



## MUNICIPAL CORPORATION OF GREATER MUMBAI

### **BID DOCUMENT e-TENDER FOR**

**Name of Work :** Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana. For Group --10 (P.L.Lokhande in M/W Ward) Total tenements 1246 of 300sq.ft. and 155 of 600 sq.ft.

**Bid No. :** 7200016405

To be displayed by 11:00 hrs on 02.11.2021 on the Mahatenders/HANA portal website <https://mahatenders.gov.in/> MCGM website

-Sd-

A.E.(AYC)SWM

-Sd-

E.E.(AYC)SWM

-Sd-

Dy.Ch.E.(AYC)

Website : <https://mahatenders.gov.in/> MCGM website

Office of : **Dy. Chief Engineer,**  
(Ashray Yojana Cell)  
3<sup>rd</sup> Floor, Engineering Hub  
Building, Dr. E. Moses Road, Worli  
Naka, Worli, Mumbai-400018.

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**SECTION 1**  
**E-TENDER NOTICE**

# **MUNICIPAL CORPORATION OF GREATER MUMBAI**

**Chief Engineer(SWM)  
Deputy Chief Engineer(AYC)**

No.Dy.Ch.E./ /AYC dated . .202

## **e-TENDER NOTICE**

**Subject: Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana. For Group --10 (P.L.Lokhande in M/W Ward)Total tenements 1246 of 300sq.ft. and 155 of 600 sq.ft.**

The Municipal Corporation of Greater Mumbai (MCGM) invites e-tender to appoint Contractor for the aforementioned work from contractors of repute, multidisciplinary engineering organizations i.e. eminent firm, Proprietary/Partnership Firms/ Private Limited Companies/ Public Limited Companies/Companies registered under the Indian companies' Act 2013, Builder, Developer the contractors registered with the Municipal Corporation of Greater Mumbai, (MCGM) in **Class I (A) and above as per new registration Rule 2016** and from the contractors/ firms equivalent and superior classes registered in Central or State Government/Semi Govt. Organization/Central or State Public Sector Undertakings, will be allowed subject to condition that, the contractors who are not registered with MCGM will have to apply for registering their firm within three months time period from the award of contract, otherwise their Bid Security i.e. E.M.D (Earnest Money Deposit) will be forfeited/recovered and amount equal to Registration Fee of respective class will be recovered as penalty.

Bidding Process will comprise of THREE stages.

The application form can be downloaded from MCGM's portal (<https://portal.mcgm.gov.in>) on payment of **Rs. 9870/- ( Rs.9400 + 2.5% SGST+2.5% CGST )**. The applicants not registered with MCGM are mandated to get registered (Vendor Registration) with MCGM for e-tendering process & obtain login credentials to participate in the online bidding process.

**i)** To download the application form, for those applicants not having vendor registration, need to apply first for vendor registration at the office of Account Officer (FAR), 3rd floor, Municipal Headquarter.

- ii) Followed by SRM login ID and password to be obtained from Central Purchase Department (CPD), Office at Byculla, Bakariadda, Mumbai.
- iii) For e-Tendering registration, enrollment for digital signature certificates and user manual, please refer to respective links provided in 'Tenders' tab. Vendors can get digital signature from any one of the Certifying Authorities (CA's) licensed by controller of certifying authorities namely, Safes crypt, IDRBT, National informatics center, TCS, CUSTOMS, MTNL, GNFC and e-Mudhra CA.

Name and Location of Work		Contract Period	Earnest Money Deposit
Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group -10 (P.L.Lokhande in M/W Ward) Total tenements 1246 of 300 sq.ft. and 155 of 600 sq.ft.		18 ( Eighteen months )	Rs. 2,85,00,000/-
		(Including monsoon)	
<b>Bid No.</b>	<b>7200016405</b>		

In terms of the 3 stage system of e-tendering, a Bidder will be required to deposit, along with its Bid, **an Earnest Money Deposit of Rs. 2,85,00,000/- (Rupees Two Crore Eighty Five Lakhs only) (the "EMD")**, refundable in accordance to the relevant clause of bid document, from the Bid Due Date, except in the case of the selected Bidder whose Bid Security/EMD shall be retained.

The Bidders will have to provide Earnest Money Deposit through the payment gateways while submitting the bids. The Bid shall be summarily rejected if it is not accompanied by the Earnest Money Deposit. The e-tender is available on MCGM portal (<https://portal.mcgm.gov.in/>) Mahatenders website as mentioned in the Header Data of the tender.

As per THREE Packet systems, the document for Packet 'A' & 'B' is to be uploaded by the bidder in vendors' document online in Packet A, B. Packet 'A', 'B' & 'C' shall be opened on dates as mentioned in header data. All the responsive and eligible bidders if they so wish can be present at the time of bids, in the office of Dy. Chief Engineer (Ashray Yojana Cell). The Packet 'C' shall be opened if bids submission in Packet 'A' & 'B' satisfies/includes all the requirements and same are found acceptable to the Authority.

The Municipal Commissioner reserves the right to reject all or any of the e- tender(s) without assigning any reasons at any stage

The dates and time for submission and opening the bids are as shown in the Header Data. If there are any changes in the dates the same will be displayed on the Mahatenders Portal.

<https://mahatenders.gov.in> / HANA

The Applicants interested for the above referred works may contact the Dy. Chief Engineer (Civil) Env/AYC at the following address on any working day during office hours.

Office of: **Dy. Chief Engineer (AYC)**  
3<sup>rd</sup> Floor, Engineering Hub Building,  
Dr. E. Moses Road, Worli Naka,  
Worli, Mumbai- 400 018.

The applicants may wish to visit the site under reference located at Group -10 P.L.Lokhande in M/W ward and can collect the information of the present status from the department who have invited the bids.

The MCGM reserves the rights to accept any of the application or reject any or all the application received for above works, without assigning any reasons thereof. The information regarding above subject matter is available on Website of Mahatender. <https://mahatenders.gov.in> / MCGM website

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**DyChE(AYC) i/c**

## **HEADER DATA**

Tender Document No. / Bid No.	<b>7200016405</b>
Name of Organization	Municipal Corporation of Greater Mumbai
Subject	Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana. for Group -10 (P.L.Lokhande in M/W Ward) Total tenements 1246 of 300 sq.ft. and 155 of 600 sq.ft.
Cost of Tender	<b>Rs. 9870/- ( Rs.9400 + 2.5% SGST+2.5% CGST )</b>
No. of Tenements	<b>1246 of 300 sq.ft. and 155 of 600 sq.ft.</b>
Bid Security Deposit/EMD	Rs. <b>2,85,00,000/-</b>
Bid Validity	180 Days
Date of Issue and sale of Tender (Start Date)	02.11.2021 from 11:00Hrs.
Last date & time for sale of tender	18.11.2021 upto 12:00 Hrs.
Submission of Packet A, B & Packet C (Online) & Receipt of Bid Security Deposit /EMD	18.11.2021 upto 16:00Hrs.
Pre-Bid Meeting – Date, Time & Venue	09.11.2021 from 15.00Hrs Office of: A.M.C.(P), Conference Hall, 2 <sup>nd</sup> Floor, MCGM Head Office Annexe Building, Mahapalika Marg, Mumbai-400001.
Opening of Packet ‘A’ and Packet ‘B’	23.11.2021 after 16:01 Hrs and 16.10 Hrs
Opening of Packet ‘C’	02.12.2021 after 15:00 Hrs
Address for Communication	Office of : <b>Dy.Chief Engineer (AYC)</b> 3 <sup>rd</sup> Floor, Engineering Hub Building, Dr. E. Moses Road, Worli Naka, Worli, Mumbai- 400 018. Email Id: <a href="mailto:ee.swm@mcgm.gov.in">ee.swm@mcgm.gov.in</a> Office Contact No.: 022 24923462
Venue for opening of Bid	Online in Dy Chief Engineer (AYC) Office

**This tender document is not transferable.**

The MCGM reserves the rights to accept any of the application or reject any or all the application received for above subject without assigning any reason thereof.

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**Dy.Chief Engineer (AYC)**

**SECTION 2**  
**ELIGIBILITY**  
**CRITERIA**

## **1. For Original and New Building Construction Works :-**

### **Appointment of Design and Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group-10 using Composite Building / Prefabrication Technology.**

#### **1.1 Technical Capacity (Project Experience):**

The tenderer(s) in their own name should have satisfactorily executed the work of similar nature MCGM /Semi Govt. /Govt. & Public Sector Organizations and private sector during **last seven (7) years** ending last day of month previous to the one in which bids are invited as a prime Contractor (or as a nominated sub-Contractor, where the subcontract had involved similar nature of work as described in the scope of works in this bid document, provided further that all other qualification criteria are satisfied)

- a) Three completed similar works or currently executing three similar works of similar nature not less than 1,97,000 sqft in multistory buildings in each work .**

**OR**

- b) Two completed similar works or currently executing two similar works of similar nature not less than 2,70,000 sqft in multistory buildings in each work .**

**OR**

- c) One completed similar work or currently executing one similar work of similar nature not less than 3,93,000 sqft in multistory buildings in each work .**

-The bidder shall submit the details of Construction Methodology / Technology which will be proposed for the said work.

**Built up area will be considered Floor plate/Foot print of the building.**

The value of executed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

**\*In case of ongoing works to be considered, the bidder must have received payment bills of 80% of the contract sum for the work/works executed last day of month previous to the one in which bids are invited.**

## 1.2 Prefabrication Capacity

1 a) The bidder shall have his own Prefabrication manufacturing facility with annual capacity of 20,000 MT

b) If the bidder doesn't have his own Prefabrication manufacturing facility then MOU with manufacturer of Prefabrication buildings with annual capacity of 20,000 MT and a solvency certificate of Rs.2,00,00,000/- is compulsory, failing which the bidder shall be disqualified.

2. Prefabrication manufacturer with whom MOU is entered into should have executed at least any one of the following categories in last 5 years.

a) One Prefabrication building of minimum 1800 MT.

OR

b) Two Prefabrication buildings of minimum 1500 MT each.

OR

c) Three Prefabrication buildings of minimum 1200 MT each.

Note : Single / JV bidder is allowed to enter into a MOU with a prefabrication manufacturer to participate in tendering process for executing the current project by provided the criteria fulfillment by bidder/ JV

### ***1.1 Similar experience is spelt in definite sense, such as-***

Residential apartments in multistory building

#### ***For Building Construction***

<i>Nos of stories</i>	<i>Experience of construction</i>
<i>Up to 4 stories</i>	<i>No special experience</i>
<i>From 5 to 10 stories</i>	<i>Minimum 5 stories or 15 m building Height</i>
<i>From 11 to 15 stories</i>	<i>Minimum 8 stories or 24 m building Height</i>
<i>From 15 + stories</i>	<i>Minimum 10 stories or 30 m building Height Should have constructed area of minimum 80% of the total BUA of the tendered project area having minimum 10 storey or 30 m height of building or buildings.</i>

## 1.2 Financial Capacity

Achieved an average annual financial turnover as certified by ‘Chartered Accountant’ (in all classes of civil engineering construction works only) equal to 50% of the tender value in last four (4) financial years out of five (5) financial years immediately preceding the Financial Year in which bids are invited i.e from 2016-2017 to 2020-2021.

- To ascertain this, tenderer(s) shall furnish /upload the financial statement (Audited balance sheet) duly certified by Chartered Accountant.
- The turnover can be enhanced by 10% every year to bring the present level.

1.4 **Joint Venture (JV) /SPV** shall be allowed subject to the standard term and condition mention in the GCC clause 83. Bidder may execute work through SPV with due approval of MCGM authorities and compliance of any conditions stipulated by MCGM authority.

## 2. Bid Capacity:

**The bid capacity of the prospective bidders will be calculated as under: Assessed Available Bid Capacity = (A\* N\* 2 - B)**

Where,

A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the **last five years** (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account the completed as well as works in progress. N = Number of years prescribed for completion of the Project/Works, **excluding monsoon** period, for which these bids are being invited. (E.g. 7 months = 7/12 year) For every intervening monsoon 0.33 shall be added to N.

B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on-going works to be completed during the period of completion of the Project/Works for which these bids are being invited.

Note: The statement showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer-in Charge, not below the rank of an Executive Engineer or equivalent.

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

- made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, or financial failures etc.

**The bidder should have bid capacity equal to or more than the tender value estimated based on price and area quoted by bidder.**

**PQC for Electrical and Mechanical Works:**

a) **Electrical Works**

1. Municipal registered electrical contractors in **Class “A”** as per new registration rules 2016.

The contractor shall have valid PWD’s electrical contractors license.

2. Registered electrical contractors of Railways / CIDCO / Central Public Works Dept./ Maharashtra State Public Works Department whose office is in Mumbai having class equivalent to Class “A” of MCGM as per new registration rules ‘2016’ are also eligible to quote for the tender subject to the condition that the contractor who are not registered with MCGM shall apply for registration within three months time period in similar category in MCGM from the award of contract, otherwise their EMD and ASD will be forfeited and the award of contract will be treated as cancelled. The contractor shall have valid PWD's electrical contractors license. **(Supporting documents and certificates shall be uploaded by main contractor)**

b) **Fire Fighting & Fire Alarm System.**

Firms dealing in the line of installations of fire fighting and detection systems enlisted with Directorate of Maharashtra fire services as eligible

(as on the date of invitation on tender) licensing agency for SITC of fire fighting and detection systems.

**(Supporting documents and certificates shall be uploaded by main contractor)**

(a) The agency should have executed SITC of Fire Fighting & Fire Alarm works in the last Seven years as under –

**a) Three completed similar works or currently executing three similar works of similar nature not less than 1,30,000 sqft in multistory buildings in each work.**

**OR**

**b) Two completed similar works or currently executing two similar works of similar nature not less than 1,65,000 sqft in multistory buildings in each work.**

**OR**

**c) One completed similar work or currently executing one similar work of similar nature not less than 2,65,000 sqft in multistory building in each work.**

# **SECTION-3**

# **DISCLAIMER**

## **DISCLAIMER**

The information contained in this e-tender document or provided to Applicant(s), whether verbally or in documentary or any other form, by or on behalf of the Municipal Corporation of Greater Mumbai (MCGM), hereafter also referred as “The Authority “, or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this e-tender and such other terms and conditions subject to which such information is provided.

This e-tender includes statements, which reflect various assumptions and assessments arrived at by the Municipal Corporation of Greater Mumbai (MCGM) in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. This e-tender may not be appropriate for all persons, and it is not possible for the Municipal Corporation of Greater Mumbai (MCGM), its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this e- tender. The assumptions, assessments, statements and information contained in this e- tender may not be complete, accurate, adequate or correct. Each Applicant should therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this e-tender and obtain independent advice from appropriate sources.

Information provided in this e-tender to the Applicant(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Municipal Corporation of Greater Mumbai (MCGM) accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed here.

The Municipal Corporation of Greater Mumbai(MCGM), its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant or Bidder, under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this e-tender or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the e-tender and any assessment, assumption, statement or

information contained therein or deemed to form part of this e-tender or arising in any way with pre-qualification of Applicants for participation in the Bidding Process. The Municipal Corporation of Greater Mumbai (MCGM) also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Applicant upon the statements contained in this e-tender.

The Municipal Corporation of Greater Mumbai (MCGM) may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this e-tender.

