

# Surat Municipal Corporation

South-West (Athwa) Zone



**Name of work : COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN  
SUB ZONE- 1 IN SOUTH WEST (ATHWA) ZONE, SURAT.**

## WORK NO.06

E- Tender

Tender (On Line) Notice No. Dy.Commissioner/ S.W.(A). Zone/ No.01/ 2026-2027.

## VOLUME-I : TECHNICAL BID

<b>DOWNLOAD OF TENDER DOCUMENTS FROM website smc.nprocure.com</b>	:	From 22/06/2026 to 07/07/2026 upto 18.00 hrs.
<b>DATE OF PRE-BID CONFERENCE</b>	:	-
<b>LAST DATE OF SUBMISSION OF ONLINE TENDER</b>	:	On or Before 07/07/2026 upto 18.00 hrs
<b>LAST DATE OF SUBMISSION OF TENDER FEES, EMD AND OTHER DOCUMENTS IN HARD COPY</b>	:	From 08/07/2026 to 16/07/2026, 18.00 hrs. to Chief Accountant, SMC, Muglisara, Surat by R.P.A.D./Speed Post
<b>Opening of technical bids (online)</b>	:	on 08/07/2026, 11.00 hrs.
<b>Opening of Price Bid (On line)</b>	:	on 17/07/2026, 11.00 hrs.
<b>ESTIMATED AMOUNT</b>	:	Rs. 49,64,161.80
<b>E.M.D.</b>	:	Rs. 49,700.00
<b>DOCUMENT FEES</b>	:	Rs.1,770.00 [Rs.1500.00 + 18% GST i.e. Rs. 270.00]
<b>CLASS</b>	:	"E-1"

TENDER TO BE SUBMITTED TO:  
THE CHIEF ACCOUNTANT,  
SURAT MUNICIPAL CORPORATION, TAPI BHAVAN  
SURAT – 395 003.

**SURAT MUNICIPAL CORPORATION  
TENDER DOCUMENT  
I N D E X**

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## SURAT MUNICIPAL CORPORATION

### 1.0 NOTICE INVITING TENDER

#### (A) RECEIPT AND OPENING OF TENDER :

Online Tenders will be received from the established and reliable contractors on or before 24.00 hours From **22/06/2026 to 07/07/2026** upto 18.00 hrs. on website [smc.nprocure.com](http://smc.nprocure.com). The tender received after due time and date specified will not be accepted.

#### (B)

#### 1. COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN SUB ZONE- 1 IN SOUTH WEST (ATHWA) ZONE, SURAT.

2. ESTIMATED COST : **Rs. 49,64,161.80**
3. EARNEST MONEY DEPOSIT : **RS. 49,700.00**
4. TIME LIMIT : **12 (Twelve) months (Incl. Monsoon)**
5. Document Fee : **Rs.1,770.00 [Rs.1500.00 + 18% GST]**
6. Registration required : **'E-1' class**

#### (C) OPENING OF TENDERS :

The tenders will be opened online in presence of bidders and opening authority subject to receipt of Tender Fees, EMD and other **Documents in hard copy**. The tenders will be opened in two stages i.e Technical Bid and Commercial Bid.

**Kindly Mention GST Number and Party code back side of Hard Copy of Tender Fee and EMD Document, if Fail to do so S.M.C. will be not be Responsible.**

#### (D) PURCHASE OF TENDER DOCUMENTS :

Tender Documents can be downloaded from [smc.nprocure.com](http://smc.nprocure.com) From **22/06/2026 to 07/07/2026** upto 18.00 hrs.

Tender documents fees of **Rs.1,770.00 [Rs.1500.00 + 18% GST]** per set which is required for submission of tender towards the cost of tender documents in cash, pay order or by demand draft of any nationalized bank, in favour of "The Commissioner, Surat Municipal Corporation" payable at Surat and shall be submitted alongwith EMD and other documents. The cost of the Tender Documents will not be refunded in any circumstances. The Surat Municipal Corporation shall not be liable for any postal delay in any case.

Demand Draft for E.M.D. & Tender (Bid) fee shall be submitted in electronic format through online mode (by scanning) while uploading the bid. This submission shall mean that E.M.D. & tender fee are received for purpose of opening of the bid. Accordingly offer of those shall be opened whose E.M.D. & tender (bid) fee is received electronically. However, for the purpose of realization of D.D. bidder shall send the D.D. in original through RPAD / Speed post as per Clause as to reach to Chief Accountant, SMC within 7 days from the last date of online submission of the bid as per tender notice.

**Penaltative action will be taken for not submitting original Demand Draft in the account department of Surat Municipal Corporation within 7 days from the last date of online submission of the bid for the first time as mentioned below.**

Sr. No.	Tender Amount	Penalty Amount in Rs.
1.	Up to Rs. 1 Crore	Rs. 10,000/-
2.	More than Rs. 1 Crore and Upto Rs. 10 Crore	Rs. 20,000/-
3.	More than Rs. 10 Crore and Upto Rs. 50 Crore	Rs. 30,000/-
4.	More than Rs. 50 Crore and Upto Rs. 100 Crore	Rs. 70,000/-
5.	More than Rs. 100 Crore	Rs. 1,00,000/-

**If bidder will not submit the penalty amount within 10 days to Surat Municipal Corporation and/or bidder will not submit the demand draft in original for the second time and after, Penaltative action shall be taken for abeyance of registration and cancellation of E-tendering code for 6 (six) months.**

Any documents in supporting of bid shall be in electronic format only through online (by scanning) & hard copy will not be accepted separately.

**(E) CONTRACT PERIOD :**

The total contract period is hereby fixed as **12 (Twelve) months (Incl. Monsoon)** from the **15<sup>th</sup> Day** of issuance of work order.

**(F) Tenderer must comply with and agree to all instructions & requirements in the Notice and in the Instructions to Tenderers, including requirements in the Contract Documents.**

- (a) All tenders must be submitted in the prescribed Tender form.
- (b) Each Tender must be accompanied by the completion Schedule.
- (c) Each tender must be accompanied by the Tender Security (Earnest Money Deposit) **Rs. 49,700.00**
- (d) The successful tenderer shall execute the Contract Agreement within fifteen days after the date of Notice of award.
- (e) The successful Tenderer will be required to furnish a performance bond (Security Deposit) of and amount equal to (2%) Two percent of the tendered amount.
- (f) The successful Tenderer shall furnish insurance in accordance with the contract documents.
- (g) The Surat Municipal Corporation may withhold issuance of the Notice of proceed for a period not exceeding fifteen days after the date of execution of the contract agreement.
- (h) The tender and tender guarantee bond (Earnest Money Deposit) shall be submitted by the Agency in whose name tender has been issued. Transfer of tender documents to any other party is prohibited.
- (i) All intending tenderers will have to purchase digital signatures in order to participate in the online bidding process.
- (j) **All the applicant contractors are required to have their own employers code number under EPF Act, 1952 and are required to comply the applicable provisions of said statute regularly and totally.**

**(k) Further the contractors for services are required to produce the certified copies of paid challans in respect of employees/workers employed by said contractor in respect of work allotted by Surat Municipal Corporation, along with copies of Pay Roll and Muster Roll. If the same are not produced, the bills will not be released.**

**(G) RECEIPT OF TENDER DOCUMENTS :**

The following details are to be submitted online on [smc.nprocure.com](http://smc.nprocure.com) :

a.Document fees and EMD Details

b.Commercial Bid

The following details shall be submitted in hard copy at prescribed address :

a. Tender fees in prescribed format

b. Earnest Money Deposit in prescribed format

c. Annexure I to X alongwith all necessary supporting documents

Please note that commercial bid shall not be submitted in hard copy under any circumstances. This will hold the tender liable for rejection.

**(H) Tender Validity Period :**

The validity period of the tender submitted for this work shall be of one hundred twenty (120) calendar days from date of opening of the price bid for this work and the Tenderer shall not be allowed to withdraw or modify the tender offer on his own during the validity period.

**(I) Rights Reserved :**

Without assigning any reason, The Surat Municipal Corporation reserves the right to reject the lowest or any other or all tenders or part of its. To waive any informality or irregularity in any tender, which in the opinion of the Surat Municipal Corporation does not appear to be in its best interest and the tenderer shall have no cause of action or claim against the Surat Municipal Corporation or its officers, employee, successors or assignees for rejection of this tender.

The Surat Municipal Corporation further reserves the right to withhold issuance of the notice to proceed, after execution of the contract agreement by the successful Tenderer. The Surat Municipal Corporation is not obliged to give reasons for any such action.

During Tender validity period, if any Tenderer withdraws or makes any modifications or additions in the terms and conditions on his own in this tender, then The Surat Municipal Corporation shall without prejudice to any right or remedy be at liberty to reject the tender and forfeit the Earnest Money Deposit in full. Such Tenderer may be disqualified from tendering for further works under the jurisdiction of The Surat Municipal Corporation.

The Surat Municipal Corporation reserves the right to increase or decrease the scope of work and split the tender in two or more parts without assigning any reason even after the award of contract.

Executive Engineer  
South-West (Athwa) Zone  
Surat Municipal Corporation

Signature of the Contractor.

ANNEXURE-I TO II FOR PRE-QUALIFICATION  
TO BE FILLED IN BY TENDERER  
**ANNEXURE-I (NOT APPLICABLE)**

Performa for list of works of similar nature already completed by the Tenderer during last 7 years.

Sr. No.	Name of work and Place	Cost on Completion	Time taken in months to complete the work	Client name	Date of completion
1	2	3	4	5	6

Note: Bidder shall give completion certificate from client. In absent of such completion certificate, experience shall not be considered for evaluation. If completion certificate covers "Similar work (as per IT-04) with other work" then bidders shall have to submit copied of final bill indicating similar work or certificate of amount including "Similar work" from relevant authority.

Please Fill above details attached separate sheet.

Signature of the Contractor  
With seal.

Place:

Date

**ANNEXURE-II (NOT APPLICABLE)**

Performa for declaration regarding work on hand with the tender:

Sr. No.	Name of work with place	Estimated Cost	Date of Issue of work order	Stipulated period of completion	Amount of work done	Brief details of delay if any	Name of client
1	2	3	4	5	6	7	8

Present liability = Total of column 3 - Total of column-6

Signature of the Contractor  
with seal

Place

Date:

Note: Amount of work done in Column 6, should be given up to the month previous to the month in which tender are invited.

Please Fill above details attached separate sheet.

## CHECK LIST

### SURAT MUNICIPAL CORPORATION

Sr. No.	Particulars	To be Submitted with Tech- Bid		Please <input type="checkbox"/> Mark as for Submission
		file to be attached Online	Hard copy Submission	
(1)	Forwarding Letter	No	No	
(2)	Tender Fee	Yes	Yes(DD / PO)	
(3)	EMD	Yes	Yes(DD / PO)	
(4)	GST Registration certificates	Yes	No	
(5)	PAN card No.	Yes	No	
(6)	Professional Tax Registration (EC/RC)certificates	No	No	
(7)	Digitally signed Partnership Agreement / Partnership Deed / power of attorney/Board Resolution in case of semi government /government Organization for being the tender documents etc. (if applicable) (pdf file to be uploaded with tech bid)	Yes	No	
(8)	Power of attorney for signing tender document etc.(if applicable) (pdf file to be uploaded with tech bid)	Yes	No	
(9)	Photograph of each partner or as the case may be	Yes	No	
(10)	Solvency certificate from bankers of Nationalized/ Scheduled bank for the <b>20% of estimated Amount (not elder than 01 (one) year).</b>	Yes	Yes	
(11)	Digitally signed CA Certificate showing financial turnover of last three years i.e. 2022-23, 2023-24,2024-25 (pdf file to be uploaded with tech-bid).	Yes	Yes	
(12)	Last Three Years Income Tax Clearance Certificates	No	No	
(13)	Certificates of successful completion of the works mentioned in "QUALIFICATION CRITERIA FOR TENDERER" as mentioned on the page no 16 of the tender document..	Yes	Yes	
(14)	A list of work on hand	No	No	
(15)	All the documents required as per the check list attached annexure with the tender (i)Annexure-I ( Performa for list of works of similar nature already completed by the Tenderer during last 7 years.)(ii)Annexure-II (Performa for declaration regarding work on hand with the tender)	No	No	
(16)	<b>Affidavit of the Bidder on non-judicial stamp paper of Rs. 300.00 (Annexure - III )</b>	Yes	Yes	
(17)	<b>Undertaking by the tenderer for not black listed on Rs. 300/- government stamp paper(Annexure-B)</b>	Yes	Yes	
(18)	Addenda corrigendum(s) duly sealed/ signed if applicable)	Yes	Yes	
(19)	Consultant's/ Bidder's Undertaking/ Certificate	No	No	
(20)	List of Technical Personnel	No	No	
(21)	CHECK LIST	Yes	No	

**Note:** - The tenderer should be required to furnish details/ certificates etc. as mentioned above otherwise their offer shall be liable for rejection.

**SEAL & SIGNATURE OF TENDERER: -**



**ANNEXURE-A**

- 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 for purpose of opening the bid. Accordingly, offer /tenders of those tenderers whose E.M.D. & tender fee is receive electronically, shall be opened. However, for the purpose of realization of EMD and Tender fee, bidder shall send the EMD as well as Tender fee in required format in original through RPAD/Speed post so as to reach to Account Department (Main office) within 7 days from the last date of submission of price bid. Punitive action shall be initiated for non submission of EMD & Tender fees in original to Account Department (Main Office) by bidder including abeyance of registration and cancellation of E-tendering code for one year. All documents in supporting of bid shall be in electronic format only thorough online (by scanning) during the budding period & hard copy will not be accepted separately.
- All documents must be coloured scanned to be seen as original, Scanning in black and white or gray shall not be acceptable.
- All the documents must be notarized with clearly displaying stamp, number and name of the notary.
- "All the documents as mension in checklist shall be submitted in HARD COPY to Surat Municipal Corporation by all bidders."
- Earnest Money Deposit as mentioned in the tender. (i.e. D.D./Pay Order)
- Tender Fees as mentioned in the tender.
- Affidavit on Non Judicial Stamp Paper of Rs.300/-

**ANNEXURE-B**

**UNDERTAKING BY THE TENDERER FOR NOT BLACK LISTED ON RS.300/-  
GOVERNMENT STAMP PAPER**

I/We.....

Address .....

.....

Solemnly affirm and state that on oath that .....

.....(Name of Tenderer) has not been  
blacklisted by any Government/Semi Government/Public Sector Undertaking/Public limited and not has been  
banned/suspended business dealings with the said firm.

The information given above is true to the best of my knowledge.

I/We agree that if any notice in future, my/our bid/tender shall be rejected/terminated.

SIGNATURE AND SEAL OF THE CONTRACTOR:

NAME AND ADDRESS:

DATE:

**❖ Note :- It is mandatory to submit the above UNDERTAKING format as indicated above to be furnished on non-judicial stamp paper of Rs.300/- and duly notarized through online (by scanning) and in hard copy.**

**ANNEXURE-III  
AFFIDAVIT**

Name of work : \_\_\_\_\_

- I, the undersigned, do hereby certify that all the statement made in the required attachments area true and correct. I also understand that in case of wrongful / false information, corporation is entitled to take any civil & criminal punitive action against me /us.
- The undersigned also hereby certifies that neither our firm M/s \_\_\_\_\_ nor any of its constituent partners have abandoned any work in India nor any contract awarded to us has been rescinded during last five years, prior to the date of this bid.
- The undersigned hereby authorized(s) and request(s) any bank, person, authorities, government or public limited institutions, firm or corporation to furnish pertinent information deemed necessary and requested by the SMC to verify our statements or our competence and general reputation etc.
- The undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the SMC.
- The SMC and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this bid and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Affidavit will also serve as authorization to any individual or authorized representative to any institution referred to in the supporting information, to provide such information deemed necessary and requested by representative of Surat Municipal Corporation to verify statements and information provided in the Tender or with regard to the resources, experience and competence of the Applicant.

Signed by the Authorize signatory of the firm

\_\_\_\_\_  
Title of the office

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

Date :

**❖ Note :- It is mandatory to submit the above affidavit format as indicated above to be furnished on non-judicial stamp paper of Rs.300/- and duly notarized through online (by scanning) and in hard copy.**

**SURAT MUNICIPAL CORPORATION  
SOUTH-WEST (ATHWA) ZONE  
CONTRACTOR TO PLEASE READ THIS CAREFULLY**

- (1) If the tender is taken in favour of the company, a company of attorney in favour of the person who may have signed the tender for the company, must accompany the tender.
- (2) Solvency certificate of current year Bank or a Revenue Officer of an amount upto 20% of the tender cost plus works on the hand still to be executed will have to be produced by the contractor.
- (3) Voucher for earnest money must accompany the tender. Tenderer may pay earnest money in form of a crossed demand draft of a local Bank drawn in favour of the Municipal Commissioner. Earnest Money by cheque shall not be accepted.
- (4) The contractor shall have to furnish income tax clearance certificate before his tender is accepted and intimate assessment No. and Ward under he is which assessed.
- (5) Copies of certificate as regards previous experience, if any must accompany the tender.
- (6) Declaration showing all works on hand with the contractor and the value of works that remains to be executed in each case must accompany the tender.
- (7) All pages of Schedule: 'A & B' & specification should be initialed by the contractor.
- (8) All corrections, errasures & over writing should be initialed by the contractor.
- (9) Descripancies and adjustment of errors:-Any error in quantity or amount in Schedule-'B' showing item of words to be carried out shall be adjusted in accordance with the following rules:-
  - (a) In the event of a discrepancy between description in works and figures quoted by a tenderer in the 'rates' column, the descriptions in words shall prevail.
  - (b) In the event of and error occuring in the amount column of the Schedule- 'B' showing items of works as a result of worng multiplication of the unit rate and quantity, the units rate shall be regarded as firm and multiplication shall be amended on the basis of the rate.
  - (c) All the errors in totalling in amount column and in carrying forwarded total shall be corrected.
  - (d) Any rounding of amounts against item' or in totals' shall be ignored.The tendered sum so altered shall, for the purpose of the tenders, be substituted for the sum originally tendered and considered for accetpance.
- (10) (i) It may please be noted that the tender shall be considered as invalid specially, if the requirements as per insiruction No.1 to 9 above are not compleied with before submitting the tender. Also please read carefully the face sheet and "General Rules and Direction for the suidence of contractor" of his form.  
(ii) Right is reserved to reject any or all tender (s) without assigning any person (s) thereof.
- (11) In addition to the above the tender will also be liable to rejected outright if :-
  - (i) The tenderer proposes any alteration in the works specified or in the time allowed for carrying out the work or any conditions or correction made in any code or made of Schedule-'B' or specifications.

- (ii) Any of the page or pages of the tender is removed or replaced.
  - (iii) All corrections, additions or pasted slips are not initialed by the tenderer.
  - (iv) Any erasures is made by him in the tender  
AND
  - (v) The tenderer or in the case of a firm, each partner or person holding the power of attorney thereof does not sign or the signature/s is/are not attested by a witness on page-9 of the tender in the space for the purpose.
- (12) In respect of the tenders from the co-operative society, a solvency certificate of an amount equal to 20% of the amount of the work put to tender will have to be produced along with the tender or a certificate regarding the borrowing capacity if the society issued by the legal Assistant, Directorate of Cottage Industries will have to be produced along with the tender.
- (13) (1) The several documents forming the contract are the essential part of the contract and requirement occurring in one is as binding as through occurring in all, they are intended to be mutually explanatory and complementary and to describe and provide for a complete work.
- (2) In the event of any discrepancy, the several documents forming the contract or in any the document, the following order or precedence should apply:-
- (a) Dimension & quantities :-
    - (i) Drawings.
    - (ii) Schedule-B of the tender form.
    - (iii) Specification.
- On drawings, figures, dimensions, unless obviously incorrect will be followed in preference to stated dimensions.
- (b) Description :
    - (i) Schedule-B of the tender form.
    - (ii) Drawings.
    - (iii) Specifications.
- In case of defective description or ambiguity, the Engineer-in-charge should issue further instructions in what manner the work is to be carried out it being understood that the best modern practice is to be followed. The contractor should forthwith comply with such instructions.
- (3) The contractor should take no advantage of any apparent error or omission in drawings or specification and the Engineer in charge shall make such corrections and interpretation as necessary to fulfil the intent of the Plans and specifications.
  - (4) Notwithstanding that all proper precautions may have been taken by contractor at all the times during the progress of the work, the contractor shall be held responsible for all damages whether to the work under execution or to any other property or to lives of persons during the progress of the work and the period of maintenance.
  - (5) Plans are for rough guidance only when detailed plans are received from the Architect of corporation during the course of execution the same will supersede previous plans
14. The contractor should appoint a qualified engineer and he must remain present on site during working hours.

Executive Engineer  
South-West (Athwa) Zone  
Surat Municipal Corporation

Signature of the Contractor

**DECLARATION FORM**

(1) I/We hereby declare that I/We have visited the site and fully acquainted myself/ourselves with the local situation regarding materials, labour and other factors pertaining to the work before submitting this tender.

(2) I/We hereby declare that I/We have carefully studied the conditions of contract, specifications and other tender documents of this work and agree to execute the same accordingly.

Executive Engineer  
South-West (Athwa) Zone  
Surat Municipal Corporation

Contractor Signature with  
Address:  
Date :

## **INSTRUCTION TO TENDERERS**

### **IT-01 GENERAL :**

The Contract documents may be secured in accordance with the notice Inviting Tender for the work called. The work shall include supply of materials necessary for construction of the work.

### **IT-02 INVITATION TO TENDER:**

The Surat Municipal Corporation hereinafter referred to as the Corporation will receive tenders for the **COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN SUB ZONE- 1 IN SOUTH WEST (ATHWA) ZONE, SURAT.** as per the specifications in the tender documents. The tenders shall be opened in presence of opening authority Surat in the presence of tenderers or their representatives who are present. The Corporation reserves the right to reject the lowest or any other or all tenders or part of it which in the opinion of the Corporation does not appear to be in its best interest, and the tenderer shall have no cause of action or claim against the corporation or its officers, employees, successors or assignees for rejection of his tender.

### **IT-03 LANGUAGE OF TENDER :**

Tenders shall be submitted in English, and all information in the tender shall also be in English, Information in any other language shall be accompanied by its translation in English. Failure to comply with this may make the tender liable to reject.

### **IT-04 QUALIFICATIONS OF TENDERERS:-**

(A) Tenderer shall be required to submit the enlisted documents along with Technical Bid, E.M.D. and tender fees. If documents are insufficient or it does not match the required criteria mentioned below, then the Price Bid of the tenderer shall not be opened.

Mainly tenderer shall fulfill following the pre-qualification.

(a) Experience of having successfully completed similar works during last 7 years

~~(b) (1a) Three similar completed works, each costing not less than amount equal to 40% of the estimated cost.~~

OR

~~(2a) Two similar completed works, each costing not less than amount equal to 50% of the estimated cost.~~

OR

~~(3a) One similar completed works, each costing not less than amount equal to 80% of the estimated cost.~~

(b) Turnover during last 3 years, ending 31st March of previous financial year should be atleast 30% of Estimated Cost. An attested copy of annual turnover for last 3 years should be enclosed.

(c) Solvency certificate from bankers of schedule bank/Nationalized bank for the 20% of tender amount. Tenderer has to submit higher amount of bank solvency if so desired by Commissioner.

(d) An attested copy of registration with MES, Various department of State Govt., Surat Municipal Corporation, CPWD etc.

(e) ~~List of the works already complete last years in prescribed proforma as per Annexure-I and attested copies of certificates from head of the office concerned for completion of the works.~~

Following enhancement factors will be used for the cost of works executed an financial figures to amount base for the value of the works completed in India.

<b>Financial Year</b>	<b>Multiplying factor</b>
One (2026-27)	1.10
Two (2025-26)	1.21
Three (2024-25)	1.33
Four (2023-24)	1.46
Five (2022-23)	1.61
Six (2021-22)	1.77
Seven (2020-21)	1.95

Bidder should indicate actual figures of cost and the amount for the work executed in Annexure-I without accounting for the above mentioned factors.

(f) Declaration regarding the work on hand with the tender should also be given in prescribed performa as per Annexure-II. Attested copies of work orders, interim certificates if any shall also be attach as supporting documents.

(g) Experience certificate issued form semi Govt. / govt. Organization only will be taken in to consideration.

(f) The work certificate of sub-contract shall not be considered for evaluation.

Attested cost of partnership deed, power of attorney etc.

#### **IT-05 TENDER DOCUMENTS :**

Printed and online documents and set of drawings shall comprehensively be referred to as Tender documents. The several sections forming the documents are the essential parts of the contract and a requirement occurring in one shall be binding as though occurring in all. They are to be taken as mutually explanatory and describe and provide for complete works.

#### **IT-06 EXAMINATION BY TENDERERS :**

A. At his own expenses and prior to submitting his tender, each tenderer shall (a) examine the contract Documents, (b) visit the site and determine local conditions which may effect the work including the prevailing wages and other pertinent cost factors, (c) familiarize himself with all CENTRAL, State and local laws, ordinance, rules, regulations and codes affecting the material supply including the cost of permits and licenses required for the work and (d) correlate his observations, investigations, and determinations with the requirements of the Tender Documents.

B. The tender quantity is approximate and may increase or decrease. Any increase or decrease in quantity will not entitle tenderer to claim any extra over the quoted rate.

C. Tender Documents be completed by legible ink, checked in a responsible manner, signed, stamped and returned together with the Tender Security Bond by the stipulated date, which shall form the Tender.

The Tenderer is required to complete :

(i) The form of tender, including the Appendices thereto Tender Security Bond and the Tender summary duly signed and stamped.

All the pages in which entries are required to be made by the tenderer are contained in the tender documents and the tenderer shall not take out or add to or amend the text of any of the documents



except in so far as may be necessary to comply with any addenda issued pursuant to Clause IT-17 hereof.

**IT-07 EARNEST MONEY DEPOSIT:**

**(A) Where the contractor is required to submit bank guarantee against payment towards any deposit e.g. EMD, SD, etc., such bank guarantees shall be produced only from any one of the shall be issued by or payable/encashable at Surat Branch of the said All Nationalized banks.**

**(B) Guarantees issued by or payable/encashable at Surat Branch will be accepted as SD/EMD .The Vailidity cut-off date in the GR is with respect to the date of issue of Bank Guarantee irrespective of the date of termination of Bank Guarantee listed below:**

- (1) AXIS Bank
- (2) A U Small Finance Bank
- (3) Bandhan Bank
- (4) City Union bank
- (5) CSB Bank
- (6) DBS Bank Indian Limited
- (7) DCB Bank
- (8) Equitas Small Finance Bank
- (9) Federal Bank
- (10) HDFC Bank
- (11) HSBC Bank
- (12) ICICI Bank
- (13) Barclaus Bank
- (14) Karnataka Bank
- (15) Karur Vysya Bank
- (16) Kotak Mahindra Bank
- (17) South Indian Bank
- (18) Tamilnadu Mercantile Bank
- (19) Utkarsh Small Finance Bank
- (20) Ahmedabad Mercantile Co-operative Bank Ltd.
- (21) Nutan Nagrik Sahakri Bank Limited
- (22) Rajkot Nagrik Sahkari Bank Ltd
- (23) Sarswat Co-operative Bank
- (24) SVC Capital Co-operative Bank Ltd
- (25) The Gujarat State Co-operative Bank
- (26) The Mehsana Urban Co-operative Bank Ltd.
- (27) The Surat District Co-operative Bank
- (28) The Surat Peoples Co-operative Bank
- (29) Saurashtra Gramin Bank
- (30) The Kalupur Commercial Co-op.Bank
- (31) Baroda Gujarat Gramin Bank
- (32) IDBI Bank
- (33) IDFC First Bank
- (34) Jana Small Finance Bank
- (35) The Cosmos Co-operative
- (36) ESAF Small Finance Bank
- (37) Jammu and Kashmir Bank
- (38) Standard Chartered Bank
- (39) Yes Bank
- (40) SBPP Co-Operative Bank Ltd.
- (41) The Baroda District Co-operative Bank
- (42) The Panchmahal District Co-operative Bank
- (43) RBL Bank

- A. The Tender shall be accompanied by of Earnest Money Deposit **Rs. 49,700.00** The tenderer shall pay Earnest Money Deposit to be deposited by pay order/demand draft issued in favour

of Commissioner, Surat Municipal Corporation, Surat through Nationalised/Schedule Bank only. The Earnest Money Deposit in the form of FDR or cheque shall not be accepted. The tenderer shall have to mention details of Earnest Money Deposit on the seal cover of Earnest Money Deposit. The tender received without Earnest Money Deposit shall be out rightly rejected.

The instruments for Earnest Money Depository shall be issued by or payable/encashable at Surat Branch of the said nationalized bank.

- B. The Earnest Money Deposit(Tender guarantee) will be forfeited in the event, the successful tenderer fails to accept the contract and fails to submit the Performance Guarantee Bond to the owner as stipulated in this tender documents within ten days after receipt of notice of award of contract. In such case owner may disqualify the tenderer from tendering for further works, under the jurisdictions of the Corporation (S.M.C.).
- C. The Earnest Money Deposit of the successful tender shall be returned after the performance guarantee bond, as required, if furnished by the contractor.
- D. No interest shall be paid by the owner on any tender guarantee.
- E. With reference to the General Board Resolution of Surat Municipal Corporation, 50% Exemption in EMD only for MSME Register Companies Applicable. Bidder must Submit registration documents of MSME duly Attested by the authority of concern District.

#### **IT-08 ~~INCOME TAX CLEARANCE CERTIFICATE :- N.A.~~**

In view of the latest circular of IT Department IT clearance certificate is not required. However the contractor shall give zerox copy of the PAN card.

#### **IT-09 PREPARATION OF TENDER DOCUMENTS :**

Tenderers are requested to note the following while preparing the Tender Documents:

- A. Technical bid, EMD and Tender fees shall be submitted on the Tender Form bound herein in English. All tender items and statements shall be properly filled in. Numbers shall be stated both in words and in figures where so indicated, and signatures of all persons signing shall be in longhand.
- B. Technical Bid shall be accompanied by the prescribed tender security bond and other required documents and drawings. All witnesses and sureties shall be persons of status and probity and their full names, occupations and address shall be stated below their signatures. All signatures in the Tender Documents shall be dated.
- C. Variations to the Contract Documents requested by the tenderer may be affixed to the Tender Document in the space available and duly signed and stamped. Such variations may be approved or refused by the Engineer at the time of adjudications of Tenders, and in either case the Engineer is not obliged to give reasons for his decisions.
- D. Delivery of Tenders shall comply with Notice inviting tenders as to place, date and time.
- E. Price Bid shall be submitted online. Tenderers are requested to quote for all four parts of the tender.

#### **IT 10 SUBMISSION OF TENDERER DOCUMENT :-**

##### **1. Following documents shall be submitted in HARD COPY TO Surat Municipal Corporation:**

- All necessary documents mentioned in Technical bid (if any).

- Earnest Money Deposit as mentioned in the Tender. (It is compulsory to mention G.S.T. No. and Party Code back side of Earnest Money Deposit document)
- Tender Fees (It is compulsory to mention G.S.T. No. and Party Code back side of Earnest Money Deposit document)
- Affidavit
- Addenda Corrigendum (if any) duly signed by Contractor.

