which are likely to be exceeding 10 days shall be protected by a thick coat of neat cement grout. Bars crossing each other where required shall be secured by binding wires (annealed) of size not less than 1 mm in such a manner that they do not slip over each other at the time of fixing and concreting. As far as possible, bars of full length shall be used. In case this is not possible, overlapping of bars shall be done as directed. When practicable overlapping bars shall not touch each other, but be kept apart by 95 mm or 1.25 times the maximum size of the coarse aggregate whichever is greater by concrete between them. Where not feasible, overlapping bars shall be bound with annealed wires, not less than 1 mm thick twisted tight. The overlaps shall be staggered for different bars and located at points along the span where neither shear nor bending moment is maximum.

Whenever indicated on the drawing or desired by the Engineer-in-charge, bars shall be jointed by couplings which shall have a cross-section sufficient to transmit the full stresses of bars. The ends of the bars that are joined by coupling shall be upset for sufficient length so not less than the nominal cross-section of the bar. Threads shall be standard threads. Steel for coupling shall conform to IS 226. When permitted or specified on the drawings, joints of reinforcement. Bars shall butt-weld so as to transmit their full stresses. Welded joints shall preferably be located at points where steel will not be subject to more than 75 percent of the maximum permissible stresses and welds so staggered that at any one section not more than 20 percent of the rods are welded. Only electric arc welding a process which excludes air from the molten metal and conforms to any or all other special provisions for the work shall be accepted. Suitable means shall be provided for holding bars securely in position during welding. It shall be ensured that no voids are left in welding and when welding is done in two or three stages. Welding surface shall be cleaned properly. Ends of the bars shall be cleaned of all loose scale, rust, grease, paint and other foreign matter before welding. Only competent welders shall be employed on the work. The M.S. electrodes used for welding shall conform to IS 814. Weld pieces of reinforcement shall be tested. Specimens shall be taken from the actual site and number and frequency of test shall be as directed. Cold twisted steel bars shall be used with or without hooks at the ends. Deformed bars without hooks shall, however, comply with relevant anchorage requirement.



### Mode of Measurement and Payment

For the purpose of calculating consumption, wastage shall not be permitted beyond 7 ½ percent. Excess consumption over 7.5% will be charged at penal rate reinforcement shall be measured in length including overlaps, separately for different diameters as actually used in the work. Where welding or coupling is resorted to, in place of lap joints, such joints shall be measured for payment as equivalent length of overlap as per design requirement. From the length so measured, the weight of reinforcement shall be calculated in tones on the same basis of as per, M-19 even though steel is supplied to the contractor by the department on actual weight. Length shall include hooks at the ends. Wastage and annealed steel wire for binding shall not be measured and the cost of these Descriptions be deemed to be included in the rate for reinforcement. The rate for reinforcement include cost of steel binding wires its carting from department store so work site, cutting bending placing, binding and fixing in position a shown on the drawings and as directed. It shall also include all devices for keeping reinforcement in approved positions, cost of joining as per approved method and all wastage and spacer bars.

The rate shall be for a unit of one kg.

Item No.7: Filling in trenches with available excavated earth in layer not exceeding 20cm in depth consolidating each deposited layer by ramming & watering

The backfilling material shall be properly consolidated by watering and ramming, taking due care that no damage is caused to the Constructed work.

Where the trenches are excavated in soil, the filling from the bottom of the trench to the level shall be done by hand compaction with selected approved earth in layers not exceeding 8 cm;

In case of excavation of trenches in rock, the filling upto a level 30 cm above the top of the pipe shall be done with fine materials, such as earth, moorum etc. The filling from a level 30 cm. Above the top of the trench shall be done by hand or other approved mechanical methods with broken rock filling of size not exceeding 20 cm mixed with fine material as available to fill up the voids.

Item No.8: Brick work using common burnt clay building brick having crushing strength not less than 35 kg/sq. cm. in foundation and plinth in Cement mortar 1:5 (1 Cement : 5 fine sand) As per Site Engineer.

#### 1.0. Materials

Water shall conform to M-1. Cement shall conform to M-3. Sand shall conform to M-4. Brick shall conform to M-10. Cement mortar shall conform to M-8.

#### 2.0. Workmanship

##### 2.1. Proportion:

2.1.1. The proportion of the cement mortar shall be 1:5 (1 cement: 5 fine sand) by volume.

##### 2.2. Wetting of bricks:

2.2.1. The bricks required for masonry shall be thoroughly wetted with clean water for about two hours before use or as directed. The cessation of bubbles, when the bricks are wetted with water is as indication of through wetting of bricks.

### 2.3. Laying:

2.3.1. Bricks shall be laid in English bond unless directed otherwise. Half or cut bricks shall not be used except when necessary to complete to bond; closures in such case shall be cut to required size and used near the ends of walls.

2.3.2. A layer of mortar shall be spread on full width for suitable length of the lower course. Each brick shall first be properly bedded and set home by gently tapping with handle of trowel or wooden mallet. Its inside face shall be flushed with mortar before the next brick is laid and pressed against it. On completion of course, the vertical joints shall be fully filled from the top with mortar.