The issue of this e-tender does not imply that the Municipal Corporation of Greater Mumbai (MCGM) is bound to select and short-list pre-qualified Applications for Bid Stage or to appoint the selected Bidder or Concessionaire, as the case may be, for the Project and the Municipal Corporation of Greater Mumbai (MCGM) reserves the right to reject all or any of the Applications or Bids without assigning any reasons whatsoever.

The Applicant shall bear all its costs associated with or relating to the preparation and submission of its Application including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by The Municipal Corporation of Greater Mumbai (MCGM) or any other costs incurred in connection with or relating to its Application. All such costs and expenses will remain with the Applicant and the Municipal Corporation of Greater Mumbai (MCGM) shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Application, regardless of the conduct or outcome of the Bidding Process.

**SECTION-4**  
**INTRODUCTION**

## **Background:**

### **INTRODUCTION**

The Municipal Corporation of Greater Mumbai covers an area of 437.71 sq. km. with a population of 1.24 Crore as per census of 2011. The metropolis accounts major portion of India's international trade and government's revenue, from being one of the foremost centers of education, science and technological research and advancement.

The Mumbai Metropolis has historic tradition of strong civic activism dedicated to the cause of a better life for all its citizens. And it's the Municipal Corporation of Greater Mumbai (MCGM), hereafter called the "corporation", the primary agency responsible for urban governance in Greater Mumbai.

MCGM (The Authority) is one of the largest local self-governments in the Asian Continent. In observance of historic traditions of strong civic activism, with the change in time and living conditions to match with the urbanization, MCGM has mainly focused in providing almost all kinds of engineering services viz, Hydraulics, storm water drain, sewerage, water supply projects, roads, bridges, solid waste management, and environmental services. Beside this, the MCGM is also providing dedicated services in various segments such as Health, Primary Education as well as the construction and maintenance of Public Markets and Slaughter Houses.

MCGM is primarily an organization, which in the interest of citizens and with the speed of urbanization deals with the variety of the infrastructure services and delivered to the public by different departments like Water Supply Projects, Sewerage Projects, Hydraulics, Storm Water Drain, Roads and bridges and Building Construction etc.

### **Scope of Work:**

**Name of Work :Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group -10 (P.L.Lokhande in M/W Ward) Total tenements 1246 of 300 sq.ft. and 155 of 600 sq.ft.**

The detailed scope of work are as follows.

There is 1 site in group-10. Scope of group-10 is around of 1246 tenements of 300 sqft and 155 tenements of 600 sqft. The details of the sites are given below:-

<b>PROPOSED TRANSIT AND REDEVELOPMENT PROPOSALS IN GROUP-10 UNDER ASHRAY YOJANA</b>				
<b>Sr. No</b>	<b>Name of Work</b>	<b>Plot Area in SM</b>	<b>Existing Tenants</b>	<b>Tentative Prop Tenements with 4.0FSI / No. of Bldg proposed</b>
<b>Tender Under Preparation / Planning Stage</b>				
1	P.L.Lokhande in M/W Ward	15190.88	404	1556

### Group for Design & Built Turnkey Projects in Group-10.

Sr. No.	Location	Ward	Plot Area in sqm.	Proposed Tenents	
				300 sqft	600 sqft
1	P.L.Lokhande	M/W Ward	15190.88	1246	155
	<b>Total</b>			<b>1246</b>	<b>155</b>

#### Notes :

1. The successful bidder /contractor shall design and built the project in coordination with PMC and MCGM in all respect and handover the possession after obtaining the Occupation certificate of the project in turn key basis to MCGM in stipulated time period. The design and the construction of the project shall be carried out considering the circular u/no No.CHE/GEN-412/DP dtd. 28.01.2013 (Annexure F) and the specification decided by MCGM. The bidder shall have to design the building with full available potential of 4 (four) FSI.

Number of tenements mentioned in tender are tentative which may enhance or decrease as per site conditions and bidders design and planning by following prevailing norms. Payment to the successful bidder will be as per rates quoted by bidder for entire constructed buit up area irrespective of increase or decrease in number of tenements mentioned in tender. The biider will not be entitled to have any claim whatsoever.

2. The successful bidder /contractor shall make inventory of the existing structures on site and demolish the same after the structure is vacated by concerned department of MCGM & further debris removal has to be done by the bidder.

3. All the works contained in the scope of work shall be carried out strictly as per relevant specifications applicable as attached or referred to, in this tender document.

4. The above is general description of the scope of work and actual work mentioned above shall be as directed by the Engineer-in-charge.

5. The plot which are presently occupied, will be vacated by MCGM before issuing the work order, in phase wise manner or at once as the case may be. The site will be handed over to bidder accordingly.

- 6.** Development of on site infrastructure shall be the responsibility of the bidder as per the prevailing norms viz roads, street light, storm water drain, water mains network, sewage network, landscape /RG etc, The cost of the same shall be included in the per sq mt BUA to be quoted by the bidder.
- 7.** The bidder shall consider all expenses along with construction i.e that plumbing, electrical, mechanical etc work required in the project while quoting the per sq mt rate.
- 8.** The successful Bidder /contractor shall liaison and obtain all approvals /NOC/Permits etc required for implementing the project from government /Semi government /Service Provider /MCGM etc. in timely manner. The cost of the same shall be included in the per sq mt BUA to be quoted by the bidder.
- 9.** Amenity / Religious structure /Community hall etc as may be required shall have to be constructed by the bidder.
- 10.** A joint site visit of the prospective bidder shall be organized by MCGM.
- 11.** In the event of 2 or more qualified bidders, quotes for the same rates, the award of the work will be decided by lottery system. Decision of Municipal Commissioner shall be final and binding.
- 12.** Concrete grade minimum M-40 to be used for RCC work in all Ashray Yojana projects.
- 13.** The scope of work may be changed depending upon the requirement of MCGM and as per existing site condition and decision of Municipal Commissioner shall be final and binding.
- 14.** The successful bidder should provide one Air conditioned SUV (Scorpio, Zylo, Innova etc.) vehicle to Municipal Corporation staff for day to day site inspection.
- 15.** The successful bidder should provide necessary barricades for plot as well as building under construction for safety as directed by engineer in charge.
- 16.** Following provision is required in each tenement
  - a) Two wash basins
  - b) M.S. powder coated grill for all windows
  - c) Aluminum sliding window should be of four track with one track for mosquito proof mesh.
  - d) Kitchen should have granite top with S. S. sink
  - e) Provision of western type W.C. pan as directed by engineer in charge.
- 17.** Successful bidder should provide fire fighting system as per remarks of C.F.O. as per DCPR 2034.
- 18.** During DLP period mentioned in the tender the concerned contractor/bidder should provide agency for annual maintenance for plumbing, common electrification, lift maintenance, attending leakages, water pump etc.
- 19.** Sewerage treatment plant should be provided by bidder as per DCPR-2034 provision, if required.

20. A third party auditor will be appointed by the MCGM and work will be strictly audited and the prospective bidder has to carry out /rectify the work as per the direction of third party auditor.
21. The tenderer should submit the detail BOQ as per the minimum class-I / premium items which are given in section-10 in C folder of packet C which is mandatory to the bidder/tenderer.
22. MCGM will form the committee of the members. The committee will validate the methodology, design, details BOQ & offer given by the successful tenderer.
23. The various test to be conducted for the material design, structural design, will be two(2) times the prevailing guidelines of MCGM at the cost of prospective bidder.
24. The prospective bidder should strictly follow all safety measures during executions of works and as directed by the expert committee.
25. Successful bidder should follow/premium/ first class specification for different item as available on MCGM portal.
26. Items to be operated in this tender having minimum Specification is given herewith for preparation of BOQ to be by tenderer.
27. All items to be operated will be of minimum Class I(Premium) specification available as given above or available in USOR-2018. If item is not available in USOR-2018, then same should be taken from Schedule rate prevailing in schedule to be used by State PWD/CPWD/ Railway/MES of Class I(Premium) material and specification.
28. A layout should be designed in such a way that there should be separate entrance and exit to the building/ wing having tenements of 600 sq.ft and 300 sq.ft.
29. The amount of security deposit may be accepted site wise which will be calculated based on successful bidders proposed cost for redevelopment of site. The same shall be submitted within 30 days of handing over of possession of the respective site.
30. Bank guarantee only for a particular plot in a group which is vacated/ handed over is required to be submitted.
31. The charges to be paid to MCGM will be waived off. If charges paid to MCGM, will be reimbursed.
32. If the land possession is excessively delayed i.e more than 1 year, successful bidder can reject the development of specific plot without any damages to successful bidder.
33. The successful bidder should remove the C&D material in closed trucks with GPS at designated site in consultation with Ex.E(SWM) of respective zone.
34. Each successful bidder should provide Ambient Air Monitoring Control System on each construction site with electronic display.

**Methodology/Technology for propose Ashraya Yojana project:**

The construction methodology/ technology should be based on Composite Building/ Prefabrication technology however the prospective bidder shall have to comply with following points:

- a) The proposed construction methodology/ technology i.e. Composite Building/ prefabrication technology should have been tried & tested in the market and should be sustainable and acceptable.

- b) Bidder should submit all the relevant details such as approved plan along with completion certificate & Occupation certificate of said completed project.
- c) Bidder shall have to make detail presentation of methodology/ technology proposed by him giving all the relevant details as may be required to justify the use of the said technology.
- d) In case required the bidder shall have to arrange site visit of the MCGM committee at his cost the decision of MCGM authority in this regard shall be final and binding. The bidder shall have to submit all the approvals certificates from the relevant appropriate authorities with respect to proposed methodology/ technology .
- e) The bidder should have authorization / rights to use the proposed technology.
- f) The bidder shall submit all the construction methodology.
- g) The bidder should submit its bid as per the specification mention in Section 10.
- h) Building constructed using this technology should have life more than or at least equal to regular RCC buildings i.e. 50 years.

## **SECTION 5**

# **E-TENDERING ONLINE SUBMISSION PROCESS**

## **E-TENDERING ONLINE SUBMISSION PROCESS**

The terminology of e-Tendering is solely depending upon policies in existence, guidelines and methodology adopted since decades. The SRM is only change in process of accepting and evaluation of tenders in addition to manual. The SAP module to be used in this E-tendering is known as Supplier Relationship Module (SRM).SRM is designed and introduced by ABM Knowledge ware Ltd. who will assist MCGM in throughout the tendering process for successful implementation.

**NOTE:** This tendering process is covered under Information Technology ACT & Cyber Laws as applicable

- (1) In e-tendering process some of the terms and its definitions are to be read as under wherever it reflects in online tendering process.

Start Date read as “Sale Date”

End Date read as “Submission Date”

Supplier read as “Contractor/bidder” Vendor

read as “Contractor/bidder” Vendor

Quotation read as “Contractors Bid/Offer”

Purchaser read as

“Department/MCGM”

- i. Before entering in to online tendering process, the contractors should complete the registration process so as to get User ID for E-tendering links. For this, the contractors can access through Supplier registration via MCGM Portal.

There are two methods for this registration :( II and III)

- ii. Transfer from R3 (registered contractors with MCGM) to SRM
- a) Contractors already registered with MCGM will approach to Vendor Transfer cell.
  - b) Submit his details such as (name, vendor code, address, registered Email ID, pan card etc.) to Vendor transfer cell.
  - c) MCGM authority for Vendor Transfer, transfers the Vendor to SRM application from R3 system to SRM system.
  - d) Transferred Vendor receives User ID creation link on his supplied mail Id.

- e) Vendor creates his User ID and Password for e-tendering applications by accessing link sent to his mail ID.
- iii. Online Self Registration (Temporary registration for applicant not registered with MCGM)
  - a) Vendor fills up Self Registration form via accessing MCGM portal.
  - b) Vendor Transfer cell (same as mentioned above) accesses Supplier Registration system and accepts the Vendor request.
  - c) Accepted Vendor receives User ID creation email with Link on his supplied mail Id.
  - d) Vendor creates his User ID and Password for e-tendering application.
- iv. CONTRACTORS BIDDING: Applicant will Quote and Upload Tender Documents:
  - 1) Access e-tender link of SRM Portal
  - 2) Log in with User ID and Password
  - 3) Selects desired Bid Invitation (he wants to bid)
  - 4) To download tender documents contractors will have to pay online Tender fee. The same can be done by accessing Pay Tender Fees option. By this one will be able to pay Tender fee through Payment Gateway-If transaction successful, Contractors can register his interest to participate. Without Registration one cannot quote for the Bid/Tender.
  - 5) Applicant will download Tender Documents from Information from purchaser tab by accessing Purchaser document folder through collaboration 'C' folder link.
  - 6) Applicant will upload Packet 'A' related and Packet 'B' related Documents in Packet 'A' and Packet 'B' folder respectively by accessing these folders through "My Notes" Tab and collaboration folder link.
  - 7) All the documents uploaded have to be digitally signed and saved. Contractors can procure there digital signature from any certified CA's in India.
  - 8) Bid security deposit/EMD and ASD, if applicable, should be paid online as mentioned in tender.
  - 9) For commercial details (in Packet 'C') contractors will fill data in Item Data tab in Service Line Item via details and quotes his "Percentage Variation" (i.e.% quoted) figure.(If entered '0' it will be treated as at par. By default the value is zero only.
  - 10) Applicants to check the bid, digitally signs & save and submit his Bid Invitation.
  - 11) Applicants can also save his uploaded documents/commercial information without submitting the BID for future editing through 'HOLD' option.
  - 12) Please note that "Hold" action do not submit the Bid.

- 13) Applicants will receive confirmation once the Bid is submitted.
- 14) Bid creator (MCGM) starts Bid Opening for Packet 'A' after reaching End Date and Time and Bid Evaluation process starts.

As per Three Packet system, the document for Packet 'A' & 'B' are to be uploaded by the tenderer in 'Vendor's document' online in Packet 'A' & 'B'. Before purchasing/downloading the tender copy, tenderer may refer to post- Qualification criteria mentioned in e-Tender Notice.

The tenderer shall pay the EMD/Bid Security through payment gateways before submission of Bid and shall upload the screenshot of receipt of payment in Packet 'A' instead of paying the EMD at any of the CFC centers in MCGM Ward Offices.

The e-tender is available on MCGM portal, <http://portal.mcg.gov.in>, as mentioned in the Header Data of the tender. The tenders duly filled in should be uploaded and submitted online on or before the end date of submission. The Packet 'A', Packet 'B' & Packet 'C' of the tenderer will be opened as per the time-table shown in the Header Data in the office of **DyChE (AYC)**.

The Municipal Commissioner reserves the right to reject all or any of the e- Tender(s) without assigning any reason at any stage. The dates and time for submission and opening the tenders are as shown in the Header Data. If there are any changes in the dates the same will be displayed on the MCGM Portal (<http://portal.mcg.gov.in>).

**SECTION-6**  
**INSTRUCTIONS**  
**TO**  
**APPLICANTS**

## **INSTRUCTIONS TO APPLICANTS**

### **Scope of Application**

The Authority wishes to receive Applications for Qualification in order to select experienced and capable Applicants for the Bid Stage.