Technical bid and price bid are not to be submitted in physical form. Please note that non submission of Technical Bid as well as price bid does not absolve the bidders from any liability created from the bid condition and bidding process. Technical-Bid and Price Bid in hard copy shall be submitted by Successful bidder upon intimation from Surat Municipal Corporation.

(i) COVER-1 : Technical Bid

E.M.D and Tender Fees for the work of **COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN SUB ZONE- 1 IN SOUTH WEST (ATHWA) ZONE, SURAT.** along with other Documents in Hard Copy **Upto 08/07/2026 To 16/07/2026** 18.00 hrs. Also mention the name of tenderer, address, tender notice number etc. on the cover .

(ii) PRICE BID

Price bid for the work of **COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN SUB ZONE- 1 IN SOUTH WEST (ATHWA) ZONE, SURAT.** shall be submitted online.

**The name of work to be written on cover shall be work of "COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN SUB ZONE - 1 IN SOUTH WEST (ATHWA) ZONE, SURAT." Also mention the name and the address of tenderer, tender notice number, work number on the cover and to be submitted to the Chief Accountant, Surat Municipal Corporation, Muglisara, Surat – 395 003.**

2. Tenderer shall be required to submit the enlisted documents as mentioned below in Cover-1. If necessary document founds insufficient then the Price Bid of the tenderer shall not be opened.
  - (a) The tender shall be accompanied by Earnest Money Deposit of **Rs.49,700.00** The tenderer will pay Earnest Money Deposit by Pay Order/Demand Draft issued in favour of "Commissioner, Surat Municipal Corporation, Surat" by Nationalized Bank. In the form of Demand Draft and Bank Guarantee.
  - (b) A covering letter detailing various considerations considered in tender shall invariably be given.
  - (c) Passport size photographs of all the partners (incase of partnership firm) to be fixed on relevant Page of the tender documents.
3.
  - (a) List of tools, plants and equipments with tenderer in detail.
  - (b) Technical establishment/staff of the tenderer in required Performa with their names, qualifications and experience.
  - (c) Tenderer shall furnish along with the tender, information regarding Income tax circle of the district in which he is assessed for income tax with PAN No.
4. Submission of a tender by a tenderer shall mean that he has read this notice and contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and nature of required quantities of materials stores, tools and plants etc. that may be required by him in carrying out the work and of local conditions and laws

and bylaws of the Government, Surat Municipal Corporation and other factors bearing influence on the execution and cost of the works.

5. E.M.D., Tender Fee and other necessary document in hard copy shall be received by Registered Post A.D. or by Speed Post through Postal Authority only by the "Chief Accountant, Surat Municipal Corporation, Muglisara, Surat-395003 on **Upto 08/07/2026 To 16/07/2026** 18.00 hrs.

The same will be opened on the **08/07/2026, 11.00 hrs. (Technical Bid) and 17/07/2026, 11.00 hrs. (Price Bid) onwards** in the presence of the tenderers, who shall remain present in the office of "Tender opening officer, Surat Municipal Corporation, Surat. Late tenders (i.e. tenders received after the specified time of opening), delayed tender (i.e. tenders received before the time of opening but after due date and the time of receipt of tender) shall not be considered at all. Tenders received by Registered Post A.D./ Speed Post after the time and the date specified in the tender notice shall not be received by the client from the postman. Such tenders if received will not be opened and will stand rejected.

6. Tender shall stand rejected if:
  1. Any eraser is made in the tender unauthenticated or any page or pages is/are removed or replaced.
  2. The tenderer shall submit the tender which satisfied each and every conditions laid down in the notice tender documents, failing which the tender will be liable for rejection.
  3. Tenderer's tender/quotation containing conditions shall be liable for rejection out rightly without assigning any reason for the same.
  4. Stipulates the validity period less than what is stated in the form or tender.
  5. Stipulates his own conditions.
  6. Does not quote his rates inclusive of Octroi duty and other terminal or sales tax or CENTRAL taxes in his rates.
  7. Does not disclose the full names and address of all his partners in the case of partnership firm.
  8. Does not pay the Earnest Money Deposit by Demand Draft/Pay order and Tender Fees with Technical Bid (Cover-1).
  9. Does not submit the tender before the stipulated time and specified date in the Account Office as directed.
  10. Does not attached the document mentioned.
  11. The tenderer proposes any alteration in the work specified in the tender or in the time limit allowed for carrying out the work or any other condition.
7. All corrections, additions or posted slips to be initialed by the tenderer.
8. All page of tender documents including specifications should be initialed by the contractor.
9. The tenderer shall submit the tender which satisfies each and every conditions laid down in this notice and tender documents failing which the tender is liable for rejection.
10. Notice of inviting tenders shall be a part of the contract documents.
11. Acceptance of tenderer/quotation will rest with the competent authority of Surat Municipal Corporation who does not bind himself to accept the lowest and reserves the right to accept or

to reject any or all quotations/tenders and no reasons will be given for acceptance or rejection thereof.

12. The contractor shall also attach list of machineries, tools, plants, equipments which he propose to deploy for this work.
13. All octroi duty and other taxes chargeable by the Municipal Corporation shall be payable by the Contractor.
14. Tender once accepted shall be binding on the contractor even if the formal agreement is not signed.
15. Tender once offered can not be withdrawn except with the permission of head of the concerned department, Surat Municipal Corporation, Surat.
16. The successful tenderer shall be required to enter in to agreement with Municipal Corporation after placing the work order for the said work from SMC.
17. The successful tenderer may be required to furnish surety of 20% of the contract value on stamp paper if so desired by the Municipal Commissioner.
18. The tenderers are requested to give complete specification of work quoted.
19. Unless specifically mentioned by the tenderer for the extra payment of taxes on price quoted by them it will be presumed the prices quoted are inclusive of the all taxes and no claim will be entertained for payment of extra taxes on the bills submitted by them.
20. The Price-bid will be opened only after technical clarifications are clarified.
21. Surat Municipal Corporation reserves the right to open or not to open any or all Price-bid without assigning any reason thereof.

#### **IT-11 TENDER VALIDITY PERIOD :**

The validity period of the tender submitted for this work shall be of one hundred twenty (120) Calendar day from the date of opening of price bid and that the tenderer shall not be allowed to withdraw or modify the tender offer on his own during the validity period. The tenderer will not be allowed to withdraw the tender or make any modifications or additions in the terms and conditions of his own in his tender. If this is done then the owner shall, without prejudice to any right or remedy, be at liberty to reject the tender and forfeit the Earnest Money Deposit in full.

#### **IT-12 SIGNING OF TENDER DOCUMENTS :**

If the Tender is made by an individual it shall be signed with his full name above his current address. If he tender is made by a Proprietary firm it shall be signed by the proprietor above his name and the name of his firm with his current address.

If the tender is made by a firm in partnership it shall be signed by all the partners of the firm above their full names and current addresses, or by a partner holding the power of attorney for the firm signing the Tender in which case a certified copy of the power of attorney shall

accompany the Tender. A certified copy of the partnership deed, current addresses of all the partners of the firm shall also accompany the tender.

If the tender is made by a limited company or a limited Corporation, it shall be by a duly authorised person holding the power of attorney for signing the Tender in which case a certified copy of the power of attorney shall accompany the Tender. Such limited company or Corporation may be required to furnish satisfactory evidence of its existence before the contract is awarded.

All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be stated below their signatures. All signatures in the Tender document shall be dated.

#### **IT-13 WITHDRAWAL OF TENDERS :**

If, during the Tender validity period, the Tenderer withdraws his Tender, the Tender Security (Earnest Money) shall be forfeited and the Tenderer may be disqualified from tendering for further works under the jurisdiction of SURAT MUNICIPAL CORPORATION

#### **IT-14 INTERPRETATIONS OF TENDER DOCUMENT :**

Tenderers shall carefully examine the tender documents and fully inform themselves as to all the conditions and matters which may in any way effect the work or the cost thereof. Should a tenderer find discrepancies or omission from the specifications or other documents, or should be in doubt as to their meaning, he should at once address query to the Divisional Head provided for concerned authority as referred in the Tender Document in Clause GC-01 (Definitions and interpretations) of the (General Condition of Contract). Any resulting interpretation of the Tender documents will be issued to all Tenderers as an addenda corrigendum. Verbal clarification and / or information given by the SMC / Consulting Engineer shall not be binding on the Municipal Corporation.

#### **IT-15 ERRORS AND DISCREPANCIES IN TENDERS :**

In case of conflict between the figures and words in the rates, the rates expressed in words shall prevail and apply in such cases.

#### **IT-16 MODIFICATION OF DOCUMENTS :**

Modification of specifications and extension of the closing date of the tender, if required, will be made by an addendum. Copies of each addendum will be sent to all tenderers. These shall be Signed and shall form a part of tender. The tenderer shall not add to or amend the text of any of the documents except in so far as may be necessary to comply with any addenda.

#### **IT-17 ADDENDA**

Addenda form part of the contract documents & full consideration shall be given to all addenda in the preparation of tenders. Tenderers shall verify the number of addenda issued, if, any and acknowledge the receipt of all Addenda in the Tender. Failure to acknowledge may cause the Tender to be rejected.

A. The Engineer of the owner may issue Addenda to advise Tenderers of changed requirements. Such addenda may modify previously issued Addenda.

B. No Addendum may be issued after the time stated in Notice Inviting Tenders.

#### **IT-18 TAXES AND DUTIES ON MATERIAL :**

The Contractor shall be liable to the payment of all the Central/ State/Local Bodies' Levies, taxes or duties etc. The S.M.C. Shall neither bear it no reimburse at any time but shall ensure deduction of Central/ State/ Local levies and taxes at Source at the rate provided under the relevant statutes from time to time enforce. Further the Work Contract tax or sale tax shall be borne by the Contractor as per Rules and Regulations of Government.

GST (Goods & Service Tax) has come in existence from 1<sup>st</sup> July, 2017. Contractor / Successful Bidder is bound to pay any amount of GST prescribed by the Govt. of India as per the Terms of Contract agreed upon during the course of execution of this Contract.

During the course of execution of Contract, if there is any change in Rate of GST (Goods & Service Tax) by the Government, the same shall be reimbursed / recovered separately by SMC, subject to the submission of Original Receipt / Proof for the amounts actually remitted by the Successful Tenderer / Contractor to the Competent Authority along with a Certificate from Chartered Accountant of Contractor / Successful Bidder certifying that the amount of GST paid to the Government and the same shall be intimated / submitted / claimed within 30 (Thirty) Days from the date of payment. Remittance of GST within stipulated period shall be the sole responsibility of the Successful Bidder / Contractor, failing which, SMC may recover the amount due, from any other payable dues with SMC and decision of Municipal Commissioner shall be final and binding on the Contractor / Successful Bidder in this regard. Further, the non-payment of GST to the Government may lead to the termination of contract and forfeiture of Security Deposit / Performance Guarantee Amount.

If imposition of any other new Taxes / Duties / Levies / Cess or any other incidentals etc. or any increase in the existing Taxes / Duties/ Levies / Cess or any other incidentals etc., are imposed during the course of the contract, the same shall be borne by the Contractor / Successful Bidder only, in no case SMC shall be Liable for the same.

**Note :- The Rates mentioned in BOQ/SCHEDULE-B are excluding GST. GST will be reimbursed separately (if applicable as per the opinion of Account department of SMC / GST Consultant of SMC) as per the prevailing GST Rates decided by the Government. The contractor is invariably bound to any changes in GST Rates made during the course of the work. The payment (if applicable) for GST will be only released only after the applicable Amount reflects on Government portal. Decision of Account Department of SMC regarding applicable GST Rates will be final.**

**Construction Cess will be deducted from all Running Bills & Final Bills as per the prevailing Government Rates.**

#### **IT-19 EVALUATION OF TENDERS : DELETED**

#### **IT-20 EVALUATION OF TIME REQUIRED FOR COMPLETION :**

The time required for completion of work shall be considered as indicated by the tenderer in the completion schedule attached with the tender. The completion period mentioned in this schedule is to be reckoned from 15<sup>th</sup> day from the date of work order to proceed. Total completion period is calendar months from 15<sup>th</sup> day from date of issue of work order and tenderers should adhere to this delivery time.

#### **IT-21 POLICY FOR TENDER UNDER CONSIDERATION :**

Tenders shall be termed to be under consideration from the opening of the tender until such time an official announcement of award is made.

While tenders are under consideration, tenderers and their representative or other interested parties are advised to refrain from connecting by any means Municipal Corporation or representatives on matters related to the tenders under study. The Engineer's representative if necessary will obtain clarification on tenders by requesting information from any or all the tenderers either in writing or through personal contact, as may be necessary. The tenderers will not be permitted to change the substance of his tender after price submission. Non-compliance with this provision shall make the tender liable for rejection.

## **IT-22 PRICES AND PAYMENTS :**

The tenderer must understand clearly that the price quoted are for the total works or the part of the total works quoted for and include all costs due to materials labour, equipment, supervisions, other services, royalties and Octroi etc. and to include all extras to cover the cost. No claim for additional payment beyond the prices quoted will be entertained and the tenderer will not be entitled subsequently to make any claim on any ground excepting for the condition laid down in GC-35 (Price Adjustment).

## **IT-23 PAYMENT TERMS :**

The terms of payment are defined in the General Conditions of Contract. The Municipal Corporation shall not under any circumstances relax, their terms of payment and will not consider any alternative payment terms. Tenderers should therefore in their own interest note this provision to avoid rejection of their tenders.

## **IT-24 AWARD :**

Award of the Contract or the rejection of tenders will be made during the Tender validity period stated in the Notice Inviting Tenders.

- A. After all contract contingencies are satisfied and the Notice of Award is issued, the successful Tenderer shall execute the Contract Agreement within the time stated in the Notice Inviting Tenders and shall furnish the Bond as required herein. The Contract Agreement shall be executed in the form stipulated by the owner. A copy of the required form is included in the contract documents.
- B. If the Tenderer receiving the Notice of Award fails or refuses to execute the Contract Agreement within the stated time limit or fails or refuses to furnish the Bond as required herein, the SMC may annul his award and declare the tender security forfeited.
- C. A Corporation, Partnership firm or other consortium acting as the Tenderer and receiving the Award shall furnish evidence of its existence and evidence that the officer signing the Contract Agreement & Bonds for the Corporation, partnership firm or other consortium acting as the Tenderer is duly authorised to do so.

## **IT-25 SIGNING OF CONTRACT :**

The successful tender shall be required to pay the security deposit and to execute the contract within 10 days of receipt of intimation to execute the contract, failing which the Municipal Corporation will be entitled to annul the award and forfeit the Earnest Money Deposit. The person to sign the contract document shall be person detailed in Article IT-12.

## **IT-26 DISQUALIFICATION :**

A tender shall be disqualified and will not be taken for consideration if :-



- (a) The outer envelope does not show on the outside the reference of bid and thus get opened before the due date of opening (as per Article IT-10 i.e. Submission of Tender Document).
- (b) The tender Security Deposit is not deposited in full and in the manner i.e. Earnest Money Deposit.
- (c) The tender is in a language other than English or does not contain its English Translation in case of other language adopted for tender preparation.
- (d) The tender documents are not signed by an authorised person.
- (e) The general performance data for qualification not submitted fully.
- (f) The tenderer does not agree to deposit security amount as specified (as per Article IT-25 i.e. Signing of Contract).
- (g) The tenderer does not agree to payment terms defined as per Article IT-23 i.e. Payment Terms.)
- (h) Conditional tender.

A.Tenderer may further be disqualified if :

- (a) Price variation is proposed by the Tenderer on any principles other than provided in the Tender Documents.
- (b) Completion schedule offered is not consistent with the completion schedule defined and specified in tender documents.
- (c) The validity of tender is less than that mentioned in Article IT-11 i. e. Tender Validity Period.
- (d) Any of the page or pages of tender is/are removed or replaced.
- (e) All corrections or pasted slips are not initialed by tenderer.
- (f) Any erasure is made in the tender.

#### **IT-27 PERFORMANCE GUARANTEE (SECURITY DEPOSIT) :**

As a contract security the tenderer to whom the award is made shall furnish a performance guarantee (Security Deposit) for amount equal to Two percent (2%) of the contract price to guarantee the faithful performance completion and maintenance of the works of the contract in accordance with all the conditions and terms specified herein and to the satisfaction of the Engineer and ensuring the discharge of all obligations arising from the execution of contract, in one of the forms mentioned below.

- (a) By a demand draft of a Scheduled bank Acceptable to owner on the Surat Branch.
- (b) **A fixed deposit receipt of a Scheduled Bank or Government securities duly, located at Surat endorsed in favors For Tender Amount More Than Rs.2 Crore As Per Circular No. AC/CIR/08, dt.14/05/2018 of the Municipal Commissioner, Surat Municipal Corporation, Surat.**

Security deposit shall be paid in time and if it is paid after fifteen(15) days from the date of preliminary work order then the penalty of 0.065 % per day of the amount of security deposit shall be recovered from the contractor while receiving the security deposit. It is clarified that the amount of security deposit shall be collected on the basis of Contract Price and not on the basis of estimated amount put to tender. As initial Security Deposit Two percent (2%) of the tendered amount accepted by the competent authority shall have to be paid towards security deposit at the time of execution of agreement.

**This will be known as initial security deposit which will be released after the total completion of contract after defect liability period of one year or audit related procedure, which is more.**

7% of the total tendered amount shall be deducted as retention money from the running account bill which will be released at the time of final bill.

Seven percent (7%) shall be deducted from running bills as retention money.

**IT-28 STAMP DUTY :**

**If Security deposit (SD) is deposited in the form of D.D./cash/Pay order, draft the agreement shall be executed on government stamp paper worth Rs.300=00 and if SD is deposited in the form of FDR, NSC, or any kind of saving certificates, the agreement shall be executed on government stamp paper worth Rs.300=00 or 4.90% / prevailing rate of SD amount whichever is higher subject to the provision made in the tender for SD.**

The Undertaking and Surety shall be executed on stamp paper worth Rs. 300/- + Rs.300/-.

**IT-29 BRAND NAMES :**

Specific references in the specifications to any materials by tender's name, or catalogue number shall be construed as establishing a standard or quality and performance and not as limiting competition and the tenderer in such cases, may at their option freely use any other product, provided that it ensures and equal or higher quality than the standard mentioned and meets Municipal Corporation approval.

**IT-30 NON-TRANSFERABLE :**

Tender documents are not transferable.

**IT-31 COST OF TENDERING :**

The owner will not defray expenses incurred by Tenderers in tendering.

**IT-32 DEFECT OF TENDER :**

The Tender for the work shall remain open for a period of 120 calendar days from the date of receipt of the tenders for this work and that the tenderer shall not be allowed to withdraw or modify the offer on his own during the period. If any tenderer withdraws or makes any modifications or additions in the terms and conditions on his own, then the Municipal Corporation, shall without prejudice to any right or remedy, be at liberty to reject the tender and forfeit the earnest money in full.

**IT-33 CHANGE IN A QUANTITY :**

The Surat Municipal Corporation reserves the right to waive any informality in any tender and to reject one or all tenders without assigning any reasons for such rejections and also to vary to quantities of items or group as specified in the Schedule of price as may be necessary. Claim what so ever by the contractor on the basis of variation of quantities shall not be entertained.

**IT-34 NEW EQUIPMENT AND MATERIAL :**

All materials, equipment and spare parts thereof shall be new, unused and originally coming from manufacturer's plant to the Corporation. The rebuilt or overhauled equipment/materials will not be allowed to be used on work.

**IT-35 RIGHTS RESERVED :**

The SMC reserves the right to reject any or all tenders, to waive any informality or irregularity in any tender without assigning any reasons. The SMC further reserves the right to withhold issuance of the notice to proceed, after execution of the contract agreement, for the period of time stated in the notice inviting tenders and no additional payment will be made to the successful tenderer on account of such withholding. The SMC is not obliged to give reasons for any such action.

**IT-36** Municipal Commissioner reserves the right to reduce the scope of work and split the tender in two or more parts without assigning any reason even after the award of contract.

**IT-37** No mobilisation advance or advance on machinery will be given.

**IT-38** The scope of work is clearly mentioned in the tender documents. The contractor shall have to carry out the work in accordance with the details specifications. No conditions will be accepted. The conditional tender will be liable to be rejected.

**IT-39** The surplus excavated earth, after backfilling the trenches shall have to be removed from the site as directed.

After compaction and consolidation, if any short fall of earth is found then contractor has to bring the same to the required quantity in order to meet shortfall at his own cost. More over, if any settlement of road after reinstatement is observed during the defect liability period of the work. Contractor shall be fully responsible for the defective work and patches/ depression / settlement shall be repaired with quarry spoil or metal at contractor's own cost. If contractor fails to repair the patches / depression / settlement in time, corporation will repair it at all risk and cost of contractor.

Surplus earth shall not be disposed off in a way that leads to nuisance to the public or SMC.

**IT-40 ROYALTIES:**

Tenderer/Supplier shall have to pay, and furnish all receipts of materials to The Engineer-in-charge, whenever required.

**IT-41 INSURANCE:**

The successful Tenderer shall furnish insurance in accordance with clause No. GC-85 of the Conditions of Contract.

**IT-42 TESTING OF CEMENT AND STEEL:**

It should be specifically noted that the cement and steel brought by the contractor at site of work shall be used only after the same is tested at the approved laboratory as per the direction of the Engineer-in-charge.

All the charge for the transport and testing of the samples shall have to be borne fby the contractor. The frequency of testing such material shall be in accordance to the relevant Indian Standards as directed by Engineer –in- charge.

**price escelation and star rate not applicable.**

EXECUTIVE ENGINEER  
SOUTH-WEST (ATHWA) ZONE  
SURAT MUNICIPAL CORPORATION,  
SURAT.

SIGNATURE OF THE CONTRACTOR.

SURAT MUNICIPAL CORPORATION  
PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

GENERAL RULES AND DIRECTIONS FOR THE GUIDANCE OF CONTRACTORS :-

- (1) All work proposed to be executed by contract shall be notified in a form of invitation to tender pasted on a board hung up in the office of the Engineer & signed by the Engineer.

This form will state the work to be carried out as well as the date/or submitting and opening tenders and the time allowed for carrying out work, also the amount of earnest money to be deposited with the tender and the amount of the Security Deposit to be paid by the successful tenderer and the percentage, if any, to be deducted from bills. It will also state whether a refund of quarry fees, royalties, octroi dues and ground rent will be granted. Copies of the specifications, designs and drawings and estimated rates and any other documents required in connection with the work which shall be signed by the Engineer-in-charge for the purpose of identification shall also be open for inspection by contractors at the office of the Engineer-in-charge during office hours.

Where the work are proposed to be executed according to the specifications recommended by a contractor and approved by a competent authority on behalf of the corporation, such specifications with designs and drawings shall form part of the accepted tender.

- (2) In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof, or in the event of the absence of any partner, it shall be signed on his behalf by a person holding a power of attorney authorising him to do so.
- (3) Receipts for payments made on account of any work, when executed by a firm, shall also be signed by all the partners, except where the contractor are described in their tender as a firm, in which case the receipts shall be signed in the name of the firm by one of the partners or by some other persons having authority to give effectual receipts for the firm.
- (4) Any persons, who submit tender shall fill up the usual printed form including the 'Column' total according to estimated quantities, stating at what rate he is willing to undertake the each item of the works, Tenders which proposal any alterations in the work specified in the said form of invitation to tender or in the time allowed for carrying out the work or which contain any other conditions of any sort, will liable to be rejection No. single tender include more than one will liable to be rejection No. single tender include more than one work but contractors who wishes to tender for each. Tender shall have (to which they refer) written outside the envelope.
- (5) The Commissioner or his duly authorised assistant shall open tender in the presence of any intending contractors who have submitted tender or their representatives who may be present at the time. In the event of a tender being accepted, the contractor shall there upon for the purpose of identification, sign the copies of the specifications and other documents mentioned in this tender. In the event of the tender being rejected, the divisional officer shall authorised the accountant to refund the amount of earnest money deposited to the contractor making the tender on his giving a receipt for the returned of the money.
- (6) The officer competent to dispose of the tender shall have the right of rejecting all or any of the tenders.
- (7) No receipts for any payment alleged to have been made by a contractor in regard to any matter to this tender shall be valid and binding on corporation unless it is signed by the Engineer-in-charge.
- (8) The memorandum of work to be tendered for and the schedule of materials to be supplied by the concern department and their rates shall be filled in and completed by the officer of the Engineer-in-charge before the tender form is issued. If a form issued an intending tenderer has not been so filled in and completed, he shall request the said officer to have this done before he completes and delivers his tender.

- (9) All works shall be measured net by standard measure and according to the rules and customs of the Public Works Department without reference to any local custom.
- (10) Under no circumstances shall any contractor be entitled to claim enhanced rates for any items in this contract.
- (11) Every contractor shall unless excepted in writing by the Additional City Engineer concerned, produced alongwith the tender, a solvency certificate of his financial stability from the Collector of the District within which he resides or a Bankers certificates. If he fails to produce such a certificate, his tender may not be considered.
- (12) All corrections and additions or pasted slips should be initiated.
- (13) The measurement of work will be taken according to the usual method in use in the public works department and no proposals to adopt alternative methods will be accepted. The Engineer-in-charge decision as to what is "the usual method in use in the public works department" will be final.
- (14) A.The Insurance Company's bond will not be accepted against the Security Deposit.
- (15) ~~The contractor shall have to attach to his tender Income Tax Clearance Certificate to be obtained from the Income Tax Officer.~~
- (16) The Contractor will have to construct a shed for storing control and valuable materials issued to him under Schedule-'A' of the agreement at work site having double locking arrangement. The materials will then be taken for use in the presence of the department person. No materials will be allowed to be removed from the site of work except with the written permission from Engineer- in-charge.
- (17) No foreign exchange will be released by the Corporation for the purpose of plant and machineries required for the execution of the work contracted for.
- (18) Controlled materials (Essentiality certificate)
  - (i) As regard controlled materials the Corporation will help to arrange for the permit as far as possible and help the contractor in securing for the permit as far as possible and help the contractor in securing the same. All incidental charges met with in procuring these materials shall be borne by the contractor himself. Though the Corporation will help to arrange for the permit as far as possible and help the contractor in obtaining the materials it shall not accept any responsibility for any delay or loss on account of delay caused to the contractor while obtaining the same.
  - (ii) The contractor shall submit to Engineer-in-charge on Close of every calender months, the monthly returns in the prescribed forms as to the receipt and actual use of the controlled materials during the month.
  - (iii) The contractor shall permit the Engineer- in- charge or his representatives to inspect the stock of the controlled materials stored by him at any time, whenever the Engineer-in- charge or his representatives so desired (s).
- (19) The tender for work shall remain open for a period of 120 days from the date of opening of the price bid for this works and that the tenderer shall not be allowed to withdraws or modify the offer on his own during this period. If any tenderer withdraws or makes any modifications or addition/s in the terms and conditions of his tender, not acceptable to the corporation them the corporation shall without prejudice to any right or remedy be at liberty in full the said earnest money absolutely (in figures as well as in words). This Blank Space should be filled in while preparing the draft tender papers.
- (20) The contractor shall employee only such labourer who shall produce a valid certificate of having been vaccinated against small pox within a period of last 3 years.
- (21) Tenderer should submit True Copy of the Certificate of Registration alongwith the tender without which the tender will not be considered.

- (22) The contractor shall have to give in writing the date completion of the work within a fortnight from the date of work completed by him. Otherwise the date noted on the record by the department shall be reawakened as final and no excuse or representation in that behalf shall be entertained at later date.
- (23) "What ever sales tax is levied by the Government on works contract and if paid by the contractor in the first instance, shall be refunded to the concerned contractor by Corporation.

Executive Engineer  
South-West (Athwa) Zone  
Surat Municipal Corporation

Contractor Signature with  
Address:  
Date :

**GENERAL CONDITION OF CONTRACT**

**SECTION-I**

**GC-01 DEFINITIONS AND INTERPRETATIONS :**

1.0 In the contract documents, as herein defined the following words and expression used shall, unless, repugnant to the subject or context thereof, have the following meanings assigned to them.

1.1 The "Owner/Municipal Corporation, Surat represen- ted by Municipal Commissioner/Add.City Engineer, any officer authorised by the Municipal Corporation.

1.2 The "Contractor" shall mean the person or the persons, firm of company whose tender has been accepted by the owner and includes his legal representative successors and permitted assignes.

1.3 The "Engineer-in-charge" shall mean the person designated as such by the owner from time to time and shall include those who are expressly authorised by the Municipal Corporation to act for and on its behalf for the operation of this contract.

1.4 "Engineer - in - charge's Representative" shall mean any Engineer or Asstt. to the Engineer-in- charge designated from time to time by the Engineer-in-charge to perform duties set forth in the Tender documents whose authority shall be notified in writing to the Contractor by the Engineer-in-charge.

1.5 "Tender" The offer or proposal of the Tenderer submitted in the prescribed form setting forth the prices for the work to be performed, and the details thereof.

1.6 "Contract Price shall mean total money payable to the Contractor under the contract documents.

1.7 "Addenda" shall mean the written or graphic notices prior to submission of tender which modify or interpret the contract documents.

1.8 "Contract Time" - The number of consecultative calendar months for the completion of work as stated in the executed contract agreement.

1.9 "Contract" shall mean agreements between the parties for the execution of works including therein all contract documents.

1.10 "Tender document" shall mean Designs, Drawings, specifica- tions, agreed variations, if any, and such other documents constituting the tender and acceptance thereof.

1.11 "The Sub-Contractor" means any person, firm or company (other than the contractor) to whom any part of the work has been entrusted by the Contractor with the written consent of the Engineer-in-charge and the legal personnel representative, successors and permitted assigness of such person, firm or company.

1.12 "The Specifications" shall mean all directions' the various technical specifications provisions and requirements attached to the contract which pertain to the method and manner or performing the work to the quality of the work and the materials to be furnished under the contract for the work and any order(s) or instruction (a) thereunder. It shall also mean the latest Indian Standards Institution Specifications for or relative to the particular work or part there of, so far as they are not contrary to the Tender specifications or I.S.I. specifications, and in absence of any tender specifications, the specifications of any other country applied in India as a matter of Standard Engineering practice and approved in writing by the Engineer-in-charge with or without modifications.

1.13 The "Drawing" shall include maps, plans, tracings or prints thereof with any modifications approved in writing by the Engineer-in-charge and such other drawings, as may, from time to time, be furnished or approved in writing by the Engineer-in-charge in connection with the work.

1.14 The "Work" shall mean the works to be executed in accordance with the context or the part thereof as the case may be and shall include extra, additional altered or substituted works as required for the purpose of the Contract. It shall mean the totality of the work by expression or implication envisaged in the contract and shall include all material, equipment and labour required for or relative or incidental to or in connection with the commencement, performance and completion of any work and/or for incorporation in the work.