2.3.3. The walls shall be taken up truly in plumb. All courses shall be laid truly horizontal and all vertical joint shall be truly vertical. Vertical joints in alternate course shall generally be directly one over the other. The thickness of brick course shall be kept uniform.

2.3.4. The brick shall be laid with frog up wards. A set of tools comprising of wooden straight edges, man son's spirit level, square half meter rub, and pins, string and plumb shall be kept on the site of work for frequent checking during the progress of work.

2.3.5. Both the faces of walls of thickness greater than 23 cms. shall be kept in proper place. All the connected brick work shall be kept not more than one meter over the rest of the work. Where this is not possible, the work shall be raked back according to bond (and not left toothed) at an angle not steeper than 45 degrees.

2.3.6. All futures, pipes, outlets of water, hold fasts of doors and windows etc. which are required to be built in wall shall be embedded in cement mortar

### 2.4. Joints:

2.4.1. Bricks shall be so laid that all joints are quite flush with mortar. Thickness of joints shall not exposed 12 mm. The face joints shall be raked out as directed by raking tools daily during the progress of work, when the mortar is still green so as to provide key for plaster or pointing to done.

2.4.2. The face of brick shall be cleaned the very day on which the work is laid and all mortar dropping removed.

### 2.5. Curing:

2.5.1. Green work shall be protected from rain suitably. Masonry work shall be kept moist on all the faces for a period of seven days. The top of masonry work shall be kept well wetted at the close of the day.

### 2.6. Preparation of foundation bed:

2.6.1. If the foundation is to be laid directly on the excavated bed, the shall be leveled, cleared of all loose materials, cleaned and wetted before stating masonry, If masonry is to be laid on concrete footing, the top of concrete shall be cleaned and moistened. The contractor shall obtain the engineer's approval for the foundation bed before foundation masonry is started. When pucca flooring is to be provided flush with the top to plinth, the inside plinth offset shall be kept lower than the outside plinth top by the thickness of the flooring.

2.7. The frames of doors, windows, cupboards etc. shall be housed into the brick work at the correct location and level as directed. The heavy steel doors, window frames etc. shall be built in with work, but for ordinary steel doors and windows required opening for frames, hold-fasts, etc., shall be in the wall and frame embedded later on in order to avoid damage to the frames.

2.8. Necessary scaffolding shall be provided. The supports of the scaffolding shall be sound and strong tied, together with horizontal pieces over which the scaffolding plunks shall be fixed. Simple scaffolding shall be allowed normally. In this case scaffolding hole shall rest in hole header horizontal coarse only. Minimum number of holes be left in brick work for supporting horizontal scaffolding poles. The contractor is responsible for providing and maintaining sufficiently strong scaffolding so as to withstand all loads likely to come upon it.

2.9. For the face of brick work, where plastering is to be done, joints shall be racked out to a depth not less than thickness of joints. The face of brick work shall be cleaned and mortar dropping removed on very same day that brick work is laid.

### 3.0. Mode measurements & payment

3.1. The measurements of this item shall be taken for the brick masonry fully completed in foundation up to plinth.

The limiting dimensions not exceeding those shown on the plinths or as directed shall be final. Battered tapered and curved portions shall be measured net.

3.1. The masonry work of G.F. i.e. above plinth level to floor two level shall be measured and paid under this item.

3.2. Brick work in parapet shall be included in the corresponding masonry item of store immediately below the floor above which the parapet is built.

3.3. No deduction shall be made from quantity of brick work nor nay extra payment made for embedding in masonry of marking holes in respect of following item.

(1) Ends of joints, beams, posts, girders, rafters, purlins trusses corbel, steps, etc. where cross sectional area does not exceed 500 sq.cm.

(2) Opening not exceed in 1000 sq.cm.

(3) Wall plate sand bed plates bearing of slab, chhajjas, and like whose thickness does not exceed 10 cms. and the bearing does not extend the full thickness of wall.

(4) Drainage holes and recesses for cement concrete blocks to embed hold fasts for doors, window etc.

(5) Iron fixtures, pipes up to 300 mm. dia. hold fasts of doors, and window built into masonry and pipes etc. for concealed wiring.

(6) Forming charges of section not exceeding 350 sq.cm. in masonry.

(7) Apparatuses for fire places, shall not be deducted nor shall extra labour required to make splaying of jumps,

throating and making trenches over the aperture be paid for separately.

3.4. The rate shall be for a unit of one cubic meter.

Item No.9: 20 mm. Thick sand faced cement plaster with finish on walls up to height 10 meters above ground level consisting of 12 mm. Thick backing coat of c.m. 1:3 (1 cement : 3 sand) and 8 mm. Thick finishing coat of c.m. 1:1 (1 cement : 1 sand) etc. complete.

a. Scaffolding – Wooden ballies, bamboos, planks, treatles and other scaffolding shal be sound. These shall be properly examined before erection and use. Stage

scaffolding shall be provided for ceiling plaster, which shall be independent of the walls.

b. Preparation of background – The surface shall be cleaned of all dust, loose mortar droppings, traces of algae, efflorescence and other foreign matter by water or by brushing. Smooth surface be roughened by wire brushing if it is not hard and hacking if it is hard. In case of concrete surface, if a chemical retarder has been applied to the formwork, the surface shall be roughened by wire brushing and all the resulting dust and loose particles cleaned off and care shall be taken that none of the retarders is left on the surface. Trimming of projections on brick / concrete surfaces where necessary shall be carried out to get an even surface.