### **Eligibility of Applicants**

The Municipal Corporation of Greater Mumbai (MCGM) invites e-tender to appoint Contractor for the aforementioned work from contractors of repute, multidisciplinary engineering organizations i.e. eminent firm, Proprietary/Partnership Firms/ Private Limited Companies/ Public Limited Companies/Companies registered under the Indian companies' Act 2013, Builder, developer the contractors registered with the Municipal Corporation of Greater Mumbai, (MCGM) **in Class I (A) and above as per new registration Rule 2016** and from the contractors/firms equivalent and superior classes registered in Central or State Government/Semi Govt. Organization/Central or State Public Sector Undertakings, will be allowed subject to condition that, the contractors who are not registered with MCGM will have to apply for registering their firm within three months time period from the award of contract, otherwise their Bid Security i.e.E.M.D (Earnest Money Deposit) will be forfeited/ recovered and amount equal to Registration Fee of respective class will be recovered as penalty.

To be eligible for pre-qualification and short-listing, an Applicant shall fulfill the following conditions of eligibility:

### **1 For Original and New Building Construction Works :**

**Appointment of Design and Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group-10 using Composite Building / Prefabrication Technology.**

#### **1.1 Technical Capacity (Project Experience):**

The tenderer(s) in their own name should have satisfactorily executed the work of similar nature MCGM /Semi Govt. /Govt. & Public Sector Organizations & Private Sector during **last seven (7) years** ending last day of month previous to the one in which bids are invited as a prime Contractor (or as a nominated sub-Contractor, where

the subcontract had involved similar nature of work as described in the scope of works in this bid document, provided further that all other qualification criteria are satisfied)

- a) Three completed similar works or currently executing three similar works of similar nature not less than 1,97,000 sqft in multistory buildings in each work .**

**OR**

- b) Two completed similar works or currently executing two similar works of similar nature not less than 2,70,000 sqft in multistory buildings in each work .**

**OR**

- c) One completed similar work or currently executing one similar work of similar nature not less than 3,93,000 sqft in multistory buildings in each work .**

**Built up area will be considered Floor plate/Foot print of the building.**

The value of executed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

**\*In case of ongoing works to be considered, the bidder must have received payment bills of 80% of the contract sum for the work/works executed last day of month previous to the one in which bids are invited.**

## 1.2 Prefabrication Capacity

1 a) The bidder shall have his own Prefabrication manufacturing facility with annual capacity of 20,000 MT

b) If the bidder doesn't have his own Prefabrication manufacturing facility then MOU with manufacturer of Prefabrication buildings with annual capacity of 20,000 MT and a solvency certificate of Rs.2,00,00,000/- is compulsory, failing which the bidder shall be disqualified.

2. Prefabrication manufacturer with whom MOU is entered into should have executed at least any one of the following categories in last 5 years.

a) One Prefabrication building of minimum 1800 MT.

OR

b) Two Prefabrication buildings of minimum 1500 MT each.

OR

c) Three Prefabrication buildings of minimum 1200 MT each.

Note : Single / JV bidder is allowed to enter into a MOU with a prefabrication manufacturer to participate in tendering process for executing the current project by provided the criteria fulfillment by bidder/ JV

**1.2 Similar experience is spelt in definite sense, such as-**

Residential apartments in multistory building

**For Building Construction**

<i>Nos of stories</i>	<i>Experience of construction</i>
<i>Up to 4 stories</i>	<i>No special experience</i>
<i>From 5 to 10 stories</i>	<i>Minimum 5 stories or 15 m building Height</i>
<i>From 11 to 15 stories</i>	<i>Minimum 8 stories or 24 m building Height</i>
<i>From 15 + stories</i>	<i>Minimum 10 stories or 30 m building Height</i> <i>Should have constructed area of minimum 80% of the total BUA of the tendered project area having minimum 10 storey or 30 m height of building or buildings.</i>

**1.3 Financial Capacity**

Achieved an average annual financial turnover as certified by ‘Chartered Accountant’ (in all classes of civil engineering construction works only) equal to 50% of the tender value in last four (4) financial years out of five (5) financial years immediately preceding the Financial Year in which bids are invited i.e from 2016-2017 to 2020-2021.

- To ascertain this, tenderer(s) shall furnish /upload the financial statement (Audited balance sheet) duly certified by Chartered Accountant.
0. The turnover can be enhanced by 10% every year to bring the present level.

**1.4 Joint Venture (JV)/ SPV** shall be allowed subject to the standard term and condition mention in the GCC clause 83. Bidder may execute work through SPV with due approval of MCGM authorities and compliance of any conditions stipulated by MCGM authority.

### **3. Bid Capacity:**

**The bid capacity of the prospective bidders will be calculated as under: Assessed Available Bid Capacity = (A \* N \* 2 - B)**

Where,

A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the **last five years** (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the Project/Works, **excluding monsoon** period, for which these bids are being invited. (E.g. 7 months = 7/12 year) For every intervening b monsoon 0.33 shall be added to N.

B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on-going works to be completed during the period of completion of the Project/Works for which these bids are being invited.

Note: The statement showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer-in Charge, not below the rank of an Executive Engineer or equivalent.

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

- made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, or financial failures etc.

**The bidder should have bid capacity equal to or more than the tender value estimated based on price and area quoted by bidder.**

## **D) Equipment Capabilities as required for this work**

### **i. Regular and Routine works: Not applicable for this tender**

ii. **New and Original Works:** The bidder should, undertake their own studies and **furnish with their bid**, a detailed construction planning and methodology supported with assessment study of requirements of equipment/plants & machineries to allow the employer to review their proposal. The bidder will ensure his commitment to make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge on an undertaking on Rs.500 stamp paper to be submitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of MCGM.

iii. **Special Works: Not Applicable for this bid.**

**Note: Bidders shall submit the undertaking for equipment capability and other undertakings as such on a single Rs. 500/- stamp paper.**

### **PQC for Electrical and Mechanical Works:**

#### **a) Electrical Works**

1. Municipal registered electrical contractors in **Class “A”** as per new registration rules 2016. The contractor shall have valid PWD's electrical contractors license.

2. Registered electrical contractors of Railways / CIDCO / Central Public Works Dept./ Maharashtra State Public Works Department whose office is in Mumbai having class equivalent to Class “A” of MCGM as per new registration rules '2016' are also eligible to quote for the tender subject to the condition that the contractor who are not registered with MCGM shall apply for registration within three months time period in similar category in MCGM from the award of contract, otherwise their EMD and ASD will be forfeited and the award of contract will be treated as cancelled. The contractor shall have valid PWD's electrical contractors license. **(Supporting documents and certificates shall be uploaded by main contractor)**

#### **b) Fire Fighting & Fire Alarm System.**

Firms dealing in the line of installations of fire fighting and detection systems enlisted with Directorate of Maharashtra fire services as eligible (as on the date of invitation on tender) licensing agency for SITC of fire fighting and detection systems.

**(Supporting documents and certificates shall be uploaded by main contractor)**

1) The agency should have executed SITC of Fire Fighting & Fire Alarm works in the last Seven years as under –

a) **Three completed similar works or currently executing three similar works of similar nature not less than 1,30,000 sqft in multistory buildings in each work.**

**OR**

**b) Two completed similar works or currently executing two similar works of similar nature not less than 1,65,000 sqft in multistory buildings in each work.**

**OR**

**c) One completed similar work or currently executing one similar work of similar nature not less than 2,65,000 sqft in multistory building in each work..**

**E) Technical Personnel**

The contractor and/or its managerial staff should have qualification/experience appropriate to the function they fulfill. The minimum standard shall be increased by asking that at least one number or more of the contractor or its managerial staff have acquired qualifications or work experience to the needs of the contract. The minimum standard may also state that the person or persons responsible for managing the works must have a minimum of no's of years' experience working on similar nature of projects.

For fixing requirement of Technical Staff as required for this work.

**(A) General Guidelines for Fixing Requirement of Technical Staff**

Cost of Work (Rs. In Crore)	Requirement of Technical Staff (Major+Minor Component)		Minimum Experience (years)	Designation
	Qualification	Number		
More than 100	i) Graduate Engineer (Major Component)	1	20	Project Manager in Major Discipline of Engineering
	ii) Graduate Engineer	2+1	12	Deputy Project Manager in Major Discipline of Engineering
	iii) Graduate Engineer or Diploma Engineer	2	5	Project/Site Engineer
		4	10	
	iv) Graduate Engineer	1+1	8	Quality Engineer
	v) Diploma Engineer	1	8	Surveyor
vi) Graduate Engineer	1+1	6	Project Planning /Billing Engineer	
More than 50 up to 100	i) Graduate Engineer	1	20	Project Manager
	ii) Graduate Engineer	1+1	12	Deputy Project Manager
	iii) Graduate Engineer or Diploma Engineer	2+1	5or 10	Project/Site Engineer
		1	8	
	iv) Graduate Engineer	1	8	Quality Engineer
	v) Diploma Engineer	1	8	Surveyor
vi) Graduate Engineer	1+1	6	Project Planning /Billing Engineer	
More than 20 up to 50	i) Graduate Engineer	1	20	Project Manager
	ii) Graduate Engineer or Diploma Engineer	1+1	5 or 10	Project/Site Engineer
		1	8	
iii) Graduate Engineer	1	8	Quality Engineer	
	iv) Diploma Engineer	1	8	Surveyor
	v) Graduate Engineer	1+1	6	Project Planning /Billing Engineer

**Notes** I) “Cost of work”, in table above, shall mean the agreement amount of the work.

-

B) Rate of recovery in case of non-compliance of the clause be stipulated at following rates:-

<b>Sr. No.</b>	<b>Qualification</b>	<b>Experience (Years)</b>	<b>Rate of Recovery</b>
1	Project Manager with Degree	20	Rs.60000/- p.m.
2	Deputy Project Manager with Degree	12	Rs.40000/- p.m.
3	Project/Site Engineer (Degree/Diploma)	5 or 10 respectively	Rs.25000/- p.m.
4	Quality Graduate Engineer	8	Rs.25000/- p.m.
5	Surveyor	8	Rs.15000/- p.m.
6	Project Planning /Billing Engineer	6	Rs.20000/- p.m.

b) Nothing extra need to be added while preparing market rate justified amount of the work if stipulation is made as per above recommended scale of technical staff.

c) Requirement of technical staff and their experience can be varied depending upon cost and complexity of the work by competent authority i.e. Chief Engineer with recorded reasons.

d) The failure in providing experienced technical and /professional ability personnel and even ignoring the instruction of the Engineer-in-charge shall be linked to penalization. Such disobeying attitude of the contractor shall also be reported to Vigilance/Registration & Monitoring department.

#### **F) TIME PERIOD OF THE PROJECT:**

Entire project should be completed and delivered **within 18 (Eighteen) Months** of time from the commencement date of contract(**Including Monsoon**) **excluding time delay not attributable to successful bidder. The time period required for obtaining different permission from different Govt. Agencies shall be excluded while calculating 18 months time period.**

**The commencement date for the said work will be considered after giving / providing possession of the land.**

The time allowed for carrying out the work as entered in the Tender shall be strictly observed by the Contractor and shall be reckoned from the date on which the Contract is awarded to the Contractor. The work shall throughout the stipulated period of the Contract be proceeded with all due diligence as time being deemed to be the essence of the contract on the part of the Contractor. On failing to do so, the Contractor shall pay as compensation an amount which shall be governed as per Clause - 8(e) of Standard General Conditions of Contract. The Contractor should complete the work as per phase given below :

¼ of the work in	..	¼ of the time
½ of the work in	..	½ of the time
¾ of the work in	..	¾ of the time
Full of the work in	..	Full of the time

Full work will be completed in **18 (Eighteen) Months Including monsoon.**

[The above programme is indicative and need to be worked out for every project for major activities) with respect to parameters such as labour, machineries, settling time, procurement and transportation of materials etc.]

The programme for completion of work shall be a part of the Contract Document in the form of Bar Chart / Gantt chart. The Contractor is supposed to carry out the work and keep the progress as per Bar Chart/GANTT Chart. The Contractor shall complete the work as per the Schedule given in the Contract and the programme submitted by the Contractor.

In case the contractor fails to achieve the desired progress as per time schedule for any reasons whatsoever and fails to rectify the lapse & show positive progress MCGM shall be entitle to levy deterrent penalty.

### **G) Contract Execution**

All required documents for execution of the contract shall be submitted within 30 days from the date of issue of letter of acceptance. If the documents are not submitted within the stipulated time a **penalty of Rs 5000/- per day** will be applicable to the contractor. All contract documents need to be duly affixed with stamp duty properly signed along with evidence/proof of payment of security/contract deposit/ within 30 days from the date of letter of acceptance received by him.

**H.** If the amount of the Contract Deposit to be paid above is not paid within 30 days from the date of issue of Letter of Acceptance, the Tender / Contractor already accepted shall be considered as cancelled and legal steps be taken against the contractor for recovery of the amounts.

**I.** The amount of Security Deposit retained by the MCGM shall be released after expiry of period up to which the contractor has agreed to maintain the work in good order is over. In the event of the contractor failing or neglecting to complete the rectification work within the period up to which the contractor has agreed to maintain the work in good order, the amount of security deposit retained by MCGM shall be adjusted towards the excess cost incurred by the Department on rectification work.

### **J. Action when whole of security deposit is forfeited:**

In any case in which under any Clause of this contract, the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit whether paid in one sum or deducted by installments or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Engineer on behalf of the Municipal Commissioner shall have

power to adopt any of the following process, as he may deem best suited to the interest of MCGM –

- 1) To rescind the contract (for which recession notice in writing to the contractor under the head of Executive Engineer shall be conclusive evidence) and in that case, the security deposit of the contract shall stand forfeited and be absolutely at the disposal of MCGM.

2) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work- charged establishment employed for getting the non-executed part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.

3) To order that the work of the contractor be measured up and to take such part thereof as shall be non-executed out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the non-executed work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

4) In case the contract shall be rescinded under Clause (a) above, the contractor shall not be entitled to recover or be paid any sum for any work therefor actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in Clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the contractors amount of excess shall be deducted from any money due to the contractor, by MCGM under the contract or otherwise, howsoever, or from his security deposit or the sale proceeds thereof provided, however, the contractor shall have no claim against MCGM even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a), (b) or (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials or entered in to any engagements or made any advance on account of or with a view to the execution of the work or the performance of the contract.

5) MCGM shall reserve the right to foreclose the project work at any stage for whatsoever circumstance without assigning any reason. The contractor shall be paid for his work done subjected to applicable conditions.

**K. Contract may be rescinded and security deposit forfeited for bribing a public officer or if contractor becomes insolvent**

If the contractor assigns or sublets his contracts or attempt so to do, or become insolvent or commence any proceeding to get himself adjudicated and insolvent or make any composition with his creditors, or attempt so to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given promised or offered by the contractor or any of his servants or agents through any public officer, or person in the employ of

MCGM/Govt. in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract the Engineer In-charge may thereupon, by notice in writing rescind the contract and the Security Deposit of the Contractor shall thereupon stand forfeited and be absolutely at the disposal of MCGM and the same consequences shall ensure as if the contract had been rescinded under above clause J hereof; and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

## **L. Project Management Consultant :**

MCGM shall appoint Project Management Consultant for validation, Proof checking, Construction supervision, Quality Assurance, Quality control and Quality audit including Architectural services for construction of dwelling units under Ashray Yojana. The successful Bidder /Contractor shall carry out the project work in coordination with PMC and MCGM staff. In case of any conflict / interpretation etc between PMC & contractor the decision of AMC /MC shall be final and binding in this regards.