- 1.15 The "Permanent work" means works which will be incorporation in and form part of the work to be handed over to the owner by the contractor on completion of the contract.
- 1.16 The "Temporary Work" shall mean all temporary works of every kind required in or about the execution, completion and maintenance of the work.
- 1.17 "Site shall mean the land and other place on, under, on or through which the work is to be carried out and any other lands or places provided by the Municipal Corporation for the purpose of the Contract together with any other places designated in the Contract as forming part of the site.
- 1.18 "The Construction Equipment" means all appliance/equipments of whatever nature required in or for execution, completion or maintenance of work or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent work.
- 1.19 "Notice in Writing or Written Notice" means a notice written, types or printed form delivered personally or sent by Registered post to the latest known private or business address at Registered Office of the Contractor.
- 1.20 The "Alteration/Variation order" means an orders given in writing by the Engineer-in-charge to effect additions to or deletion from and alterations in the work.
- 1.21 "Final Test Certificate" shall mean the final test Certificate issued by the owner within the provisions of the Contract.
- 1.22 The "Completion Certificate" shall mean a certificate to be issued by the Engineer-in-charge when the work has been completed to his satisfaction.
- 1.23 The "Final Certificate" shall mean the final certificate issued by the Engineer-in-charge after the work is finally accepted by the owner.
- 1.24 "Defect Liability Period" shall mean the specified period between the issue of completion Certificate and the final certificate as specified in the tender.
- 1.25 "Approved" shall mean approved in writing including subsequent modification in writing of previous verbal approval and "Approval" means approved in writing including as aforesaid.
- 1.26 "Letter of Acceptance" shall mean an intimated by a letter to tenderer that the tender has been accepted in accordance with provisions contained therein.
- 1.27 "Order" and "Instruction" shall respectively mean any written order or instruction given by the Engineer-in-charge within the scope of his powers in terms of the Contract.
- 1.28 "Running Account Bill" shall mean a Bill for the payment of "On Account" money to the contractor during the progress of work on the basis of work done and the non-perishable materials to be incorporated in the work supplied by the Contractor.
- 1.29 "Security Deposit" shall mean the deposit to be held by the owner as security for the due performance of contractual obligations.
- 1.30 "The appointing authority" for the purpose of Arbitration shall be the Municipal Commissioner, Surat Municipal Corporation, Surat.
- 1.31 Retention Money shall mean the money retained from R.A. Bill for due completion of "NET WORK".
- 1.32 Unless otherwise specifically stated, the masculine gender shall include the feminine and natural genders and viceversa and the singular shall include the plural and vice-versa.

#### GC-02 LOCATION OF SITE AND ACCESSIBILITY :

The site of works is within the limits of Surat Municipal Corporation. It is served by all weather roads and Western Railway Broad Gauge line, Government Irrigation Canal Crossing. The intending Tenderer should inspect the

site and make himself familiar with site conditions and available communication facilities. Non availability of access/roads shall in no case be the cause to condon any delay in the execution of the work or be the cause for any claims or extra compensation.

#### GC-03 SCOPE OF WORK :

The scope of work is defined broadly in the special conditions of Contract and specifications. The Contractor shall provide all necessary materials equipment and labour etc. for the execution and of the work till completion. All materials that go with the work shall be approved by the Engineer-in-charge prior to procurement and use.

Owner at his discretion may endeavour to provide water to the Contractor at the owner's source of supply at one point at the rate charged for such works.

The contractor shall make his own arrangement for the distribu- tion pipe net works from the source of supply after getting prior permission for the same from the Engineer-in-charge. Supply of water shall not be free and the necessary charges as fixed by the Local Body shall have to be paid by the contractor. However, owner does not guarantee the supply of water and this does not relieve the contractor of his responsibility in making his own arrangements and for the timely completion of the work as stipulated.

#### POWER SUPPLY :

The Contractor shall have to make his own arrangement for power supply.

#### LAND FOR CONTRACTOR'S FIELD OFFICE, GODOWN & WORKSHOP:

Owner will not be a position to provide land required for Contractors shall have to make his own arrangement for the same. No land will be provided by S.M..C. to the contractor for constructing his labour and supervisory comp and other service facilities.

#### GC-04 RULLING LANGUAGE :

The language according to which the contractor shall be constructed and interpreted shall be English. All entries in the contract documents and all correspon-dence between the contractor and the Municipal Corporation or the Engineer shall be in English. All dimensions for the materials shall be given in metric units only.

#### GC-05 INTERPRETATION OF CONTRACT DOCUMENT :

1. The provisions of the General Conditions of Contract and special conditions of contract shall prevail over those of any other documents of the contract unless specifically provided otherwise. Should there be any discrepancy, inconsistency error or omission in the several documents forming the contract, the matter may be referred to the Engineer-in-charge for his instructions and decision. The Engineer-in-charge's decision in such case shall be the final and binding to the contractor.
2. Works shown upon the drawings but not described in the specifications of described in the specific specifications without showing on the drawings shall be taken as described in the specifications and shown on the drawings.
3. The heading and the marginal notes to the clauses of those general conditions of contract or to the specifications or to any other part of tender documents are solely for the purpose of giving a concise indication and not a summary of contents thereof or be used in the interpretation or construction thereof of the contract.
4. Unless otherwise stated specifically, in this contract documents the singular shall include the plural and vice versa wherever the context so requires. Works implementing persons shall include relevant corporated companies/ registered associations / body of individual / firm of partnership.
5. Notwithstanding the sub-divisions of the documents into separate sections and volumes every part of each shall be supplementary to and complementary of every other part and shall be read with and into the context so far as it may be practicable to do so.
6. Where any portion of the General Conditions of contract is repugnant to or ar variance with any provisions of the special conditions of contract, then, unless a different intension appears, the provisions of the special conditions of

contract shall be deemed to override the provisions of General conditions of Contract and shall to the extent of such repugnancy or variance prevail.

7. The materials, Design and Workmanship shall satisfy the relevant I.S.S. and Codes referred to. If Additional requirements are shown in the specifications, the same shall be satisfied over and above I.S.S. and Codes.

8. If the specification mention that the contract shall perform certain work or provide certain facilities, it will mean that the contractor shall do so at his own cost.

9. The correctness of the details given in the tender documents is not guaranteed. The contractor shall independently obtain all necessary information for making the tender. The contractor shall be deemed to have examined the Contract Documents, to have generally obtained his own information in all matters that might affect the carrying out of the work or the Tenderer rates. Any error in description of quantity or commission there from shall not vitiate the contract or release the contractor from executing the work comprised in the contract according to the Drawings and specifications at the tendered rates. He is deemed to have known the scope, nature and magnitude of the work and the requirements of materials and labour involved and as to what all works he has to complete in accordance with the contract what-soever be the defects, omissions, or errors that may be found in the contract documents. The contractor shall be deemed to have visited the site and the surroundings, to have satisfied himself to the nature of all existing structures, if any, and also as to the nature and the conditions of railways, roads, bridges and culverts, means of transport and communications, whether by land, air or water and as to possible interceptions thereto and the access and agrees from the site, to have made inquiries, examined and satisfied himself as to the sites for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials, the available accommodation as to whatever required, the depicts and such other buildings as may be necessary for executing and completing the work, to have local independent inquiries as to the subsoil, subsoil water and variation thereof, storms, prevailing winds, climatic conditions and all other similar matters effecting the work. He is deemed to have acquainted himself as to his liability for payment of Government taxes, custom duty and other charges.

Any neglect or failure on the part of the contractor in obtaining necessary and reliable information upon the forgoing or any other matters affecting the contract shall not relieve him from any risks or liabilities or the entire responsibility from completion of the work at the tendered rates and time in strict accordance with the contract documents.

No verbal agreement or inference from conversation with any officer or employee of the owner either before or after the execution of the Contract Agreement shall in any way effect or modify any of the terms of obligations herein contained.

#### GC-06 CONTRACTOR TO UNDERSTAND HIMSELF FULLY :

The contractor by tendering shall be deemed to have satisfied himself, as to consideration and circumstances affecting the tender price, as to the possibility of executing the works as shown and described in the contract and to have fixed his prices according to his own view on these matters and to have understand that no additional allowances except as otherwise expressly provided, will after words be made beyond the contract price. The contractor shall be responsible for any misunder-standing or incorrect information given in writing by the Engineer.

#### GC-07 ERROR IN SUBMISSION ;

The contractor shall be responsible for any errors or omissions in the particulars supplied by him. Whether such particulars have been approved by the Engineer or not, provided that such discrepancies, errors or omissions be not due to inaccurate information or particular furnished in writing to the Contractor by the Municipal Corporation or the Engineer.

#### GC-08 SUFFICIENCY OF TENDER :

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness of the tender rates which rates shall, except as or other wise provided for, cover all the Contractor's liabilities and obligation set forth or implied in the contract for the proper execution of work for compliance with requirements of Article GC-19 thereof.

#### GC-09 DISCREPANCIES :

The drawings and specifications are to be considered as mutually explanatory of each other, detailed drawings being followed in preference to small scale drawings and figures dimension in preference to scale and special conditions in preference to general conditions. Special direction or dimensions given in the specifications shall supersede all else. Should any discrepancies however, appear or should any misunderstanding arise as to the meaning and intent of the said specifications or drawings, or as to the dimensions or the quality of the materials or the due and proper execution of the works, or as to the measurement or quality and valuation of the works executed under this contract or as extra there upon the same shall be explained by the Engineer-in-charge and his explanation shall subject to the final decision of the Additional City Engineer, in case reference be made to him, be binding upon the contractor shall execute the work according to such explanation (subject to aforesaid) and without addition to or deduction from the contract and shall also do all such works and things necessary for the proper completion of the works as implied by the Drawings and specifications, even though such works and things are not specially shown and described in said specifications. In cases where not particular specifications are given for any article to be used under the contract, relevant specifications of the Indian Standard Institution shall apply.

#### **GC-10 PERFORMANCE GUARANTEE : (Security Deposit)**

1. A sum of 2.0% of the accepted value of the tender contract price shall be deposited by the tenderer (hereinafter called. The Contractor while tender is accepted) as Security deposit with the S.M.C. for the faithful performance, completion of the works in accordance with the contract documents and to the satisfaction of the Engineer and assuring the payment of all obligations arising from the execution of the contract.

This shall be deposited initially at 2.0% of the value of the contract within ten days of the receipt by him or the notification of acceptance of tender and atleast three (3) days before the contract agreement is executed in the forms mentioned below :

#### **Tender Amount below Rs. 2.00 crore**

(a) In cash or by a demand draft of a Schedule Bank acceptance to owner on the Surat Branch.

#### **Tender Amount above Rs. 2.00 crore-N.A.**

(b) A fixed deposit receipt of a Scheduled Bank or Government Securities located at Surat duly endorsed in favour of the Municipal Commissioner, Surat Municipal Corporation, Surat.

(c) If the value of the work as per actual execution exceeds the accepted value of tender because of allotment of further work further recoveries towards security deposit shall be effected at four percent (4%) of R.A.Bill to make up the total amount of security deposit equal to two point five percent (2.50%) of the revised value of contract. Alternatively the Contractor may at his option deposit the full amount of security deposit as per the revised value of the contract within fifteen days of receipt by him on the notification accepting the tender in the form as aforesaid.

2. If the Contractor, sub - contractor or their employees shall break, deface or destroy any property belonging to the owner or other agency during the execution of the contract, the same shall be made good by the contractor at his own expenses and in default thereof, the Engineer-in-charge may cause the same to be made good by other agencies and recover expenses from the Contractor (for which the certificate of the Engineer-in-charge shall be final). These expenses can be recovered from the security deposit if recover from other sources is not possible. The amount so reduced in security deposit will be made good by deduction from the next R.A.Bill of the Contractor.

3. All compensation or other sums of money payable by the contractor to the owner under terms of this contract may be deducted from or paid by the sale of sufficient part of his security deposit or from any sums which may be due or become due to the contractor by the owner on any account whatsoever and in the event this Security deposit being reduced by reasons of any such deductions or sale of security deposit or part thereof as aforesaid, the Contractor shall within fifteen days thereafter make good the in cash, bank drafts or Government Securities endorsed as aforesaid. No interest shall be payable by the owner for sum deposited as security deposit.

4. The security deposit shall be extendable upto the date as decided by Engineer in accordance with Requirement of contractual obligations under the contract.

5. The security deposit less any amounts due shall be returned to the contractor without any interest after the defects liability period is over and subject to the Engineer-in-charge certifying that no liability attaches to the contractor.

6. The performance guarantee shall be delivered to the Municipal Corporation within Ten (10) days of the notice of award. Security Deposit should be paid in time and if it is paid after fifteen days from the date of work order then the penalty of 0.065% per day of the amount of security deposit should be recovered from the Contractor while receiving the security deposit. The performance guarantee will be returned to the Contractor without any interest after the defect liability period is over. It is clarified that the amount of security deposit shall be collected on the basis of Contract Price and not on the basis of estimated amount put to tender. Two percent (2.0%) of the tendered amount accepted by the competent authority shall have to be paid towards security deposit at the time of execution of agreement.

#### GC-11 INSPECTION OF WORK :

1. The Engineer in charge will have full power and authority to inspect the work at any time wherever in progress either on the site or at the contractor's any other manufacturers workshops or factories wherever situated and the contractor shall afford for Engineer-in-charge every facility and assistance to carry out such inspection. Contractor or his authorised representative shall, at all time during the usual working hours and all other times when so notified, remain present to receive orders and instructions, orders given to Contractor's representative shall considered to have the same force as if they had been given to the contractor himself. Contractor shall give not less than 7 days notice in writing to the Engineer-in-charge before covering up or otherwise placing beyond reach of inspection and measuring any work in order that the same may be inspected and measured. In the event of breach of the above, the same shall be recovered at Contractor's expenses for carrying out such inspection or measurement.

2. No material shall be despatched from contract store on site of work before obtaining approval in writing of the Engineer-in-charge, Contractor shall provide at all time during the progress of work and maintenance period proper means of access with ladders, gangways, etc. and the necessary attendance to move and adopt as directed for inspection or measurement of work by Engineer-in-charge.

#### GC-12 DEFECT LIABILITY :

1. Contractor shall guarantee the work for a period of 12 months from the date of issue of completion certificate. Any damage or defect that may arise or that may remain undiscovered at the time of issue of completion certificate connected in any way with the equipment or materials supplied by him or in the workmanship be rectified or replaced by contractor at his own expenses as desired by Engineer-in-charge or in default may cause the same to be made good by other agency and deduct expenses of which the certificate of Engineer-in-charge shall be final from any sums that may then or any time thereafter become due to contractor of sale thereof or of a sufficient portion thereof.

2. From the commencement to completion of work contractor shall take full responsibility for the case of the work including all temporary works and in case any damage, loss or injury shall happen to work or any part thereof or to any temporary works from any cause whatsoever and shall at his own cost repair and make good the same so that at completion work shall be in good order and in conformity in every respect with the requirements of contract and as per the instructions of the Engineer-in-charge.

3. If at any time before the work is taken over, the Engineer-in-charge shall -

(a) Decide that any work done or materials used by the contractor are defective or not in accordance with contract or that work of any portion thereof is defective or do not fulfill the requirements of contract (all such materials being hereinafter called defects in this clause and (b) as soon as reasonably practicable given to contractor notice in writing of the said defect specifying particulars of the defects alleged to exist or to have occurred, then contractor shall at his own expenses and with all speed make good the defects so specified.

(b) In case contractor fails to do so, owner may take at the cost of the contractor, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure so incurred by S.M.C. will be recovered from the amount due to contractor. The decision of Engineer-in-charge with regard to the amount to be recovered from contractor will be final and binding on the contractor.

#### GC-13 POWER OF ENGINEER TO GIVE FURTHER INSTRUCTIONS :

The Engineer shall have the power and authority from time to time and at all times to give further instructions and directions as may appear to him necessary or proper for the guidance of contractor and the works and efficient execution of the works according to the terms of the specifications, and the contractor shall receive, execute, obey and be bound by the same, according to the true intent and meaning thereof, as fully and effectually as though the same had accompanied or had been mentioned or referred to in the specifications. No work which radically changes the original nature of the contract shall be ordered by the Engineer and in the event of any deviation being ordered, which in the opinion of the contractor changes the original nature of the contract, the shall nevertheless carry it

out and any disagreement as to the nature of the work & the rate to be paid thereof shall be resolved. The time of completion of works, in the event of any deviations, resulting in additional cost over the contract sum being ordered, then be extended or reduced reasonable by the Engineer. The Engineer's decision in the case shall be final and binding.

#### GC-14 PROGRAMME :

The time allowed for execution of works shall be essence of the contract. The contract period shall commence from date of Notice of intimation to proceed. The tenderer at the time of submitting his tender shall indicate the construction or pipeline schedule, the month-wise programme required for the execution of the works and shall confirm the same within fourteen (14) days of the acceptance of his Tender. The contractor shall provide to the Engineer-in-charge a detailed programme of time schedule for execution of the works in accordance with the specifications & the completion date. The entire programme to be finalised by the Contractor, has to confirm to the execution period mentioned alongwith the Bill of Quantities in the Tender Documents. The Engineer upon scrutiny of such submitted programme by contractor, shall examine suitability of it to the requirement of contract and suggest modifications, if found necessary.

#### GC-15 SUBLETTING OF WORKS :

No part of the contract nor any share or interest thereon shall in any manner or degree be transferred, assigned or sublet by the contractor directly or indirectly to any firm or Corporation whatsoever except as provided for in the succeeding subclause without the consent in writing of the owner.

#### GC-16 SUB-CONTRACTORS FOR TEMPORARY WORKS ETC. :

The owner may give written consent to sub-contractors for execution of any part of the work at the site being entered upon by the contractors provided each individuals contractor is submitted to the Engineer-in-charge before being entered into and in approved by him. List of Sub-Contractors is to be supplied. Not with standing any subletting with such approval as aforesaid and not with standing the Engineer-in-charge shall have received copies of any sub-contractors, the contractors shall be and shall remain solely responsible for the quality and proper expenditures and execution of the works and the performance of all the conditions of contract in all respects as if such submitting or sub-contracting had not taken place and as if such work had done directly by the Contractor.

#### GC-17 TIME FOR COMPLETION:

**1. The work covered under this contract shall be commenced from the date of contract is served with a notice to proceed with the work and shall be completed before the date as mentioned in the time schedule of work. The time is the essence of the contract and unless the same is extended as mentioned in clause No. GC-18 (Extension of time) the contractor will be panalised for the delay.**

**2. The general time schedule for work is given in the tender document. Contractor shall prepare a detailed weekly or monthly programme of work in consultation with Engineer-in-charge soon after the agreement and the work shall be strictly executed accordingly. The time for as construction of road given includes, the time required for testing, rectification if any, retesting and completion in all respects to the entire satisfaction of the Engineer- in-charge.**

#### GC-18 EXTENSION OF TIME :

Time shall be considered as the essence of the contract. If however, the failure of the Contractor to complete the work as per the stipulated dates referred to above arises from delays on the part of Municipal Corporation in supplying the materials of equipment it has undertaken to supply under the contract or from delays in handing over sites or from increase in the quantity of work to be done under the contract, or force Majeure an appropriate extension of time will be given. The Contractor shall request such extension within one month of the cause of such delay and in any case before expiry of the contract period.

#### GC-19 CONTRACT AGREEMENT :

The successful tenderer shall when called upon to do so, enter into and execute the Contract Agreement within (15) fifteen days of the Notice of Award, in the form shown in tender documents with such modifications as may be necessary in the opinion of the Municipal Commissioner. It should be incumbent on the contract to pay the stamp duty and the legal charges for the completion of the contract agreement.

GC-20 A.PENALTY FOR DELAY :

If the contractor fails to complete the work within the stipulated completion date for the work or he shall pay liquidated damages at one tenth of Two percent of contract value per day of delay in completion and handing over the work or part thereof as the case may be to the Municipal Commissioner. The amount of liquidated damages shall, however, be subjected to a maximum of ten (10) percent of the contract value. Delays in excess of one hundred days will be a cause for termination of the contract and forfeiture of all security for performance.

**~~B.BAR CHART:~~**

~~—————The successful tenderer shall have to submit the progress bar chart within fifteen days after the contract, and the contractor should work as per the approved bar chart, failing the contractor shall have to pay the compensation for delay as per the decision of Municipal Commissioner.~~

GC-21 FORFEITURE OF SECURITY DEPOSIT :

Whenever any claim arises against the contractor for the payment of a sum of money out of or under the contract, the owner shall be entitled to recover such sum by appropriating in part or whole, the security deposit of the contractor. In case the Security deposit is insufficient the balance recoverable shall be deducted from any sum then due or which at any time thereafter may become due to the contractor shall pay to the owner on demand the balance remaining due.

GC-22 ACTION OF FORFEITURE OF SECURITY DEPOSIT :

In any case in which under any clause or clauses of the contract, the contractor shall have forfeited the whole of his Security deposit or have committed a breach of any of the terms contained in this contract, the owner shall have power to adopt any of the following courses as he may deem best suited to his interest -

- (a) To rescind the contract (of which rescission notice in writing to the contractor under the hand of the owner shall be conclusive evidence) in which case, the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of the owner.
- (b) To employ labour and to supply materials to carry out the balance work debiting contractor with the cost of labour employed and the cost of materials supplied for which a certificate of the Engineer-in-charge shall be final and conclusive against the contractor and 10% costs on above to cover all departmental charges and crediting him with the value of work done at the same rates as if it has been carried out by the contractor under the terms of his contract. The certificate of Engineer-in-charge as to the value of the work done shall be final and conclusive against the contractor.
- (c) To measure up the work of the contractor and to take such part hereof as shall be unexecuted out of his hand to give it to another contractor to complete. In this case the excess expenditure incurred than what whole have been paid to the original contractor, if the work would have been executed by him, shall be earnest and paid by the original contractor and shall be deducted from any money due to him by the owner under the contract or otherwise and for the excess expenditure, the certificate of the Engineer-in-charge shall be final and conclusive.

In the event any of the above course being adopted by the owner, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any agreement so or made by advance on account of or with a view to the execution of the work or the performance of the contract. In such case the contractor shall not be entitled to recover or be paid by sum for any work actually performed under this contract unless the Engineer-in-charge will certify in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified. In the event of the owner putting in force the powers as stated in a, b, c, above vested in him under the preceding clause, he may, if he so desire, take possession of all or any tools and plant, materials and stores in or upon the work or the site thereof belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates to be certified by the Engineer-in-charge whose certificate thereof shall be final otherwise the Engineer-in-charge may give notice in writing to the contractor or his representative requiring him to remove such tools plant materials or stores from the premises within the time specified in the notice and if the contractor fails to comply with any such notice, the Engineer-in-charge may remove them at the Contractor's expenses or sell them by auction or private sale on account of the contractor and his risks in all respects without any further notice as to the date, time to place of the sale and the certificate of Engineer-in-charge as to the expenses of any such removal and the amount of the proceeds and the expenses of any such sale shall be final and conclusive against the contractor.

**GC-23 NO COMPENSATION FOR ALTERATION IN OR RESTRICTION OF WORK :**

If at any time from the commencement of work, the owner shall for any reasons whatsoever not require the whole or part thereof a specified in the tender to be carried out, the Engineer-in-charge shall give notice in writing of the contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from execution of work in full, but which he did not derive in consequence of the full amount of the work not having been carried neither shall he have any claim for compensation by reason of any alterations having been made in original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.

When the contractor is a partnership firm, the prior approval in writing of the S.M.C. shall be obtained before any change is made in the constitution of the firm, where the contractor is an individual or a Hindu Undivided Family business concern, such approval as aforesaid shall, likewise be obtained before sub-contractor enters into any agreement with other parties whereunder the reconstituted firm would have the right to carry out the work hereby undertaken by the contractor. In either case if prior approval as aforesaid is not obtained, the contract shall be deemed to have been allotted in contravention of sub-letting clause hereof and the same action may be taken and the same consequence shall ensue as provided in the sub-letting clause.

**GC-24 IN EVENT OF DEATH OF CONTRACTOR :**

Without prejudice to any of the right or remedies under the contract, if the contractor dies, the owner shall have the option of terminating the contract without compensation to the contractor.

**GC-25 MEMBER OF THE OWNER NOT INDIVIDUALLY LIABLE :**

No official or employee of the owner shall in any way be personally bound or liable for the acts or obligations of the owner under the contract or answerable for any default or omission in the observance or performance of the acts, matters or things which are herein contained.

**GC-26 OWNER NOT BOUND BY PERSONAL REPRESENTATIONS :**

The contractor shall not be entitled to any increase on the Schedule of rates or any other rights or claims whatsoever by reason of representation, explanation or statement or alleged representation, promise or guarantees given or alleged to have been given to him by any person.

**GC-27 CONTRACTOR'S OFFICE AT SITE :**

The Contractor shall provide and maintain an office at the site for the accommodation of his agent and staff and such office shall be opened at all reasonable hours to receive instructions, notice or other communications.

**GC-28 CONTRACTOR'S SUBORDINATE STAFF AND THEIR CONDUCT :**

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1. The contractor on award of the work shall name and depute a qualified Engineer, having experience of carrying out work of similar nature, to whom equipments, materials, if any, shall be issued and instructions for work given. The contractor shall also provide to the satisfaction of Engineer in-charge sufficient and qualified staff to superintend the execution of the work, competent sub-agents, foremen and leading hands including those specially qualified by previous expeditions to supervise the type of works comprised in the contract in such manner as will ensure work of the best quality and expeditions working, it, in the opinion of the Engineer-in-charge, additional properly qualified supervision staff is considered necessary, if shall be employed by the contractor without additional charge on account thereof. The contractor shall ensure to the satisfaction of the Engineer-in-charge that sub-contractors, if any shall provide competent and efficient supervision over the work entrusted to them.

2. If and whenever any of the contractor's or sub-contractor agents, sub-agents, assistance, foremen or other employees shall, in the opinion of Engineer-in-charge, be guilty of any misconduct or be incompetent or insufficiently qualified or intelligent in the performance of their duties or that in opinion of the owner or Engineer-in-charge, it is undesirable for administrative or any other reason for person or persons to be employed in the works, the contractor, if so directed by the Engineer-in-charge, shall at once remove person or persons from employment thereon. Any person or persons so removed shall not again be reemployed in connection with the works without the written permission of the Engineer-in-charge. Any person so removed from the works shall be immediately replaced at the expenses of the contractor by a qualified and competent substitute. Should the contractor be required to repatriate any person removed from the works he shall do so and shall bear all costs in connection therewith.



3. The contractor shall be responsible for the proper behaviour of all the staff, foremen, workmen and others shall exercise proper control over them and in particular and without prejudice to the same. Generally, the contractor shall be bound to prohibit and prevent any employee from trespassing or acting in any way detrimental or prejudicial to the interest of the community or of the properties or occupiers of land and properties in the neighbourhood and in the event of such employees so trespassing, the contractor shall be responsible therefore and relieve the owner of all consequent claims, actions for damages or injury or any other grounds whatsoever. The decision of the Engineer-in-charge upon any matter arising under this clause shall be final.

4. If and required by the owner, the contractor's personnel entering upon the owner's premises shall be properly identified by badges of a type acceptable to the S.M.C. which must be worn at all times on owner's premises.

#### GC-29 TERMINATION OF SUB-CONTRACTOR BY OWNER :

If any sub-contractor engaged upon the works at the site executes any work which in the opinion of Engineer-in-charge is not in accordance with the contract documents, the S.M.C. may give written notice to the contractor request him to terminate such sub-contract and the contractor upon the receipt of such notice shall terminate such sub-contract and the latter shall forthwith leave the works failing which the owner shall have the right to remove such sub-contractors from the site.

No action taken by the owner under the above clause shall relieve the contractor of his liabilities under the contract or give rise to any right to compensation, extension of time or otherwise.

#### GC-30 POWER OF ENTRY :

If the contractor shall not commence the work in the manner previously described in the contract documents or if he shall, at any time, in the opinion of Engineer-in-charge.

- (i) Fail to carry out works in conformity with the documents or
- (ii) Fail to carry out the works in accordance with the time schedule.
- (iii) Substantially suspend work or the works for a period of fourteen days without authority from Engineer-in-charge or
- (iv) Fail to carry out and execute the work to the satisfaction of the Engineer-in-charge or
- (v) Fail to supply sufficient or suitable construction plant temporary works, labour materials or things or
- (vi) Commit breach of any other provisions of the contract on his part to be performed or observed or persist in any of the above mentioned breached of the contract for fourteen days after notice in writing shall have been given to the contractor by the Engineer-in-charge requiring such breach to be remedied or
- (vii) Abandon the work or
- (viii) During the continuance of the contract becomes bankrupt, make any arrangement or compromise with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of amalgamation or reconstruction then in any such case.

The owner shall have the power to enter upon the works and take possession thereof and of the materials, temporary works, constructional plant and stock therein, and to revoke the contractor's licence to use the same and to complete the works by his agents, other contractor or workman or to relate the same upon any terms and to such other person, firm or corporation as the owner in his absolute discretion may think proper to employ, and for the purpose aforesaid to use or authorise the use of any materials, temporary works, constructional plant, and stock as aforesaid, without making payment or allowance to the Contractor for the said materials other than such as may be certified in written by the Engineer-in-charge to be reasonable and without making any payment or allowance to the contractor for the use of said temporary works, constructional plant and stock or being liable for any loss or damage thereto. If the owner shall be reason of his taking possession of the works or of the work being got completed by other contractor incur excess certified by the Engineer-in-charge shall be deducted from any money which may be due for the work done by the contractor under the contract and not paid for. Any deficiency shall forthwith be made good and paid to the

owner by the contractor and the owner shall have power to sell in such manner and for such price as he may think fit all or any of the constructional plant, materials etc. constructed by or belonging to and recoup and retain the said deficiency or any part thereof out of the proceeds of the sale.

#### GC-31 CONTRACTOR'S RESPONSIBILITY WITH THE OTHER CONTRACTOR & AGENCIES:

Without repugnance to any other condition, it shall be the responsibility of the contractor executing the work of civil construction to work in close co-operation and co-ordinate the work with other contractors or their authorised representative and the contractor will put a joint scheme with the concurrence of other contractors showing the arrangements for carrying his portion of the work to the Engineer-in-charge and get the approval. The Engineer-in-charge before approving the joint scheme will call the parties concerned and modify the scheme if required. No claim will be entertained on account of the above. The contractor shall conform in all respects with the provisions of any statutory regulations, ordinances or by laws of any local or locally constituted authorities or public bodies which may be applicable from time to time to works or any temporary works. The contractor shall keep the owner indemnified against all penalties and liabilities of every kind arising out of non-adherence to such statutes, ordinance, laws, rules, regulations, etc.

#### GC-32 OTHER AGENCIES AT SITE :

The Contractor shall have to execute the work in such place and condition where other agencies will also be engaged for other works, such as site grading, filling and levelling, electrical and mechanical engineering works, etc. No claim shall be entertained for works being executed in the above circumstances.

#### GC-33 NOTICES :

Any notice under this contract may be served on the contractor or his duly authorised representative at the job site or may be served by registered post direct to the official address of the contractor proof of issue of any such notice could be conclusive of the contractor having been duly informed of all contents therein.

#### GC-34 RIGHT OF VARIOUS INTERESTS :

The owner reserves the right to distribute the work between more than one contractor. Contractor shall co-operate and afford reasonable opportunity to other contractors for access to the works for the carriage and storage of materials and execution of their works.

Wherever the work being done by any department of the owner or by other contractor employed by the owner is contingent upon work covered by this contract, the respective rights of the various interests shall be determined by Engineer-in-charge to secure the completion of various portions of the work in general harmony.

#### GC-35 PRICE ADJUSTMENT :

No adjustment in price shall be allowed as the time limit for completion of the project is less than One year.

#### GC-36 TERMS OF PAYMENT :

The payment of Bills shall be made progressively according to the rules and practice followed by the Municipal Corporation. The progressive payment unless otherwise provided in the Contract Agreement or subsequently agreed to by the parties, shall be made generally monthly on submission of a bill by the Contractor in prescribed form in an amount according to the value of the work performed less the aggregate of previous progressive payments and as required by clause GC-37 (Retention money) herein. All such progressive payment shall be regarded as payment by way of advance against final payment.