Racking of joints incase of masonry work where necessary shall be allowed to dry out for sufficient period before carrying out the plasterwork.

The work shall not be soaked but only damped evenly before applying the plaster. If the surface becomes dry, such areas shall be moistened again.

For external plaster, the plastering operation shall be started from top floor and carries downwards. For internal plaster, the plastering operations may be started wherever the building frame and cladding work are ready and the temporary supports of the ceiling resting on the wall of the floor have been removed. Ceiling plaster shall be completed before starting plaster to walls.

c. Application of Plaster:

The plaster about 15 x15 cms. shall be first applied horizontal and vertically at not more than 2 meters intervals over the entire surface to serve as gauge. The surface gauges shall be truly in place of the finished plastered surface. The mortar shall then be applied in uniform surface slightly more than the specified thickness then brought to a true surface by working wooden straight edge reaching across the gauges with small upward and sideways movements at a time. Finally, the surface shall be finished off true with a trowel of wooden flat according as a smooth or a sandy granular texture is required. Excessive trawling or overworking the float shall be avoided. All corners, arises, angles and junctions shall be truly vertical or horizontal as the case may be and shall be carefully finished. Rounding or chamfering, corners, junction's etc. shall be carried out with proper templates to the size required.

Cement plaster shall be used within half an hour after addition of water. Any mortar or plaster, which is partially set, shall be rejected and removed forthwith from the site.

In suspending the work at the end of the day, the plaster shall be left out clean to the line both horizontally and vertically. When recommencing the plaster, the edges of the old work shall be scrapped clean and wetted with cement putty before plaster is applied to the adjacent areas to enable the two to properly join together. Plastering work shall be closed at the end of the day on the body of the wall and nearer that 15 cms to any corners or arises. It shall not be closed on the body of features such as plaster bands and cornices not at the corners of arises. Horizontal points in plasterwork shall not also occur on parapet tops copings as those

invariably lead to leakage. No portion of the surface shall be left out initially to be packed up later on.

Each coat shall be kept damp continuously till the next coat applied for a minimum period of 7 days. Moistening shall commence as soon as plaster is hardened sufficiently. Soaking on walls shall be avoided and only as much water as can be readily absorbed shall be used, excessive evaporation on the sunny or windward side of building in hot air to dry weather shall be prevented by hanging matting or gunny bags on to the outside of the plaster and keeping them wet.

The work shall be carried out in two coats. The backing coat (base coat) shall be 12 mm. thick in C.M. 1:3. The thickness of back coat shall be 12 mm. Average and the proportion shall be cement mortar 1:3 (1 cement: 3 sand) before the first coat hardens its surface shall be beaten up by edges of wooden tapers and close dents shall be made on the surface. Subsequent coat shall be applied after this coat has been allowed to set for 3 to 5 days, depending upon the weather conditions. The surface shall not be allowed to dry during this period.

The second coat shall be completed to 8 mm thickness in C.M. 1:1 as described above, including raising sand facing by bushing. The sample of sand shall be got approved before the work is started. The whole work shall be carried out uniformly as our sample approved.

d. Curing :

Watering shall be done for 14 days. Item includes preparation of bases by scraping of removing loose mortar, scaffolding including erecting and dismantling with labour, materials, tools and plants required for satisfactory completion of items.

e. Mode of Measurements and Payment :

i. The rate shall include the cost of all materials; labour for scaffolding etc. involved in the operations described under workmanship.

ii. All plastering shall be measured in square meters unless otherwise specified. Length, breadth or height shall measure correct to a centimeter.

iii. Thickness of the plaster shall be exclusive of the thickness of the key i.e. grooves of open joints in brickwork, stone work etc. or space between laths. Thickness of plaster shall be average thickness minimum 10 mm at any point on this surface.

iv. This item included plastering up to floor two level.

v. The measurement of wall plastering shall be taken between the walls or partition (dimensions before plastering being taken) for length and from the top of floor or skirting to ceiling for height. Depth of cover of cornices if any shall be deducted.

vi. Soffits of stairs shall be measured as plastering on ceilings.

vii. For jambs, soffits, sills etc. for openings not exceeding 0.5 sq. mts. Each in area for ends of joints, beams, posts, girders, step etc. not exceeding 0.5 sq. mts. Each in

area for and for openings exceeding 0.5 sq. mt. And not exceeding 3 sq. mts. In each area deductions and additions shall be made in the following manner.