### **SUBMISSION OF TENDERS** **PACKET-A**

**The Packet 'A' shall contain scanned certified copies of the following documents-  
Scrutiny of this packet will be done strictly with reference to only the scanned copies  
of**

Documents uploaded online in packet 'A'

- a) Valid Registration Certificate.
- b) Valid Bank Solvency Certificate of Minimum Solvency amount of Rs. 2,00,00,000
- c) A document in support of Registration under GST Act 2017. Those who have not registered shall submit an undertaking to the effect that if they become successful tenderer, they shall submit GST 2017 Certificate in Maharashtra within 15 days of issue of work order, failing which payment for the work executed will not be released.
- d) Certified copies of valid 'PAN' documents and photographs of the individuals, owners, Karta of Hindu undivided Family, firms, private limited companies, registered co-operative societies, partners of partnership firms and at least two Directors, if number of Directors are more than two in case of Private Limited Companies, as the case may be. However, in case of Public Limited companies, Semi Government Undertakings, Government Undertakings, no 'PAN' documents will be insisted.
- e) Latest Partnership Deed in case of Partnership firm duly registered with Chief Accountant (Treasury) of MCGM and registration certificate with registrar of companies in case of Private Ltd. / Public Ltd. / Semi Govt. & Govt. undertakings.
- f) Annexure – E in prescribed format on Rs. 500/- stamp paper as per circular no. CAF / Project / 19 dated 15/09/2017.
- g) The bidders shall categorically provide their Email-ID in Packet 'A'.

h) Scanned copy of details of online payment of EMD shall be uploaded.

**NOTE:**

- If the tenderer(s) withdraw tender offer during the tender validity period, his entire E.M.D shall be forfeited.
- If it is found that the tenderer has not submitted required documents in Packet “A” then, the shortfalls will be communicated to the tenderer through e-mail only and compliance required to be made within a time period of **three working days** otherwise they will be treated as non-responsive.

**PACKET – B**

**The Packet ‘B’ shall contain scanned certified copies of the following documents –**

The bidder shall submit the details of Construction Methodology / Technology which will be proposed for the said work.

- A) ~~The bidder shall submit the list of the details of at least one projects having 1125 tenements (80% of which should be completed.) (approx. 2,00,000 sqft BUA) with similar **Construction Methodology / Technology.**~~
- B) **The bidder shall deliver a detailed presentation of the Construction Methodology / Technology giving all the relevant details to the reviewing committee.**
- C) **The bidder shall have to submit all the approvals / certificates from the relevant appropriate bodies with respect to proposed Construction Methodology /Technology.**
- D) **The bidder shall have all the authorization for using the Construction Methodology/ Technology and submit the relevant documents for the same.**
- E) The list of similar type of works as stated in para ‘A’ of Post qualification successfully completed during the last **Seven (7) years** in prescribed proforma, in the role of prime contractor. Information furnished in the prescribed proforma (**Proforma – I**) shall be supported by the certificate duly self-attested. Documents stating that it has successfully completed during the last **Seven (7) years** at least one contract of similar works as stated in para ‘A’ of Post qualification.
- F) Annual financial turnover for preceding **last four (4) financial years out of five (5) financial years** as certified by Chartered Accountant preceding the Financial Year in which bids are invited. Copies of Applicants duly audited balance sheet and profit and loss account for the preceding three financial years preceding the Financial Year in which bids are invited. (Proforma – II) at least four in last five years.(years should be mentioned)
- G) Documents stating that, it has access to or has available liquid assets, unencumbered assets, lines of credit and other financial means (independent of any

contractual advance payment) sufficient to meet the construction cash flow requirements for the subject contract in the event of stoppage, start-up, or other delay in payment, of the minimum 15% of the cost of the work tendered for, net of the tenderer's commitment of other contracts (Certificate from Bankers / C.A./Financial Institution shall be accepted as a evidence).

H) The bidder shall give undertaking on Rs 500/- stamp paper that it is his/their sole responsibility to arrange the required machineries either owned/on lease or hire basis, at site before start of the work

I) New and Original Works: The bidder should, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with assessment study of requirements of equipment/plants & machineries to allow the employer to review their proposal. The bidder shall ensure his commitment to make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge on an undertaking on Rs.500 stamp paper to be sub-mitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of MCGM.

I. Details of works in hand (Proforma VI-A & VI-B) (original), along with copies of work orders & attested copies of percentage of works completed or part thereof.

II. Statement showing assessed available Bid Capacity.

III. The undertaking of Rs. 500/- stamp paper as per the proforma annexed in 'Annexure- B & C'

**Note: Bidders shall submit the undertaking for equipment capability and other undertakings as such on a single Rs. 500/- stamp paper.**

IV. The tenderers shall

V. Upload work plan as per the following outline:

- 1) GANTT chart/ PERT/ CPM chart showing the completion of work within prescribed time period, considering major activities.
- 2) Organizational set up envisaged by the contractors.
- 3) Plant & equipment proposed to be deployed for this work.
- 4) Site Offices and Laboratories proposed to be set up.

- 5) A note on how the whole work will be carried out (work plan including methodology).
- 6) Quality management plan. There will be third party Quality audit at different stages of construction as per stages mentioned in schedule of payment.
- 7) All the activities included in the Scope of Work shall be covered in the work plan.
- 7 (a) Circular u/no. DMC/CPD/3217 of 02.03.2019 regarding Grievance Redressal
- 8) Signed copies of Corrigendum /Addendum, if any.
- 9) Information on Litigation History (Proforma-VIII) in which the tenderer is involved – Proforma as below

Other Party (ies)	Employer	Cause of Dispute	Amount involved.	Remarks showing Present Status.
1	2	3	4	5

The bidder shall disclose the litigation history in Packet 'B' under the head "Details of Litigation History"

If there is no Litigation History, the bidder shall specifically mention that there is no Litigation History against him as per the clause of Litigation History. In case there is Litigation History

–

Litigation History must cover – Any action of blacklisting, debarring, banning, suspension, deregistration and cheating with MCGM, State Govt., Central Govt. or any authority under State or Central Govt. / Govt. Organization initiated against the company, firm, directors, partners or authorized signatory shall be disclosed for last 5 years from the date of submission of bid. Also, bidder must disclose the litigation history for last 5 years from the date of submission of bid about any action like show cause issued, blacklisting, debarring, banning, suspension, deregistration and cheating with MCGM and MCGM is party in the litigation against the company, firm, directors, partners or authorized signatory for carrying out any work for MCGM by any authority of MCGM and the orders passed by the competent authority or by any Court where MCGM is a party. While taking decision on litigation history, the concerned Chief Engineer or **D.M.C. or Director, as may be the case, should consider the details submitted by bidder and take decision based on the gravity of the litigation and the adverse effect of the act of company, firm, directors, partners or authorized signatory on the MCGM works which can spoil the quality, output, delivery of any goods or any work execution and within time frame.**

**J. Tentative layout and plan as per prevailing norms.**

**K. Bidder is required to submit estimated construction area, no of tenements to be constructed and maximum FSI utilized as per prevailing norms.**

**Note:**

i. The Electrical / Mechanical work shall be got carried out by the civil contractors through the contractors registered with MCGM in Electrical Category. Information about the registered contractors shall be obtained from the office of the Ch.E. (M&E)/ E.E. (Monitoring & Registration Cell). Attested scanned copy of the valid registration certificate in Electrical Category shall be uploaded with the tender along with the undertaking from the registered Electrical Contractor stating his willingness to carry out the tender work.

i. The successful bidder shall submit valid registration certificate under E.S.I.C., Act 1948, if the tenderer has more than 10 employees /persons on his establishment (in case of production by use of energy) and 20 employees/persons on his establishment (in case of production without use of energy) to MCGM as and when demanded. In case of less employees/persons mentioned above then the successful bidder has to submit an undertaking to that effect on Rs. 500/- stamp paper as per circular u/no.CA/FRD/I/65 of 30.03.2013.

i. The successful bidder shall submit valid registration certificate under E.P.F. & M.P., Act 1952, if tenderer has more than 20 employees/persons on his establishment, to MCGM as and when demanded. In case if the successful bidder has less employees/persons mentioned above then the successful bidder has to submit an undertaking to that effect on Rs. 500/- stamp paper as per circular u/no. CA/FRD/I/44 of 04.01.2013.

**Note:**

● If it is found that the tenderer has not submitted required documents in Packet “B” then, the shortfalls will be communicated to the tenderer through e-mail only and compliance required to be made within a time period of **three working days** otherwise they will be treated as non-responsive.

MCGM reserves the right to reject any bid whose plan and area calculation is not maximizing the FSI consumption as per prevailing norms.

## **PACKET – C**

- a) The bidder shall quote cost per square m. Built up area (BUA) for the group. The rates quoted shall be inclusive of all rates and taxes.
- b) The tenderer should submit the detail BOQ as per minimum Class -I/ premium items which are given in Section 10 of Specifications in C folder of Packet C which is mandatory to the bidder/ tenderer.

### **BID SECURITY OR EMD**

- The Bidder shall furnish, as part of the Bid, Bid Security/EMD, in the amount specified in the Bid Data Sheet. This bid security shall be in favor of the authority mentioned in the Bid Data Sheet and shall be valid till the validity of the bid.
- The tenderers shall pay the EMD online instead paying the EMD at any of the CFC centre in MCGM Ward Offices.
- Any bid not accompanied by an acceptable Bid Security and not secured as indicated in sub-clause mentioned above, shall be rejected by the Employer as non-responsive.
- The Bid Security/EMD of the successful Bidder will be discharged after 6 months from the date of work order. The Bid Security/ EMD of L-3 and downwards shall be refunded immediately after opening of financial bid but, the EMD/ASD submitted by the L-2 bidder will be returned after obtaining Standing Committee Resolution.
- The Bid Security may be forfeited:
  - a) if the Bidder withdraws the Bid after bid opening (opening of technical qualification part of the bid during the period of Bid validity;
  - b) in the case of a successful Bidder, if the Bidder fails within the specified time limit to:
    - i. sign the Agreement; and/or
    - ii. Furnish the required Security Deposits.
- 1. The cases wherein if the shortfalls are not complied by a contractor, will be informed to Registration and Monitoring Cell. Such non-submission of documents will be considered as 'Intentional Avoidance' and if three or more cases in 12 months are reported, shall be viewed seriously and disciplinary action against the defaulters such as banning/ deregistration, etc. shall be taken by the registration cell with due approval of the concerned AMC.

2. No rejections and forfeiture shall be done in case of curable defects. For non-curable defects the 10% of EMD shall be forfeited and bid will be liable for rejection.

**Note:**

**I. Curable Defect shall mean shortfalls in submission such as:**

- a. **Non-submission of following documents,**
  - i. **Valid Registration Certificate (The contractors who are not registered with MCGM will have to apply for registering their firm within three months time period from the award of contract, otherwise their Bid Security will be forfeited)**
  - ii. **Valid Bank Solvency**
  - iii. **Sales Tax Registration Certificate (VAT) / Goods and Service Tax Registration Certificate**
  - iv. **Certified Copies of PAN documents and photographs of individuals, owners, etc.**
  - v. **Partnership Deed.**
  - vi. **Undertakings as mentioned in the tender document.**

**II. Non-curable Defect shall mean**

- a) **In-adequate submission of EMD/ASD amount,**
- b) **In-adequacy of technical and financial capacity with respect to Eligibility criteria as stipulated in the tender.**
- c) **Wrong calculation of Bid Capacity, No proper submission of experience certificates.**
- d) **Failure to upload detailed BOQ in C folder of Packet C as per minimum Class-I specifications /premium items which are given in Section 10.**

**BID VALIDITY**

**Bids shall remain valid for a period of not less than one eighty (180) days after the deadline date for bid submission specified in Bid Data Sheet. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.**

- In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his Bid Security. A bidder

agreeing to the re-quest will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension.

## **DEFECT LIABILITY PERIOD**

- The Contractor is expected to carry out the construction work in Workmen like manner so as to meet the requirement and specification for the project. It is expected that the Workmanship and materials will be reasonably fit for the purpose for which they are required.
- Defects or defective work is where standard and quality of workmanship and materials as specified in the contract is deficient. Defect is defined as a failure of the completed project to satisfy the express or implied quality or quantity obligations of the construction contract. Defective construction works are as the works which fail short of complying with the express descriptions or requirements of the contract, especially any drawings or specifications with any implied terms and conditions as to its quality, workmanship, durability, aesthetic, performance or design. Defects in construction projects are attributable to various reasons.
- Some of the defects are structural defects results in cracks or collapse of faulty defective plumbing, inadequate or faulty drainage system, inadequate or faulty ventilation, cooling or heating systems, inadequate fire systems etc. The defects could be various on accounts of different reasons for variety of the projects. The Engineering In charge/Project Officer shall issue the practical completion certificate for the project. During the Defect Liability Period which commences on completion of the work, the Engineer in charge shall inform or the contractor is expected to be informed of any defective works by the Employer's representative of the defects and make good at contractor's cost with an intention of giving opportunity to the contractor of making good the defects appeared during that period. It is the contractor's obligation under the contract to rectify the defects that appear during Defect Liability Period and the contractor shall within a reasonable time after receipt of such instructions comply with the same at his own cost. The Engineering In charge/Project Officer shall issue a certificate to that effect and completion of making good defects shall be deemed for all the purpose of this contract to have taken place on the day named in such defect liability certificate.
- If defective work or workmanship or design have been knowingly covered-up or conceived so as to constitute fraud, commencement of the Defect Liability Period may be delayed. The decided period may be delayed until discover actually occurs on at least the defect could have been discovered with reasonable diligence, whichever is earlier.

**The DLP shall be as below:**

<b>Department</b>	<b>Type of Works</b>	<b>DLP</b>
AYC	General works	3 years
	Structural works	10 years
	Waterproofing works	10 years
	Lift /Fire Fighting /Mechanical works	10 years

- Also, in case of defect, the Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at. The Defects Liability Period shall be extended for as long as Defects remain to be corrected. Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer’s notice. The Engineer may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice. The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer a compliance report.

- It is the Completion Stage when the contractor has completed all of the works and fixed all of the defects that were on the list of issue by Engineer-in-charge. When this happens, the engineer must issue a ‘Certificate of Completion’. On the issue of

‘Certificate of Completion’, the ‘Defect Liability Period ‘starts. The contractor also must issue a ‘Certificate statement’ as an acknowledgment to the engineer not later than

14 days after the ‘Certificate of Completion’ has been issued. During the ‘Defect Liability Period’, the contractor has to obey all written instructions from the engineer to carryout repairs and fix any defects which appear in the Permanent Works.

If the contractor does not ,due to his own faults finish the repair works or fix the defects by the end of ‘Defect Liability Period’, the ‘Defect Liability Period’ will continue until all works instructed by engineer is done.

## **SECURITY DEPOSIT AND PERFORMANCE GUARANTEE**

### **Security Deposit**

The security deposit shall mean and comprise of

- I. Contract Deposit and
- II. Retention Money.

**I. Contract Deposit** – The successful tender, here after referred to as the contractor shall pay an amount equal to **two (2) percent** of the contract sum shall be paid within thirty days from the date of issue of letter of acceptance.

The amount of security deposit may be accepted site wise which will be calculated based on successful bidders proposed cost for redevelopment of site. The same shall be submitted within 30 days of handing over of possession of the respective site.