Payment for the work done by the contractor will be based on the measurement at various stages of the work, in accordance with the conditions at Clause GC-77 (Measurement of Work in Progress)

#### GC-37 RETENTION MONEY :

Pursuant to Clause GC-36 Terms of Payment) on all money due to the contractor for work done, Municipal Corporation will hold as retention money of Seven percent (7%) of the value of work. The retention money will not normally be due for payment until the completion of the entire work and till such period the work has been finally accepted by the Municipal Corporation and completion certificate issued by the Municipal Corporation in pursuant to Clause No.GC-83 (Completion Certificate).

However, after the assurance of completion certificate, and Municipal Commissioner may at its own discretion and having considered the Contractor's performance and diligence during the contract time allow the retention money to be converted into a Bond as stipulated in the Clause GC-10 (Performance Bond Security Deposit).

#### GC-38 PAYMENT DUE FROM THE CONTRACTOR :

All costs, damages or expenses, for which under the Contract the Contractor is liable to the Municipal Corporation deducted by the Municipal Corporation from any money due or becoming due to the Contractor under the contract or from any other contract with the Municipal Corporation or may be recovered by action at law or otherwise from the Contractor.

#### GC-39 CONTINGENT FEE :

1. The Contractor warrants that he has not employed any person to solicit or secure the contract upon any agreement for a commission, percentage, brokerage or contingent fee. Breach of this warranty shall give the Municipal Commissioner the right to cancel the contract or to take any other measure as the Municipal Commissioner may deem fit. The warranty does not apply to commissions payable by the contractor to establish commercial or selling agent for the purpose of securing business.

2. No officer, employer of the Municipal Corporation be admitted to any share or part of this contract or to any benefit that may rise therefrom.

#### GC-40 BREACH OF CONTRACT BY CONTRACTOR :

If the contractor fails to perform the work under the contract with due diligence or shall refuse or neglect to comply with instruction given to him in by the Engineer-in-charge accordance with the contract, or shall contravene the provisions of the contract, the S.M.C. may give notice in writing to the contractor to make good such failure, neglect or contravention. Should the Contractor fail to comply with such written notice within twenty eight (28) days or receipt, if the Municipal Commissioner shall think fit, it shall be lawful for the Municipal Corporation, without prejudice to any other rights, the contractor may have under the contract, to terminate the contract for all or part of the works, and to make any other arrangements it shall deem necessary to complete the work outstanding under the contract at the time of termination. In this event Article GC-15 (Subletting of work) and GC-16 (Sub-Contracts for Temporary Works etc.) hereof shall be invoked and the performance Bond shall immediately become due and payable to the Municipal Commissioner the value of the work done on the date of termination and not paid for shall stand forfeited to the Municipal Corporation and the Municipal Corporation shall have free use of any works which the contractor may have at the site at the time of termination of the contract.

#### GC-41 DEFAULT OF CONTRACTOR :

1. The Municipal Corporation may upon written notice of default to the contractor terminate the contract in circumstance detailed hereunder :

(a) If in the judgement of the Municipal Corporation the contractor fails to make completion of works within the time specified in the completion schedule or within the period for which extension has been granted by the Municipal Corporation /Engineer to the Contractor.

(b) If in the judgement of the Municipal Corporation the contractor fails to comply with any of the provisions of this contract.

2. In the event the Municipal Commissioner terminates the contract in whole or in part as provided in Article GC-48 (Termination of Contract), the Municipal Corporation reserves the right to purchase upon such terms and in such manner as it may deem appropriate, plant similar to that terminated and the contractor will be liable to the Municipal Corporation for any additional costs for such similar and / or for liquidated damages for delay until such reasonable time as may be required for the final completion of works.

3. If this contract is terminated as provided in this paragraph GC - 30 (Power of entry) (1) the Municipal Corporation in addition to any other rights provided in this clause, may require the Contractor to transfer title and deliver to the Municipal Corporation under any of the following cases in the manual and as directed by the Municipal Corporation. (a) Any partially completed information and contract rights as the contractor has specifically produced or acquired for the performance of the contract so terminated.

4. In the event the Municipal Corporation does not terminate the contract as provided in the paragraph GC-48 (Termination of Contract) the Contractor shall continue performance of the contract, in which case the shall be liable to the Municipal Corporation for liquidated damages for delay until the works are accepted.

#### GC-42 BANKRUPTCY :

If the Contractor shall become bank rupt or insolvent or have a receiving order made against him, or compound with the creditors, or being the Municipal Corporation commence to be wound up, not being a member's Voluntary winding up for the purpose of amalgamation or reconstruction, or carry on its business under a receiver for the benefit of his creditors or any of them, the owner shall be at liberty to either (a) terminate the contract forthwith by giving notice in writing to the contractor or to the receiver or liquidator or to any person or organisation in whom the contract may become vested and to act in the manner provided in Article GC-41 (Default of Contractor) as though the last mentioned notice had been the notice referred to in such Article of (b) to give such receiver liquidator or other person in work the contract may become vested the option of carrying out the contract subject to his providing a satisfactory guarantee for the due and faithfully performance of the contract subject to his providing a satisfactory guarantee for the due and faithful performance of the contract upto an amount to be agreed. In the event that the Municipal Corporation terminates the Contract in accordance with this article, the performance Bond shall immediately become due and payable on demand to Municipal Corporation.

#### GC-43 OWNERSHIP :

Works supplied pursuant to the Contract shall become the property of the Municipal Corporation from whichever is the earlier of the following times, namely,

- (a) When the works are completed pursuant to the Contract.
- (b) When the Contractor has been paid any sum to which he may become entitled in respect thereof pursuant to clause GC-36 (Terms of Payment).

#### GC-44 DECLARATION AGAINST WAIVER :

The condonation by the Municipal Corporation of any breach of branches by the stipulations and conditions contained in the contract shall in no way prejudice or effect to the constructed as a waiver of the Municipal Corporation rights, powers and remedies under the contract in respect of any breach or breaches.

#### GC-45 LAWS GOVERNING THE CONTRACT :

The contract shall be constituted according to and Subject to the laws of India and the State of Gujarat and under the jurisdiction of the courts of Gujarat at Surat.

#### GC-46 OVERPAYMENT AND UNDERPAYMENT :

Whenever any claim forths payment of a sum to the Municipal Corporation arises out of or under this Contract against the contractor the same may be deducted by the Municipal Corporation from any sum then due or which at any time thereafter may become due to the contractor under this contract and failing that under any other contract with the Municipal Corporation or from any sum due to the contractor with the Municipal Corporation (which may be available with Municipal Corporation), or from his retention money, or he shall pay the claim on demand. The Municipal Corporation reserves the right to carry out post payment audit and technical examination of the final bill including all supporting vouchers, abstracts, etc.

The Municipal Corporation further reserves the right to enforce recovery of any over payment when detected no withstanding the fact that the amount of the final bill may be included by the Contractor.

It as a result of such audit and technical examination any over payment is discovered in respect of any work done by the Contractor or alleged to have been done by him under the contract, it shall be recovered by the Municipal Corporation from the contractor by way of all the means prescribed above or if any under payment is discovered by the Municipal Corporation, any amount due to the contractor under this contract or under payment may be adjusted against any amount then due or which may at any time thereafter become due before payment is made to the contractor from him to the Municipal Corporation on any other contract account whatsoever.

#### GC-47 SETTLEMENT OF DISPUTES :

Except or otherwise specifically provided in the contract, all disputes concerning questions of fact arising under the contract shall be decided by the Commissioner, subject to a written appeal by the Contractor to the Commissioner, and these decisions shall be final and binding to the contractor.

#### GC-48 TERMINATION OF THE CONTRACT:

1. If the Contractor finds it impracticable to continue operation owing to Force Majeure reasons or for any reason beyond his and/or the Municipal Commissioner find site impossible to continue operation when prompt notification in writing shall be given by the party affected to the other.

2. If the delay or difficulties so caused can not be expected to cease or become unavoidable or if operations can not be resumed within six(6) months the party shall have the right to terminate the contract upon Ten (10) days written notice to the other. In the event of such termination of the contract, payment to the Contractor will be made as follows :

a) The Contractor shall be paid for all works approved by the Engineer and for any other legitimate expenses due to him.

b) If the Municipal Commissioner terminates the contract owing to Force Majeure or due to any cause beyond its control, the contractor shall additionally be paid for any work done during the said Six (6) months period including any financial commitment made for the proper performance of the Contract and which are not reasonable defrayed by payment under (a) above;

c) The Municipal Commissioner also release all bonds and guarantees at its disposal except is cause where the total amount of payments made to the contractor exceeds the final amount due to him in which case the contractor shall refund the excess amount within Sixty (60) days after termination and the Municipal Commissioner thereafter shall release all bonds and guarantees, should the contractor fail to refund the amount received in excess within the said period such amounts shall be deducted from the bonds or guarantees provided.

3. On the termination of the contract for any cause the contractor shall see the orderly suspension and termination of operations, with due consideration to the interests of the Municipal Corporation with respect to completion, safeguarding or storing of materials procured for the performance of the contract and the salvage and resale thereof.

#### GC-49 CHANGES IN CONSTITUTION :

Where the contractor is a partnership firm, the prior approval in writing of the Municipal Commissioner shall be obtained any change is made in the constitution of the firm. Where the contractor is an individual or an undivided family business concern such approval as aforesaid shall like wise be obtained before the contractor enters into any partnership agreement whereunder the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If prior approval as aforesaid is not obtained the contract shall be deemed to have been assigned in contravention of Article thereof.

#### GC-50 SUB-CONTRACTUAL RELATIONS :

All work performed for the contract by sub-contractor shall be pursuant to an appropriate agreement between the contractor and sub-contractor which shall contain provisions to :

a) Protect and preserve the rights of the Municipal Corporation and the Engineer with respect to the work to be performed under the sub-contract so that the sub-contractor thereof will not prejudice such rights.

b) Require that such work be performed in accordance with requirements of the Contract documents.

c) Require under such contract of which the contractor is a party, the submission to the contractor of application for payment and claims for additional costs, extension of time, damages for delay or otherwise with respect to the sub- contracted portions of the work in sufficient time, that the contractor may apply for payment and comply in accordance with the contract Documents for like claim by the Contractor upon the Municipal Corporation.

d) Waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance except such rights as they may have to the proceeds so such insurance held by the Municipal Corporation as trustee and,

e) Obligate each sub-contractor specifically to consent to the provisions of this Article.

GC-51 LIEN :

If, at any time, there should be evidence of any lien or claim for which owner might have become liable and which is chargeable to the contractor, the owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the owner against such lien or claim or if such lien or claim be valid the owner may be or become due and payable to the contractor. If any lien or claims remaining, unsettled after all payments are made, the contractor shall refund or pay to the owner all money that the latter may be compelled to pay in discharging such lien or claim including all cost and reasonable expenses.

GC-52 EXECUTION OF WORK :

The whole work shall be carried out in strict conformity with the provisions of the Contract Documents, detailed drawings, specifications and the instructions of the Engineer-in-charge from time to time. The Contractor shall ensure that the whole work is executed in the most substantial, proper and best workmanship using materials of best quality in strict accordance with the specifications to the entire satisfaction of the Engineer-in-charge.

GC-53 WORK IN MONSOON :

When the work continues in monsoon, the contractor shall maintain minimum labour force required, for the work and plan and execute the construction and erection work according to the prescribed schedule. No extra rate will be considered for such work in monsoon. During monsoon and entire constructing period the contractor shall keep the site free from water at his own cost.

GC-54 WORK CLOSED ON SUNDAYS & HOLIDAYS & BETWEEN SUNSET AND SUNRISE:

No work shall be carried out on Sundays and Corporation Holidays and no work shall be carried out between sunset and sunrise. Except with the special permission of Engineer-in-charge in writing previously obtained and with holding such permissions shall be no ground of complaint on the part of contractor or cause for compensation to them. Working period shall be maximum eight (8) hours per days.

GC-55 EXTRA SUPERVISION CHARGES TO BE BORNE BY CONTRACTOR :

Further to clause No. GC-54 when Engineer-in-charge feels necessary to give permission to contractor for carrying out work for period of more than Eight hours working period in a day and/or to continue work on Sunday and Corporation holidays. Extra Supervision charges arising due to overtime working of Corporation's staff shall be borne by the contractor at prevailing rates from time to time. Such extra supervision charges shall be deducted by Corporation from the running bill/s of the contractor at Surat Municipal Corporation's description.

GC-56 DRAWING TO BE SUPPLIED BY THE OWNER :

The drawings attached with the tender documents shall be for general guidance of the contractor to enable him to visualize the type of work contemplated and scope of work involved. Detailed working drawings according to which the work is to be done shall be furnished from time to time as the work progresses. The contractor shall study the drawings thoroughly in connection with other connected details and discrepancy if any bring to the notice of the Engineer-in-charge before actually carrying out the work.

GC-57 DRAWINGS TO BE SUPPLIED BY THE CONTRACTOR :

~~Where drawings, date are to be furnished by the contractor they shall be as enumerated in special condition of contract and shall be furnished within the specified time. Where approval of drawings has been specified it shall be the Contractor's responsibility to have these drawings got approved before any work is taken up with regard to the same. Any changes becoming necessary in these drawings during the execution of the work shall have to be carried out by the contractor at no extra cost. All final drawings shall bear the certification stamp as indicated below duly signed by both the contractor and Engineer in charge.~~

"Certified true for \_\_\_\_\_ project Agreement  
 No. \_\_\_\_\_ Signed \_\_\_\_\_ Contractor  
 Engineer in charge Drawings will be approved within three (3) weeks of the receipt of the same by the Engineer in-charge.

## GC-58 SETTING OUT WORK :

The contractor shall set out the work on the site handed by the Engineer-in-charge and shall be responsible for the correctness of the same. The work shall be carried out to the entire satisfaction of Engineer-in-charge. The approval thereof or partaking by Engineer-in-charge in setting out work shall not relieve contractor of any of his responsibilities.

The contractor shall provide at his own cost all necessary level posts, pegs, bamboos, flage, ranging, rods, strings and other materials and labourers required for proper setting out of the work. The Contractor shall provide, fix and be responsible for the maintenance of all stakes, temples level marks profiles and similar other things and shall take and necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence for such removal or disturbance. The contractor shall also be responsible for the maintenance of all existing Survey Marks, Boundary Marks, Distance Marks and Centre line marks either existing or fixed by the Contractor. The Centre, longitudinal or face lines and cross lines shall be marked by small masonry pillars. Each pillar shall have distance mark at the centre for setting up the theodolite. The work shall not be started unless the setting out is checked by Engineer-in-charge in writing but such approval shall not relive the contractor of his responsibilities. The contractor shall provide all materials, labour and other facilities necessary for checking at his own cost.

Pillars bearing geodetic marks on site shall be protected by the Contractor. On completion of the work the contractor shall submit the Geodetic documents according to which the work has been carried out.

## GC-59 RESPONSIBILITIES OF CONTRACTOR FOR CORRECTNESS OF WORK:

The contractor shall be entirely and exclusively responsible for the correctness of every part of the work and shall rectify completely and errors thereon at his own cost when so instructed by Engineer-in-charge.

## 1. Materials to be supplied by Contractor :

Contractor shall procure and provide all the materials required for the execution and maintenance of work including M.S. rods, all tools, tackle, construction plant and equipment except the materials to be supplied by the owner detailed in the contract documents and for the transport thereof, owner, shall made recommendations to the respective authorities if designed by the contractor but assumes no responsibility or any nature. Owner shall insist for procurement of materials with ISI Marks supplied by reputed firms on the DGS & D List. 2. If however the Engineer-in-charge feels that work is likely to be delayed due to contractor's inability to procure the materials, the Engineer-in-charge shall have the right to procure materials from the market and the contractor will accept these materials at the rates decided by Engineer-in-charge

## GC-60 MATERIALS TO BE SUPPLIED BY THE OWNER :

1. If the contract provides certain materials or stores to be supplied by the S.M.C. such materials and stores shall be transported by the contractor at his cost from S.M.C.'s stores or Railway Station. The sum due from contractor for the value of materials supplied by the owner will be recovered from the R.A.Bill on the basis of actual consumption of materials in the work covered and for which R.A.Bill has been prepared. After completion of the work contract has to account for the full quantity of materials supplied to him.

2. The value of store materials supplied by the S.M.C. to the contract shall be charged at rates shown in the contract document and in case any other material not listed in the schedule of materials is supplied by the S.M.C., the same shall be charged at cost price including carting and other expenses incurred in procuring the same. All materials so supplied shall remain the property of the owner and shall not be removed from the site on any account. Any material remaining un-used at the time of completion of work or termination of contract shall be returned to S.M.C.'s store or any other place as directed by the Engineer-in-charge in perfectly good condition at contractor's cost. When materials are supplied free of cost for use in work and surplus and unaccounted balances thereof are not returned to the Municipal Corporation, recovery in respect of such balance will be effected at double the applicable issue rate of the materials or the market rate whichever is higher.

## GC-61 CONDITIONS OF ISSUE OF MATERIALS BY THE S.M.C.:

- a) The materials specified to be issued by the S.M.C. to the contractor shall be issued by the S.M.C.'s store or at Railway Station and all expenses for its shifting to site shall be borne by the contractor. The materials will be issued during working hours and as per rules of S.M.C. from time to time.
- b) Contractor shall bear all expenses for storage and safe custody at site of materials issued to him before use in work.
- c) Material shall be issued by the S.M.C. in Standard/non-standard sizes as obtained from manufacturer.

- d) Contractor shall construct suitable godowns at site for storing the materials to protect the same from damage due to rain, dampness, fires, theft etc.
- e) The contractor should take the delivery of the materials issued by the S.M.C. after satisfying himself that they are in good conditions. Once the materials are issued, it will be the responsibility of the Contractor to keep them in good condition and in safe custody. If the materials get damaged or if they are stolen, it shall be the responsibility of the contractor to replace them at his according to the instructions of the Engineer-in-charge.
- f) For delay in supply or for non supply of materials to be supplied by the S.M.C., on account of natural calamities, act of enemies, other difficulties beyond the control of the S.M.C., the S.M.C. carries non-responsibilities. In no case the contractor shall be entitled to claim any compensation for loss suffered by him on this account.
- g) None of the materials issued to the contractor, shall be used by the Contractor for manufacturing items which can be obtained from manufacturer. The materials issued by the owner shall be used for the work only and no other purpose.
- h) Contractor shall be required to execute indemnity bond in the prescribed form for the same custody and account of materials issued by the owner.
- i) Contractor shall furnish sufficiently in advance a Statement of his requirements of quantities of materials to be supplied by the S.M.C. and the time when the same will be required for the work, so as to enable Engineer-in-charge to make arrangements to procure and supply the materials.
- j) A daily account of materials issued by the owner shall be maintained by the Contractor showing receipt, consumption and balance in hand in the form laid down by Engineer-in-charge with all connected paper and shall be always available for inspection in the site office.
- k) Contractor shall see that only the required quantities of materials are got issued and no more. The contractor shall be responsible to return the surplus materials in good condition at S.M.C.'s store at his own cost.

#### GC-62 MATERIALS PROCURED WITH ASSISTANCE OF THE OWNER :

Notwithstanding anything contained to the contrary in any of the clauses of this contract, where any materials for the execution of the contract are procured with the assistance of the S.M.C. either by issue from S.M.C. stock or purchase made under orders or permits or licences issued by the Government, the contractor shall hold the same materials as trustees for owner and use such materials economically and solely for the purpose of contract and not dispose them off without the permission of S.M.C. and return, if required by Engineer-in-charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on his being paid or credited such prices as Engineer-in-charge shall determine having due regard to the conditions of the materials. The price allowed to contractor shall not exceed the amount charged to him excluding the storage charges if any. The decision of Engineer-in-charge shall be final and conclusive in such matters. In the event of breach of the aforesaid condition, the contractor shall in terms of licence of permits and/or for criminal breach of trust be liable to compensate S.M.C. at double rate or any higher rates. In the event of these materials at that time having higher rate or not being available in the market then any other rate to be determined by the Engineer-in-charge and his decision shall be final and conclusive.

#### GC-63 MATERIALS OBTAINED FROM DISMANTLING :

If the contractor, in the course of execution of work is called upon to dismantle any part for reasons other than on account of bad or imperfect work, the materials obtained from dismantling will be the property of the S.M.C. and will be disposed of as per instruction of Engineer-in-charge in the best interest of the S.M.C.

#### GC-64 ARTICLE OF VALUE OR TREASURE FOUND DURING CONSTRUCTION:

All gold, silver and other minerals of any description and all precious stones, coins, treasures, relics, antiquities and other similar things which shall be found in under or upon site shall be the property of the owner and the contractor shall properly preserve the same to the satisfaction of Engineer-in-charge and shall hand over the same to the owner.

#### GC-65 DISCREPANCIES BETWEEN INSTRUCTIONS :

If there is any discrepancy between the various stipulations of the contract documents of instructions to the contractor or his authorised representative or if any doubt arises as in the meaning of such stipulation or instructions, the contractor shall immediately refer in writing to the Engineer-in-charge whose decision shall be final and conclusive and no claim for losses caused by such discrepancy, shall in any event be admissible.

In case there is any discrepancy in measurements shown in drawing and specifications, the same shown in drawing shall be considered as final and will be binding upon the contractor.



## GC-66 SCHEDULE OF QUANTITIES AND EXTRA ITEMS :

## A. Schedule of Quantities :

Variations in the quantities of work in schedule of quantities shall not vitiate the contract. The rates quoted for the individual items shall apply for the quantities of work increased or decreased by not more than twenty percent for each of the items, should the quantities of work actually involved under any item vary by more than twenty (20%) percent, the rate for such item of work shall be revised in accordance with the procedures indicated under clause "Extra Items". The payment for the items will, however, continue to be at the original rate till the revised rate decided.

## B. Extra Items :

**Extra Items of work shall not vitiate the contract. The contractor shall be bound to execute extra items of work as directed by the Engineer-in-charge. The rates for extra items shall be derived from the S.O.R.(R&B Division) Year 2024-2025 and quoted premium of tender. If the rate of extra item is not available in S.O.R. it will be derived on prevailing market rate.**

## GC-67 ACTION WHEN NO SPECIFICATION IS ISSUED :

In case of any class of work for which no specification is supplied by the S.M.C. in the tender documents, such work shall be carried out in accordance with I.S.S. do not cover the same, the work should be carried out as per standard Engineering practice subject to the approval of Engineer-in-charge.

## GC-68 ABNORMAL RATES :

Contractor is expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all specifications and conditions of contract. This will avoid loss of profit or gain in case of curtailment or change or specification for any item. In case it is noticed that the rates quoted by a tenderer for any item is usually high or unusually low, it will be sufficient cause for rejection of tender unless the S.M.C. is convinced about the reasonableness of the rates on scrutiny of the analysis for such rate to be furnished by the tenderer or demand.

## GC-69 ASSISTANCE TO ENGINEER-IN-CHARGE :

Contractor shall make available to Engineer-in-charge free of cost all necessary instruments and assistance in checking of any work made by the contractor for taking measurement of work.

## GC-70 TEST OF QUALITY OF WORK :

1. All workmanship shall be of the best kind described in the contract document and in accordance with the instructions of Engineer-in-charge and shall be subjected from time to time to such test at contractor's cost as the Engineer-in-charge may direct at the place of manufacture or fabrication or on site or at any such place. Contractor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any work or workmanship as may be selected and required by Engineer-in-charge.

2. All tests will be necessary in connection with the execution of work as decided by Engineer-in-charge shall be carried out at an approved laboratory at contractor's cost.

3. The contractor shall furnish to Engineer-in-charge for approval when requested or if required by the specification adequate samples of all materials and finished goods to be used in work and sufficiently in advance to permit test and examination thereof. All materials furnished and finished goods applied in work shall be exactly as per the approved samples.

4. All the testing charges shall be borne by the Contractor.

## GC-71 ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP :

If it shall appear to the Engineer-in-charge that any work has been executed with materials of inferior description, or quality or are unsound or with unsound imperfect or unskilled workmanship or otherwise not in accordance with the contract shall, no demand in writing from Engineer-in-charge or his authorised representative specifying the work, materials or articles complained of, notwithstanding that the same may have been

inadvertantly passed, certified and paid for forthwith rectify or remove and reconstruct the work, specified and in the event of failure to do so within a period to be specified by Engineer-in-charge in his aforesaid demand, contractor shall be liable to pay compensation at the rate of one (1) percent of the tendered cost of work for every Ten (10) days limited to a maximum of Ten (10%) Percent of the value of work while his failure to do so continue and in the case of any such failure the Engineer-in-charge may on expiry of the notice period rectify and remove and re-execute the work or remove and replace with other at the risk and cost of the Contractor. The decision of the Engineer-in-charge as to any question arising under this clause shall be final and conclusive.

#### GC-72 SUSPENSION OF WORK :

Contractor shall, if ordered in writing by Engineer-in-charge or his representative temporarily suspended the work or any part thereof for such time (not exceeding two months) as ordered and shall not after receiving such written order proceed with the work until he shall have received a written order to proceed therewith the contractor shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of work as aforesaid. An extension of time for completion of work will be granted to the contractor corresponding to the delay caused by such suspension of work if the applied for the same provided the suspension was not consequent upon any default or failure on the part of the contractor.

#### GC-73 OWNER MAY DO PART OF THE WORK :

When the contractor fails to comply with any instructions given in accordance with the provisions of this contract, the S.M.C. has the right to carry out such parts of work as the S.M.C. may designate whether by purchasing materials and engaging labour or by the agency of another contractor. In such case the S.M.C. shall deduct from the amount which otherwise might become due to contractor the cost of such work and materials with Ten (10%) percent added to cover all departmental charges and should the total amount thereof exceed the amount due to contractor, contractor shall pay the difference to S.M.C.

#### GC-74 POSSESSION PRIOR TO COMPLETION :

The Engineer-in-charge shall have the right to take possession of or to use any completed or partly completed work or part of work, such possession or use shall not be deemed to be an acceptance of any work completed in accordance with the contract. If such prior possession or use by Engineer-in-charge delays the progress of work, equitable adjustment in the time of completion will be made and the contract shall be deemed to be modified accordingly.

#### GC-75 COMPLETION CERTIFICATE :

As soon as the work has been completed in accordance with contract (except in minor respect that do not effect their use for the purpose for which they are intended and except for maintenance thereof) as per general conditions of contract and has passed the tests on completion, the Engineer-in-charge shall issue a certificate (hereinafter called completion certificate) in which he shall certify the date on which work has been completed and has passed the said tests and S.M.C. shall be deemed to have taken over work on the date so certified. If work has been divided in various groups in contract, S.M.C. shall be entitled to take over any group or groups before the other or others and there-upon the Engineer-in-charge will issue a completion certificate which will, however, be for such group or groups so taken over only. In order that contractor could obtain a completion certificate, he shall make good, with all speed any defect arising from the defective materials supplied by contractor or workmanship or any act or omission of contract that may have been discovered or developed after the work or group of works has been taken over. The period allowed for carrying out such work will be normally, one month. If any defect be not remedied within a reasonable time, S.M.C. may proceed to do work at contractor's risk and expenses and deduct from the final bill such amount as may be decided by S.M.C. If by reason of any default on the part of the contractor, a completion certificate has not been issued in respect of every portion of work within one month after the date fixed by contractor for completion of work, S.M.C. shall be at liberty to use work or any portion thereof in respect of which a completion-certificate has been issued, provided that work or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completion of this work for the issue of completion certificate.

#### GC-76 SCHEDULE OF RATES :

1. The price/rates quoted by the contractor shall remain firm till the issue of final certificate and shall be subject to price ADJUSTMENT CLAUSE GC-35. Schedule of rates shall be deemed to include and cover all costs expenses and liabilities of every description and all risks of every kind to be taken in executing, completing and handling overwork to owner by contractor. Contractor shall be deemed to have known the nature, scope,

magnitude and the extent of work and materials required through contract documents may not fully and precisely furnish them. He shall make such provision in the schedule of rates as he may consider necessary to cover the cost of such items of work and materials as may be reasonable and necessary to complete work. The opinion of Engineer-in-charge as to the item of work shall be final and binding on Contractor although the same may be not shown on or described specifically in contract documents.

2. The Schedule of rates shall be deemed to include and cover the cost of all constructional plant, temporary work, pumps, materials, labour and all other materials in connection with each item in schedule of rates and the execution of work or any portion thereof furnished complete in every respect and maintained as shown or described in the contract document or as may be ordered in writing during the continuance of the contract.

3. The Schedule of rates shall be deemed to include and cover the cost of all royalties and free for the articles and processes, protected by letters patent or otherwise incorporated in or used in connection with work, also all royalties, and other payments in connection with materials of whatsoever kind for work and shall include an indemnity to-owner which contractor hereby gives against all action, proceeding, claims, damages, costs and expenses arising from the incorporation in use of work of any such articles, processes or materials. Octroi of other Municipal or Local Board charges if levied on materials equipment of machineries to be brought to site for use on work shall be borne by the contractor.

4. No exemption or reduction of custom duties excise duties, sales-tax or any other taxes or charges of the Central or State Government any local body whatsoever will be granted to be obtained. All of such expenses shall be deemed to have been included in and covered by schedule of rates. Contractor will also obtain and pay for all permits or other privileges necessary to complete work.

5. The schedule of rates shall be deemed to include and cover risk on account of delay or interference with contractor's conduct of work which may occur from any cause including orders of S.M.C. in the exercise of his power and no account of extension of time granted due to various reasons.

6. For work under unit rate basis no alteration will be allowed in the schedule of rates by reason of work or any part of them being field, altered extended, diminished or omitted.

#### GC-77 PROCEDURE FOR MEASUREMENT OF WORK IN PROGRESS :

1. All measurements shall be in metric system. All the work in progress will be jointly measured by the representative of Engineer-in-charge and contractor's authorised agent. Such measurements will be got recorded in the measurement book by the Engineer or his authorised representative and signed by contractor or his authorised agent in token of acceptance. If the contractor or his authorised agent fails to be present when even required by the Engineer-in-charge for taking measurements for any reasons whatsoever, the measurement will be taken by the Engineer - in - charge or his authorised representative notwithstanding the absence of contractor and these measurements will be deemed to be correct and binding on contractor.

2. Contractor will submit a bill in approved proforma in duplicate to the Engineer - in - charge of the work giving abstract and detailed measurements of various items executed during a month as mutually agreed. The Engineer-in-charge shall verify the bill and the claim, far as admissible, adjusted if possible, within 10 days of presentation of the bills.

3. In case of Tenders for completed items of work, contractor may be allowed 'Secured Advance' on the Security of materials brought to site for execution of the constructed items of work the extent of 75% of the value of materials of unperishable nature and an agreement bedrawn up with contractor under which the owner secured a lien on these materials and is safe guarded against losses due to any reasons whatsoever. Recoveries of advance paid would not be post-poned till the whole work is completed but shall be adjusted from his work done or the materials used, the necessary deductions being made when the items of work in which they are used and are billed for. When the mode of measurement is not covered by contract for any item of work it shall be as per latest I.S.I.

#### GC-78 RUNNING ACCOUNT PAYMENT TO BE RECOVERED AS ADVANCES :

1. All running account payments shall be regarded as payments by way of advance against the final payment only and not as payment for work actually done and completed and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or to be considered as an admission of the due performance of contract or any part thereof.