- a) No deductions shall be made for ends of joints, beams, posts etc. and openings not exceeding 0.5 sq. mts. Each and no addition shall be made for reveals, jambs, soffits, sills etc. of these openings for finish to plaster around ends of joints, beams, posts etc.
- b) Deduction for openings exceeding 0.5 sq. mts. But not exceeding 3 sq. mts. Each shall be made as follows and no additions shall be made for reveals, jambs, soffits sills etc. of these openings –
  - i) When both faces of all walls are plastered with same plaster, deduction shall be made for one face only.
  - ii) When two faces of wall are plastered with different types of plaster or if one face is plastered and the other pointed, deductions shall be made from the plaster or pointing on the side of frame for doors, windows etc. on which width of reveals is less than that on the other side but no deduction shall be made on the other side. Where width of reveals on both faces of all are equal, deductions of 50 % of area of opening on each face shall be made from areas of plaster and/or pointing as the case may be.
- viii. For openings having doorframes equal to projecting beyond the thickness of wall, full deductions for opening shall be made from each plastered face of the wall.
  - i) In case of opening of area above 3 sq. mts. Each deduction shall be made for opening but jambs, soffits and sills shall be measured.
  - ii) The rate shall be for a unit of one Sq. Mts.

Item No. 10 :Wall Painting (Two Coats) with Plastic emulsion paints of approved brand and manufacture on uncoated wall surface give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.

#### 1.0. Materials

Water shall be conform M-1. The plastic emulsion shall conform to I.S.: 5411-1969 (part-I).

#### 2.0. Workmanship

2.1. Scaffolding : The relevant specifications of item-No. 18.11 Para 2.1 shall be followed.

2.2. Preparation of surface : The relevant specification of item No. 18.44 Para 2.2 shall be followed.

#### 2.3. Preparation of Mix :

This shall be done as per manufacture's instructions. The thinning of emulsion is to be done with water and not with turpentine. The quantity of thinner to be added shall be as per manufacturer instructions.

#### 2.4. Application :

2.4.1. Before pouring into small containers for use, the paint shall be stirred thoroughly in item container. When applying also, the paint shall be continuously stirred in the smaller container, so that its consistency is kept uniform.

2.4.2. The paint shall be laid on evenly and smoothly by means of crossing and laying off the crossing and consist of covering the area over with paint, brushing the surface hard for the first time over and then, brushing alternately in opposite direction two or three times and then finally brushing lightly in direction at right angles to the same. In this process, no brush Marks shall be left after the laying off is finished. No hair marks from the brush or clogging of paint puddles in the corners of panels, angles of moldings, etc. shall be left on the work. The full process of crossing and laying off will constitute one coat.

2.4.3. The paint shall be applied with brush or rollers. For undecorated surfaces, the surface shall be treated with minimum two coats of cement water proofing paint. The second or subsequent coat shall not be started until the proceeding coat as become sufficiently hard to resist marking by brushing being used.

2.4.4. The surface on finishing shall present a flat velvety smooth finish. It shall be even and uniform in shade without patches, brush marks, paint drops etc.

#### 2.5. Precautions :

(a) Old brushes if they are to be used with emulsion paints, shall be completely dried of turpentine or oil paint by washing in warm soap water. Brushes shall be quickly washed in water immediately after use and kept immersed in water fusing break periods to prevent the paint from hardening on the brush.

(b) In the preparation of wall for plastic emulsion painting, no oil base petals shall be used in filling cracks, holes etc.

(c) Splashes on floors etc. shall be cleaned out without delay as they will be difficult to remove after hardening.

(d) Washing or surfaces treated with emulsion paint shall not be done within 3 to 4 weeks of application

2.6. Protective payment: The relevant specifications of item No. 18.11 shall be followed.

### 3.0. Mode of measurements and payment

3.1. The relevant specifications of item No. 18.11 shall be followed.

3.2. The rate shall be for a unit of One sq. meter

Item No.11: Providing & fixing Broken Glass chips on cement concrete coping of compound wall during laying of C.C. coping using broken glass chips @5 kg/ Sq.m (Rate includes cost of glass chips but excluding cost of Cement concrete coping)

#### Materials:

- Broken Glass Chips: Use clean, sharp, and preferably colored glass chips for a better visual deterrent and aesthetic appeal.

#### Preparation:

- Broken glass chips shall be applied directly on the coping beam during the concrete casting work of the beam.
- Ensure proper curing:

Ensure the cement concrete coping is properly cured before applying the mortar.

#### Fixing the Glass Chips:

- Embed Glass Chips:

While the mortar is still fresh, embed the broken glass chips into the mortar, ensuring they are firmly pressed in place.

- Coverage:

Ensure the glass chips cover the entire top surface of the coping, creating a continuous layer.

- Clean Finish:

After the glass chips are embedded, remove any excess mortar that may have come out between the chips using a trowel or other suitable tool.

#### Curing:

- Moisture: Keep the area damp for a few days to allow the mortar to cure properly.
- Protection: Protect the newly installed glass chips from excessive sunlight or rain during the curing period.

#### Safety:

- Personal Protective Equipment (PPE):

Wear appropriate PPE, including gloves and eye protection, when handling broken glass chips and cement mortar.

- Clean-up:

Dispose of any broken glass chips or mortar debris properly after the work is completed.