**II. Retention Money** – The contractor shall pay the retention money an amount equal to **two and half (2.5) percent** of the Contract Sum which will be recovered from the contractors every bill i.e. interim / running / final bill of a site in a group.

The recovery of retention money shall be done for each site separately. Recovery equivalent to 1% of contract sum of a particular site or 50 lakhs, whichever is higher, shall be kept in the form of cash. Remaining amount may be released after securing bank guarantee from the successful bidder.

### **Additional Security Deposit**

~~The additional security deposit will be applicable when a rebate of more than of 12 % at the rate of with no maximum limit. The ASD is calculated as follows:-~~

~~- **Additional security deposit** =  $(X/100) * \text{office estimated cost}$ , Where X = percentage rebate quoted above 12%~~

~~The ASD shall be paid online in the ASD tab for bidders in e-tendering system before submission of the bid.~~

### **Performance Guarantee**

The successful tender, here after referred to as the contractor shall pay in the form of “Performance Guarantee” at different rates for different slabs as stated below:

**Performance Guarantee shall be 1% of contract sum.**

**Note: Contract sum shall mean amount after application of rebate/premium as quoted by the contractor with contingencies only and excluding price variation.**

The PG shall be paid in one the following forms.

- I) Cash (In case guarantee amount is less than Rs.10,000/-)
- II) Demand Draft (In case guarantee amount is less than Rs.1,00,000/-)
- III) Government securities
- IV) Fixed Deposit Receipts (FDR) of a Schedule Bank.
- V) An electronically issued irrevocable bank guarantee bond of any Schedule bank or if in the prescribed form given in Annexure.

Performance Guarantee is applicable over and above the clause of Security Deposit.

Performance Guarantee will have to be paid & shall be valid till the defect liability period or finalization of final bill whichever is later.

This deposit will be allowed in the form of I to V as mentioned above and shall be paid within 15 days after receipt of Letter of Acceptance.

**Note:** Following exceptions shall be adopted for ‘Demolition Tenders’:

- ~~Irrespective of the offer (Rebate/ at par/ premium), ASD shall be differed and only PG of 10% of contract sum be taken from the successful bidder on award of contract only.~~
- ~~MCGM departments shall ensure to incorporate specific condition regarding above in bid document and e-tender notice.~~

## Refund of Security Deposit

### **Refund of Contract Deposit**

The Contract Deposit shall be released within 30 days after completion of 6<sup>th</sup> year of DLP (in case of 10 years DLP) subject to no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. No claim shall be made against the Balance Contract Deposit after the issue of Defects Liability Certificate.

### **Refund of Retention Money**

One-half (50%) of the Retention Money shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor. The balance Retention Money shall be released within 30 days after completion of 6<sup>th</sup> year of DLP (in case of 10 years DLP) provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. In the event of different Defects Liability Periods have been specified or become applicable to different sections or parts of the Permanent Works, the said moneys will be released within 30 days on expiration of the latest of such Defects Liability Periods.

Payment of the above mentioned 50% is exclusive of the amounts to be withheld as stated in and that amount shall be paid as per condition stated therein.

### **Refund of Additional Security Deposit**

The additional security deposit shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

### **Refund of Performance Guarantee**

The Deposit on account of performance guarantee shall be released within 30 days of completion of Defects Liability Certificate subject finalization of final bill whichever is later and no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor.

❖ Summary of time of Refund of deposit is tabulated as follows:

#### **Time of Refund for works having 10 years DLP**

<b>Deposits refunded after completion</b>	<b>After 6 years of DLP</b>
<b>50 % of RM</b>	<b>CD+50% of RM</b>

**Time of refund of performance Guarantee is tabulated as follows:**

<b>DLP</b>	<b>% Refund</b>	<b>Cumulative Refund in %</b>
After 6 <sup>th</sup> yr	20%	20%
After 7 <sup>th</sup> yr	20%	40%
After 8 <sup>th</sup> yr	20%	60%
After 9 <sup>th</sup> yr	20%	80%
After 10 <sup>th</sup> yr	20%	100

**\*Note:** a) It shall be clearly mentioned that the BG shall be applicable for individual work/contract and clubbing of various contracts of the said contractor will not be allowed. In case of obtaining Bank Guarantee, it is necessary to mention that the same shall be valid further 6 months from the completion of defect liability period/ warranty period.

b) It shall be the responsibility of the bidder to keep the submitted B.G. “VALID” for the stipulated time period in the tender & in case of its expiry it will attract penaliza- tion.

c) Bank Guarantee should be issued by way of General Undertaking and Guarantee issued on behalf of the Contractor by any of the Nationalized or Scheduled banks or branches of foreign banks operating under Reserve Bank of India regulations located in Mumbai upto Virar & Kalyan. List of approved Banks is appended at the end of Instructions to Bidders (ITB). The Bank Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Bank Guarantee is countersigned by the Manager of a Regional Branch of the same bank within the Mumbai City Limit categorically endorsing thereon that the said Bank Guarantee is binding on the endorsing Branch of the Bank or the Bank itself within Mumbai Limits and is liable to be enforced against the said Branch of the Bank or the bank itself in case of default by the Contractors furnishing the Bank Guarantee. The Bank Guarantee shall be renewed as and when required and/or directed from time to time until the Contractor has executed and completed the works and remedied any defects therein.

**Legal + Stationary Charges: (As per applicable circular)**

Successful tender shall pay the Legal Charges +Stationary charges as per Circular no. CA/FRG/03 dtd 22.06.2021

<b>Sr. No.</b>	<b>Nature of Documents</b>	<b>Legal +Stationary charges in Rs.</b>
	<b>Legal Charges on Contract Agreement / Contract Value</b>	
1	Rs. 10,001/- to Rs 50,000/-	Nil
2	Rs. 50,001/- to Rs.100,000/-	Rs. 5,710/-
	Rs.1,00,001/- to Rs.3,00,000/-	Rs. 9,430/-
3	Rs.3,00,001/- to Rs5,00,000/-	Rs. 11,330/-

	Rs.5,00,001/- to Rs10,00,000/-	Rs 13,190/-
	Rs.10,00,001/- to Rs 20,00,000/-	Rs 15,060/-
	Rs.20,00,001/- to Rs 40,00,000/-	Rs 16,960/-
	Rs.40,00,001/- to Rs 1,00,00,000/-	Rs 18,830/-
4	Rs.1,00,00,001/- to Rs 10,00,00,000/-	Rs. 22,220/-
5	Rs.10,00,00,001/-to Rs 20,00,00,000/-	Rs. 25,650/-
	Rs.20,00,00,001/-to Rs 30,00,00,000/-	Rs 29,070/-
	Rs.30,00,00,001/-to Rs 40,00,00,000/-	Rs 32,490/-
	Rs.40,00,00,001/-to Rs 50,00,00,000/-	Rs 35,880/-
	Rs.50,00,00,001/-to Rs 1,00,00,00,000/-	Rs 42,720/-
	Rs 1,00,00,00,001/- to Rs 2,00,00,00,000/-	Rs 52,970/-
	Rs 2,00,00,00,001/- to Rs 3,00,00,00,000/-	Rs 59,790/-
	Rs 3,00,00,00,001/- to Rs 4,00,00,00,000/-	Rs 68,290/-
	Rs 4,00,00,00,001/- to Rs 5,00,00,00,000/-	Rs 76,820/-
	Rs 5,00,00,00,001/- and above to any limit	Rs 85,380/-

The tenderers are requested to note that stationary charges as given in the table above will be recovered from the successful tenderer for supply of requisite prescribed forms for preparing certificate bills in respect of the work.

### **Stamp Duty: (As per applicable circular)**

It shall be incumbent on the successful tenderer to pay stamp duty on the contract.

- i. As per the provision made in Article 63, Schedule I of Bombay Stamp Act 1958, stamp duty is payable for “works contract” that is to say, a contract for works and labour or services involving transfer of property in goods (whether as goods or in some other form) in its execution and includes a sub-contract, as under :

(a)	Where the amount or value set forth in such contract does not exceed rupees Ten lakhs	Five Hundred rupees stamp duty.
(b)	Where it exceeds rupees Ten lakhs	Five Hundred rupee plus 0.1 % of the amount above rupees ten lakh subject to maximum of rupees twenty five lakhs.

( c )	On Bank Guarantee	0.5% , Maximum Rs. 10 Lakh
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- i. The successful bidder shall enter into a contract agreement with M.C.G.M. within 30 days from the date of issue of Work Order and the same should be adjudicated for payment of Stamp Duty by the successful bidder.
- ii. Further shortfall if any, in amount of stamp duty paid as against prescribed amount for the documents executed in Mumbai City & Mumbai Suburban District be recovered from the concerned work contractors and to deposit the deficit or unpaid Stamp Duty and penalty by two separate Demand Draft or Pay Order in favour of “Superintendent of Stamp, Mumbai” within 15 days from intimation thereof.
- iv. All legal charges and incidental expenses in this respect shall be borne and paid by the successful tenderer.

### **IMPORTANT DIRECTIONS**

(1) All the information uploaded shall be supported by the corroborative documents in absence of which the information uploaded will be considered as baseless and not accepted for qualification criteria. All the documents shall be uploaded with proper pagination. The page No. shall be properly mentioned in the relevant places.

The information shall be uploaded in the sequence as asked for with proper indexing etc. The Bidder shall be fully responsible for the correctness of the information uploaded by him.

(2) Applicants/Bidders shall refer [portal.mcgm.gov.in/tenders](http://portal.mcgm.gov.in/tenders) for “The Manual of Bid-Submission for Percentage Rate/Item Rate Tender Document.” The detail guidelines for creation and submission of bid are available in the referred document.

Any queries or request for additional information concerning this TENDER shall be submitted by e-mail to [ee.swm@mcgm.gov.in](mailto:ee.swm@mcgm.gov.in) The subject shall clearly bear the following identification/ title: "Queries/ Request for Additional Information: TENDER for Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana. For Group --10 (P.L.Lokhande in M/W Ward) Total tenements 1564 of 300 sq.ft. and 155 of 600 sq.ft.for SWM staff quarters of MCGM under Ashray Yojana. Any changes in Email ID will be intimated on the portal.

(3) In case of Equal Percentage of lowest bidders (L1), the allotment of work shall be done by giving 48 hrs (2 working days) from the day of opening of packet ‘C’ on same BID-Document number for re-quoting and such development needs to be done by IT department in MCGM’s SRM system. Till such development is made; ‘Sealed Bids’ shall be called from the bidders quoting the same rates i.e. L1.

In case of equal percentage of lowest bidders is obtained even after re-quoting, then the successful bidder will be decided by lottery system by concerned Ch. Eng.

The bidder shall need to submit the additional ASD if applicable within 7 days after receipt of notification issued by concerned Dy. Chief Engineer civil Env/AYC.

Also, the Performance Guarantee shall be paid in 15 days after receipt of Letter of Acceptance.

(4) All excavated & surplus material on site will be disposed by nearby transportation at the cost of contractor by abiding all present rules and regulations. No additional payment will be done to the contractor.

(5) It will be entirely responsibility of the contractor to provide and install barricades on the work site wholly at his cost.

(6) The labour welfare cess

The labour welfare Cess as applicable as per the Govt. Resolution under no. BCA / 2009 / Case No. 108 / Labour 7A/ Mantralaya / Mumbai – 400 032 dated 17.06.2010 shall be recovered from contractor's bill.

**SECTION 7**  
**SCOPE OF**  
**WORK**

## SCOPE OF WORK

**Name of Work : Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group -10 ( P.L.Lokhande Marg in M/W Ward ) Total tenements 1246 of 300 sqft and 155 of 600 sqft.**

The detailed scope of work are as follows.

There is 1 site in Group-10. Scope of Group-10 is around of 1246 tenements of 300 sqft and 155 tenements of 600 sqft. The details of the sites are given below:-

<b>PROPOSED TRANSIT AND REDEVELOPMENT PROPOSALS IN GROUP-10 UNDER ASHRAY YOJANA</b>				
<b>Sr. No</b>	<b>Name of Work</b>	<b>Plot Area in SM</b>	<b>Existing Tenants</b>	<b>Tentative Prop Tenements with 4.0FSI / No. of Bldg proposed</b>
<b>Tender Under Preparation / Planning Stage</b>				
1	P.L.Lokhande in M/W Ward	15190.88	404	1556

### **Group for Design & Built Turnkey Work in Group-10**

<b>Sr. No.</b>	<b>Location</b>	<b>Ward</b>	<b>Plot Area in sqm.</b>	<b>Proposed Tenents</b>	
				<b>300 sq.ft</b>	<b>600 sq.ft</b>
1	P.L.Lokhande Marg	M/W Ward	15190.88	1264	155
	<b>Total</b>			<b>1264</b>	<b>155</b>

### **ANNEXURE-1**

#### **Existing old structure to be demolished for Redevelopment Proposals Under Ashray Yojna**

<b>Name of Site</b>							<b>Existing old structure to be demolished &amp; Appro. Tenets</b>
<b>Group 1</b>							
P.L.Lokhande =15190.88	Marg	in	M/W	Ward,	Div-,Plot	Area	14 Buildinds of G+2 and 3 Ground floor structure.

**Notes :**

1. The successful bidder /contractor shall design and built the project in coordination with PMC and MCGM in all respect and handover the possession after obtaining the Occupation certificate of the project in turn key basis to MCGM in stipulated time period. The design and the construction of the project shall be carried out considering the circular u/no No.CHE/GEN-412/DP dtd. 28.01.2013 (Annexure F) and the specification decided by MCGM. The bidder shall have to design the building with full available potential of 4 (four) FSI.

Number of tenements mentioned in tender are tentative which may enhance or decrease as per site conditions and bidders design and planning by following prevailing norms. Payment to the successful bidder will be as per rates quoted by bidder for entire constructed buit up area irrespective of increase or decrease in number of tenements mentioned in tender. The biider will not be entitled to have any claim whatsoever.

2. The successful bidder /contractor shall make inventory of the existing structures on site and demolish the same after the structure is vacated by concerned department of MCGM & further debris removal has to be done by the bidder.

3.All the works contained in the scope of work shall be carried out strictly as per relevant specifications applicable as attached or referred to, in this tender document.

4. The above is general description of the scope of work and actual work mentioned above shall be as directed by the Engineer-in-charge.

5. The plot which are presently occupied, will be vacated by MCGM before issuing the work order, in phase wise manner or at once as the case may be. The site will be handed over to bidder accordingly.

6. Development of on site infrastructure shall be the responsibility of the bidder as per the prevailing norms viz roads, street light, storm water drain, water mains network, sewage network, landscape /RG etc, The cost of the same shall be included in the per sq mt BUA to be quoted by the bidder.

7.The bidder shall consider all expenses along with construction i.e that plumbing, electrical, mechanical etc work required in the project while quoting the per sq mt rate.

8. The successful Bidder /contractor shall liaison and obtain all approvals /NOC/Permits etc required for implementing the project from government /Semi government /Service Provider /MCGM etc. in timely manner. The cost of the same shall be included in the per sq mt BUA to be quoted by the bidder.

9. Amenity / Religious structure /Community hall etc as may be required shall have to be constructed by the bidder.

10. A joint site visit of the prospective bidder shall be organized by MCGM.

11. In the event of 2 or more qualified bidders, quotes for the same rates, the award of the work will be decided by lottery system. Decision of Municipal Commissioner shall be final and binding.