#### GC-79 NOTICE FOR CLAIM FOR ADDITIONAL PAYMENT :

If the contractor considers that he is entitled to extra payment or compensation or any claim whatsoever in respect of work, he shall forthwith give notice in writing to the Engineer-in-charge about his extra payment and/or compensation. Such notice shall be given to the Engineer-in-charge within Ten (10) days from the happening of any event upon which contractor basis such claims and such notice shall contain full particular of the nature of such claim with full details and amount claimed. Failure on the part of the contractor to put forward any claim with the necessary particulars as above within the time above specified shall be an absolute waiver thereof. No commission by S.M.C. to reject any such claim and no delay in dealing therewith shall be waiver by S.M.C. of any rights in respect thereof.

#### GC-80 PAYMENT OF CONTRACTOR'S BILL :

1. The price to be paid by the S.M.C. to contractor for the work to be done and for the performance of all the obligations under taken by the contractor under contract shall be based on the contract price and payment to be made accordingly for the work actually executed and approved by the Engineer-in-charge.

2. No payment shall be made for work costing less than Rs.5,000/-till the work is completed and a certificate of completion given. But in case of work estimated to cost more than Rs.5,000/- contractor on submitting the bill thereof will be entitled to receive a monthly payment, proportionate to the part thereof, approved and passed by Engineer-in-charge whose certificate of such approval and passing of the sum so payable shall be final and conclusive against contractor. This payment will be made after making necessary deductions as stipulated elsewhere in the contract documents for materials, security deposit, etc. The payment shall be released to the contractor within Thirty (30) days of submission of the bill in case of running bill and within two (02) months in case of final bill, contractor shall present the bill duly pre-receipted on proper revenue stamp.

Payment due to Contractor shall be made by the by crossed Accounts payee cheque in Indian currency forwarding the same to the registered office of the contractor. Owner shall not be responsible if the cheque is mislaid or misappropriated by unauthorised person.

#### GC-81 FINAL BILL :

The final bill shall be submitted by Contractor within two (02) month of the date of physical completion of work, Otherwise the Engineer-in-charge certificate of the measurement and of total amount payable for work shall be finalised binding on all parties.

#### GC-82 RECEIPT FOR PAYMENT :

Receipt for payment made on account of work when executed by a firm must be signed by a person holding power of attorney in this respect on behalf of contractor except when described in the tender as a limited company in which case the receipt must be signed in the name of the company by one of its principal officers or by some other person having authority to give effectual receipt for the Company.

#### GC-83 COMPLETION CERTIFICATE :

1. When the contractor fulfil his obligation as per terms of contract he shall be eligible to apply for completion certificate. Contractor may apply for separate completion certificate in respect of each such portion of work by submitting the completion documents alongwith such application for completion certificate. The Engineer-in-charge shall normally issue to contractor the completion certificate within 2 (Two) month after receiving an application thereof from contractor after verifying from the complete documents and satisfying himself that work has been completed in accordance with and as set out in the construction and erection drawings and the contract document. Contractor after obtaining the completion certificate is eligible to present the final bill for work executed by him under the terms of contract.

2. Within 2 (Two) month of completion of work in all respect contractor shall be furnished with a certificate by the Engineer-in-charge of such completion but no certificate shall be given nor shall work be deemed to have been executed, until all (1) scaffolding, surplus materials and rubbish is clearing off site completely (2) until work shall have been measured by the Engineer-in-charge whose measurement shall be binding and conclusive and (3) until all the temporary works, labour and staff colonies etc. constructed are removed and the work site cleaned to the satisfaction of the Engineer-in-charge. If contractors shall fail to comply with the requirements as aforesaid or before date fixed for

the completion of work, the Engineer-in-charge may at the expenses of contractor remove such scaffolding, surplus materials and rubbish and dispose of the same he thinks fit.

3. The following documents will form the completion documents :

- (a) Technical documents according to which work was carried out
- (b) Construction drawings showing therein the modifications and corrections made during the course of execution signed by Engineer-in-charge.
- (c) Completion certificate for "Embedded" or "Covered" up work.
- (d) Certificate of final levels as set out for various works.
- (e) Material appropriation statement for the materials issued by owner for work and list of surplus materials returned to S.M.C.'s store duly supported by necessary documents.

4. Upon expiry of the period of defects liability and subject to Engineer-in-charge being satisfied that work has been duly maintained by contractor during the defects liability period as fixed originally, or as external subsequently and the contractor has in all respects made up by subsidence and performed all his obligations under contract, the Engineer-in-charge shall (without prejudice to the rights of owner in any way) give final certificate to that effect. The Contractor shall not be considered to have fulfilled the whole of his obligation until final certificate shall have been given by the Engineer-in-charge notwithstanding previous entry upon and taking possession, working or using of the same or any part thereof by owner.

5. Final Certificate only Evidence of Completion :

Except the final certificate no other certificate or payments against a certificate or an general account shall be taken to be an admission by owner of the due performance of contract or any part thereof or of occupancy validity of any claim by the contractor.

#### **GC-84 TAXES, DUTIES, OCTROI, ETC.:**

The Contractor shall be liable to the payment of all the Central/ State/Local Bodies' Levies, taxes or duties etc. The S.M.C. Shall neither bear it no reimburse at any time but shall ensure deduction of Central/ State/ Local levies and taxes at Source at the rate provided under the relevant statutes from time to time enforce. Further the Work Contract tax or sale tax shall be borne by the Contractor as per Rules and Regulations of Government.

GST (Goods & Service Tax) has come in existence from 1<sup>st</sup> July, 2017. Contractor / Successful Bidder is bound to pay any amount of GST prescribed by the Govt. of India as per the Terms of Contract agreed upon during the course of execution of this Contract.

During the course of execution of Contract, if there is any change in Rate of GST (Goods & Service Tax) by the Government, the same shall be reimbursed / recovered separately by SMC, subject to the submission of Original Receipt / Proof for the amounts actually remitted by the Successful Tenderer / Contractor to the Competent Authority along with a Certificate from Chartered Accountant of Contractor / Successful Bidder certifying that the amount of GST paid to the Government and the same shall be intimated / submitted / claimed within 30 (Thirty) Days from the date of payment. Remittance of GST within stipulated period shall be the sole responsibility of the Successful Bidder / Contractor, failing which, SMC may recover the amount due, from any other payable dues with SMC and decision of Municipal Commissioner shall be final and binding on the Contractor / Successful Bidder in this regard. Further, the non-payment of GST to the Government may lead to the termination of contract and forfeiture of Security Deposit / Performance Guarantee Amount.

If imposition of any other new Taxes / Duties / Levies / Cess or any other incidentals etc. or any increase in the existing Taxes / Duties/ Levies / Cess or any other incidentals etc., are imposed during the course of the contract, the same shall be borne by the Contractor / Successful Bidder only, in no case SMC shall be Liable for the same.

**Note :- The Rates mentioned in BOQ/SCHEDULE-B are excluding GST. GST will be reimbursed separately (if applicable as per the opinion of Account department of SMC / GST Consultant of SMC) as per the prevailing GST Rates decided by the Government. The contractor is invariably bound to any changes in GST Rates made during the course of the work. The payment (if applicable) for GST will be only released only after the applicable Amount reflects on Government portal. Decision of Account Department of SMC regarding applicable GST Rates will be final.**

**Construction Cess will be deducted from all Running Bills & Final Bills as per the prevailing Government Rates.**

GC-85 INSURANCE :

Contractor shall at his own expenses carry and maintain with reputable Insurance Companies to the satisfaction of owner as follows :

1. Employees State Insurance Act :

Contractor agrees to and does hereby accept full and exclusive liability for compliance with all obligations imposed by the Employees' State Insurance Act 1948, and Contractor further agree to defend, indemnify and hold owner harmless from any liability or penalty which may be imposed by the Central or State Government of Local authority by reasons of any asserted violation by contractor or Sub-Contractor of the Employees' State Insurance Act, 1948 and also from all claims, suits or proceedings that may be brought against owner arising tender, growing out of or by reasons of the work provided for by this contract whether brought by employees of Contractor, by third parties or by Central or State Government authority or any administrative Sub-division thereof. Contractor agrees to fill in with the Employees State Insurance Corporation, the declaration from and all forms which may be required in respect Contractor's or Sub-contractor's employees these aggregate remuneration is Rs. 400/- p.m. or less and who are employed in work provided for or those covered by E.S.I from time to time under the agreement. The Contractor shall deduct and secure the agreement of the Sub-contractor to deduct the employees' contribution as per the first Schedule of the Employees' State Insurance Act from wages. Contractor shall remit and secure the agreement of Sub-contractor to remit to the State Bank of India Employees' State Insurance Corporation Accounts, the employees contribution as required by the Act Contractor agrees to maintain all cares and record as required under the Act in respect of employees and payments and contractor shall secure the agreements of the sub-contractors to maintain such records, any expenses incurred for the contributions or maintaining records shall be to contractor's or sub-contractor's account. Owner shall retain such sum as may be necessary from the contract value until contractor shall furnish satisfactory proof that all contribution as required by the Employees' State Insurance Act 1948 have been paid.

2. Workman's Compensation And Employees Liability Insurance :

Insurance shall be effected for all contractors employees engaged in the performance of this contract. If any part of work is sublet, contractor shall require the sub-contractor to provide workmans' compensation and employer's liability insurance which may be required by owner.

3. Other Insurance required under law or regulation by owner :

Contractor shall also carry and maintain any and all other insurance which may be required under any law or regulation from time to time. He shall also carry and maintain any other insurance which may be required by owner.

GC-86 DAMAGE TO PROPERTY :

1. Contractor shall be responsible for making good to the satisfaction of owner any loss of and any damage to all structures and properties belonging to owner or being executed or Procured by owner or of other Agencies within the premises of all work of owner, if such loss or damage is due to fault and / or the negligence or will full act or omission of contractor, his employees, agent representatives or Sub- contractors.

2. Contractors shall indemnify and keep owner harmless of all claims for damage to properties other than S.M.C's property arising under or by reasons of this agreement if such claims result from the fault and / or negligence or wilful act of omission of contractor, his employees, agents, representatives or sub-contractors.

GC-87 OUR LAWS AND REGULATIONS :

1. The contractor shall be responsible for the strict compliance of and shall ensure strict compliance by his sub contractor employees and agents of all labours and others laws, rules or regulations having the force of law affecting the relationship of employer and employee between the contractor/ sub- contractor and their respective employees.

2. No labour below the age of eighteen (18) year be employed on work.

3. Contractor shall pay to the labours engaged on work according to the law.

4. The Contractor and sub-contractors of the contractor shall obtain proper authority designated in this behalf under any application law, rules or regulations (including but not restricted to the factories Act and Contract Labour Abolition and Regulation Act 1970, ) in so far as applicable) any and all such licences, consents, Registration and / or other authorisation as shall from time to time be or become necessary for relating to the execution of work or any part of portion thereof or the storage or supply of any materials or otherwise in connection with the performance of the contract and shall at all times observe by the sub-contractors, employees and agents of all

terms and conditions of the said licences, consents, regulation and other authorisation and laws, rules and regulations applicable thereto.

#### GC-88 CONTRACTOR TO INDEMNIFY OWNER :

1. The Contractor shall indemnify and keep indemnified the owner and every member, officer and employee of owner from and against all action, claims, demands and liabilities whatsoever and in respect of the breach of any of the above clauses and/or against any claim, action or demand by any workman/ employee of the contractor or any sub-contractor and or from any liability and way to any workman / employee of the contractor or any sub-contractor under any law, rule or regulations having the force of law, including but not limited to claims against the owner under the workman compensation Act 1923. The employees' Provident Funds Act 1952 and/or the Contract Labour (Abolition and Regulations) Act, 1970.

2. Payment of claims and damages :

If owner has to pay any money in respect of such claims or demands as aforesaid, the amount so paid and the cost incurred by the owner shall be charged to and paid by contractor without any dispute not with standing the same may have been paid without the consent or authority of the Contractor.

3. In every case in which by virtue of any provision applicable in the workman's Compensation Act 1923 or any other Act, be obliged to pay compensation to workman employed by Contractor the amount of compensation so paid, and without prejudice to the rights of S.M.C. under sec.(12) Sub-section (2) of the said Act, S.M.C. shall be at liberty to recover such amount from any surplus due to the contractor or the security deposit. S.M.C. will not be bound to contest any claim made under section (12) Sub-section (2) of the said Act except or written request of Contractor and upon the contesting of such claim.

4. The Contractor shall protect adjoining sites against structural decorative and other damages that could be caused to adjoining premises by the execution of these works and made good at his cost, any such damage, so caused.

#### GC-89 IMPLEMENTATION OF APPRENTICE ACT 1964 :

Contractor shall comply with the provisions of the Apprentice Act 1964 and the orders issued thereunder from time to time. If he fails to do so, it will be a breach of contract. Contractor shall also be liable for any particular liability arising on account of any violation of the provisions of the Act by him.

#### GC-90 HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS :

Contractor shall comply with all the rules and regulations of the local sanitary authorities or as framed by owner from time to time for the protection of health and sanitary arrangements of all labour directly or indirectly employed on the work of this contract.

#### GC-91 SAFETY CODE :

##### GENERAL :

Contractor shall adhere to safe construction practice and guard against hazardous and unsafe working conditions and shall comply with owner's safety rules and set forth herein.

1. First Aid and Industrial Injuries :

1.1 Contractor shall maintain first aid facilities for its employees and those of his sub-contractor.

1.2 Contractor shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Name of those providing these services shall be furnished to Engineer-in-charge prior to start of construction, and their telephone numbers shall be prominently posted in contractor's field office.

1.3 All injuries shall be reported promptly to Engineer-in-charge, and a copy of Contractor's report covering each personal injury requiring the attention of a physician shall be furnished to owner.

2. General Rules :

2.1 Carrying, striking, matches, lighters inside the project area & smoking within the job site is strictly prohibited. Violators of smoking rules shall be discharged immediately. Within the operation area, not hot work shall be permitted without valid gas safety, fire permits. The Contractor shall also be held liable and responsible for all lapses of his sub-contractors/ employees in this regards.

### 3. Scaffolding :

3.1 Suitable scaffolding shall be provided for workmen for all works that can not safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the latter is used for carrying materials as well, suitable foothold and handholds shall be provided on the ladder and the same shall be given inclination not steeper than 1 to 4 (1 horizontal and 4 vertical).

3.2 Scaffolding or staging more than 3.6 M (12') above the ground or floor, swing or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise fixed at least 1.0 M (3') high above the floor or platform of scaffolding or staging and extending along the entire length of the outside ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

### 4. Maintenance of Safety Devices :

4.1 All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in some conditions and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near place or work.

### 5. Display of Safety Instructions :

5.1 These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at the work-spot. The person responsible for compliance of the safety code shall be named therein by the Contractor.

### 6. Enforcement of Safety Regulations :

6.1 To ensure effective enforcement of the rules and regulations relating safety precautions, the arrangements made by the contractor shall be open to inspection by the welfare Officer, Engineer-in-charge of safety Engineer of the owner or their representatives.

### 7. No Exemption :

7.1 Notwithstanding the above clause 1.0 to 13.0 there is nothing to exempt the contractor from the operations of any other Act or rules in force in the Republic of India.

7.2 In addition to the above, the Contractor shall abide by the safety code provision as per C.P.W.D. Safety Code framed from time to time.

### GC-92 ACCIDENTS :

It shall be the contractor's responsibility to protect against accidents on the work. He shall indemnify the Municipal Corporation against any claim for damage or for injury to persons or property resulting from, and in the course of work and also under the provision of the Workman's Compensation Act. On the occurrence of an accident arising out of the works which results in death or which is so serious as to be likely to result in death, the contractor shall within twenty four hours of such accident, report in writing to the Engineer-in-charge, the facts stating clearly and in sufficient details the circumstances of such accident and the subsequent action. All other accidents on the works involving injuries to persons or damage to property other than that of the contractors shall be promptly reported to the Engineer-in-charge stating clearly and in sufficient details and facts and circumstances of the accidents and the action taken. In all cases the contractor shall indemnify the Municipal Corporation against all loss of damage resulting directly or indirectly from the Contractor's failure to report in the manner aforesaid. This includes penalties or fine consequence of failure to give notice under the workman's compensation Act or failure to confirm to the provisions of the said Act in regard to such accidents.



In the event of an accident in respect of which compensation may become payable under the workmens compensation Act VIII of 1923 including all modification thereof whether such compensation may become payable by the contractor or by the Municipal Corporation as principal employer, the Engineer-in-charge may retain out of money due and payable to the contractor such sum or sums of money as may, in the opinion of the Engineer-in-charge be sufficient to meet such liability. On receipt of award from the labour commission in regard to quantum of compensation, the difference in amount will be adjusted.

#### GC-93 WATER SUPPLY & ELECTRIC SUPPLY

##### **FOR WATER CHARGE (As per City Engineer Note No.386, dtd.30/7/2012)**

**In case of Municipal Network or distribution center available or not at near by area**

##### **OPTION-1:**

**Contractor has to make his own arrangement for construction work whether from private boring or tankers. Contractor has to submit test report of water whether it is of good quality for construction work or not and contractor has to inform about it within 30 days of starting the work.** If the contractor makes his own arrangement for water required for construction and labour camp etc. by drilling own bore or tankers, no water charges will be recovered from the contractor.

##### **OPTION-2:**

**If contractor wants to use Municipal Water he has to follow procedure within below:**

- 1. Contractor has to apply for water connection by Municipal Licensed plumber in prescribed form.**
- 2. Contractor has followed all procedure with his own expenses.**
- 3. According to rule Municipal Corporation issue bill to contractor for consumption of water and contractor has to paid it within stipulated time and contractor has submit one copy of bill and payment receipt to concern department. If contractor fail to pay the bill the amount of bill/paid receipt can be recover from contractor's bill.**
- 4. If Municipal Corporation network is not available then Contractor can make arrangement of water tanker from nearby distribution center after depositing required amount.**
- 5. After completion of work contractor has to can-celled the water connection and inform the concern department.**
- 6. If network and distribution center/network are both not available in that case contractor has to make his own arrangement for good quality construction water and has to follow the option-1.**
- 7. If contractor is taking water connection or even if the contractor is not taking connection and makes other arrangement to use Municipal Water by tanker or tapping water from near private connection, water charges shall be recovered at the rate of 3% (THREE Percent) of the civil items in which water consumed.**

(2) The contractor shall make his own arrangement at his cost for electric supply required for operating various plants and machineries required for the works and for general lighting purpose for site, office labour colony etc.

The energy bills shall also be paid by the contractor.

#### **GC-94 Responsibility of contractor under Construction and Demolition Waste (C & D Waste) rules 2016**

- Contractor shall remove all Construction and Demolition Waste (C & D Waste) and clean the area every day, or depending upon (1) the type & schedule of work, (2) The quantity and type of waste generated, appropriate storage and collection facility shall be developed at site. Reasonable timeframe shall be worked out in consultation with engineer in charge of the project, for storage & usage of C & D Waste.**
- If it's found that contractor is irregular and showing negligence to management of C & D Waste, then If deem fit, Engineer in charge would arrange to dispose the said C & D Waste through an Authorized C & D Waste Contractor/agency of Surat Municipal Corporation and All the expenditure made towards disposal of this C & D Waste shall be recovered from the contractor as per the prevailing charges.**
- Contractor shall have to bear the expenses towards management of C & D waste as per the prevailing norms, no extra payment shall be entertained for the same.**
- Contractor shall keep record of the generation and disposal of Construction and Demolition waste (C & D Waste) and proof of its disposal as per the provision of C & D Waste rules and he has to submit along with running bills.**

- If contractor fails to upkeep and maintain records of C & D Waste Generation-Disposal records etc., than it shall be calculated as per the provision of the Standing Committee Resolution no 1621/2016, Dt: 01/10/2016 and charges shall be recovered from due of contractor with Surat Municipal Corporation.
- Contractor shall also ensure use of recycled products made from SMC authorized C & D Waste management project.

EXECUTIVE ENGINEER  
SOUTH-WEST (ATHWA) ZONE  
SURAT MUNICIPAL CORPORATION,  
SURAT.

SIGNATURE OF THE BIDDER.

**SCHEDULE - A****ADDITIONAL INSTRUCTION FOR CEMENT AND STEEL : (SCHEDULE-A)**

Surat Municipal Corporation shall not issued cement and reinforcement steel to be used for this work.

The cement, reinforcement steel and rough kotah stone (water table) required for the above said work shall be procured by contractor at its own cost.

The Surat Municipal corporation shall not issue cement and reinforcement steel. Contractor shall make his own arrangement to procure all materials, cement and reinforcement steel.

The brands for cement shall be **Ambuja, Ultratech, Sanghi, Hathi, Sidhdhi, JK Laxmi, JK Cement Ltd.** company confirming to IS-12269/87 latest amendment ISO-9000 of **53 grade** only.

Approved make of TMT reinforcement steel :- **TATA, SAIL, Kalika Steel Alloys Pvt. Ltd, Jalna, Rastriya Ispat, Electrothurm, National, Gallantt Metal Ltd., JSW steel ltd, Ramsarup, Polaad TMT steel, Metaroll ispat Pvt.Ltd., Jalna, Rajuri Steel & TMT Bars Pvt.Ltd., Welspun Shield TMT** as per confirming to IS 1786/85 latest amendment **TMT Fe-415/Fe-500**. TMT Steel shall be purchased by only manufacturing company/Authorised dealer/ Distributor/ Stockist only shall be allowed to use 6 mm plain steel shall be as per IS 2062/99 with latest emendment of any brand/make.

The test certificates regarding its property including indication of its Thermo-Mechanically treated must accompany every lot and shall be submitted to Surat Municipal Corporation before utilizing the same. Unless and until such certificate is submitted, the steel procure at site will not be allowed to be used.

**Cement, Reinforcement steel and other materials:**

The cement and steel shall not be issued by SMC

(1) Penalty for cement shall be levied as below against variation than the actual consumption:

(a) No penalty if actual total consumption is equal to or more than standard theoretical total consumption. For over consumption of cement no extra payment shall be made.

(b) **Twice the Basic Rate of Rs. 5,600/- (Without GST)** per MT for the variation in cement consumption less than standard theoretical consumption.

(c) **Twice the Basic Rate of Rs. 53,000/- (Without GST)** per MT for variation in steel consumption less than standard theoretical consumption.

(2) The payment for reinforcement bar will be made on theoretical weight basis but not exceeding actual procurement at site. The weight shall be computed on the basis of the length of the steel used in the work multiplied by the standard unit weight of MS/HYSD (TMT) bar as mentioned in IS Code No. 1786/85.

(3) No separate payment shall be made for any kind of wastage/excess consumption in the materials.

(4) Ultimately the liability for assurance of the good quality work as per tender provision lies with the contractor.

**Testing of Cement, Steel and other materials:**

It should be specifically noted that the Cement, Steel, etc. brought by the contractor at site of work shall be used only after the same is tested at the approved laboratory as per the direction of Engineer-in-charge. The testing of all the materials shall be carried out as per relevant codes of I.S. All the charge for the transport and testing of the samples etc. shall have to be borne by the contractor. The frequency of testing such material shall be in accordance to the relevant Indian Standards as directed by Engineer-in charge. The contractor shall have to make his own arrangement for transportation of inspecting authorities/ agencies/PMC at his own cost.

Executive Engineer  
South-West (Athwa) Zone  
Surat Municipal Corporation

Contractor Signature with  
Address:  
Date :

## MEMORANDUM

1.	General Description of work	:	<b>COLOUR WORK OF VARIOUS MUNICIPAL BUILDINGS IN SUB ZONE- 1 IN SOUTH WEST (ATHWA) ZONE, SURAT.</b>
2.	Estimated Cost	:	Rs. 49,64,161.80
3.	Earnest Money Depository	:	Rs. 49,700.00
4.	Initial Security Deposit (i) Cash/ D.D/ Pay order (not less than the amount of earnest money)	:	Rs. 2% of Tender Amount.
	(ii) To be deducted for current bills	:	Rs. -----
	Total Deposit	:	Rs. 2% of Tender Amount.
5.	Time allowed for the completion of work from date fixed in written order to commence	:	12 (TWELVE) Months excl. monsoon
6.	Compensation for delayed work under Clause 2	:	Zero Point two percent (0.2%) of the contract price per day maximum upto ten percent (10%) of the contract price.
7.	The progress of work should confirm to the following schedule		
	10% of the work to be done in 40% of the work to be done in 70% of the work to be done in 100% of the work to be done in	:	25% of the time. 50% of the time. 75% of the time. 100% of the time.
8.	<b>Percentage to be retained from running Account Bills</b>	:	<b>7% (Seven Percent) of work done to be deducted form running Account Bills.</b>
9.	Defect Liability Period	:	<b>01 (One) Year From the Complition of work.</b>
10.	Water Charges	:	<b>CONDITION FOR THE WATER SUPPLY &amp; ELECTRIC SUPPLY on next page.</b>
11.	Construction Cess will be deducted from respective R.A. Bill and Final bill in accordance with the prevailing norms of Govt. of Gujarat.	:	1% of Work Done Amount in R.A.Bill

Executive Engineer  
South-West (Athwa) Zone  
Surat Municipal Corporation,

Contractor Signature with  
Address:  
Date :

SURAT MUNICIPAL CORPORATION  
SOUTH WEST (ATHWA) ZONE  
CONDITION FOR THE WATER SUPPLY & ELECTRIC SUPPLY

**FOR WATER CHARGE (As per City Engineer Note No.386, dtd.30/7/2012)**

**In case of Municipal Network or distribution center available or not at near by area**

**OPTION-1:**

Contractor has to make his own arrangement for construction work whether from private boring or tankers. Contractor has to submit test report of water whether it is of good quality for construction work or not and contractor has to inform about it within 30 days of starting the work.

**OPTION-2:**

**If contractor wants to use Municipal Water he has to follow procedure within below:**

1. Contractor has to apply for water connection by Municipal Licenced plumber in prescribed form.
  2. Contractor has follow all procedure with his own expenses.
  3. According to rule Municipal Corporation issue bill to contractor for consumption of water and contractor has to paid it within stipulated time and contractor has submit one copy of bill and payment receipt to concern department. If contractor fail to pay the bill the amount of bill/paid receipt can be recover from contractor's bill.
  4. If Municipal Corporation network is not available then Contractor can make arrangement of water tanker from nearby distribution center after depositing required amount.
  5. After completion of work contractor has to cancelled the water connection and inform the concern department.
  6. If network and distribution center/network are both not available in that case contractor has to make his own arrangement for good quality construction water and has to follow the option-1.
  7. if contractor is taking water connection or even if the contractor is not taking connection and makes other arrangement to use Municipal Water by tanker or tapping water from near private connection, water charges shall be recovered at the rate of **3% (THREE Percent)** of the civil items in which water consumed.
- (2) The contractor shall make his own arrangement at his cost for electric supply required for operating various plants and machineries required for the works and for general lighting purpose for site, office labour colony etc.

The energy bills shall also be paid by the contractor.

EXECUTIVE ENGINEER  
SOUTH WEST (ATHWA) ZONE  
SURAT MUNICIPAL CORPORATION,  
SURAT.

SIGNATURE OF THE CONTRACTOR.

IMPORTANT INSTRUCTION-A TO THE CONTRACTOR

- (1) This tender document containing Page No.01 to 96 duly signed by the tenderer, should be furnished to Corporation treasury along with the amount of earnest money deposit as mentioned in tender notice. If any of the drawings or papers removed from the tender, the tender shall be rejected and E.M.D. shall be forfeited.
- (2) The tenderer who wants to propose something in written, he should write it on his letter pad or another paper. Anything written on tender papers shall not be considered by Corporation and Contractor shall not be intend to do so.
- (3) Following Certificate shall be enclosed with tender.
  - (a) Solvency Certificate amounting of 20% of tender amount.
  - (b) Registration Certificate of required class given by Governement or Semi-Government firm.
  - (c) Similar work Completion certificate (similar works means new furniture work /repairing and renovation of Carpentry works)
  - (d) List of work done by Contractor with its volume.
  - (e) Undertaking by the tenderer for not black listed on Rs. 300/- government non-judicial stamp paper.
  - (f) Affidavit of the Bidder on non-judicial stamp paper of Rs. 300.00

EXECUTIVE ENGINEER  
SOUTH-WEST (ATHWA) ZONE  
SURAT MUNICIPAL CORPORATION,  
SURAT.

SIGNATURE OF THE CONTRACTOR.

## IMPORTANT INSTRUCTION-B TO THE CONTRACTOR

1.	Affix latest passport size photo of tenderer

Specimen Signature of the Contractor

2. \_\_\_\_\_

1	2	3	4
AFFIX LATEST PASSPORT SIZE PHOTOGRAPH OF ALL PARTNERS IN CASE OF PARTNERSHIP AGENCY			

Specimen signature of all partners incase of partnership agency.

1. \_\_\_\_\_ Submission of Registered
2. \_\_\_\_\_ Agreement is compulsory
3. \_\_\_\_\_ in case of partnership
4. \_\_\_\_\_ agency.

3. Submission of income tax clearance certificate of last three years is compulsory for tenderer submitting agency.
4. Submission of sale tax certificate, with proof of residence is compulsory for tenderer.
5. In case of Government royalty applicable to tenderer, it is compulsory to submit a receipt of royalty payment with tender.
6. The Photograph and specimen signature of contractor will be cross checked, whenever contractor receives payment in account section of SMC.
7. The specimen signature of contractor will be cross checked by Account Department of SMC, in case of representative of Contractor alongwith letter of authority of a person who signed an agreement, receives payment.
8. In case of octroi applicable to the goods of supplier/tenderer, the tenderer/supplier has to submit an attested copies of Xerox of all octroi receipts.

EXECUTIVE ENGINEER  
SOUTH-WEST (ATHWA) ZONE  
SURAT MUNICIPAL CORPORATION,  
SURAT.

SIGNATURE OF THE CONTRACTOR.

**DETAILED SPECIFICATIONS OF MATERIALS****M-1 WATER :**

- 1.1 Water shall not be salty or brackish and shall be clean, reasonably clear and free from objectionable quantities of silt and traces of oil and injurious alkalies, salts, organic matter and other deleterious material which will either weaken the mortar or 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 standards 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. 269-1989. Any indication of unsoundness, change 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 Portable water shall generally be found suitable for curing mortar or concrete.

**M-2 LIME :**

- 2.1 Lime shall be hydraulic lime as per I.S. 712-1984. Necessary tests shall be carried out as per I.S. 6932 (Parts I to X) 1995.
- 2.2 The following field tests for limes are to be carried out ---
  - a] A very rough idea can be formed about the type of lime by its visual examination i.e. fat lime bears pure white colour, lime in form of porous lumps of dirty white colour, indicates quick lime, and solid lumps the unbrunt lime stone.
  - b] Acid tests for determining the carbonate content in lime. Excessive amount of impurities and rough determination of class of lime.
- 2.3 Storage shall comply with I.S. 712-1984. The slaked lime, if stored, shall be kept in a weather proof and damp proof shed with impervious floor and sides to protect it against rain, moisture, weather and extraneous materials mixing with it. All lime that has been damaged in any way shall be rejected and all rejected materials shall be removed from site of work.
- 2.4 Field testing shall be done according to I.S. 162-1989 to show the acceptability of materials.

**M-3 CEMENT :**

- 3.1 Cement shall be ordinary portland slag cement as per I.S. 269-1989 or Portland slag cement as per I.S. 455-1976 and revised latest I.S.