**PRICE BID: Name of Work : Development of Compound Wall at New Hazardous waste Landfill site for Vapi Green Enviro Limited**

**ABSTRACT**

<b>Item No.</b>	<b>Description</b>	<b>Qty</b>	<b>Rate Rs.</b>	<b>Unit</b>	<b>Amount</b>
<b>Work Up to Plinth Level</b>					
1	Clearing and rubbing road land including uprooting rank vegetation grass bushes, shubs, sapling and trees girth up to 300mm removal of stumps of trees cut earlier and disposal of unserviceable materials (A) by mechanical means in area of light jungle	20000		Sq. Mtr	
2	Excavation for foundation upto 1.50 Mt depth including sorting out and stacking of useful materials and disposing the excavated stuff up to estate limit lead in all kind of soil	429		Cu. Mtr	
3	Boring hole of 300 mm. dia., 3.0 mt. deep including under reaming inside the bore hole in ordinary soil & getting out the soil & disposal of the surplus excavated soil as directed with all lead and lift within estate limit including placing the reinforcement FE -500 inside bore and casting the pile including curing etc. complete.	488.4		Each	
4	Providing & Casting in Situ Cement Concrete in Grade M10 (Approx Prop. 1:3:6) Using Granite quartzite trap metal of Size 12mm to 25mm including the cost of foram work and consolidation curing etc completed. Plain Cement concrete Work M10	92.4		Cu. Mtr	
5	Providing and Casting in Situ Cement Concrete in Grad M25 Proportion of ingredients as per mix design by weight batchin using granite, quartzite trap metal of size 12mm to 20mm and or 6mm to 12mm including the cost of scaffolding centering foramwork, needle virated consolidation and curing etc. completed (excluding the cost of reinforcement).				
5A	Cast in Situ- Piles	123.2		Cu. Mtr	
5B	Column	114.4		Cu. Mtr	
5C	Beam	214.5		Cu. Mtr	
5D	Coping	48.4		Cu. Mtr	
6	Providing and fixing T.M.T (Thermo Mechanically Treated) bars conforming to relevant IS Fe 500 grade for R.C.C. works including bending, binding and placing in position etc. incl. cost of binding wire etc. complete up to floor two level.	55,055.00		Kg	

7	Filling in trenches with available excavated earth in layer not exceeding 20cm in depth consolidating each deposited layer by ramming & watering	231		Cu. Mtr	
8	Brick work using common burnt clay building brick having crushing strength not less than 35 kg/sq. cm. in foundation and plinth in Cement mortar 1:5 (1 Cement: 5 fine sand) As per Site Engineer.	562.1		Sq. Mtr	
<b>Work Up above plinth level</b>					
9	20 mm. Thick sand faced cement plaster with finish on walls up to height 10 meters above ground level consisting of 12 mm. Thick backing coat of c.m. 1:3 (1 cement : 3 sand) and 8 mm. Thick finishing coat of c.m. 1:1 (1 cement : 1 sand) etc. complete.	7,438.20		Sq. Mtr	
10	Wall Painting (Two Coats) with Plastic emulsion paints of approved brand and manufacture on uncoated wall surface give an even shade including throughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.	7,438.20		Sq. Mtr	
11	Providing & fixing Broken Glass chips on cement concrete coping of compound wall during laying of C.C. coping using broken glass chips @5 kg/ Sq.m (Rate includes cost of glass chips but excluding cost of Cement concrete coping)	377.3		Sq. Mtr	
				<b>Total Rs.</b>	