12. Concrete grade M-40 to be used for RCC work in all Ashray Yojana projects.

13. The scope of work may be changed depending upon the requirement of MCGM and as per existing site condition and decision of Municipal Commissioner shall be final and binding.

14. The successful bidder should provide one Air conditioned SUV (Scorpio, Zylo, Innova etc.) vehicle to Municipal Corporation staff for day to day site inspection.

15. The successful bidder should provide necessary barricades for plot as well as building under construction for safety as directed by engineer in charge.

16. Following provision is required in each tenement

cc) Two wash basins

dd) M.S. powder coated grill for all windows

ee) Aluminum sliding window should be of four track with one track for mosquito

proof mesh.

ff) Kitchen should have granite top with S. S. sink

gg) Provision of western type W.C. pan as directed by engineer in charge.

17. Successful bidder should provide fire fighting system as per remarks of C.F.O. as per DCPR 2034.

18. During DLP period mentioned in the tender the concerned contractor/bidder should provide agency for annual maintenance for plumbing, common electrification, lift maintenance, attending leakages, water pump etc.

19. Sewerage treatment plant should be provided by bidder as per DCPR-2034 provision, if required.

20. A third party auditor will be appointed by the MCGM and work will be strictly audited and the prospective bidder has to carry out /rectify the work as per the direction of third party auditor.

21. The tenderer should submit the detail BOQ as per the minimum class-I / premium items which are given in section-10 in C folder of packet C which is mandatory to the bidder/tenderer.

22. MCGM will form the committee of the members. The committee will validate the methodology, design, details BOQ & offer given by the successful tenderer.

23. The various test to be conducted for the material design, structural design, will be two(2) times the prevailing guidelines of MCGM at the cost of prospective bidder.

24. The prospective bidder should strictly follow all safety measures during executions of works and as directed by the expert committee.

25. Successful bidder should follow/premium/ first class specification for different item as available on MCGM portal.

26. Items to be operated in this tender having minimum Specification is given herewith for preparation of BOQ to be by tenderer.

27. All items to be operated will be of minimum Class I(Premium) specification available as given above or available in USOR-2018. If item is not available in USOR-2018, then same should be taken from Schedule rate prevailing in schedule to be used by State PWD/CPWD/Railway/MES of Class I(Premium) material and specification.

28. A layout should be designed in such a way that there should be separate entrance and exit to the building/ wing having tenements of 600 sq.ft and 300 sq.ft.

29. The amount of security deposit may be accepted site wise which will be calculated based on successful bidders proposed cost for redevelopment of site. The same shall be submitted within 30 days of handing over of possession of the respective site

30. Bank guarantee only for a particular plot in a group which is vacated/ handed over is required to be submitted.

31. The charges to be paid to MCGM will be waived off. If charges paid to MCGM, will be reimbursed.

32. If the land possession is excessively delayed i.e more than 1 year, successful bidder can reject the development of specific plot without any damages to successful bidder.

33. The successful bidder should remove the C&D material in closed trucks with GPS at designated site in consultation with Ex.E(SWM) of respective zone.

34. Each successful bidder should provide Ambient Air Monitoring Control System on each construction site with electronic display.

**Methodology/Technology for propose Ashraya Yojana project:**

The construction methodology/ technology should be based on Composite Building/ Prefabrication technology however the prospective bidder shall have to comply with following points:

a) The proposed construction methodology/ technology i.e. Composite Building / prefabrication technology should have been tried & tested in the market and should be sustainable and acceptable.

b) ~~The bidder should submit the details of cumulative completed projects of at least 2,00,000 sqft of Built Up Area (residential) by using same methodology and technology.~~

c) Bidder should submit all the relevant details such as approved plan along with completion certificate & Occupation certificate of said completed project.

- d) Bidder shall have to make detail presentation of methodology/ technology proposed by him giving all the relevant details as may be required to justify the use of the said technology.
- e) In case required the bidder shall have to arrange site visit of the MCGM committee at his cost the decision of MCGM authority in this regard shall be final and binding.
- f) The bidder shall have to submit all the approvals certificates from the relevant appropriate authorities with respect to proposed methodology/ technology .
- g) The bidder should have authorization / rights to use the proposed technology.
- h) The bidder shall submit all the construction methodology.
- i) The bidder should submit its bid as per the specification mention in Section 10.
- j) Building constructed using this technology should have life more than or at least equal to regular RCC buildings i.e. 50 years.

**SECTION-8**

**BILL OF**

**QUANTITIES**

## **BILL OF QUANTITIES**

Subject : Appointment of Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group – 10 ( P.L.Lokhande Marg in M/W ward )  
Total tenements -1246 of 300 sq.ft. and 155 of 600 sq.ft.

<b>Sr. No.</b>	<b>Description of Work</b>	<b>Rate/sq.m. in Rs. (Including all taxes)</b>
01	Design & Built Turnkey Contractor for construction of dwelling units under Ashray Yojana for Group – 10 (P.L.Lokhande Marg in M/W Ward) Total tenements -1246 of 300 sq.ft. and 155 of 600 sq.ft.	

**Note- The tenderer should submit the detailed BOQ as per the minimum class -I / premium items which are given in Section 10 in C- folder of packet C which is mandatory to the bidder/ tenderer.**

**Failure to upload detailed BOQ as directed above will make the bidder disqualified.**

**-For the purpose of this project, the rate shall be Rs.30,000 sqmt/BUA. The same shall be referred only for financial capacity evaluation and clearance in packet B. This calculation will not be done based on actual quote of bidder in packet C.**

**-Detailed BOQ including quantities for 3000 sqmt construction area for all the tenders shall be uploaded in C folder of packet C. Variation of +/- 10% is allowed. However, no additional payment will be made for the items operated.**

## **SECTION 9**

# **GENERAL CONDITIONS OF CONTRACT**

## **General Conditions of Contract**

### **A. General**

#### **1. Definitions**

**1.1** Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

**The “Contract”** shall mean the tender and acceptance thereof and the formal agreement if any, executed between the Contractor, Commissioner and the Corporation together with the documents referred to therein including these conditions and appendices and any special conditions, the specifications, designs, **drawings**, price schedules, bills of quantities and schedule of rates. All these documents taken together shall be deemed to form one Contract and shall be complementary to one another.

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

**The “Contractor”** shall mean the individual or firm or company whether incorporated or not, whose tender has been accepted by the employer and the legal successor of the individual or firm or company, but not (except with the consent of the Employer) any assignee of such person.

**The Bidder** is a person or corporate body who has desired to submit Bid to carry out the Works, including routine maintenance till the tender process is concluded.

**The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.

**The “Contract Sum”** means the sum named in the letter of acceptance including Physical contingencies subject to such addition thereto or deduction there-from as may be made under the provisions hereinafter contained.

**Note :** The contract sum shall include the following –

- In the case of percentage rate contracts the estimated value of works as mentioned in the tender adjusted by the Contractor’s percentage.
- In the case of item rate contracts, the cost of the work arrived at after finalization of the quantities shown in schedule of items / **quantities** by the item rates quoted by the tenderers for various items and summation of the extended cost of each item.
- In case of lump sum contract, the sum for which tender is accepted.
- Special discount / rebate / trade discount offered by the tenderer if any and accepted by the Corporation.
- Additions or deletions that are accepted after opening of the tenders.

**The “Contract Cost”** means the Contract Sum plus Price Variation. This cost shall be included in the letter of acceptance.

**A Defect** is any part of the Works not completed in accordance with the Contract.

**The Defects Liability Certificate** is the **certificate** issued by the Engineer, after the Defect Liability Period has ended and upon correction of Defects by the Contractor.

**Drawings** means all the drawings, calculations and technical information of a like nature provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation & maintenance manual and other technical information of like nature submitted by the Contractor and approved by the Engineer.

**The Authority** shall mean Municipal Corporation of Greater Mumbai (MCGM)

**The “Employer”** shall mean the **Municipal Corporation for Greater Mumbai / Municipal Commissioner for Greater Mumbai**, for the time being holding the said office and also his successors and shall also include all “Additional Municipal Commissioners, Director (Engineering Services & Projects)” and the Deputy Municipal Commissioner, to whom the powers of Municipal Commissioner, have been deputed under Section 56 and 56B of the Mumbai Municipal Corporation Act.

**The Engineer in-charge** shall mean the Executive Engineer in executive charge of the works and shall include the superior officers of the Engineering department i.e. Dy.Ch.Eng/Ch.Eng. and shall mean and include all the successors in MCGM

**The Engineer's Representative** shall mean the Assistant Engineer, Sub. Engineer/Jr. Engineer in direct charge of the works and shall include Sub Eng./ Jr. Eng of Civil section/ Mechanical section/ Electrical section appointed by MCGM.

**The “Engineer”** shall mean the City Engineer / the Hydraulic Engineer / the Chief Engineer / the Special Engineer, appointed for the time being or any other officer or officers of the Municipal Corporation who may be authorized by the commissioner to carry out the functions of the City Engineer / the Hydraulic Engineer / the Chief Engineer / the Special Engineer or any other competent person appointed by the employer and notified in writing to the Contractor to act in replacement of the Engineer from time to time.

**Contractor’s Equipment** means all appliances and things of whatsoever nature required for the execution and completions of the Works and the remedying of any defects therein, but does not include plant material or other things intended to form or forming part of the Permanent Works.

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

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

**Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works and works of routine maintenance.

**Plant** is any integral part of the Works that shall have a mechanical, electrical, electronic, chemical, or biological function.

**Routine Maintenance** is the maintenance of activities of the completed structure for five years as specified in the Contract Data.

The “**Site**” shall mean the land and other places including water bodies more specifically mentioned in the special conditions of the tender, on, under in or through which the permanent works or temporary works are to be executed and any other lands and places provided by the Municipal Corporation for working space or any other purpose as may be specifically designated in the contract as forming part of the site.

**Site Investigation Reports** are those that were included in the bidding documents and are reports about the surface and subsurface conditions at the Site.

“**Specification**” shall mean the specification referred to in the tender and any modification thereof or addition or deduction thereto as may from time to time be furnished or approved in writing by the Engineer.

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

A **Nominated Sub-Contractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the construction work and/or routine maintenance in the Contract, which includes work on the Site.

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

**Variation** means a change to the:-

- i) Specification and /or Drawings (if any) which is instructed by the Employer.
- ii) Scope in the Contract which is instructed by the Employer.
- iii) Price in the Contract which is instructed by the Employer.

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

**Jurisdiction:** In case of any claim, dispute or difference arising in respect of a contract, the cause of action thereof shall be deemed to have arisen in Mumbai and all legal proceedings in respect of any claim, dispute or difference shall be instituted in a competent court in the City of Mumbai only.

## **2. Interpretation**

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

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

**2.3** The documents forming the Contract shall be interpreted in the following documents:

(1) Agreement, (2) Letter of Acceptance, (3) Notice to Proceed with the Work , (4) Contractor's Bid, (5) Contract Data, (6) Special Conditions of Contract Part (7) General Conditions of Contract Part I, (8) Specifications, (9) Drawings, (10) Bill of Quantities, and (11) Any other document listed in the Contract Data.

### **3. Engineer's Decisions**

3.1 Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer. However, if the Engineer is required under the rules and regulations and orders of the Employer to obtain prior approval of some other authorities for specific actions, he will so obtain the approval, before communicating his decision to the Contractor.

3.2 Except as expressly stated in the Contract, the Engineer shall not have any authority to relieve the Contractor of any of his obligations under the contract.

### **4. Delegation**

4.1 The Engineer, with the approval of the Employer, may delegate any of his duties and responsibilities to other person(s), except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

### **5. Communications**

All certificates, notices or instructions to be given to the Contractor by Employer/ Engineer shall be sent on the address or contact details given by the Contractor of Bid. The address and contact details for communication with the Employer/ Engineer shall be as per the details given in Contract Data. Communications between parties that are referred to in the conditions shall be in writing. The Notice sent by facsimile (fax) or other electronic means shall be effective on confirmation of the transmission. The Notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service.

### **6. Subcontracting**

6.1 Unless specifically mentioned in the contract subletting will not be allowed. Subletting, where otherwise provided by the contract shall not be more than 25% of the contract price.

6.2 The Contractor shall not be required to obtain any consent from the Employer for:

- a) the sub-contracting of any part of the Works for which the Subcontractor is named in the Contract;
- b) the provision for labour, or labour component.
- c) the purchase of Materials which are in accordance with the standards specified in the Contract.

6.3 Beyond what has been stated in clauses 6.1 and 6.2, if the Contractor proposes sub contracting any part of the work during execution of the Works, because of some unforeseen circumstances to enable him to complete the Works as per terms of the Contract, the Employer will consider the following before according approval:

- a. The Contractor shall not sub-contract the whole of the Works.

b. The permitted subletting of work by the Contractor shall not establish any contractual relationship between the sub-contractor and the MCGM and shall not relieve the Contractor of any responsibility under the Contract.

**6.4** The Engineer should satisfy himself before recommending to the Employer whether

- a. the circumstances warrant such sub-contracting; and
- b. the sub-Contractor so proposed for the Work possesses the experience, qualifications and equipment necessary for the job proposed to be entrusted to him.

## **7. Other Contractors**

7.1 The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the Contract Data. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

7.2 The Contractor should take up the works in convenient reaches as decided by the Engineer to ensure there is least hindrance to the smooth flow and safety of traffic including movement of vehicles and equipment of other Contractors till the completion of the Works.

## **8. Personnel**

8.1 The Contractor shall employ for the construction work and routine maintenance the key personnel including technical personnel named in the Contract Data or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to those of the personnel stated in the Contract Data.

8.2 The Contractor's personnel shall appropriately be qualified, skilled and experienced in their respective trades or occupations. The Engineer shall have authority to remove, or cause to be removed, any person employed on the site or works, who carries out duties incompetently or negligently and persists in any conduct which is prejudicial to safety, health or the protection of the environment.

8.3 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.

8.4 The Contractor shall not employ any retired Gazetted officer who has worked in the Engineering Department of the MCGM /State Government and has either not completed two years after the date of retirement or has not obtained MCGM/State Government's permission to employment with the Contractor.

## **9. Employer's and Contractor's Risks**

**9.1** The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

## **10. Employer's Risks**

**10.1** The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot, commotion or disorder (unless restricted to the Contractor's employees) and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

## **11. Contractor's Risks**

**11.1** All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks, referred to in clause 11.1, are the responsibility of the Contractor.

## **12. Insurance**

12.1 The Contractor at his cost shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

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

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

12.3 Alterations to the terms of insurance shall not be made without the approval of the Engineer.

12.4 Both parties shall comply with any conditions of the insurance policies.

12.5 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid, from payments otherwise due to the Contractor or if no payment is due, the payment of premiums shall be debt due.

## **13. Site Investigation Reports**

**13.1** The Contractor, in preparing the Bid, may rely, at his own risk, on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him, before submitting the bid.

## **14. Queries about the Contract Data**

**14.1** The Engineer will clarify queries on the Contract Data.

## **15. Contractor to Construct the Works and Undertake Maintenance (if specified in the tender)**

**15.1** The Contractor shall construct, and install and maintain the Works in accordance with the Specifications and Drawings and as per instructions of the Engineer.