**M-4 WHITE CEMENT :**

- 4.1 The white cement shall conform to I.S. 8042-1989.

**M-5 COLOURED CEMENT :**

- 5.1 Coloured cement shall be with white or grey portland cement as specified in the item of the work.
- 5.2 The pigments used for coloured cement shall be of approved quality and shall not exceed 10% of cement used in the mix. The mixture of pigment and cement shall be properly ground to have a uniform colour and shade. The pigments shall have such properties as to provide for durability under exposure to sun-light and weather.
- 5.3 The pigment shall have the property such that it is neither affected by the cement nor detrimental to it.

**M-6 SAND :**

- 6.1 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 matter, loam, mica or other deleterious substances and shall be got approved from the Engineer-in-charge. 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.
- 6.2 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 sand 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	900-100	300 Micron	5-70
1.18 mm	70-100	150 Micron	0-60



- 6.3 Fine Sand : The finess modulus shall not exceed 1.0. The sieve analysis of fine sand shall be as under ---

I.S. Sieve Designation	% by weight passing sieve	I.S. Sieve Designation	% by weight passing sieve
4.55 mm	100	600 Micron	40-85
2.36 mm	100	300 Micron	5-50
1.18 mm	75-100	150 Micron	0-10

**M-7 STONE DUST :**

- 7.1 This shall be obtained from crushing hard black tray or equivalent, it shall not contain more than 8% of silt as determined by field test with measuring cylinder. The method of determining silt contents by field test is given as under.
- 7.2 A sample of stone dust to be tested shall be placed without drying in 200 mm measuring cylinder. The quantity of the sample shall be such that it files the cylinder upto 100 mm mark. The clean water shall be added upto 150 mm mark. The mixture shall be stirred vigorously and the content allowen to settle for 3 hours.
- 7.3 The height of silt visible as settled layer above the stone dust shall be expressed as percentage of the height of the stone dust below. The stone dust containing more than 8% silt shall be washed so as to bring the silt content within the allowable limit.
- 7.4 The fineness modulus of stone dust shall not be less than 1.80.

**M-8 STONE GRIT :**

- 8.1 Grit shall consist of crushed or broken stone and be hard, strong, dense, durable, clean, of proper gradation and free from skin or coating likely to prevent proper adhesion of mortar. Grit shall generally be cubical in shape and as far as possible flaky elongated pieces shall be avoided. It shall generally comply with the provisions of I.S. 383-1990. Unless a special stone of a particularly quarry is metnioned, grit shall be obtained from the best black trap or equivalent hard stone as approved by the Engineer-in-charge. The grit shall have no deleterious reaction with cement.
- 8.2 The grit shall conform to the following gradation as per sieve analysis :

I.S. Sieve Designation	% by weight passing sieve	I.S. Sieve Designation	% by weight passing sieve
12.50 mm	100%	4.75 mm	2.20%
10.00 mm	80-100%	2.36 mm	0.25%

- 8.3 The crushing strength of grit will be such as to allow the concrete in which it is used to build-up the specified strenght of concerte.
- 8.4 The necessary tests for grit shall be carried out as per the requirements of I.S. 2338 (Parts I to VIII) 1988, as per instruction of the Engineer-in-charge. The necessity of test will be decided by the Engineering-in-charge.

**M-9 CINDER :**

- 9.1 Cinder is well brunt furnace residue which has been fused or ssintered into lumps of varying sizes.
- 9.2 Cinder aggregates shall be well burnt furnace residue obtained from furnace using coal fuel only. It shall be sound clead and free from clay, dirt, ash or other deleterious matter.
- 9.3 The average grading for cindar aggregates shall be as mentioned below :
- |         |     |
|---------|-----|
| 20 mm   | 100 |
| 10 mm   | 86  |
| 5.75 mm | 70  |
| 2.36 mm | 52  |

**M-10 LIME MORTAR :**

- 10.1 LIME : Shall conform to specification M-2. WATER : Water shall conform to specification M-1. SAND : Sand shall conform to specification M-6.
- 10.2 PROPORTION OF MIX Mortar shall consist of such proportions of slaked lime and sand as may be specified in the item. The slaked lime and shall be measured by volume.
- 10.3 PREPARATION OF MORTAR Lime mortar shall be prepared by wet process as per I.S. 1625-1971. Power driven mill shall be used for preparation of lime mortar. The slaked lime shall be placed in the mill in an even layer and ground for 180 revolutions with sufficient water. Water shall be added as required during grinding (care being taken not to add more water) that will bring the mixed material to a consistency of stiff paste. Thoroughly wetted sand shall then be added evenly and the mixture ground for another 180 revolutions.

- 10.4 STORAGE : Mortar shall always be kept damp, protected from sun and rain till used up, covering it by tarpaulin or open sheds.
- 10.5 USE: All mortar shall be used as soon as possible after grinding. It should be used on the day on which it is prepared. But in no case mortar made earlier than 36 hours shall be permitted for use.

**M-11 CEMENT MORTAR :**

- 11.1 Water shall conform to specification M-1. Cement shall conform to specification M-3. Sand shall conform to M-5.
- 11.2 PROPORTION OF MIX : 11.2.1 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.
- 11.3 PREPARATION OF MORTAR : 11.3.1 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.
- 11.4 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-12 STONE COARSE AGGREGATE FOR NOMINAL MIX CONCRETE :**

- 12.1 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.
- 12.2 The aggregate 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 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 6mm. less than the cover whichever is smaller.

**TABLE**

I.S. Sieve Designation	Percentage Passing for single sized aggregates of nominal size			I.S. Sieve Designation	Percentage Passing for single sized aggregates of nominal size		
	40 mm	20 mm	16 mm		40 mm	20 mm	16 mm
80 mm	-	-	-	12.5 mm	-	-	-
63 mm	100	-	-	10 mm	0.5	0.20	0.30
40 mm	80-100	100	-	4.75 mm	-	0.50	0.50
20 mm	0-20	85-100	100	2.75 mm	-	-	-
10 mm	-	-	85-100				

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

- 12.3 The grading test shall be taken in the beginning and at the change of source of materials. The necessary tests indicated in I.S. 383-1990 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.

**M-13 BLACK TRAP OR EQUIVALENT HARD STONE COARSE :**

- 13.1 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.
- 13.2 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.
- 13.3 The necessary tests indicated in I.S. 383-1990 and I.S. 456-2000 shall have to be carried out to ensure the acceptability of the material.
- 13.4 If aggregate is covered with dust it shall be washed with water to make it clean.

**M-14 BRICK BATS AGGREGATE :**

- 14.1 Brick bat aggregate shall be broken from well burnt or slightly over burnt and dense bricks. It shall be homogeneous in texture, roughly cubical in shape, clean and free from dirt of any other foreign material. The brick bats shall be of 40 mm to 50 mm size unless otherwise specified in the item. The underburnt or overburnt brick bats shall not be allowed.
- 14.2 The brick bats shall be measured by volume by suitable boxes as directed.

**M-15 BRICKS :**

- 15.1 The bricks shall be hand or machine moulded and made from suitable soils and kiln burnt. They shall be free from cracks and flaws not nodules 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 100mm x 40 mm and 10mm to 20mm deep on one of its flat sides. The bricks shall not break when dropped on the ground from a height of 600 mm.
- 15.2 The size of modular bricks shall be 190mm x 90mm x 90mm.
- 15.3 The size of conventional bricks shall be as under ---225 x 110 x 75mm.
- 15.4 Only bricks of one standard size shall be used on one work. The following tolerances shall be permitted in the conventional size adopted in a particular work.  
Length : 3.00 mm  
Width : 1.50 mm  
Height : 1.50 mm
- 15.5 The crushing strength of the bricks shall not be less than 35 Kg./Sq.Cm. The average water absorption shall not be more than 20% by weight. Necessary tests for crushing strength and water absorption etc. shall be carried out as per I.S. 3495 (Part I to IV)-1992.

**M-15A FLYASH BUILDING BRICKS :**

The Flyash building bricks shall conform to Grade-5 of IS-13757. The frog of the 80 to 100 mm x 40 mm x 10 to 20 mm size.

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

The size of conventional brick shall be 230 mm x 110 mm x 70 mm.

Only bricks of one standard size shall used on one work. The following tolerances shall permitted in the conventional size adopted in a particular work:

Length :  $\pm 4$  mm

Width :  $\pm 2$  mm

Height :  $\pm 2$  mm

The physical characteristic of bricks shall be as follows.

The minimum compressive strength of Flyash building bricks shall not be less than 70 Kg/Sq.Cm. and the test shall be conform to IS-3495 (Part-I).

The averages water absorption not more than 20 percentage by weight and the test shall conform to IS-3495(Part-3). Sampling of Flyash building bricks and criteria for conformity shall be as per I.S.:5454.

**M-16 STONE :**

- 16.1 The stone shall be of the specified variety such as Granite/Trap stone/Quartzite or any other type of good hard stones. The stones shall be obtained only from the approved quarry and shall be hard, sound, durable and free from defects like cavities, cracks, sand holes, flaws, injurious viens, patches of loose or soft materials etc. and weathered portions and other structural defects or imperfections tending to affect their soundness and strength. The stone with round surface shall not be more than 5% of dry weight. When tested in accordance with I.S. 1134-1985. The minimum crushing of the strength of the stone shall be 200 Kg./Sq.Cm. unless otherwise specified.
- 16.2 The samples of the stone to be used shall be got approved before the work is started.
- 16.3 The khanki facing stone shall be dressed by chisel as specified in the item for khanki facing in required shape and size. The face of the stone shall be so dressed that the bushing on the exposed face shall not project by more than 40 mm. from the general wall surface and on face to be plastered it shall not project by more than 19 mm nor shall it have depressions more than 10 mm from the average wall surface.

**M-17 LATERITE STONE :**

- 17.1 Laterite stone shall be obtained from the approved quarry. It shall compacted in texture, sound, durable and free from soft patches. It shall have a minimum crushing strength of 100 Kg/Sq.Cm. in its dry condition. It shall not absorb water more 20% of its own weight, when immersed for 25 hours in water. After quarrying, the stone shall be allowed to weather for some time before using in work.

- 17.2 The stone shall be dressed into rectangular blocks so that all faces are free from waviness and unevenness and the edges true and square.
- 17.3 Those type of stone in which white clay occurs should not be used.
- 17.4 Special corner stones shall be provided where so directed.

**M-18 MILD STEEL BARS/TMT/CRS BARS :**

- 18.1 Mild steel bars reinforcement TMT/CRS Bars for R.C.C. work shall conform to I.S. 432 (Part-II)-1982 and shall be of tested quality. It shall also comply with the relevant part of I.S. 456-1978 and revised latest I.S. Code.
- 18.2 All the reinforcement shall be clean and free from dirt, paint, grease, mill scale or loose or thick rust at the time of placing.
- 18.3 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)	6 mm	0.22 Kg/Rmt.
(ii)	8 mm	0.39 Kg/Rmt.
(iii)	10 mm	0.62 Kg/Rmt.
(iv)	12 mm	0.89 Kg/Rmt.
(v)	14 mm	1.21 Kg/Rmt.
(vi)	16 mm	1.58 Kg/Rmt.
(vii)	18 mm	2.00 Kg/Rmt.
(viii)	20 mm	2.47 Kg/Rmt.
(ix)	22 mm	2.98 Kg/Rmt.
(x)	25 mm	3.85 Kg/Rmt.
(xi)	28 mm	4.38 Kg/Rmt.
(xii)	32 mm	6.32 Kg/Rmt.
(xiii)	36 mm	8.00 Kg/Rmt.
(xiv)	40 mm	9.86 Kg/Rmt.

**M-19 HIGH YIELD STRENGTH STEEL DEFORMED BARS :**

- 19.1 High yield strength steel deformed bars shall be either cold twisted or hot rolled and shall conform to I.S. 1739-1978 and I.S. 1139-1966 respectively.
- 19.2 Other provision and requirements shall conform to specification No. M-18 for Mild Steel Bars.

**M-20 HIGH TENSILE STEEL WIRES :**

- 20.1 The high tensile wires for use in prestressed concrete shall conform to I.S. 2090-1983.
- 20.2 The tensile strength of the high tensile steel bars shall be as specified in the item. In absence of the given strength and minimum strength shall be taken as per para 6-1 of the I.S. 1785-1962. Testing shall be done as per I.S. requirements.
- 20.3 The high tensile steel shall be free from loose mill scale, rust, oil, grease or any other harmful matter. Cleaning of steel bars may be carried out by immersion in solvent solution, wire brushing or passing through a pressure box containing carborundum.
- 20.4 The high tensile wire shall be obtained from manufactures in coils having diameter not less than 350 times the diameter of wire itself so that wire springs back straight on being uncoiled.

**M-21 MILD STEEL BINDING WIRE :**

- 21.1 The mild steel wire shall be of 1.63mm or 1.22mm (16 or 18 gauge) diameter and shall conform to I.S. 280-1978.
- 21.2 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-22 STRUCTURAL STEEL :**

- 22.1 All structural steel shall conform to I.S. 226-1975. The steel shall be free from the defects mentioned in I.S. 226-1975 and shall have a smooth finish. The material shall be free from loose mill scale, rust pits or other defects affecting the strength and durability. Rivet bars shall conform to I.S. 1148-1992.
- 22.2 When the steel is supplied by the contractor test certificates of the manufacturers shall be obtained according to I.S. 226-1975 and other relevant Indian Standards.

**M-23 GALVANISED IRON SHEETS :**

- 23.1 The galvanised iron sheets shall be plain or corrugated sheets of gauge as specified in item. The G.I. Sheets shall conform to I.S. 277-1992. The sheets shall be undamaged in carriage and handling either by rubbing off

of zinc coating or otherwise. They shall have clean and bright surface and shall be free from dents, bends, holes, rust or white powdery deposit.

23.2 The length and width of G.I. sheets shall be as directed as per site condition.

**M-23-A G.I. VALLEYS GUTTER, RIDGES :**

23-A.1 The G.I. ridges and hips shall be of plain galvanised sheets class-3 of the thickness as specified in item. These shall be 600 mm width and properly bent up to shape without damage to the sheets in process of bending.

23-A.2 Valleys gutters and flashings shall be also of galvanised sheet of thickness as specified in item. Valleys shall be 900 mm. wide over all and flashing shall be 380 mm wide over all. They shall be bent to the required shape without damage to the sheet in the process of bending.

**M-24 ASBESTOS CEMENT SHEETS :**

24.1 Asbestos cement sheets plain, corrugated or semi-corrugated shall conform to I.S. 459-1970. The thickness of the sheets shall be as specified in the item. The sheet shall be free from all defects such as cracks, holes, deformities, chipped edges or otherwise damaged.

24.2 Ridges and Hips :

24.2.1 Ridges and hips shall be of same thickness as that of A. C. sheets. The types of ridges shall be suitable for the type of sheets and locations.

24.2.2 Other accessories to be used in roof such as flashing pieces, eaves filler pieces, valley gutters, north light and ventilator curves, barge boards etc. shall be of standard manufacture and shall be suitable for the type of sheets and location.

**M-25 MANGALORE PATTERN ROOF TILES :**

25.1 The Mangalore pattern tiles shall conform to I.S. 654-1992 for Class 'AA' or 'A' type as specified in item. Samples of the tiles to be provided shall get approved from the Engineer-in-charge. Necessary tests shall be carried out as directed.

**M-26 SHUTTERING :**

26.1 The shuttering shall be either of wooden planking of 30mm 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 ballies properly cross bracked together so as to make the centering rigid. In places of ballie props, bricks pillar of adequate section built in mud mortar may be used.

26.2 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 concrete, live load of men working with it and other incidental loads associated with it. The shuttering shall have smooth and even surface and its joints shall not permit leakage of cement grout.

26.3 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 approved from the Engineer-in-charge, before the reinforcement bars are placed in position.

26.4 The props shall consist of bullies having 100mm minimum diameter measured at mid length and 80mm at thin end and 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.

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

26.6 The timber used in shuttering shall not be so dry so as to absorb water from concrete and swell or bulge nor so green or wet so 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.

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

26.8 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.

26.9 The shuttering for beams and slabs shall have camber of 4mm per metre (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-27 EXPANSION JOINTS - PREMOULDED FILLER :**

- 27.1 The item provides for expansion joints in R.C.C. frame structures for internal joints, as well as exposed joints, with the use of premoulded bituminous joint filler.
- 27.2 Premoulded bituminous joint filler, i.e. performed stirp of expansion joint filler shall not get deformed or broken by twisting, bending or other handling when exposed to atmospheric condition. Pieces of joint filler that have been damaged shall be rejected.
- 27.3 Thickness of the pre moulded joint filler shall be 25 mm unless otherwise specified.
- 27.4 Premoulded bituminous joint filler shall conform to I.S. 1838-1961.

**M-28 EXPANSION JOINTS - COPPER STRIPS AND HOLD FASTS :**

- 28.1 The item provides for expansion joints in R.C.C. frame structure for internal joints as well as for exposed joints with the use of necessary copper strip and holdfasts.
- 28.2 Copper sheet shall be 1.25 mm thick and of 1.25 mm with 'U' shape in the middle, copper strip shall have holdfast of 3 mm diameter copper rod fixed to the plate soldered on strip at intervals of about 30 cm. or as shown in the drawing or as directed. The width of each flange (horizontal side) of the copper plate to be embedded in the concrete work shall be 25 mm Depth of 'U' to be provided in the expansion joint, in the copper plate shall be of 25 mm.

**M-29 TEAK WOOD :**

- 29.1 The teak wood shall be of good quality as required for the item to be executed. When the kind of wood is not specifically mentioned, good Indian teak wood as approved shall be used.
- 29.2 Teak wood shall generally be free from large, loose, dead or cluster knots, flaws, warps, twists, shakes, bends or any other defects. It shall generally be uniform in substance and of straight fibres as far as possible. It shall be free from rot, decay, harmful fungi and other defects of harmful nature, which will affect the strength, durability or its usefulness for the purpose for which it is required. The colour shall be uniform as far as possible. Any effort like painting, using any adhesive or resinous materials made to hide the defects shall render the pieces liable to rejection by the Engineer-in-charge.
- 29.3 All scantlings, planks etc. shall be sawn in straight lines and planes in the direction of grains and of uniform thickness.
- 29.4 The tolerances in the dimensions shall be allowed at the rate of 1.5 mm per face to be planed.
- 29.5 First Class Teak Wood :  
First class teak wood shall have no individual hard and sound knots, more than 6 sq.cm. in size and the aggregate area of such knots shall not be more than 1% of area of piece. The timber shall be closed grained.
- 29.6 Second Class Teak Wood :  
No individual hard and sound knots shall be more than 15 sq.cm. in size and aggregate area of such knots shall not exceed 2% of the area of piece.

**M-29-A NON-TEAK WOOD :**

The non teak wood shall be chemically treated, seasoned as per I.S. Specifications and of good quality. The type of wood shall be got approved before collecting the same on site. Fabrication of wooden members shall be started only after approval. For this purpose wood of Bio, Kalai, Sires, Saded, Behda, Jamun, Sisoo will be used for door frames whereas only Kalai, Siras, Halda, Kalam etc. will be permitted for shutters after proper seasoning and chemical treatment.

The non teak wood shall be free from large, loose dead or cluster knots, flows, shakes, warps, bends, or any other defect. It shall be uniform in substance and of straight fibres as far as possible. It shall be free from rots, decay, harmful fungi and other defects of similar nature which will affect the strength, durability or its usefulness for the purpose for which it is required. The colour of the wood shall be uniform as far as possible. The scantlings, planks etc. shall be sawn in straight lines and planes in the direction of grain and of uniform thickness.

The department will use the Agency to produce a certificate from the Forest Department in the event of a dispute and the decision of the Department shall be final and binding to the contractor.

The tolerance in the dimension shall be allowed at 1.5 mm. per face to be planed.

**M-30 WOODEN FLUSH DOOR SHUTTERS (SOLID CORE) :**

- 30.1 The solid core type flush door shutters shall be of decorative or non-decorative type as specified in the drawing. The size and thickness of the shutter shall be as specified in drawings or as directed. The timber species for core shall be used as per I.S. 2202-(Part-I)-1991. The timber shall be free from decay and insect attack. Knots and knot holes less than half the width of cross-section of the members, pitch streaks and harmless pin holes shall be permissible except in the exposed edges of the core members. The commercial plywood, cross bands shall conform to I.S. 303-1298.

- 30.2 The face panel of the shutters shall be formed by gluing by the hot press process on both faces of the core with either plywood or corss bands, and face veneers. The lipping, rebating, opening of glazing, venetion etc. shall be provided if specified in the drawing.
- 30.3 All edges of the door shutters shall be square. The shutters shall be free form twist or warp in its plane. Both faces of the shutters shall be sand papered to smoot even texture.
- 30.4 The shutters shall be tested for ---
- i] End Immersion Test : The test shall be carried out as per I.S. 2202 (Part-I) 1991. There shall be no delamination at the end of the test.
  - ii] Knife Test : The face panel when tested in accordance with I.S. 1659-1990 shall pass the test.
  - iii] Glue Adhesion Test : The flush door shall be tested for glue adhesive test in accordance with I.S. 2202(Part-I)-1991. The shutters shall be considered to have passed the test if no delamination occurs in the glue lines in the plywood and if no single delamination more than 80 mm. in length and more than 3 mm. in depth has occured in the assembly glue lines between the plywood face and the style and rail. Delamination at the corner shall be measured continously around the corner. Delamination at the knots knot, hole and other permissible wood defects shall not be considered in assessing the sample.
- 30.5 The tolerance in size of solid core type flush door as under:-  
In nominal thickness # 1.2 mm. In nominal height # 3 mm. The thickness of the shutters shall be uniform throughout with a permissible variation of not more than 0.8 mm. when measured at any two points.

### **M-31 ALUMINIUM DOORS, WINDOWS, VENTILATORS :**

- 31.1 Aluminium alloy used in the manufacture of extruded window sections shall conform to I.S. desgnation HEA-WP of I.S.:733- 1991 and also to I.S. Designation WVG - WP OF I.S.:1285-1991. The sections shall be as specified the drawing and design. The fabrication shall be done as directed.
- 31.2 The hinges shall be cast or excluded aluminium hinges of same type as in window but or large size.
- 31.3 The hinges shall normally be of 50 mm projecting type non projecting type of hinges may also be used if directed. The handles of door shall be of specified design. A suitable lock for the door operable either from outside shall be provided. In double shutter door, the first closing shall have a concealed aluminium alloy bolt at top and bottom.

### **M-32 ROLLING SHUTTERS :**

- 32.1 The rolling shutters shall conform to I.S. 6248-1991. Rolling shutters shall be supplied of specified type with accessories. The size of the rolling shutters shall be specified in the drawings. The shutters shall be constructed with interlocking lath sections formed from cold rolled steel strips not less than 0.9 mm. thick and 80 mm. wide for shutters upto 3.5 m. Width not less than 1.25 mm. thick and 80 mm. wide for shutters 3.5 m. in width and above unless otherwise specified.
- 32.2 Guide channels shall be of mild steel deep channel section and of rolled pressed or built up (fabricated) jointless construction. The thickness of sheet used shall not be less than 3.15 mm.
- 32.3 Hood covers shall be made of M.S. sheets not less than 0.92 mm. thick. For shutters having width 3.5 mts. and above, the thickness of M.S. sheet for the hood covers shall be not less than 1.25 mm.
- 32.4 The spring shall be of best quality and shall be manufactured from tested high tensile spring steel wire or strip of adequate strength to balance the shutters in position. The spring pipe shaft etc. shall be supported on strong M.S. or malleable C.I. brackets. The brackets shall be fixed on the or under the lintel as specified with rawl plugs and screws bolts etc.
- 32.5 The rolling shutters shall be of self rolling type upto 8 sq.m. clear area without ball bearing and upto 12 sq.m. clear area with ball bearing. If the rolling shutters are of larger then gear operated type shutters shall be used.
- 32.6 The locking arrangement shall be provided at the bottom of shutter at both ends. The shutters shall be opened from outside.
- 32.7 The shutters shall be completed with door suspension, shafts, locking arrangements, pulling hooks, handles and other accessories.

### **M-33 COLLAPSIBLE STEEL GATE :**

- 33.1 The collapsible steel gate shall be in one or two leaves and size as per approved drawings or as specified. The gate shall be fabricated from best quality mild steel channels, flates etc. Either steel pulleys or ball bearings shall be provided in every double channel. Unless otherwise specified the particulars of collapsible gate shall be as under ---
- i] Pickets : These shall be of 20 mm. M.S. channels of heavy sections unless otherwise shown on drawings. The distance centre to centre of pickets shall be 12 cms. with an opening of 10 cms.
  - ii] Pivoted M.S. flats shall be 20 mm. x 6 mm.
  - iii] Top and bottom guides shall be from tee or flat iron of approved size.

- iv] The fittings like stoppers, fixing hold fasts, locking cleats, brass handles and cast iron rollers shall be of approved design and size.

**M-34 WELDED STEEL WIRE FABRIC:**

- 34.1 Welded steel wire fabric for general purpose shall be manufactured from cold drawn steel 'as drawn' or galvanised steel conforming to I.S. 226-1975 With longitudinal and transverse wire securely connected at every intersection by a process of electrical resistance welding and conforming to I.S. 4948-1974. It shall be fabricated and finished in a workman like manner and shall be free from injurious defects and shall be rust proof. The type of mesh shall be oblong or square as directed. The mesh sizes and sizes of wire for square as well as oblong welded steel wire fabric shall be as directed. The steel wire fabric in panels shall be in one whole piece in each panel as far as stock sizes permit.

**M-35 EXPANDED METAL SHEETS :**

- 35.1 The expanded metal sheets shall be free from flaws, joints, welds, broken, stands, laminations and other harmful surface defects. Expanded metal steel sheet shall conform to I.S. 412 - 1992 except that blank sheets need not be with guaranteed mechanical properties. The size of the diamond mesh of expanded metal and dimensions of strands (width and thickness) shall be as specified. The tolerance on nominal weight of expanded metal sheets shall be of + 10 per cent.
- 35.2 Expanded metal in panels shall be in one whole piece in each panel as far as stock sizes permit. The expanded metal sheets shall be coated with suitable protective coating to prevent corrosion.

**M-36 MILD STEEL WIRE (Wire Gauze Jali) :**

- 36.1 Mild steel wire may be galvanised, as indicated. All finished steel wire shall be well cleanly drawn to the dimensions and size of wire as specified in item. The wire shall be sound, free from slits, surface flaws, rough jagged and imperfect edges and other harmful surface defects and shall conform to I.S. 280-1992.

**M-37 PLYWOOD :**

- 37.1 The Plywood for general purpose shall conform I.S. 303-1998. Plywood is made by cementing together thin boards or sheets of wood into panels. There are always an odd number of layers 3, 5, 7, 9 ply etc. The plies are placed so that the grain of each layer is at right angles to the grain in the adjacent layers.
- 37.2 The chief advantage of plywood over a single board of the same thickness is the more uniform strength of the plywood along the length and width of the plywood and greater resistance to cracking and slitting with change in moisture content.
- 37.3 Usually synthetic resins are used for glueing. Phenolic resins are usually cured in a hot press which compresses and simultaneously heats the plies between hot plates which maintain a temperature of 90 degree C. to 140 degree C. and a pressure of 11 to 14 Kg./Sq.cm. on the wood. The time of heating may be any thing from 2 to 60 minutes depending upon thickness.
- 37.4 When water glue are used the wood absorbs so much Water that the finished plywood must be dried carefully, When synthetic resins are used as adhesive the finished plywood must be exposed to atmosphere of controlled humidity until the proper amount of moisture has been absorbed.
- 37.5 According to I.S. : 303-1998 the plywood for general purpose shall be of three grades namely BWR, WWR and CWR depending upon the adhesives used for bonding the veneers and it will be further classified into six types namely AA, AB, AC, BB, BC and CC based on the quality of the two faces, each face being of three kinds namely A, B and C. After pressing, the finished plywood should be reconditioned to a moisture content not less than 8 percent and not more than 16 percent.

**TABLE**

37.6 **THICKNESS OF PLYWOOD BOARDS**

Board	Thick
3 ply	3 mm
	4 mm
	5 mm
	6 mm
6 ply	5 mm
	6 mm
	8 mm
	9 mm
7 Ply	9 mm
	13 mm
	16 mm
9 Ply	13 mm



	16 mm
	19 mm
11 ply	19 mm
	22 mm
	25 mm

**M-38 GLASS :**

38.1 All glass shall be of the best quality, free from specks, bubbles, smokes, veins, air holes blisters and other defects. The kind of glass to be used shall be as mentioned in the item or specification or in the special provisions or as shown in detailed drawings. Thickness of glass panes shall be uniform. The specifications for different kinds of glass shall be as under ----

38.2 Sheet Glass :

38.2.1 In the absence of any specified thickness or weight in the item or detailed specifications of the item of work, sheet glass shall be weighing 7.5 Kg./Sq.m. for panes upto 600 mm. x 600 mm.

38.2.2 For panes larger than 600 mm. x 600 mm. and upto 800 mm. x 800 mm. glass weighing not less than 8.75 Kg./Sq.m. shall be used. For bigger panes upto 900 mm. x 900 mm. glass weighing not less than 11.25 Kg./Sq.m. shall be used.

38.2.3 Sheet glass shall be patent flattened glass of best quality and for glazing and framing purposes shall conform to I.S. 761-1963. Sheet glass of the specified colours shall be used, if so shown on detailed drawings or so specified. For important buildings and for panes with any dimensions over 900 mm. plate glass of specified thickness shall be used.

38.3.0 Plate Glass :

38.3.1 When plate glass is specified it shall be "Polished Patent Plate Glass" of best quality. It shall have both the surface ground flat and parallel and polished to obtain clear undisturbed vision and reflection. The plate glass shall be of the thickness mentioned in the item or as shown in the detailed drawing or as specified. In the absence of any specified thickness, the thickness of plate glass to be supplied shall be 6 mm. and a tolerance of 0.20 mm. shall be admissible.

38.4.0 Obscured Glass :

38.4.1 This type of glass transmits light so that vision is partially or almost completely obscured. Glass shall be plain rolled, figured, ribbed or fluted, or frosted glass as may be specified as required. The thickness and type of glass shall be as per details on drawings or as specified or as directed.

38.5.0 Wired Glass :

Glass shall be with wire netting embedded in a sheet of plane glass. Electrically welded 13 mm. Georgain square mesh shall be used. Thickness of glass shall not be less than 6 mm. wired glass shall be of type and thickness as specified.

**M-39 ACRYLIC SHEETS :**

39.1 Acrylic sheets shall be of thickness as specified in the item and of a specified shape and size as the case may be. Panels may be flat or curved. It should be light in weight. It shall be colourless or coloured or opaque as specified in the item. Colourless sheet shall be as transparent as the finest optical glass. Its light transmission rate shall be about 95%. Transparency shall not be affected for the sheets of larger thickness. It shall be extremely resistant to sunlight, weather and low temperatures. It shall not show any significant yellowing or change in physical properties or loss of light transmission over a longer period of use.

The sheet shall be impact resistant also. Sheets should be available in complete range of standard transparent, translucent and opaque colours. Sheets should be available in complete range of standard transparent, translucent and opaque colours. Sheets shall be of such quality that they can be cut, bent and jointed as desired. Solution for the joints shall be used as per the requirement of manufacture.