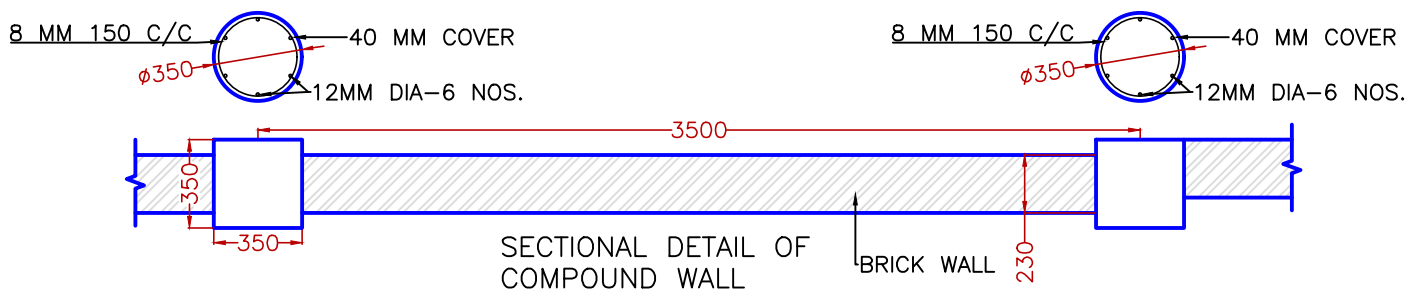
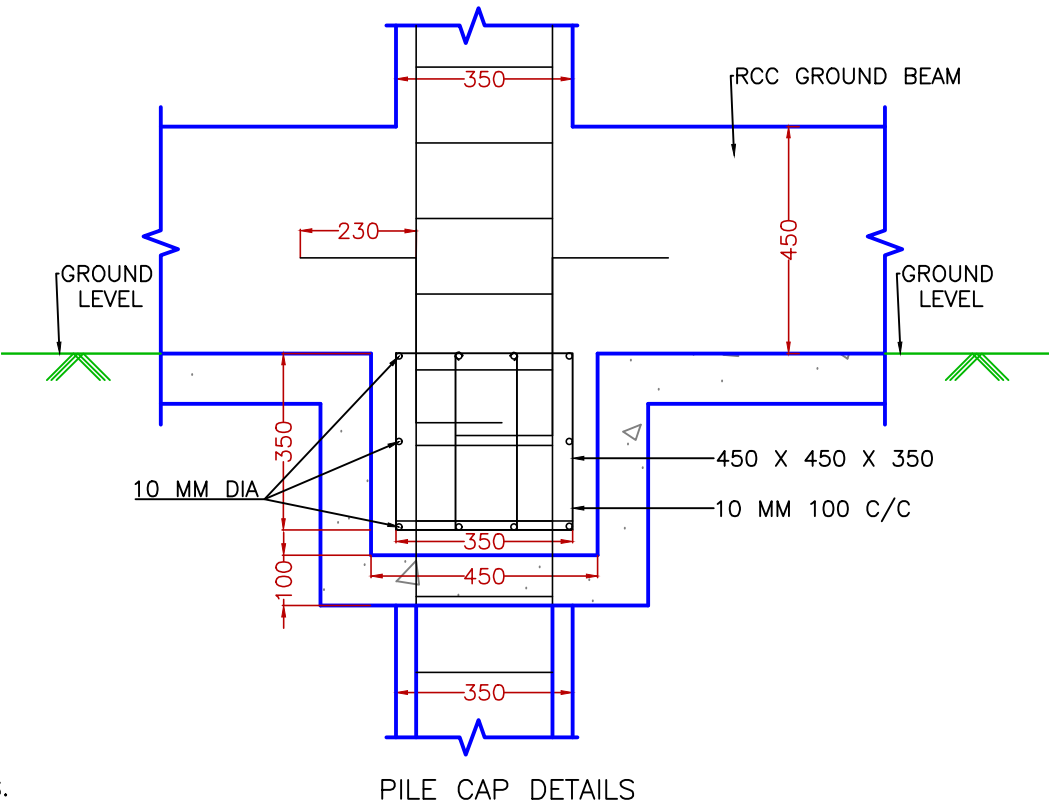
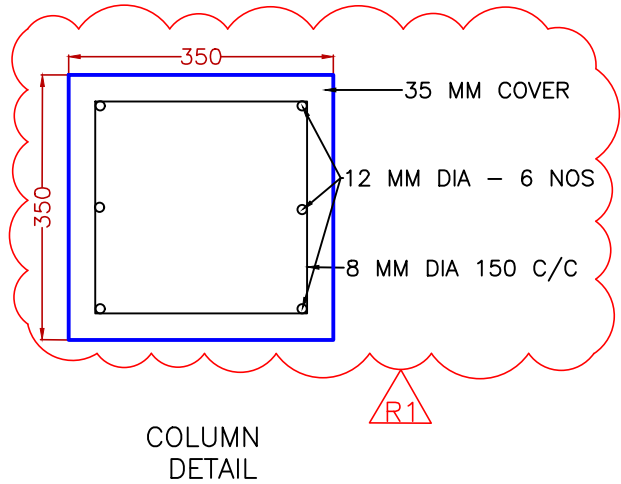
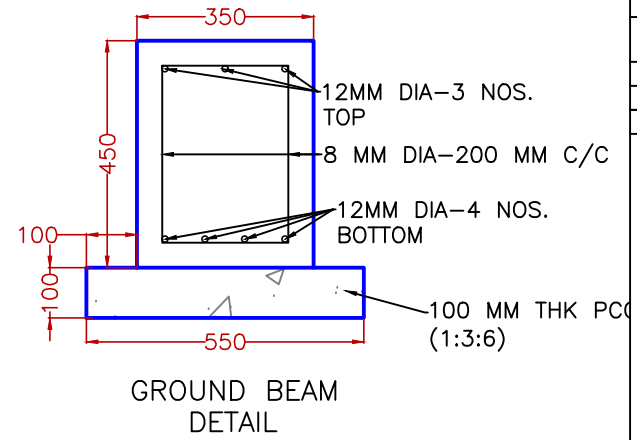