**15.2** The Contractor shall construct the works with intermediate technology, i.e., by manual means with medium input of machinery required to ensure the quality of works as per specifications. The Contractor shall deploy the equipment and machinery as required in the contract.

**15.3** The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and byelaws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in future by the State or Central Government or the local authority. Salient features of some of the major laws that are applicable are given below:

- The Water (Prevention and Control of Pollution) Act, 1974, this provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.
- The Air (Prevention and Control of Pollution) Act, 1981, this provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.
- The Environment (Protection) Act, 1986, this provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter- relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
- The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous

substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

## **16. The Works and Routine Maintenance to be completed by the Intended Completion Date.**

**16.1** The Contractor may commence execution of the Works on the Start Date and shall carry out the Works and Routine Maintenance, if specified in the tender, in accordance with the Programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

## **17. Approval by the Engineer**

**17.1** The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

**17.2** The Contractor shall be responsible for design and safety of Temporary Works.

**17.3** The Engineer's approval shall not alter the Contractor's responsibility for design and safety of the Temporary Works.

**17.4** The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

**17.5** All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

## **18. Safety**

**18.1** The Contractor shall be responsible for the safety of all activities on the Site. He shall comply with all applicable safety requirements and take care of safety of all persons entitled to be on the site and the works. He shall use reasonable efforts to keep the site and the works, both during construction and maintenance, clear of unnecessary obstruction so as to avoid danger to the persons and the users.

- Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Power warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
- The workers engaged for cleaning the manholes/sewers should be properly trained before allowing working in the manhole.

## **18.2 Safety Programs:-**

- I. Have adequate safety supervision in place to ensure that safety programs set up by the firms/agencies are in compliance with prevalent laws and regulations.
- I. Review safety programs developed by each of the trade firms, prepare and submit a comprehensive safety program.
- II. Monitor day to day implementation of safety procedures.

## **18.3 First Aid Facilities: -**

- i. At every work place there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
  - i. The first-aid box shall be distinctly marked with a red cross on white back ground.
  - ii. Adequate arrangements shall be made for immediate recoument of the equipment when necessary.
- iv. Nothing except the prescribed contents shall be kept in the First-aid box.
- v. The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
- vi. A person in charge of the First-aid box shall be a person trained in First-aid treatment, in the work places where the number of contract labour employed is 150 or more.

## **19. Discoveries**

**19.1** Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

## **20. Possession of the Site**

**20.1** The Employer shall handover complete or part possession of the site to the Contractor 7 days in advance of construction programme. At the start of the work, the Employer shall handover the possession of at-least 75% of the site free of all encumbrances, the remaining 25 % of the possession as per contractor's construction programme.

## **21. Access to the Site**

**21.1** The Contractor shall allow access to the Site and to any place where work in connection with the Contract is being carried out, or is intended to be carried out to the Engineer and any person/persons/agency authorized by: a. The Engineer b. The Employer or authorized by the Employer.

## **22.Instructions**

**22.1**The Contractor shall carry out all instructions of the Engineer, which comply with the applicable laws where the Site is located.

**22.2** The Contractor shall permit the appointed and/or authorized persons to inspect the Site and/or accounts and records of the Contractor and its subcontractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed, if so required. The Contractor's attention is invited to Clause of 'Fraud and Corruption', which provides, inter alia, that acts intended to materially impede the exercise of the inspection and audit rights provided for under the Clause & constitute a obstructive practice subject to contract termination.

**22.3** Engineer to have power to issue further drawings or instructions:

The Engineer shall have the power and authority from time to time and at all times to make and issue such further drawings and to give such further instructions and directions as may appear to him necessary or proper for the guidance of the contractor and the good and sufficient execution of the works according to terms of the specifications and 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 specification, and the Engineer may also alter or vary the levels or position of nature of works contemplated by the specifications, or may order any of the works contemplated thereby to be omitted, with or without the substitution of any other works in lieu thereof, or may order any work or any portion of work executed or partially executed, to be removed, changed or altered, added if needful, may order that other works shall be substituted instead thereof and difference of expense occasioned by any such diminution or alteration so ordered and directed shall be added to or deducted from the amount of this Contract, as provided under condition no.10(a) hereinafter.

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 Contract he shall nevertheless carry it out and disagreement as to the nature of the work and the rate to be paid therefore shall be resolved in accordance with condition no.13d.

The time for completion of the Works, shall be in even of any deviations resulting in additional cost over the contract price being ordered, be extended or reduced reasonably by the Engineer. The Engineer's decision in this case shall be final.

## **B. Time Control**

### **23. Programme**

**23.1** Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme, including Environment Management Plan showing the general methods, arrangements, order, and timing for all the activities in the Works, along with monthly cash flow forecasts for the construction of works.

After the completion of the construction works, the programme for the Routine Maintenance Work, showing the general methods, arrangements, order and timing for all the activities involved in the Routine Maintenance will also be submitted by the Contractor to the Engineer for approval if specified in the tender. The programme for Routine Maintenance will be submitted in each year for the period of Maintenance.

**23.2** The Contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/ equipments being placed in field laboratory and the location of field laboratory along with the Programme. The Engineer shall cause these details to be verified at each appropriate stage of the programme.

**23.3** An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

**23.4** The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

**23.5** The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme shall show the effect of Variations and Compensation Events.

### **24. Extension of Time In Contracts :**

Subject to any requirement in the contract as to completion of any portions or portions of the works before completion of the whole, the contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses:

#### **a) Extension attributable to MCGM**

**i. Extension Due To Modification:** If any modifications have been ordered which in the opinion of the Engineer have materially increased the magnitude of the work, then such extension of the contracted date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting such extension of the date as may be considered necessary as soon as the cause

thereof shall arise and in any case **should not be less than 30 days before the expiry of the date fixed for completion of the works.**

**ii. Extension For Delay Due To MCGM:** In the event of any failure or delay by the MCGM to hand over the Contractor possession of the lands necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the MCGM due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the contractor to damages or compensation therefore, but in any such case, the MCGM may grant such extension(s) of the completion date as may be considered reasonable.

**Note: For extension of time period as governed in (i) and (ii) above, any modifications in design/drawings, specifications, quantities shall be needed to be justified with recorded reasons with approval of Ch.Eng. for not anticipating the same while preparing estimates and draft tender.**

**b) Extension of Time for Delay Due To Contractor:** The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed no later than the date(s) / the programme for completion of work as specified in the contract. If the contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in above as (a.i) and (a.ii), the MCGM may, if satisfied that the works can be completed by the contractor within reasonable short time thereafter, allow the contractor for further extension of time as the Engineer may decide. On such extension the MCGM will be entitled without prejudice to any other right and remedy available on that behalf, to recover the compensation as governed by Clause 8(e) of GCC.

For the purpose of this Clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued

**Further, competent authority while granting extension to the currency of contract under Clause (b) of as above may also consider levy of penalty, as deemed fit based on the merit of the case. Also, the reasons for granting extension shall be properly documented.**

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

**25.1** The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works. Delay/delays totaling more than 30 days will require prior written approval of the DMC/AMC.

## **26. Management Meetings**

**26.1** The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for progress of the Works.

**26.2** The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

C.

**Quality Control**

**Quality of work will be audited by Third party Auditor appointed by MCGM in phase wise manner as mentioned below-**

<b>phases</b>	<b>Activity /phase of recommendation of Project Work</b>
1	On completion of Foundation
2	On completion upto plinth
3	On completion of 50% of RCC Work
4	On completion of 100% of RCC Work
5	On completion of all Masonry Work
4	On completion of internal Plaster, internal Plumbing & internal Painting
5	On completion of external Plaster, external Plumbing & external Painting
6	On completion of Flooring & Electrical works
7	On completion of - Doors/Windows/Grills Lifts All U.Gs. & O.H.Ts. Electrical meters Access road & internal pathways with street lights Drainage network with S.T.P. (if applicable) S.W.D. Water mains Compound wall with main gate R. G. area
8	Occupation Certificate

**27.1 Work to be open to Inspection and Contractor or Responsible agent to be present**

All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Eng-in-charge and his subordinates and the contractor shall at all times during the usual working hours, at all other times, during the usual working hours and at all other times at which reasonable notice of the intention of the Eng-in-charge and his subordinates to visit the works shall have been given to the contractor, either himself be present to receive orders and instruction or have responsible agent duly accredited in writing present for that purpose. Order given to the contractors' duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

## **27.2 Notice To Be Given Before Work Is Covered Up**

The contractor shall give not less than ten days' notice in writing to the Eng-In- Charge or his subordinate in-charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimension thereof taken before the same is so covered up or placed beyond the reach of measurements and shall not cover up or place beyond the

reach of measurement any work without the consent in writing of the Eng-In-Charge or his subordinate in-charge of the work, and if any work shall be covered up or placed beyond the reach of measurement, without such notice having been given or consent obtained the same shall be uncovered at the contractors expenses, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

## **27.3 Works to be executed in accordance with specifications / drawings / orders etc. :**

The contractor shall execute the whole and every part of the work the most substantial and workman like manner and both has regards material and every other respect in strict accordance with specifications. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer In-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site or work during office hours. The contractor shall be entitled to receive three sets of contract drawings and working drawings as well as one certified copy of the accepted tender along with the work order free of cost.

## **27.4 Ready Mix Concrete/ Asphalt Mix**

- (i) The contractor shall have to arrange Ready Mix concrete (RMC)/Asphalt from RMC/ASPHALT producing plants registered with MCGM.
- (i) The contractor shall, within 7 days of award of the work, submit a list of at least three RMC/Asphalt producers with details of such plants including details and number of transit, mixers & pumps etc. to be deployed indicating name of owner/company, its location, capacity, technical establishment.

The Engineer-in-charge will reserve right to inspect at any stage and reject the concrete if he is not satisfied about quality of product at the user's end.

- (ii) The Engineer-in-charge reserves the right to exercise control over the:-

- a) Calibration check of the RMC/Asphalt plant.
- b) Weight and quantity check on the ingredients, water and admixtures added for batch mixing for RMC plants
- c) Time of mixing of concrete/grade of asphalt.
- d) Testing of fresh concrete/asphalt mix, recording of results and declaring the mix fit or unfit for use. This will include continuous control on the work ability during production and taking corrective action, if required.

e) For exercising such control, the Engineer-in-charge shall periodically depute his authorized representative at the RMC/Asphalt plant. It shall be responsibility of the contractor to ensure that all necessary equipment, manpower & facilities are made available to Engineer-in-charge and or his authorized representative at RMC/Asphalt plant.

f) All required relevant records of RMC/Asphalt mix shall be made available to the Engineer-in-charge or his authorized representative. Engineer-in-charge shall, as required, specify guidelines & additional procedures for quality control & other parameters in respect of material production & transportation of concrete mix which shall be binding on the contractor & the RMC/Asphalt plant. Only concrete as approved in design mix by Engineer- in-charge shall be produced in RMC plant and transported to the site.

g) The contractor shall have to produce a copy of challan receipts/SCADA reports/VTS reports as issued by the RMC/Asphalt plant as a documentary proof in lieu of supply of RMC/Asphalt mix before releasing payment.

## **28 Identifying Defects**

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

28.2 The Contractor shall permit the Employer's technical person(s) to check the Contractor's work and notify the Engineer and Contractor if any defects that are found.

## **29. Tests**

**29.1** For carrying out mandatory tests as prescribed in the specifications, the Contractor shall establish field laboratory at the location decided by Engineer. The field laboratory will have minimum of equipments as specified in the Contract Data. The contractor shall be solely responsible for:

- a. Carrying out the mandatory tests prescribed in the Specifications, and
- b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.

**29.2** If the Engineer instructs the Contractor to carry out a test not specified in the Specification/ Quality Assurance Handbook to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect, the test shall be a compensation event.

When required by the Engineer-in-charge the contractor(s) shall supply for the purpose of testing samples of all materials proposed to be used in the works. Samples submitted either to govern bulk supplies or required for testing before use shall be in suitable packages to contain them and shall be provided free of charge by the contractor. The cost of testing shall be borne by the contractor even if the result of the sample confirm or do not confirm to the relevant BIS code specifications.

- i. All expenditure required to be incurred for taking the samples conveyance, packing shall be borne by the contact or himself.

- i. The failed material shall be removed from the site by the contractor at his own cost within a week time of written order of the Engineer-in-charge.

### **29.3 Setting of Site Laboratories:**

Contractors shall set up a laboratory at site before commencement of work at their cost for performing various tests and at least the following machines and equipments shall be provided therein –

- 1) Set of Sieves as per I.R.C. /I.S.
- 2) Compressive Testing Machine(For new works)
- 3) Oven, Electrically Operated
- 4) Weighing Balance (20 kg capacity)
- 5) 3 m straight edge
- 6) Sieve shaker
- 7) First Aid Box
- 8) Measuring Jar (for silt content)
- 9) Other Machines/apparatus as may be directed by the Engineer
- 10) Vernier Caliber
- 11) Level / Theodolite

All the test records shall be maintained in the site office and made available as and when required. The laboratory must be established within 15 days from the date of receipt of the orders from Engineer In charge. On failure to do so, a penalty of Rs. 1000/- per day shall be imposed.

The contractor shall install testing equipment at site. The contractor shall ensure and certify the calibration of the equipment so installed and shall maintain the same in working order throughout the period of construction. The contractor shall also provide necessary technically qualified experienced trained staff for carrying out such tests for using such equipment. The tests shall be carried out under the supervision of the Engineer-in-charge. The calibration shall be checked every twelve months as directed by Engineer-in-charge.

### **30. Correction of Defects noticed during the Defects Liability Period.**

**30.1 a)** The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and ends after five years. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

b) Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice.

c) The Engineer may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice. The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer a compliance report.

### **31 Uncorrected Defects and Deficiencies**

31.1 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period under clause and deficiencies in maintenance, to the satisfaction of the Engineer, within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect or deficiency corrected, and the Contractor shall pay this amount, on correction of the Defect or deficiency by another agency.

**D.**

### **Cost Control**

#### **~~32. Variations (Not Applicable as this is a turnkey Project)~~**

~~—The Engineer shall, having regard to the scope of the Works and the sanctioned estimated cost, have power to order, in writing, Variations within the scope of the Works he considers necessary or advisable during the progress of the Works. Such Variations shall form part of the Contract and the Contractor shall carry them out and include them in updated Programmes produced by the Contractor. Oral orders of the Engineer for Variations, unless followed by written confirmation, shall not be taken into account.~~

#### **~~33. Payments for Variations (Not Applicable as this is a turnkey Project)~~**

~~33.1 If rates for Variation items are specified in the Bill of Quantities, the Contractor shall carry out such work at the same rate.~~

~~33.2 The rate for Extra/Excess shall be governed by clause 10.A of Standard General Condition of Contract.~~

#### **34. Cash Flow Forecasts**

When the Programme is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.

#### **35. Payment Certificates**

The payment to the Contractor will be as follows for construction work:

- a) A bill shall be submitted by the Contractor monthly or before the date fixed by the Engineer In-charge for all works executed in the previous month, and the Engineer In-charge shall take or cause to be taken requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted, if possible, within 10 days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer In-charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly authorized agent whose counter signature to the measurement list shall be sufficient warrant, and Engineer In-Charge may prepare a bill from such list which shall be binding on the contractor in all respects.
- b) The Engineer shall check the Contractor's fortnightly/monthly statement within 14 days and certify the amount to be paid to the Contractor.
- c) The value of work executed shall be determined, based on measurements by the Engineer.