**M-40 PARTICLE BOARD :**

40.1 The particle boards used for face panels shall be of best quality free from any defects. The particle boards shall be made with phenolmaldehyde adhesive. The particle boards shall conform to I.S. 3087-1990. "Specification for wood particle board for general purpose." The size and the thickness of the particle board shall be as specified.

**M-41 EXPANDED POLYSTYRENE OR FRAMES STYROPER SLEBS :**

41.1 The expanded polystyrene ceiling boards and tiles shall be of approved make and shall be of size, thickness, finish and colour as indicated. It shall be of high density and suitable for use as insulating material. The insulating material shall be like slab of thermocole etc.

**M-42 RESIN BONDED FIBRE GLASS :**

- 42.1 The resin bonded fibre glass tiles or rools shall be of approved make and shall be sizes, thickness and finish as indicated.
- 42.2 For test of Mineral wood thermal insulation Blanket I.S. 3144-1965 followed.
- 42.3 Insulation wool blanket shall be with the following coverings on one or both sides as indicated.
  - (1) Bituminised bessian kraft paper suitable for use in position where moisture has to be excluded.
  - (2) Hessain cloth or Kraft paper for keeping out dust.
  - (3) G. I. wire netting, suitable or surfaces to be plastered over.

**M-43 FIXTURES & FASTENINGS :**

General ---

- i] The fixtures and fastenings, that is, butt, hingers, tee and strap hinges, sliding door bolts, tower bolts, door latch, bath-room latch, handles, door stoppers, casement window fasteners, casement stays and ventilator catch shall be made of the metal as specified in the item or its specifications.
- ii] They shall be of iron, brass, aluminium, chromium plated iron, chromium plated brass, copper oxidised iron, copper oxidised brass or anodised aluminium as specified.
- iii] The fixtures shall be heavy, medium or light type. The fixtures and fastenings shall be smooth finished and shall be such as will ensure ease of operation.
- iv] The samples of fixtures and fastenings shall be got approved as regards quality and shape before providing them in position.
- v] Brass and anodised aluminium fixtures and fastenings shall be bright finished.

Holdfasts :

- i] Holdfasts shall be made from mild steel flat 30 cm. length and one of the holdfasts shall be bent at right angle and two nos. of 6 mm. dia. hooles shall be made in it for fixing it to the frame with screws. At the other end, the holdfast shall be forked and bent at right angles in opposite directions.

Butt Hinges :

- i] Railway standard heavy type butt hinges shall be used when so specified.
- ii] Tee and strap hinges shall be manufactured from M.S. sheet.

Sliding Door Bolts (Aldrops) :

- i] The aldrops as specified in the item shall be used and shall be got approved.

Tower Bolts (Barrel Type) :

- i] Tower bolts as specified in the item shall be used and shall be got approved.

Door Latch :

- i] The size of door latch shall be taken as the length of latch.

Bathroom Latch :

- i] Bathroom latch shall be similar to tower bolt.

Handle :

- i] The size of the handles shall be determined by the inside grip length of the handles. Handles shall have a base plate of length 50 mm. more than the size of the handle.

Door Stoppers :

- i] Door stoppers shall be either floor door stopper type or door catch type. Floor stopper shall be of overall size as specified and shall have a rubber cushion.

Door Catch :

- i] Door catch shall be fixed at a height of about 900 mm. from the floor level such that one part of the catch is fitted on the inside of the shutter and other part is fixed in the wall with necessary wooden plug arrangements for appropriate fixity. The catch shall be fixed 20 mm. inside the face of the door for easy operation of catch.

Wooden Door Stop With Hinge :

- i] Wooden door stop of size 100 mm. x 60 mm. x 40 mm. shall be fixed on the door frame with a hinge of 75 mm. size and at a height of 900 mm. from the floor level. The wooden door stop shall be provided with 3 coats of approved oil paint.

Casement Window Fastner :

- i] Casement window fastener for single lead window shutter shall be left or right handed as directed.

Casement Stays (Straigot Peg.Stay) :

- i] The stays shall be made from a channel section having three holes at appropriate position so that the window can be opened either fully or partially as directed.

Size of the stay shall be 250 mm. to 300 mm. as directed.

Ventilator Catch :

- i] The pattern and shape of the catch shall be as approved.

Pivot :

- i] The base and socket plate shall be made from minimum 3 mm. thick plate, and projected pivot shall not be less than 12 mm. dia. and 12 mm. length and shall be firmly riveted to the base plate case of iron pivot and in single piece base in the case of brass pivot.

#### **M-44 PAINTS :**

##### **44.1 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 stainer 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 meet with the following general requirements -

- i] Paint shall not show excessive setting in a freshly opened full can and shall easily be redispersed with paddle to a smooth homogeneous state. The paint shall show no curdling, livering, caking or colour separation and shall be free from lumps and skins.
- ii] The paint as received shall brush easily, possess good levelling 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. Ready mixed paint shall be used exactly as received from the manufacturers and generally according to their instructions and without any admixtures whatsoever.

##### **44.2 Enamel Paints :**

The enamel paint shall satisfy in general requirements as mentioned in specification of oil paints. Enamel paints shall conform to I.S. 2933-1991.

#### **M-45 FRENCH POLISH :**

The french polish of required tint and shade shall be prepared with the below mentioned ingredients and other necessary materials :

- i] Denatured spirit of approved quality.
  - ii] Shellac.
  - iii] Chandras.
  - iv] Pigment.
- The french polish so prepared shall conform to I.S. 348-1991.

#### **M-46 MARBLE CHIPS FOR MARBLE MOSAIC TERRAZZO :**

- 46.1 The marble chips shall be of approved quality and shades. It shall be hard, sound, dense and homogeneous in texture with crystalline and coarse grains. It shall be uniform in colour and free from stains, cracks, decay and weathering.
- 46.2 The size of various colours of marble chips ranging from the smallest upto 20 mm. shall be used where the thickness of top wearing layers is 6 mm. in size. The marble chips of approved quality and colours only as per grading as decided by the Engineer-in-charge shall be used for marble mosaic tiles or works.
- 46.3 The marble chips shall be machine crushed. They shall be free from foreign matter, dust etc. Except as above the chips shall conform to I.S. 2114-1990.

#### **M-47 FLOORING TILES :**

A] Plain Cement Tiles -

- 47.1.1 The plain cement tiles shall be of general purpose type. These are the tiles in the manufacture of which no pigments are used. Cement used in the manufacture of tiles shall be as per Indian Standards.
- 47.1.2 The tiles shall be manufactured from a mixture of cement and natural aggregates by pressure process. During manufacture, the tiles shall be subjected to a pressure of not less than 140 Kg./Sq.cm. The proportion of cement to aggregate in the backing of the tiles shall be not leaner than 1:3 by weight. The wearing face, though the tiles are of plain cement, shall be provided with stone chips of 1 to 2 mm size. The proportion of cement to the marble chips aggregate in the wearing layer of the tiles shall be three parts of cement to one part of chips by weight. The minimum thickness of wearing layer shall be 3 mm. The colour and texture of wearing layer shall be uniform throughout its face and thickness. On removal from mould, the tiles shall be kept in moist condition continuously at least for seven days and subsequently, if necessary, for such long period as would ensure their conformity to requirements of I.S. 1237- 1990 requiring resistance to wear and water absorption.
- 47.1.3 The wearing face of the tiles shall be plain, free from projections, depressions and cracks and shall be reasonably parallel to the back face of the tile. All angles shall be right angle and all edges shall be sharp and true.

- 47.1.4 The tile sizes shall generally be square shape 24.85cm. x 24.85cm. or 25cm. x 25cm. The thickness of the tiles shall be 20 mm.
- 47.1.5 The tolerance of length and breadth shall be plus or minus 1 mm. The tolerance on thickness shall be plus 5 mm.
- 47.1.6 The tiles shall satisfy the tests as regards transverse strength, resistance to wear and water absorption as per I.S. 1237-1980.
- 47.2 B] Plain Coloured Tiles :
- 47.2.1 These tiles shall have the same specifications as for plain cement tiles as per (A) above except that they shall have a plain wearing surface wherein pigments are used. They shall conform to I.S. 1237-1990.
- 47.2.2 The pigment used for colouring cement shall not exceed 10% by weight of cement used in the mix. The pigments, synthetic or otherwise, used for colouring tiles shall have permanent colour and shall not contain materials detrimental to concrete.
- 47.2.3 The colour of the tiles shall be specified in the item or as directed.
- 47.3 C] Marble Mosaic Tiles :
- 47.3.1 These tiles have the same specifications as per plain cement tiles except the requirements as stated below ---
- 47.3.2 The marble mosaic tiles shall conform to I.S. 1237-1990. The wearing face of the tiles shall be mechanically ground and filled. The wearing face of tiles shall be free of projections, depressions and cracks and shall be reasonably parallel to the back face of the tiles. All angles shall be right angles and all edges shall be sharp and true.
- 47.3.3 Chips used in the tiles be from smallest upto 20 mm. size. The minimum thickness of wearing layer of tiles shall be 6 mm. For pattern of chips to be laid on the wearing face, a few samples with or without their full size photographs as directed shall be presented to the Engineer-in-charge for approval.
- 47.3.4 Any particular samples, if found suitable shall be approved by the Engineer-in-charge, of he may ask for particular sized chips to be more or less in the sample presented. The samples shall have to be made by the contractor till a suitable sample finally approved for use in the work. The contractor shall ensure that the tiles supplied for the work shall be in conformity with the approved sample only, in terms of its dimensions, thickness of backing layer and wearing surface, materials, ingredients, colour shade, chips, distribution etc. required.
- 47.3.5 The tiles shall be prepared from cement conforming to Indian Standards or coloured portland cement generally depending upon the colour of tiles to be used or as directed.
- 47.4 D] Chequered Tiles :
- 47.4.1 Chequered tiles shall be plain cement tiles or marble mosaic tiles. The former shall have the same specification as per (A) above and the latter as per marble mosaic tiles as per (C) except as mentioned below.
- 47.4.2 The tiles shall be of nominal size of 250mm. x 250mm. or as specified. The centre to centre distance of the chequer shall not less than 25mm. and not more than 50mm. The overall thickness of the tile shall be 22mm.
- 47.4.3 The grooves in the chequers shall be uniform and straight. The depth of the grooves shall not be less than 3mm. The chequered tiles shall be plain, coloured or mosaic as specified. The thickness of the upper layer measured from the top of the chequers shall not be less than 6mm. The tiles shall be given the first grinding with machine before delivery to site.
- 47.4.4 Tiles shall conform to relevant I.S. 1237-1990.
- 47.5 E] Chequered Tiles for Staircases :
- 47.5.1 The requirements of these tiles shall be the same as chequered tiles as per (D) above except in following respects :
  - i] The length of a tile including nose shall be 330 mm.
  - ii] The minimum thickness shall be 28 mm.
  - iii] The nosing shall have also the same wearing layer at the top.
  - iv] The nosing edge shall be rounded.
  - v] The front portion of the tile for a minimum length of 75mm. from and including the nosing shall have grooves running parallel to nosing and at centres not exceeding 25mm. Beyond that the tiles shall have normal chequer pattern.

#### **M-48 ROUGH KOTAH STONE :**

- 48.1 The kotah stones shall be hard, even, sound and regular in shape and generally uniform in colour. The colour of the stone shall generally be green. Brown coloured stones shall not be allowed for use. They shall be without any soft veins, cracks or flaws.
- 48.2 The size of the stones to be used for flooring shall be size 600mm. x 60mm. and/or size 600mm. x 450mm. as directed. However, smaller sizes will be allowed to be used to the extent of maintaining the required pattern. Thickness shall be as specified.
- 48.3 Tolerance of minus 30 mm. on account of chisel dressing of edges shall be permitted for length as well as breadth. Tolerance in thickness shall be plus 3mm.

- 48.4 The edges of stones shall be truly chiselled and table rubbed with coarse sand before paving. All angles and edges of the stone shall be true, square and free from chipping and the surface shall be true and plain.
- 48.5 When machine cut edges are specified, the exposed edges and the edges at joints shall be machine cut. The thickness of the exposed machine cut edges shall be uniform.

**M-49 POLISHED KOTAH STONES :**

- 49.1 Polish kotah stone shall have the same specifications as per rough kotah stone except as mentioned below.
- 49.2 The stone shall have machine polished smooth surface. When brought on site, the stones shall be single polished or double polished depending upon its use. The stones for paving shall generally be single polished. the stones to be used for dedo, skirting, platforms sink, veneering, sills, steps etc. where machine polishing after the stones are fixed in situ is not possible shall be double polished.

**M-50 DHOLPUR STONE SLAB :**

- 50.1 Dholpur stone slab shall be of best quality as approved by the Engineer-in-charge. The stone slab shall be without any veins, cracks, and flaws. The stone slab shall be even, sound and durable, regular in shape and uniform colour.
- 50.2 The size of the stone shall be as specified in the item or detailed drawing or as approved by the Engineer-in-charge. The thickness of the stone shall be as specified in the item of work with the permissible tolerance of plus or minus 2 mm. The provisions in respect of polishing as for polished kotah stone shall apply to polished Dholpur stone also. All angles and edges of the face of stone slab shall be fine chiselled or polished as specified in the item of work and all the four edges shall be machine cut. All angles and edges of the stone slab shall be true and plane.
- 50.3 The sample of stone shall be got approved from the Engineer-in-charge for shade and tint for a particular work. It shall be ensured the stones to be used in a particular work shall not differ much in shade or tint from the approved sample.

**M-51 MARBLE SLAB :**

Marble slabs shall be white or of other colour and of best quality as approved by the Engineer-in-charge. Slab shall be hard, close, uniform and in texture. They shall also be free defects and cracks. The surface shall be machine polished to an even and perfectly plane surface and the edges, machine cut true and square. The rear face shall be rough enough to provide key for the mortar.

Marble slabs with natural veins, if selected shall have to be laid as per the pattern given by the Engineer-in-charge. Size of the slabs shall be minimum 450mm. x 450mm. and preferably 600mm. x 600mm. However, smaller sizes will be allowed to be used to the extent of maintaining required pattern.

The slab shall not be thinner than the specified thickness at its thinnest part. A few specimen of finished slab to be used shall be deposited by the contractor in the office for reference.

Except as above, the marble slabs shall conform to I.S. 1130-1993 or as revised from time to time.

**M-52 GRANITE STONE SLAB :**

- 52.1 Granite shall be of approved colour and quality, The stone shall be hard even, sound and regular in shape and generally uniform in colour. It shall be without and soft veins, cracks or flaws.
- 52.2 The thickness of the stone shall be specified in the item.
- 52.3 All exposed faces shall be double polished to tender truly smooth and even reflecting surface. The exposed edges and corners shall be rounded off as directed. The exposed edges shall be machine cut and shall have uniform thickness.

**M-53 P.V.C. FLOORING :**

- 53.1 P.V.C. sheets for P.V.C. floor covering shall be homogenous flexible type, conforming to I.S. 3462-1991. The P.V.C. covering shall neither develop any toxic effect while put to use nor shall give off any disagreeable odour.
- 53.2 Thickness of flexible type covering or tiles shall be as specified in the description of the item.
- 53.3 The flexible type shall be backed with hessian or other woven fabric. The following tolerance shall be applicable on the nominal dimensions of the sheet rolls or tiles :
- |     |                         |                   |
|-----|-------------------------|-------------------|
| (a) | Thickness               | +/- 0.15 mm       |
| (b) | Length or width         |                   |
|     | 1. 300 mm Square tiles  | +/- 0.20 mm       |
|     | 2. 600 mm Square tiles. | +/- 0.40 mm       |
|     | 3. 900 mm Square tiles. | +/- 0.60 mm       |
|     | 4. Sheets and rolls.    | +/- 0.10 percent. |

#### 53.4 Adhesive :

53.4.1 The adhesive for PVC flooring shall be of the type and make recommended by the manufacturers of PVC sheets tiles.

#### M-54 FACING TILES :

54.1 The facing tiles (burnt clay facing bricks) shall be free from cracks, flaws, and nodules of free lime. They shall be thoroughly burnt and shall have plane rectangular faces with parallel sides and sharp straight right angled faces. The texture of the finished surface that will be exposed when in place, shall conform to an approved sample consisting not less than four stretcher bricks each representing resistance to penetration by rain and greater durability than common bricks. The tiles shall conform to I.S. 2691-1995.

54.2 The standard size of facing brick tiles shall be 19 x 9 x 4 cms. The facing brick tiles shall be provided with frog which shall conform to I.S. 1077-1992.

54.3 The permissible tolerance in dimensions specified above shall be as follows.

Size	Tolerance for	
	1st Class Brick	2nd Class Brice
19 cm	+/- 6 mm	+/- 10 mm
9 cm	+/- 2 mm	+/- 7 mm
4 cm	+/- 1.5 mm	+/- 3 mm

The tolerance for distortion or warpage of face or edges of individual brick from a plane surface and from a straight line respectively shall be as follows :

Facing dimensions. Permissible tolerance.

Max. below 19 cms. Max. 2.5 mm.

Max. above 19 cms. Max. 3.0 mm

54.5 The average compressive strength obtained as a sample of five tiles when tested in accordance with the procedure as per I.S. 1077-1992 shall be not less than 175 Kg/Sq.cm. The average compressive strength of any individual brick shall not less than 160 Kg/Sq.cm.

54.6 The average water absorption for five brick tiles shall not be exceed 12 percent of average weight of brick before testing. The absorption for each individual brick shall not exceed 25 percent.

54.7 The brick tiles when tested in accordance with I.S. 1077-1992 the rate of efflorescence shall not be more than "Slightly effloresced".

#### M-55 WHITE GLAZED TILES :

55.1 The tiles shall be of best quality as approved by the Engineer-in-charge. They shall be flat and true to shape. They shall be free from cracks, crazing, spots, chipped edges and corners. The glazing shall be of uniform shade.

55.2 The tiles shall be of nominal size of 150mm. x 150mm. unless otherwise specified. The maximum variation from the stated sizes, other than the thickness of tile, shall be plus or minus 1.5mm. The thickness of the tile shall be 6mm. except as above the tiles shall conform to I.S. 777-1988.

#### M-56 GALVANISED IRON PIPES AND FITTINGS :

Galvanised iron pipe shall be of the medium type and of required diameter and shall comply with I.S. 1239-1990. The specified diameter of the pipes shall refer to the inside diameter of the bore. Clamps, screw and all galvanised iron fittings shall be of the standard 'R' or equivalent make.

#### M-57 BIB COCK AND STOP COCK :

57.1 A bib cock is a draw off tap with a horizontal inlet and a free outlet. A stop cock is a valve with a suitable means of connection for insertion in a pipe line for controlling or stopping the flow.

57.2 They shall be of screw down type and or brass chromium plated and of diameter as specified in the description of the item. They shall conform to I.S. 781-1990 and they shall be of best Indian make. They shall be polished bright.

57.3 The minimum finished weight of bib cock and stop shall be as given below--

Dia.	Bib Cock	Stop Cock	Dia.	Bib Cock	Stop Cock
8 mm.	0.25 Kg.	0.25 Kg.	15 mm.	0.40 Kg.	0.40 Kg.
10 mm.	0.30 Kg.	0.35 Kg.	20 mm.	0.75 Kg.	0.75 Kg.

#### M-58 GUN METAL WHEEL VALVE :

58-1 The gun metal wheel valve shall be of approved quality. These shall be of gun metal fitted with wheel and shall be of gate valve opening full way and of the size as specified. These shall conform to I.S. 778-1990.

**M-59 WHITE GLAZED PORCELAIN WASH BASIN :**

- 59.1 Wash basin shall be of white porcelain first quality best Indian make and it shall conform to I.S. 2556-(Part-IV)-1994 and I.S. 771-1990. The size of the wash basin shall be as specified in the item. The wash basin shall be of one piece construction with continued over-flow arrangements. All internal angles shall be designed so as to facilitate cleaning. Wash basin shall have single tap hole or two holes as specified. Each basin shall have a circular waste hole which is either rebated or bevelled internally with 65 mm. dia. at top and 10 mm. depth to suit the waste fitting. The necessary stud slot to receive the bracket on the under side of the basin shall be provided. Basin shall have an internal soap holder recess which shall fully drain into the bowl.
- 59.2 White glazed pedestal of the quality and colour as that of the basin shall be provided where specified in the item. It shall be completely recessed at the back for reception of supply and water pipe. It shall be capable of supporting the basin rigidly and adequately and shall be so designed as to make the height from the floor to top of the rim of basin 750 mm. to 800 mm. as directed.

**M-60 EUROPEAN TYPE WATER CLOSET/WITH LOW LEVEL FLUSHING :**

- 60.1 The European type water closet shall be white glazed conforming to I.S. 2556-1994 and I.S. 771-1692.
- 60.2 'S' trap shall be provided as required with water seal not less than 50 mm. The solid plastic seat and cover shall be of the best Indian make conforming to I.S. 2548-1996. They shall be made of moulded synthetic materials which shall be tough and hard with high resistance to solvents and shall be free from blisters and other surface defects and shall have chromium plated brass hinges and rubber butter of suitable size.

**M-61 ORISSA TYPE WATER CLOSET :**

- 61.1 The specification of Orissa type white glazed water closet of first quality shall conform to I.S. 2556 (Part-III) 1994 and relevant specification of Indian type water closet except that pan will be with the integral squarring pan of size 580 mm x 440 mm. with raised footrest.

**M-62 INDIAN TYPE WATER CLOSET :**

The Indian type white glazed water closet of first class quality, size as specified in the item and conforming to I.S. 771-1979 and I.S. 2556-(Part-II)-1994. Each pan shall have integral flushing ring of suitable type with adequate number of holes all around as directed to have satisfactory flushing. It shall also have an inlet at back of front for connecting flush pipe as directed. The inside of the bottom of the pan shall have sufficient slope from the front towards the outlet and the surface shall be uniform and smooth. Pan shall be provided with 100 mm. diameter 'P' or 'S' trap with approximately 50 mm. water seal and 50 mm. diameter vent horn.

**FOOT RESTS :**

A pair of white glazed earthen ware rectangular foot rests of minimum size 250 mm. x 130 mm. x 20 mm. shall be provided with the water closet.

**M-63 GLAZED EARTHEN WARE SINK :**

The glazed earthenware sink shall be of specified size, colour and quality. The sink shall conform to I.S. 771- Part-II-1992. The brackets for sinks shall conform to I.S. 775-1990.

The pipes shall conform to I.S. 1239-Part-I-1990 and I.S. 404-1993 for steel and lead pipes respectively. 32 mm. brass waste coupling of standard pattern with brass chain and rubber plug shall be provided with sink.

**M-64 GLAZED EARTHEN WARE LIPPED TYPE FLAT BACK URINAL/CORNER TYPE URINAL:**

The lipped type urinal shall be flat back or corner type as specified in the item and shall conform to I.S. 771-1992. It shall be of best Indian make and size as specified and approved by the Engineer-in-charge. The flat back or corner type urinal must be of first class quality, free from any defects, cracks etc.

**M-65 LOW LEVEL ENAMEL FLUSHING TANK:**

- 65.1 The low level enamel flushing tank shall be of 15 litres capacity. It shall conform to I.S. 774-1990. The flushing cistern shall be of best quality and free from any defects. The flushing tank shall have outlet 32 mm diameter. The outlet shall be connected with W.C. Pan by lead pipe of P.V.C. pipe as specified. The flushing tank shall be provided with inlet and outlet for fixing G.I. inlet pipes and over flow pipes. The flushing cistern shall be provided with chromium plated handle for flushing. The flushing tank shall be provided with bracket of cast iron so that it can be fixed on wall at specified height. The brackets shall conform to I.S. 775-1990.

**M-66 CAST IRON FLUSHING CISTERN :**

- 66.1 The cast iron flushing cistern shall be of 15 litres capacity. It shall conform to I.S. 774-1990. The flushing cistern shall be of best quality free from any defects.

- 66.2 The flushing cistern shall have outlet of 32 mm diameter. The outlet shall be connected to lead pipe of 32 mm diameter. The lead pipe shall conform to I.S. 404 (Part-I) 1993. For fixing G.I. inlet pipes and overflow pipe 20 mm dia. inlet and outlet shall be provided. The flushing cistern shall be provided with galvanised iron chain and pull of sufficient length and shall be got approved from the Engineer-in-charge. The cast iron flushing cistern shall be painted with one coat of anticorrosive paint and two coats of paints. The flushing cistern shall be fixed on to C.I. brackets. The brackets shall conform to I.S. 775-1990.

#### M-67 FLUSH COCK :

Half turn flush cock (heavy weight) shall be of gun metal chromium plated of diameter as specified in the description of the item. The flush cock shall conform to relevant Indian Standards.

#### M-68 CAST IRON PIPES AND FITTINGS :

- 68.1 All soil, waste, vent and antisiphonage pipes and fittings shall conform to I.S. 1729-1991. The pipes shall have spigot and socket ends with head on spigot end. The pipes and fittings shall be true to shape, smooth, cylindrical their inner and outer surfaces being as nearly as practicable concentric. They shall be sound and nicely cast and shall be free from cracks, laps, pin holes or other imperfections and shall be neatly dressed and carefully fettled.
- 68.2 The end of pipes and fittings shall be reasonably square to their axis.
- 68.3 The sand cast iron pipes shall be of the diameter as specified in the description and shall be in length of 1.5 M., 1.8 M. & 2.0 M. including socket ends of the pipe unless shorter length are either specified or required at junction etc. The pipes and fittings shall be supplied without ears unless specified or directed otherwise.
- 68.4 Tolerances : The standard weights and thickness of pipes shall be as shown in the table below. A tolerance upto minus 10% may however be allowed against these standard weights.

Sr. No.	Nominal dia of bore	Overall Thick	Wight of pipe excluding ears		
			1.5 m long	1.m long	2 m long
1.	75 mm	5.00 mm	12.83 Kg.	16.52 Kg.	18.36 Kg.
2.	100 mm	5.0 mm	18.14 Kg.	21.67 Kg.	24.15 Kg.
3.	150 mm				
4.	250 mm				

A tolerance upto minus 15% in thickness and 20 mm. in length will be allowed. For fittings tolerance in lengths shall be plus 25 mm. and minus 10 mm.

The thickness of fittings and their socket and spigot dimensions shall conform to the thickness and dimensions specified for the corresponding sizes of straight pipes. The tolerance in weights and thickness shall be the same as for straight pipes.

#### M-68-A P.V.C. Pipes & Fittings:-

- All soil, waste and vent pipes & fittings shall conform to I.S. 4985-1988 & I.S. 13592:1992. The pipes are provided with an integral rubber ring type socket at one end while the other end is kept plain, smooth & free from burrs. The pipes and fittings shall be true to shape, smooth & cylindrical. They shall be free from cracks, laps, pinholes or other imperfection and shall be nearly dressed and carefully fettled.
- The P.V.C. Pipes shall be of the diameter as specified in the description and shall be in length of 6.0, 3.0 & 1.8 m including socket ends of the pipe unless shorter length are either specified or required at junction etc. Tolerances on specified length shall be + 10 mm and - 0 mm.
- Rubber real rings for joints and Access Doors shall be manufactured in accordance with IS: 5382-1998. There are made out of natural rubber with a shore 'A' hardness of 40+5.
- The mean outside diameter, outside diameter at any point and wall thickness manufactured plain or with socket shall be as shown in the following table:-

\* All dimensions in millimeters.

Sr. No.	Nomian/Outside dia	Mean outside Diamter		Outside diameter at		Wall whtick	
		Min.	Max.	Min.	Max.	Min.	Max
1.	75	70.0	75.3	74.1	75.9	3.2	3.8
2.	100.	110.00	100.4	108.6	111.4	3.2	3.8

- 4.2 Minimum Wall thickness of sockets on pipes & Dimensions of sliding socket of pipes shall be as shown in following table.

\* All dimensions in millimeters.

Sr. No.	Nominal outside diameter	Minimum wall thick of sockets on pipes.		Socet Depth min.	Mean inaide diamete of societ at mil point	
		S2, Min	S3, Min		Min	Max
1.	75	2.9	2.4	40.00	75.1	75.3



2.	110	2.9	2.4	48.0	110.1	110.4
<p>* The outside diameter of pipe shall be obtained by the method given in IS: 12235(Part-1)-1998, wall thickness shall be measured by the method given in IS:12235(Part-2)1998.</p>						
4.3	<p>The permissible variation between the mean outside diameter &amp; the nominal outside diameter of a pipe shall be positive in the form + x, where x is less than or equal to greater of the following two values.</p> <p>a) 0.03 mm, and b) 0.003 x nominal outside diameter- rounded off to the next higher 0.1 mm.</p>					
4.4	<p>The permissible variation between the outside diameter at any point (d1) &amp; the nominal outside diameter (de) of a pipe shall not exceed the greater of the following two values.</p> <p>a) 0.5mm, and b) 0.012 de rounded off to the next higher 0.1</p>					
4.5	<p>The thickness of fittings and their socket &amp; spigot dimensions shall conform to the thickness and dimensions specified for the corresponding sizes of straight pipes.</p>					
<b>M-69</b>	<p><b>NAHNI TRAP :</b> Nahni trap shall be of cast iron and shall be sound and free from porosity or other defects which affect serviceability. The thickness of the base metal shall not be less than 6.5 mm. The surface shall be smooth and free from crack, chips and other flaws or any other kind of defects which affect serviceability. The size of nahni trap shall be as specified and shall be of self cleansing design. The nahni trap shall be of quality approved by the Engineer- in-charge and shall generally conform to the relevant Indian Standards. The nahni trap provided shall be with deep seal, minimum 50 mm. except at places where trap with deep seal can not be accommodated. The cover shall be cast iron. Perforated cover shall be provided on the trap of appropriate size.</p>					
<b>M-70</b>	<p><b>GULLY TRAP :</b> Gully trap shall conform to I.S. 651-1992. It shall be sound, free from defects such as fire cracks or hair cracks. The glaze of the traps shall be free from crazing. They shall give a sharp clear note when struck with light hammer. There shall be no broken blisters. The size of the gully trap shall be as specified in the item. Each gully trap shall have one C.I. grating of square size corresponding to the dimensions, of inlet of gully trap. It will also have a water tight C.I. cover with frame inside dimensions 300mm. x 300mm. the cover weighing not less than 4.53 Kg. and the frame not less than 2.72 Kg. The grating cover and frame shall be of sound and good casting and shall have truly square machined seating faces.</p>					
<b>M-71</b>	<p><b>GLAZED STONE WARE PIPE AND FITTINGS :</b> The pipes and fittings shall be of best quality as approved by the Engineer-in-charge. The pipe shall be of best quality manufactured from stone-ware of fire clay, salt glazed thoroughly burnt throughout the whole thickness, of a close even texture, free from air blows, fire blisters, cracks and other imperfections, which affect the serviceability. The inner and outer surfaces shall be smooth and perfectly glazed. The pipe shall be capable to withstand pressure of 1.5 m. head without showing signs of leakage. The thickness of the wall shall not be less than (1/12)th of the internal dia. The depth of socket shall not be less than 38 mm. The socket shall be sufficiently large to allow a joint of 6 mm. around the pipe. The pipes shall generally conform to relevant I.S. 651-1992.</p>					
<b>M-72</b>	<p><b>WALL PEG SAIL :</b> 72.1 The aluminium wall peg rail shall have three aluminium pegs of approved quality and size. It shall be fixed on teakwood plank of size 450 mm x 75 mm x 20 mm. The teak wood shall be french polished or oil painted as specified.</p>					
<b>M-73</b>	<p><b>G.I. WATER SPOUT :</b> 73.1 The G.I. pipes of 40 mm dia shall be of medium quality and specials shall be of 'R' brand or equivalent brand of best quality. 73.2 The pipe shall have length as required for the thickness of wall in which it is fixed, and at the outside end tee and bend cut at half the length shall be provided and at either end coupling shall be provided and the have better fixing. The water spout shall be provided as per detailed drawings or as directed.</p>					

**M-74 ASBESTOS CEMENT PIPE (A.C. PIPE) :**

- 74.1 The asbestos cement pipe of diameter as specified in the description of the item shall conform to I.S. 1926-1980. Special like bends, shoes cowl, etc. shall conform to relevant Indian Standards. The interior of pipe shall have a smooth finish, regular surface and regular internal diameter. The tolerance in all dimensions shall be as per I.S. 1926-Part-I-1980.