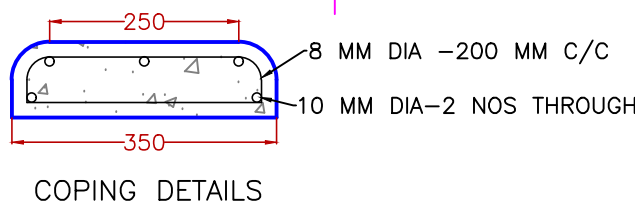
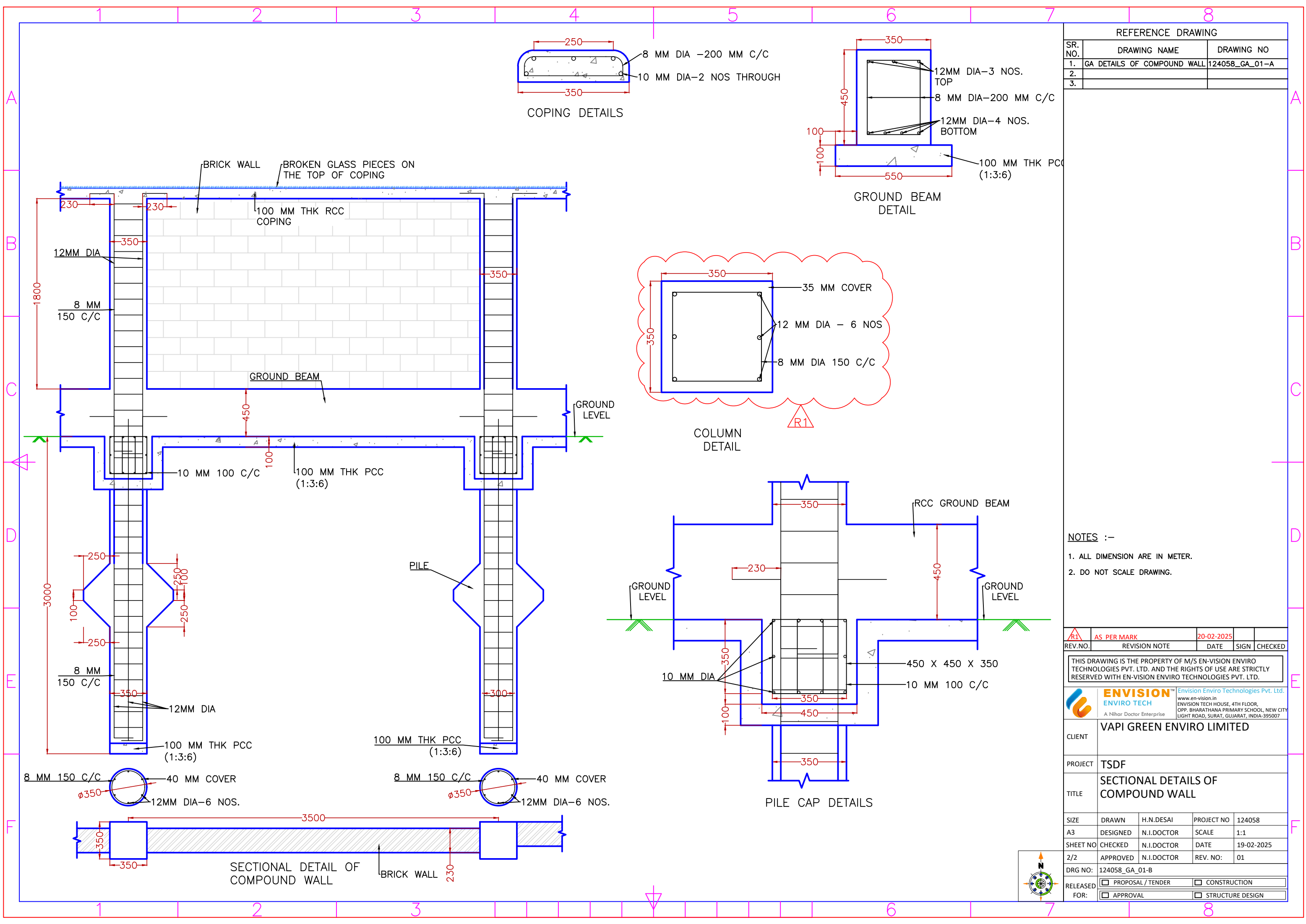
TOTAL BASIC AMOUNT Rs.	
GST (9% CGST + 9% SGST = Total 18%):	
<u>GRAND TOTAL:</u>	
<u>GRAND TOTAL AMOUNT (In Words):</u>	