**M-75 CRYDON BALL VALVE :**

Ball valve of screwed type including polythene float and necessary lever etc. shall be of the size as mentioned in the description of item and shall conform to I.S. 1703-1989.

**M-76 BITUMEN FELT FOR WATER PROOFING AND DAMP PROOFING :**

- 76.1 Bitumen felt shall be on the fibre bases and shall be of type 2, self finished felt grade-2 and shall conform to I.S. 1322-1998.

**M-77 SELECTED EARTH:**

- 77.1 The selected earth shall be that obtained from excavated material or shall have to be brought from outside as indicated in the item. If item does not indicate anything, the selected earth shall have to be brought from outside.
- 77.2 The selected earth shall be good yellow soil and shall be got approved from the Engineer-in-charge. In no case black cotton soil or similar expansive and shrinkable soil shall be used. It shall be clean and free from all rubbish and perishable materials, stones or brick bats. The clods shall be broken to a size of 50 mm. or less. Contractor shall make his own arrangements at his own costs for land for borrowing selected earth. The stacking of materials shall be done as directed by the Engineer-in-charge in such a way as not to interfere with any constructional activities and in proper stacks.
- 77.3 When excavated material is to be used, only selected stuff got approved from the Engineer-in-charge shall be used. It shall be stacked separately and shall comply with all the requirements of selected earth mentioned above.

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SURAT.

SIGNATURE OF THE CONTRACTOR.

### SCHEDULE FOR TESTING OF MATERIALS

Sr.No.	Brief description of materials to be tested	Prescription of test which shall be carried out	Frequency @ which test shall be carried out (As per GERI Q.C. Vol-12002)
1.	Sand	(1) Gradation (2) Fineness Modulus (3) Specific Gravity (4) Water Absorption (5) Silt Content	1/150 Cmt for concrete or as per requirement of relevant specification.
2.	Coarse Aggregate	(1) Gradation (2) Impact Value (3) Flakiness Index (4) Water Absorption (5) Stripping Value	1/150 Cmt for concrete or as per requirement of relevant specification.
3.	C.C.Cube	(1) Compressive Strength	1-5 Cmt. 1-Test 6-15 Cmt. 2-Test 16-30 Cmt. 3-Test 31-50 Cmt. 4-Test 51 & above 4 + 1 for each addl. 50 Cmt or part of thereof.
4.	Flush Door	(1) End Immersion Test (2) Glue Adhesion Test	Randomly as per IS:7638: 1975
5.	Tiles	(1) Wet Transverse Strength (2) Water Absorption	Randomly as per Strength IS:4905:1968
6.	Flyash Brick	(1) Compressive Strength (2) Water Absorption	As per IS:5454:1978
7.	AAC Block	(1) Compressive Strength (2) Dry Density (3) Drying Shrinkage (4) Thermal conductivity	As per IS 2185 Part-3 As per IS 6441
8.	Cement	(1) Consistency test (2) Initial Setting time (3) Final setting time (4) Compressive Strength (5) Fineness by Dry Sieving (6) Fineness by Specific Surface (7) Soundness by Le-Chatelier (8) Specific Gravity	Every 50 Tons or part thereof
9.	Steel	(1) Weight per meter (2) Yield Stress / 0.2 % Proof stress (3) % Elongation (4) Tensile Strength	<p><b>(a) For Consignment below 100 tons</b>            (i) Under 10 mm dia One sample for each 25 tons or part thereof            (ii) 10 mm to 16 mm dia One Sample for each 35 tones or part thereof            (iii) Over 16 mm dia One Sample for each 45 tons or part thereof.</p> <p><b>(b) For Consignment over 100 tons</b>            (i) Under 10 mm dia One sample for each 40 tons or part thereof            (ii) 10 mm to 16 mm dia One Sample</p>

			for each 45 tones or part thereof
10.	Chemical Mortar for AAC Blocks	As per Relievent Latest IS-code	

**Note:-**

- (1) For Sand and Coarse aggregate two Nos. of full bag for one sample shall be supplied by agency.
- (2) For water test 5:00 liters of water shall be supplied by agency in plastic container for each sources.
- (3) Sample from the lot shall be selected by authorized representative along with representative of SMC or TPI or PMC.
- (4) Selected sample shall be handed over personally by representative of S.M.C. or TPI or PMC in sealed condition with letter containing sample No. and sampling date.
- (5) Test report should be received by the department containing reference of department's letter, sample No. sampling date and date of testing.

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SURAT.**

**Signature of the Contractor:-**

GENERAL TECHNICAL SPECIFICATION FOR BUILDING WORKSGENERAL :

1. In the specification "as directed"/"Approved" shall be taken to mean "as directed"/approved by the Engineer-in-charge.
2. 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.
3. In "Mode of Measurement" in the specification wherever a dispute arises in the absence of specific mention of a particular point or aspect, the provisions on these particular point or aspects in the relevant Indian Standards shall be referred to.
4. All measurements and computations, unless otherwise specified, shall be carried out nearest to the following limits :  
 ( i ) Length, width and depth (height) ..... 0.01 Mt.  
 ( 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.
5. The distance which constitutes lead shall be determined along the shortest partial route and not necessarily the route actually taken. The decision of the Engineer-in-charge in this regard shall be taken as final.
6. Where no lead is specified, it shall mean "all leads".
7. Lift shall be measured from plinth level.
8. Definite particulars covered in the items of work, though not mentioned or elucidated in its specifications shall be deemed to be included therein.
9. Reference to specifications of materials as made in the detailed specification the items of works is in the form of a designation containing the number of the specification of the material and prefix 'M' e.g. 'M-s'.
10. Approval of 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.
11. The contract rate of the item of work shall be for the work completed in all respects .
12. No collection of materials shall be made before it is got approved from the Engineer-in-charge.
13. 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 damage, deterioration or intrusion of foreign matter and to ensure the preservation of their quality and fitness for the work.
14. Materials, if and when rejected by the Engineer-in-charge, shall be immediately removed from the site of work.
15. No materials shall be stored prior to, during and after execution of a structure in such a way as to cause or lead to damage on overloading of the various components of the structure.
16. All work shall be carried out in a workmanlike manner as per the best techniques for the particular item.
17. 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 be kept in sufficient numbers and in good working condition on the site of the work.
18. The mode procedure and manner of, execution shall be such that it does not cause damage or overloading of the various components of the structure during execution of after completion of the structure.
19. Special modes of construction not adopted in general Engineering practice, if proposed to be adopted by the Contractor, shall be considered only if the contractor provides satisfactory evidence that such special mode of construction is safe, sound and helps in speedy construction and completion of work to the required strength and quality. Acceptance of the same by the Engineer-in-charge shall not, however, absolve the contractor of the responsibility of any adverse effects and consequences of adopting the same in the course of execution of completion of the work.
20. All installations pertaining to water supply and fixtures thereof as well as drainage lines and sanitary fittings shall be deemed to be completed only after giving satisfactory tests by the Contractor.

21. The contractor shall be responsible for observing the rules and regulations imposed under the "Minor Minerals Act", and such other laws and rules prescribed by Government from time to time.
22. All necessary safety measures and precautions (including those laid down in the various relevant Indian Standards) shall be taken to ensure the safety of men, materials and machinery on the works as also of the work itself.
23. The testing charges of all materials shall be borne by the Contractor.
24. Approval to any or the executed items for the work does not in any way relieve the contractor of his responsibility for the correctness, soundness and strength of the structure as per the drawings and specifications.

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SURAT.

SIGNATURE OF THE CONTRACTOR.

## **ITEMWISE DETAILED TECHNICAL SPECIFICATIONS**

**Note: Item number of Technical specification and Item Number shown in Price Bid may vary. Bidder is instructed to refer relevant Item only.**

### **Item No. 1 :-**

White Washing with lime on wall surface to give an even shade & surface incl. thoroughly brooming the surface to remove dirt, dust mortar drops & losse scales of lime wash & other foreign matter. Two coats.

(A) walls

(B) Ceiling

---do--- Extra Subsequent coat over above Item

(A) walls

(B) Ceiling

#### 1.1.0 MATERIALS

1.1.1 The clear colour shall be made from glue and boiling water. The mixture shall be suitably tinted where required for use under coloured distemper if directed. Glue shall conform to I.S. 852-1969 (Specifications for animal glue).

1.1.2 Lime used shall be freshly brunt class 'C' lime (fat lime) and white in colour conforming to I.S. 712-1973. Water shall conform to M-1. Best quality of gum shall be used in the preparation of white wash. Ultramarine blue or indigo shall conform to I.S. 55-1970 for points, and shall be used for preparation of white wash. Pigments, mineral colours, not affected by lime shall be used in preparing colour wash.

#### 1.2.0 WORKMANSHIP

1.2.1 Preparation of white wash solution - The fat lime shall be slaked at site and shall be mixed and stirred with about five litres of water for 1 Kg. of unslaked lime to make a thin cream. This shall be allowed to stand for a period of 24 hours and then shall be screened through a clean coarse cloth. 4 Kg. of gum dissolved in hot water shall be added to each cubic metre of lime cream. Small quantity of ultramarine blue (upto 3 gms. per Kg. of lime) shall also be used, the solution shall be stirred thoroughly before use.

1.2.2 Preparation of Surface - The surface shall be thoroughly cleaned of all dust, dirt, mortar droppings and other foreign matter before white wash is to be applied.

The surface spoiled by smoke soot shall be scraped with steel wire brushes or steel scrapers or shall be rubbed with over burnt surkhi or brickbats. The surface shall be then broomed to remove all dust, dirt and shall be washed with clean water.

Oil or grease spots shall be removed by suitable chemical and smooth surface shall be rubbed with wire brushes.

All unsound portion of the surface plaster shall be removed to full depth of plaster in rectangular patches and plastered again after raking the masonry joints properly. Such portion shall be wetted and allowed to dry. They shall then be given one coat of white wash.

All unnecessary nails shall be removed, the holes, cracks, patches etc. shall be made good with materials similar in composition to the surface to be prepared.

1.2.3 Scaffolding - Where scaffolding is necessary it shall be erected in such a way that as far as possible no part of scaffolding shall rest against the surface to be white or colour washed. A properly secured strong and well tied suspended platform (zoola) may be used for white washing. Where ladders are used, pieces of old gunny bags shall be tied at top and bottom to prevent scratches to the floors and walls. For white washing of ceilings, proper stage scaffolding shall be erected where necessary.

- 1.2.4 Application of White/Colour Wash - On the surface so prepared the white wash shall be applied with 'Moon' brush. The first stroke of the brush shall be from top downwards, another from bottom upwards over the first stroke and similarly one stroke from the right another from the left, over the first stroke brush before it dries. This will form one coat. Each coat shall be allowed to dry before the next coat is applied. The number of coats as specified in item shall be applied.

It shall present a smooth and uniform finish free from brush marks and it should not come off easily when rubbed with fingers.

Splashing and dropping if any on the doors and windows, ventilators etc. shall be removed and the surface cleaned.

Priming and alkali resistant treatments, scrapping of surface, washing etc. surface spoiled by smoke & soot, removing of oil and grease spots treatment for infection with efflorescence moulds, moss, fungi, algae and lichen and patch repairs to plaster wherever done shall not be paid extra.

### 1.3.0 MODE OF MEASUREMENTS & PAYMENTS

1.3.1 All the works shall be measured in the decimal system as under ---

- a] Dimensions shall be measured to the nearest 0.01 M.
- b] Area in individual items shall be worked out to the nearest 0.01 Sq.M.  
All the works shall be measured in Sq.Mts. Deductions for jambs, soffits, sills etc. for openings not exceeding 0.5 Sq.Mts. each in area, for ends of joints, posts, beams, girders, steps etc. not exceeding 0.5 Sq.Mts. each in area and for openings exceeding 0.5 Sq.Mts. but not 3.0 Sq.Mts. each in area deductions and additions shall be made as under.
- 1.3.2 No deductions shall be made for ends of joints, beams, posts etc. and openings not exceeding 0.5 Sq.Mts. each. No additions shall be made for reveals, jambs, soffits, sills etc. of these openings not for finish around ends of joints, beams, posts, etc.
- 1.3.3 Deductions of 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 etc. of these openings --
  - a] When both the faces of walls are provided with finish, deduction shall be made for one face only.
  - b] When each face of wall is provided with a different finish deduction shall be made for that side of frame for door, windows etc. on which width of reveals is less than that of the other side, where width of reveals on both faces of wall are equal, deduction of 50% of area of opening on each face shall be made from total area to finish.
  - c] When only one face of wall is treated and the other face is not treated, full deduction shall be made if the width of reveal on the treated side is less than that on the untreated side, but if the width of the reveal is equal or more than on the untreated side neither deductions nor additions to be made for reveals, jambs, soffits, sills etc.
- 1.3.4 In case of area of openings exceeding 3 Sq.Mts. each, deduction shall be made for openings but jambs, soffits, sills shall be measured.
- 1.3.5 No deductions shall be made for attachment such as casing, conducts, pipe, electric wiring and the like.
- 1.3.6 Cornices and all other features, when they are not picked out in a different finish colour shall be girthed and included in the general area.
- 1.3.7 The rate shall include the cost of all materials, labour scaffolding, protective measures etc. involved in all the operations described above.
- 1.3.8 The rate shall be for a unit of one Sq.Mts.

### **Item No. 2 :-**



Colour washing with lime on wall over & incl. a primary coat of white washing to give an even shade & surface incl. thoroughly brooming the surface to remove all dirt, dust mortar drops & loose scales of lime wash & other foreign matter. Two coats.

(A) walls

(B) Ceiling

---do--- Extra Subsequent coat over above Item

(A) walls

(B) Ceiling

Specification shall be same as detailed in Item No.1 above except that the item shall be executed for colour wash instead of whitewash as directed by Engineer-in-charge.

Rate shall be per Sq.mt. basis for complete item.

### **Item No. 3 :-**

Distempering two coats with oil bound washable distemper of approved brand & manufacture & of required shade on wall surface to give an even shade over and & including a priming coat of alkali resistance primer of approved brand after thoroughly brushing the surface to give an even shade after thoroughly brushing the surface free from mortar droppings and other foreign matter and also including preparing the surface even and smooth.

Item is general shall be carried out as per the general specifications on page 413 and specification No.146 on Page 315 and 316 of P.W.D. H.B. Vol.I 1949 edition. Material shall also confirm to general specification of materials-M-34.

The surface where oil bound distemper is to be filled in crevices, depressions, pot-holes to make surface even and smooth. Lapi shall be allowed to dry and oil bound distemper of approved quality and shades then be applied with brush only. appropriate quality of water shall be added in paste.

Such coat of oil bound distemper shall be applied as directed. Patch work of difference in colour shades will not be tolerated, in such case extra one coat shall have to be applied for which to extra payment shall be made.

Measurement shall be paid on Sq.mt. basis.

### **Item No. 4 :-**

Apply two coats of putty and two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other matter and sand papered smooth.

Same as per item description, manufacturer details and as directed by Engineer-in-charge.

Rate shall be per square meter basis for complete item.

### **Item No. 5 :-**

Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth. paint specification and as directed by Engineer-in-charge.

The rate shall be for a unit of one Sq.Mts.

### **Item No. 6 :-**

Distempering two coats on previously distempering wall (without primer) with oil bound washable distemper of approved brand & required shade on wall surface to give an even shade after thoroughly brushing the surfaces clean of all grease, dirt loose places of scales & also including preparing the surface even and smooth.

Item is general shall be carried out as per the general specifications on page 413 and specification No.146 on Page 315 and 316 of P.W.D. H.B. Vol.I 1949 edition. Material shall also confirm to general specification of materials-M-34.

The surface where oil bound distemper is to be filled in crevices, depressions, pot-holes to make surface even and smooth. Lapi shall be allowed to dry and oil bound distemper of approved quality and shades then be applied with brush only. appropriate quality of water shall be added in paste.

Such coat of oil bound distemper shall be applied as directed. Patch work of difference in colour shades will not be tolerated, in such case extra one coat shall have to be applied for which to extra payment shall be made.

Measurement shall be paid on Sq.mt. basis.

#### **Item No. 7 :-**

Applying Priming coat over new steel and other metal surface after over and including preparing the surface by thoroughly cleaning oil, grease dirt and other foreign matter and scoured with brushed fine steel wool, scrapers and sand paper with ready mixed priming paint brushing red lead.

#### **Materials :**

The ready mixed primer, brushing red lead shall conform to IS 102:1972.

The thinner (linsed oil) shall conform to IS 75:1973 if for any reason, thinning is necessary in a case of ready mix paint, the brand of thinner recommended by manufacturer shall be used.

The enamel paints shall conform to M-44 B.

#### **Workmanship :**

##### **Preparation of surfaces :**

The surfaces before painting shall be cleaned of all rust, scale, dirt and other foreign matter sticking to it with wire brushes, steel wool, scrapers, sand paper etc. This surface shall then be wiped finally with mineral turpentine which shall also removed greas and perspiration of hand marks. The surface shall then be allowed to dry.

##### **Application of primer :**

After the preparation of the surface, the priming coat shall be applied immediately. The brushing operations are to be adjusted to the spreading capacity advised by the manufacturer of the particular primer. The paint shall be applied evenly and smoothly by means of crossing and laying off. The crossing and laying off consists of covering the area over with paint, brushing alternately in opposite directions, two or three times and then finally brushing lightly in a direction at right angles to the same. In this process no brush marks shall be left after the laying off is finished. The full process of crossing and laying will constitute one coat.

During painting, every time, after the priming coat has been worked out of the brush bristles or after the brush has been unloaded the bristles of the brush shall be opened up striking the brush against portion of the unpainted surface with the end of the bristles held at right angles to the

surface, so that bristles thereafter will collect the correct amount of paint when dipped again in to a paint container. The primery coat shall be allowed to dry completely before painting is started. No hair marks from the brush or clogging at paint puddles in the corner or panels angles of mouldings etc. shall be left on the work.

Specials care shall be taken painting over bolts, nuts, rivets overlaps etc.

The container when not in use shall be kept close and free from air so that paint does not thicken and also shall be kept guarded from dust.

#### General :

The materials required for painting work shall obtained directly from approved manufacturers are approved dealer and brought to the site in maker's drums, bogs etc. with seal unbroken.

All materials not in actual use shall be kept properly protected lid of containers shall be kept closed and surface of paint in open or partially

open containers covered with a thin layer of turpentine to prevent formation of skin. The materials which have become state or flat to improper and long storage shall not be used. The paint shall be stirred throughly in its container before pouring into and shall be continuously stirred in smaller container. No left over paint shall be put back into stock tins. When not in use the containers shall be kept properly closed.

If for reasone, thinning is necessary, the brand of thinner recommended by the manufacturer shall be used.

The surface to be painted shall be throughly cleaned and dusted. All dust, dirt and greas shall be thoroughly removed before painting is started. No painting on exterior or other exposed parts of the work shall be carried out in wet, damp or otherwise unfavourable weather and all the surface shall be thoroughly dried before painting work is started.

#### Application of paint :

Brushing operations are to be adjusted to the spreading capacity advised by the manufacturer of particular paint. The paint shall be applied evenly and smoothly by means of crossing and laying off. The crossing and laying off consists of convering the area over with paint, brushing the surface hard for the first time over and than brushing alternately in opposite directions to 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. The full process of crossing and laying off will constitute one coat.

Each coat shall be allowed to dry completely and lightly rubbed with every fine grade of sand paper and loose particles brushed off before next coat is applied. Each coat shall vary slightly in the shade and shall be get approved from Engineer-in-charge before next coat is started.

Each coat except the last cost shall be lightly rubbed down with sand paper or fine pumicestone and cleaned of dust before the next coat is applied. No hairmarks from the brush or clogging of paint puddles in the corners of panels, angles of moulding etc. shall be left on the work.

Specials care shall be taken while painting over bolts, nuts, rivets, overlaps etc. Approved quality brushes shall be used.

#### Mode of measurement and payment :

The new steel and other metal surface shall be measured under this item.

All the work shall be measured net in the decimal system as executed subject to the following limits unless otherwise statted hereinafter.

(a) Dismensions shall be measured to the nearest 0.01 mtr.

(b) Areas shall be worked cut to the nearest 0.01 sq.metre.

No. deductions shall be made for openings not exceeding 0.5 sq.metre each and no addition shall be made for painting to beadings mouldings, edges, jambs, soffits, sills etc.of such openings.

In case of fabricated structural steel and iron work, priming coat of paint shall be included with fabrication. In case of trusses if measured in sq.m. compound girders, stanchions, lattices, girder and similar work, actual area shall be measured in sq.m. and no extra shall be paid for painting on bolts, heads, nuts, washers, etc. No addition shall be made to the weight calculated for the purpose of measurements of steel and iron works for paint applied on shop or at site.

The different surfaces shall be grouped into one general item. Areas of uneven surface being converted into equivalent paint areas in accordance with the table given as per Annexure-II for payment.

The rate is for complete item as specified i.e. one primer coat and two coats of oil paint.

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

#### ANNEXURE-II

Equivalent plain Area of a uneven surface (Vide specifications for item relevant to paint and polishing)

Sr. No.	Description of work	How measured	Multiplying factor
1.	Pannelled or framed and braced of ledged and battened or ledged and braced joinery cleats etc. shall be deemed to be included in the item.	Measured flat (not girthed) including chowkhat or frame. Edges, chocks,	1.30 For each side)
2.	Flush joinery	Measured flat (not girthed) including chowkhat or frame, Edges, Chocks, cleats, etc. shall be deemed to be included in the item.	1.20 For each side)
4.	Fully glazed haused joinery	Measured flat (not girthed) including chowkhat or frame, cleats, etc. shall be deemed to be included in the item.	0.80 For each side)
4.	Partly panelled and partly glazed of or glazed journey.	Measured flat (not girthed) including chowkhat or frame etc. shall be deemed cleats, Edges, chocks to be included in the item.	1.0 For each side)
5.	Full Ventilationed or or louzured jonery.	Measured flat (not girthed) including chowkhat or cleats etc. shall be deemed to be included in the item.	1.0 For each side)
6.	Weather boarding	Measurement flat (not girthed) supporting frame work shall not be measured separately.	1.2 For each side)
7.	Wood Shingle roofing	Measurement flat (not girthed)	1.0 For each side)
8.	Boarding with cover fillets and match boarding.	Measurement flat (not girthed)	1.05 For each side)
9.	Tile & slate work one way or two way	Measurement flat over all no deduction shall be made	0.08 For each side)

		painting for open spaces. supporting over) members shall not be measured separately.	
10.	Trellies ( or Jafri ) work one way or two way for the open spaces	Measured flat over all no deduction shall be made supporting members shall not be measured separately.	1.00 for painting cover
11.	Guard bars balustrades, rades, gates gratings, grills, expanded metal and railings	Measured flat over all No deduction shall be made for open spaces, supporting members shall not be measured separately.	1.00 for painting cover
12.	Gates and open palisade fencing including standards.	Measurement flat over all No deductions shall made for open spaces. supporting members shall not be measured separately	1.00 for painting cover
13.	Curved or enriched work	Measured flat over all no no deductions shall be made for open spaces supporting members shall not be measured separately	2.0 (For each side)
14	Steel roller shutters.	Measured flat (size of opening) over all, jamb guides, bottom rails and locking arrangement etc. shall be included in the item (top cover shall be measured seperately).	1.10(for each side)
15.	Plaing sheet steel door and windows)	Measured flat (not girthed) including frame	1.10(for each side)
16.	Fully glazed or gauzed steel door & windows.	Measured flat (not girthed)including frame edges etc.	0.60(for each side)
17.	Partly panelled and partly glazed or gauzed steel doors	Measured flat (not girthed) including frame edges etc.	0.80(for each side)
18.	Collapsible gate	Measured flat (size of opening No separate measurements shall be taken for the top and bottom guide rails, rolls, fittings etc.	1.0 for painting all over

Note : The height shall be taken from the bottom of the lowest rail if the palisades do not go below it (or from the lowerened of palisades, if they protect below the lowest rail) upto the top of palisades but not upto the top of standards if they are higher than the palisades.

#### **Item No. 8 :-**

Painting two coat (excluding priming coat) on new steel and other metal surface with synthetic enamel paint, burshing to give an even shade including cleaning the surface of all dirt, dust and other foreign matters.

Details specification same as per Item No.16 and paint specification and as directed by Engineer-in-charge.

The rate shall be for a unit of one Sq.Mts.

**Item No. 9 :-**

Painting one coat (excluding priming coat) on Previously Painted steel and other metal surface with synthetic enamel paint, burshing to give an even shade including cleaning the surface of all dirt, dust and other foreign matters.

For every subsequent coat Extra over item no.above

Details specification same as per Item No.16 and paint specification and as directed by Engineer-in-charge.

The rate shall be for a unit of one Sq.Mts.

**Item No. 10 :-**

Applying Priming coat over new wood & wood surface after & incl. preparing the surface by throughly cleaning oil grease dirt & other foreign matter sand papering & knetting Really mixed paint brushing priming for enamel. paint specification and as directed by Engineer-in-charge.

The rate shall be for a unit of one Sq.Mts.

**Item No. 11 :-**

Painting two coats (excluding priming coat) on New wood & wood based surface with enamel paint to give an even shade & surface incl. cleaning of all dirt, dust & other foreign matter.

The brand of the synthetic enamel paint shall be specified as ready made paint of the required colour shall be used. If extent. The surface shall be made perfectly dry and smooth by rubbing with sand paper of different grades, first with coarse one and then with fine sand paper.

All surface should be painted with two coats of first quality synthetic enamel of approved brand to applied so as give smooth glossy finished surface. The shade of synthetic enamel shall have to be got approved from the Engineer-in-charge or his representative. The paint shall be applied with brushes evenly and smoothly by crossing and laying off in the direction of grain of wood work and no brush marks should be seen. Each coat should be perfectly dry before next is applied. The paint should be stirred in the container immediated before use of if found necessary should be screened through coarse cloth so as to screen out the crustation.

The whole work shall have be carried out as per the instruction of the Engineer-in-charge.

Mode of Measurement and payment:

Rate shall be per Sq.mt. basis for complete item.

**Item No. 12 :-**

Painting two coats (excluding priming coat) on previously painted wood & wood based surface with enamel paint to give an even shade & surface incl. cleaning of all dirt, dust & other foreign matter.

The rate shall be for a unit of one Sq.Mts.

**Item No. 13 :-**

Polishing with french polished on New wood & wood based surface to give an even surface incl. cleaning the surface of all dirt, dust & sand papered smooth incl. a cost of wood filler. The rate shall be for a unit of one Sq.Mts.

**Item No. 14 :-**

Polishing with french polished on previously polishing wood & wood based surface to give an even surface incl. cleaning the surface of all dirt, dust & sand papered smooth incl. a cost of wood filler. paint specification and as directed by Engineer-in-charge. The rate shall be for a unit of one Sq.Mts.

**Item No. 15 :-**

Painting two coats of enamel paint over priming coat (including priming coat) on wall after removing entire surface dirt, dust foreign matter & also incl. preparing the surface even & sand papered smooth etc. comp.(M.R.)

The brand of the paint shall be as specified and ready made paint of the required colours shall be used. If thinning is required pure potable water may be added to the required extent. The water used for thinning should be pure and free from floating or suspended debris. It should be free from any of impurity. The surface shall be made perfectly dry and smooth by rubbing with sand paper of the different grades. All holes and open joints in wood or walls shall be filled with strong putty or with a mixture of glues and plaster of paris and smoothened by rubbing with fine grade sand paper.

All the surface should be first painted with cement primer of approved over which three/two coats of Acrylic emulsion of approved quality and make be applied so as to give smooth finished surface. The shade of the Acrylic Emulsion shall have to be get approved from the Engineer-in-charge or his representative.

The paint shall be applied with brushes evenly and smoothly. The paint should be stirred in the container immediately before use. The whole work shall have to be carried out to the entire satisfaction of the Engineer-in-charge or his representative.

Patch work or different in colour shades will not be tolerated in such case, extra one coat shall have be applied for which not extra payment shall be made.

Item includes preparation of base, scaffolding using every thing and dismantled with labour, materials, tools, paints required for satisfactorily completion of work.

Rate shall be per square meter basis for complete item.

**Item No. 16 :-**

Painting two coats of enamel paint (Excluding priming coat) over previously painted wall after removing entire surface with even shade & surface after removing dirt, dust foreign matter etc. comp.(M.R.)

The brand of the paint shall be as specified and ready made paint of the required colours shall be used. If thinning is required pure potable water may be added to the required extent. The water used for thinning should be pure and free from floating or suspended debris. It should be free from any of impurity. The surface shall be made perfectly dry and smooth by rubbing with sand paper of the different grades. All holes and open joints in wood or walls shall be filled with strong putty or with a mixture of glues and plaster of paris and smoothened by rubbing with fine grade sand paper.

All the surface should be first painted with cement primer of approved over which three/two coats of Acrylic emulsion of approved quality and make be applied so as to give smooth finished surface. The shade of the Acrylic Emulsion shall have to be get approved from the Engineer-in-charge or his representative.

The paint shall be applied with brushes evenly and smoothly. The paint should be stirred in the container immediately before use. The whole work shall have to be carried out to the entire satisfaction of the Engineer-in-charge or his representative.

Patch work or different in colour shades will not be tolerated in such case, extra one coat shall have to be applied for which no extra payment shall be made.

Item includes preparation of base, scaffolding using every thing and dismantled with labour, materials, tools, paints required for satisfactory completion of work.

Rate shall be per square meter basis for complete item.

#### **Item No. 17 :-**

Providing & applying two coats of weather shield max paint (3 coats may be required in case of darker colours.) of ICI Dulux or Apex Ultima of Asian Paint including applying exterior acrylic primer coat as per manufacturers specification and directions in shade and colour approved by architects, on exterior surfaces of the building including scaffolding, preparing the surface, watering, curing etc. complete and as directed by the architects and manufacturers.

#### **Surface Preparation :**

surface is thoroughly clean, dry and free from all loose dirt, chalk, grease, fungi, algae and flaking paint. This can be achieved by brushing with a wire/ stiff coir brush, followed by water jetting if required. Fill up all minor cracks and defects with white cement and sand mixture in the ratio 1:3. For application on previously painted wall, previous coatings of paint must be thoroughly scraped off and Clean the surface thoroughly using wire brushes.

#### **Priming:**

Apply a liberal coat of exterior acrylic primer and allow it to dry for 4-5 hours. Application of putty is not recommended.

Minimum 4-6 hours duration is required between each coat of weather shield max paint

Rate shall be per square meter basis.

EXECUTIVE ENGINEER  
SOUTH WEST (ATHWA) ZONE  
SURAT MUNICIPAL CORPORATION,  
SUTRAT

SIGNATURE OF THE CONTRACTOR.