Note: (1) Quantity of some items may change, or some items may not require for construction. Bidder has to accept all technical change,

(2) Bidder has to fill rates in above prescribed format only. No change shall be allowed in our signed documents. If any bidder has changed any word or language or figure or quantity, the bids shall be directly rejected. No argument shall be considered on this regard,

(3) Offer should be inclusive of all Taxes, Duties, Transportations, etc, Except GST

[CETP\\_DGM-PURCHASE](#)



REFERENCE DRAWING		
SR. NO.	DRAWING NAME	DRAWING NO
1.	GA DETAILS OF COMPOUND WALL	124058_GA_01-A
2.		
3.		

- NOTES :-
- ALL DIMENSION ARE IN METER.
  - DO NOT SCALE DRAWING.

REV.NO.	REVISION NOTE	DATE	SIGN	CHECKED
R1	AS PER MARK	20-02-2025		

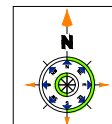
THIS DRAWING IS THE PROPERTY OF M/S EN-VISION ENVIRO TECHNOLOGIES PVT. LTD. AND THE RIGHTS OF USE ARE STRICTLY RESERVED WITH EN-VISION ENVIRO TECHNOLOGIES PVT. LTD.

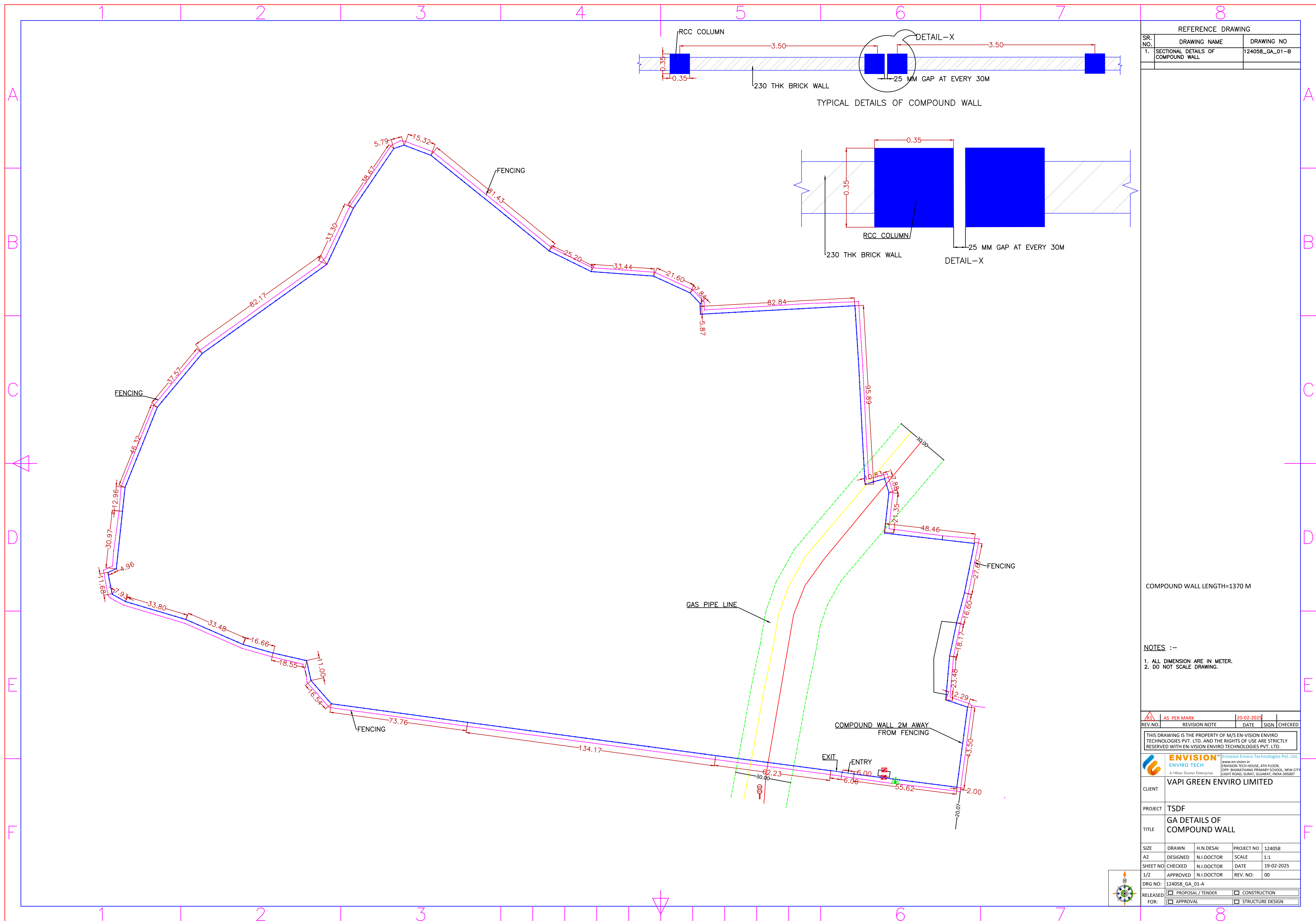


CLIENT	VAPI GREEN ENVIRO LIMITED		
PROJECT	TSDF		
TITLE	SECTIONAL DETAILS OF COMPOUND WALL		

SIZE	DRAWN	H.N.DESAI	PROJECT NO	124058
A3	DESIGNED	N.I.DOCTOR	SCALE	1:1
SHEET NO	CHECKED	N.I.DOCTOR	DATE	19-02-2025
2/2	APPROVED	N.I.DOCTOR	REV. NO:	01

DRG NO:	124058_GA_01-B		
RELEASED FOR:	<input type="checkbox"/> PROPOSAL / TENDER	<input type="checkbox"/> CONSTRUCTION	
	<input type="checkbox"/> APPROVAL	<input type="checkbox"/> STRUCTURE DESIGN	





REFERENCE DRAWING		
SR. NO.	DRAWING NAME	DRAWING NO
1.	SECTIONAL DETAILS OF COMPOUND WALL	124058_GA_01-B

TYPICAL DETAILS OF COMPOUND WALL

COMPOUND WALL LENGTH=1370 M

- NOTES :-
1. ALL DIMENSION ARE IN METER.
  2. DO NOT SCALE DRAWING.

REV. NO.	REVISION NOTE	DATE	SIGN	CHECKED
AS PER MARK		20-02-2024		

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CLIENT: VAPI GREEN ENVIRO LIMITED

PROJECT: TSDF

TITLE: GA DETAILS OF COMPOUND WALL

SIZE	DRAWN	H.N.DESAI	PROJECT NO	124058
A2	DESIGNED	N.I.DOCTOR	SCALE	1:1
SHEET NO	CHECKED	N.I.DOCTOR	DATE	19-02-2025
1/2	APPROVED	N.I.DOCTOR	REV. NO:	00

DRG NO: 124058\_GA\_01-A  
 RELEASED FOR:  PROPOSAL / TENDER  CONSTRUCTION  APPROVAL  STRUCTURE DESIGN