- d) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- e) The value of work executed shall also include the valuation of Variations and Compensation Events.
- f) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- g) The contractor shall submit all bills on the printed forms at the office of Engineer In-charge. The charges to be made in the bills shall always be entered at the rates specified in tender.

### **36- Payments**

36.1 Payments shall be adjusted for deductions for advance payments, retention, security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 15 days of the date of each certificate.

36.2 All sums payable by a contractor by way of compensation under any of these conditions, shall be considered as a reasonable compensation to be applied to the use of MCGM without reference to the actual loss or damage sustained and whether any damage has or has not been sustained.

36.3 No payment shall be made for any work estimated to cost less than Rupees One Thousand till after the whole of work shall have been completed and the certificate of completion given. But in the case of works estimated to cost more than Rs. One Thousand, the contractor shall on submitting a monthly bill therefore be entitled to receive payment proportionate to the part of the work than approved and passed by the Engineer In-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actual done and completed and shall not preclude the Engineer In-charge from requiring any bad, unsound, imperfect or unskillful work to be removed or taken away and reconstructed or re-erected nor shall any such payment be considered as an admission of the due performance of the contract or any part thereof in any respect or the offering of any claim not shall it conclude, determine or effect in any other way, the powers of the Engineer In-charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or effect the contract. The final bill shall be submitted by the Contractor within one month of the date fixed for the completion of the work otherwise the Engineer In-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

**37.**—The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor for not having given early warning or not having cooperated with the Engineer.

### **38- Tax**

GST and other state levies/cess which are not subsumed under GST will be applicable. The tenderer shall quote inclusive of all taxes/levies/cess. It is clearly understood that MCGM will not bear any additional liability towards payment of any Taxes and Duties.

Rates accepted by MCGM shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations in market rates; increase in taxes/any other levies/tolls etc. except that payment/recovery for overall market situation shall be made as per Price Variation.

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प.ल. /व"त/प/24 द%. 10.10.2017

3) प.ल. /क'र'ख/शहर/20 द%. 05.10.2018

Should be applicable.

### **39- Currencies**

All payments will be made in Indian Rupees.

### **40- Liquidated Damages**

Both, the Contractor and the Employer have agreed that it is not feasible to precisely estimate the amount of losses due to delay in completion of works and the losses to the public and the economy, therefore, both the parties have agreed that the Contractor shall pay liquidated damages to the Employer and not by way of penalty, at the rate per week or part thereof stated 80in the Contract Data for the period that the Completion Date is later than the Intended Completion Date. Liquidated damages at the same rates shall be withheld if the Contractor fails to achieve the milestones prescribed in the Contract Data. However, in case the Contractor achieves the next milestone, the amount of the liquidated damages already withheld shall be restored to the Contractor by adjustment in the next payment certificate. The Employer and the contractor have agreed that this is a reasonable agreed amount of liquidated damage. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.

### **41- Cost of Repairs**

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

## **E. Finishing the Contract**

### **42- Completion of Construction and Maintenance**

42.1 The Contractor shall request the Engineer to issue a certificate of completion of the construction of the works, and the Engineer will do so upon deciding that the works is completed. This shall be governed as per clause no.8(g) of Standard General Conditions of Contract.

### 43 Taking Over

~~43-~~ 1The Employer shall take over the works within seven days of the Engineer issuing a certificate of completion of works. The Contractor shall continue to remain responsible for its routine maintenance during the maintenance period if specified in the contract.

### 44 Final Account

Final joint measurement alongwith the representatives of the contractor should be taken recorded and signed by the Contractors. Contractors should submit the final bill within 1 month of physical completion of the work.

If the contractor fails to submit the final bill within 1 month, the MCGM staff will prepare the final bill based on the joint measurement within next 3 months.

Engineer's decision shall be final in respect of claims for defect and pending claims against contractors.

No further claims should be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of those items of the bills in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by the Commissioner shall be made within a reasonable period as may be necessary for the purpose of verification etc.

After payment of the final bill as aforesaid has been made, the contractor may, if he so desires, reconsider his position in respect of a disputed portion of the final bills and if he fails to do so within 84 days, his disputed claim shall be dealt with as provided in the contract.

A percentage of the retention money, over and above the actual retention money as indicated below shall be held back from payments till the finalization of final bill to be submitted as per above and will be paid within 30 days of acceptance of the final bill.

<b>Sr. No.</b>	<b>Amount of Contract Cost</b>	<b>Minimum Payable Amount in final bill</b>
1	Upto Rs.5 Crores	Rs.10 Lacs or final bill amount whichever is more
2	Upto Rs.25 Crores	Rs.1 Crore or final bill amount whichever is more
3	Upto Rs.50 Crores	Rs.2 Crore or final bill amount whichever is more
4	Upto Rs.100 Crores	Rs.4 Crore or final bill amount whichever is more
5	More than Rs.100 Crores	Rs.7 Crore or final bill amount whichever is more

The contractor has to submit the bill for the work carried out within 15 days from the date of completion of the work to the respective executing department. If the contractor fails to

submit their bills to concerned executing department, penalty or action as shown below will be taken for each delayed bill:-

After 15 days from the date of completion/running bill upto certain date, upto to next 15 days i.e. upto 30 days.	Equal to 5 % of bill amount.
Next 15 days upto 45 days from the date of completion/running bill upto specified date.	Equal to 10 % of bill amount
If not submitted within 45 days from the date of completion/RA Bill	Bill will not be admitted for payment.

#### **45. Operating and Maintenance Manuals**

45.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

45.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

#### **46. Termination**

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

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

- a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;
- b) the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
- c) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- d) the Contractor does not maintain a Security, which is required;
- e) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in relevant clause.
- f) the Contractor fails to provide insurance cover as required under relevant clause.
- g) if the Contractor, in the judgment of the Employer, has engaged in the corrupt or fraudulent practices as defined in GCC in competing for or in executing the Contract.
- h) if the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified in the Contract Data; and
- i) any other fundamental breaches as specified in the Contract Data.

j) if the Contractor fails to deploy machinery and equipment or personnel as specified in the Contract Data at the appropriate time.

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

46.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

46.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

#### **47. Payment upon Termination**

47.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for value of the work done and materials ordered less liquidated damages, if any, less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the Contract Data. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit, and performance security. If any amount is still left unrecovered it will be a debt due from the Contractor to the Employer.

47.2 If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the

Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.

#### **48. Property**

48.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer for use for completing balance construction work if the Contract is terminated because of the Contractor's default, till the Works is completed after which it will be transferred to the Contractor and credit, if any, given for its use.

#### **49. Release from Performance**

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

### **A. Other Conditions of Contract**

## **50.Labour**

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

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

## **51. Compliance with Labour Regulations**

a) During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority.

b) Furthermore, the Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance guarantee. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

c) The Contractor shall require his employees to obey all applicable laws, including those concerning safety at work.

d) The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

## **52. Drawings and Photographs of the Works**

52.1 The Contractor shall do photography/video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work as required by Engineer In-charge and lastly after the completion of the work. No separate payment will be made to the Contractor for this.

52.2 The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the works or any part thereof or plant employed thereon, except those permitted under above clause, shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing.

No photographs/ Video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

### **53.The Apprentices Act, 1961**

The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so, he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

### **54.Contract Document**

The documents forming the contract are to be taken as mutually explanatory of one another. Unless otherwise provided in the contract, the priority of the documents forming the contract shall be, as follows:

- 1) Contract Agreement (if completed)
- 2) The letter of Acceptance
- 3) The Bid:
- 4) Addendum to Bid; if any
- 5) Tender Document
- 6) The Bill of Quantities:
- 7) The Specification:
- 8) Detailed Engineering Drawings
- 9) Standard General Conditions of Contracts (GCC)
- 10) All correspondence documents between bidder/contractor and MCGM.

### **55. Conflict of Interest**

The Applicant shall not have a conflict of interest (the “Conflict of Interest”) that affects the Bidding Process. Any Applicant found to have a Conflict of Interest shall be disqualified. An Applicant shall be deemed to have a Conflict of Interest affecting the Bidding Process, if

1. A constituent of such Applicant is also a constituent of another Applicant; or
2. Such Applicant has the same legal representative for purposes of this Application as any other Applicant; or
3. Such Applicant, or any Associate thereof has a relationship with another Applicant, or any Associate thereof, directly or through common third party/ parties, that puts either or both of them in a position to have access to each other’s information about, or to influence the Application of either or each other; or
4. The Applicant shall be liable for disqualification if any legal, financial or technical adviser of the Authority in relation to the Project is engaged by the Applicant, its Member or any Associate thereof, as the case may be, in any manner for matters related to or incidental to the Project. For the avoidance of doubt, this disqualification shall not apply where such adviser was engaged by the Applicant, its Member or Associate in the past but its assignment

expired or was terminated 6 (six) months prior to the date of issue of this TENDER. Nor will this disqualification apply where such adviser is engaged after a period of 3 (three) years from the date of commercial operation of the Project.

### **56.Applications and costs thereof**

No Applicant shall submit more than one Application for the Project. An applicant applying individually shall not be entitled to submit another application either individually. The Applicant shall be responsible for all of the costs associated with the preparation of their Applications and their participation in the Bid Process. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

### **57.Acknowledgment by Applicant**

It shall be deemed that by submitting the Application, the Applicant has:

- a. made a complete and careful examination of the tender;
- b. received all relevant information requested from the Authority;
- c. accepted the risk of inadequacy, error or mistake in the information provided in the tender or furnished by or on behalf of the Authority relating to any of the matters referred; and
- d. Agreed to be bound by the undertakings provided by it under and in terms hereof “The Authority” shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to the TENDER or the Bidding Process, including any error or mistake therein or in any information or data given by the Authority.

### **58.Right to accept or reject any or all Applications/ Bids**

Notwithstanding anything contained in this TENDER, “The Authority” reserves the right to accept or reject any Application and to annul the Bidding Process and reject all Applications/ Bids, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons therefore. In the event that the Authority rejects or annuls all the Bids, it may, in its discretion, invite all eligible Bidders to submit fresh Bids hereunder.

“The Authority” reserves the right to reject any Application and/ or Bid if:

- (a) at any time, a material misrepresentation is made or uncovered, or
- (b) the Applicant does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Application.

In case it is found during the evaluation or at any time before signing of the Agreement or after its execution and during the period of subsistence thereof including the concession thereby granted by “The Authority”, that one or more of the per-qualification conditions have not been met by the Applicant, or the Applicant has made material misrepresentation or has given any materially incorrect or false information, the Applicant shall be disqualified forthwith if not yet appointed as the Successful Bidder either by issue of the LOA (Letter of Approval) or entering into of the Agreement, and if the Applicant has already been issued

the LOA or has entered into the Concession Agreement, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this TENDER, be liable to be terminated, by a communication in writing by “The Authority” to the Applicant, without the Authority being liable in any manner whatsoever to the Applicant and without prejudice to any other right or remedy which the Authority may have under this TENDER, the Bidding Documents, the Concession Agreement or under applicable law. “The Authority” reserves the right to verify all statements, information and documents submitted by the Applicant in response to the TENDER. Any such verification or lack of such verification by the Authority shall not relieve the Applicant of its obligations or liabilities hereunder nor will it affect any rights of the Authority there under.

#### **59. The bid shall be rejected if the bidder-**

- a) Stipulates the validity period less than 180 days.
- b) Stipulates own condition/conditions.
- c) Does not fill and (digital) sign undertaking forms, which are incorporated, in the document .

#### **60. Clarifications**

Applicants requiring any clarification on the tender may notify “the Authority” in writing or by fax or e-mail. They should send in their queries before the date specified in the header data. “The Authority” shall Endeavor to respond to the queries within the period specified therein. The responses will be sent by fax and/or e-mail. The Authority will forward all the queries and its responses thereto, to all purchasers of the TENDER without identifying the source of queries.

“The Authority” shall Endeavor to respond to the questions raised or clarifications sought by the Applicants. However, the Authority reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or requiring the Authority to respond to any question or to provide any clarification, but not later than the date provided in header data.

“The Authority” may also on its own motion, if deemed necessary, issue interpretations and clarifications to all Applicants. All clarifications and interpretations issued by the Authority shall be deemed to be part of the tender. Verbal clarifications and information given by Authority or its employees or representatives shall not in any way or manner be binding on the Authority.

#### **61. Amendment of tender**

At any time prior to the deadline for submission of Application, the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by an Applicant, modify the tender by the issuance of Addendum.

Any Addendum thus issued will be sent in writing/ Fax/ Email to all those who have purchased the tender.

In order to afford the Applicants a reasonable time for taking an Addendum into account, or for any other reason, the Authority may, in its sole discretion, extend the Application Due Date.

## **Preparation and Submission of Application**

### **62. Language**

The Application and all related correspondence and documents in relation to the Bidding Process shall be in English language. Supporting documents and printed literature furnished by the Applicant with the Application may be in any other language provided that they are accompanied by translations of all the pertinent passages in the English language, duly authenticated and certified by the Applicant. Supporting materials, which are not translated into English, may not be considered. For the purpose of interpretation and evaluation of the Application, the English language translation shall prevail.

### **63. Format and signing of Application**

The Applicant shall provide all the information sought under this TENDER. The Authority will evaluate only those Applications that are received in the required formats and complete in all respects. Incomplete and /or conditional Applications shall be liable to rejection.

The Applicant will upload bid in One Folder in electronic form which shall contain the scanned certified copies of the documents given below and the documents uploaded has to be digitally signed by the bidder. These copies shall be certified by Practicing Notary approved by the Govt. of Maharashtra or Govt. of India with his stamp, clearly stating his name & registration number, except where original documents are demanded.

### **64. Marking of Applications**

The Applicant shall submit the Application in the format specified at Appendix-I, together with the documents, upload in folder as “VENDOR” together with their respective enclosures

Applications submitted by fax, telex, telegram shall not be entertained and shall be rejected outright.

### **65. Late Applications**

Applications received by the Authority after the specified time on the Application Due Date shall not be eligible for consideration and shall be summarily rejected.

### **66. Confidentiality**

Information relating to the examination, clarification, evaluation, and recommendation for the short-listed qualified Applicants shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the Authority in relation to or matters arising out of, or concerning the Bidding Process. The Authority will treat all information, submitted as part of Application, in confidence and

will require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the Authority or as may be required by law or in connection with any legal process.

### **67. Clarification Of Financial Bids**

To assist in the examination, evaluation and comparison of Bids, the Engineer may, at his discretion, ask any bidder for clarification of his Bid, including breakdown of unit rates. The request for clarification and the response shall be in writing or by post/facsimile/e- mail. No Bidder shall contact the Engineer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. Any effort by the Bidder to influence the Engineer in the Engineer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder's bid.

### **68. Inspection of site and sufficiency of tender:**

1. The Contractor shall inspect and examine the site and its surrounding and shall satisfy himself before submitting his tender as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the quantities and nature of the work and materials necessary for the completion of the works and means of access to the site, the accommodation he may require and in general shall himself obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect his tender. He shall also take into consideration the hydrological and climatic conditions.
2. The Employer may make available to the Contractor data on hydrological and sub-surface conditions as obtained by or on his behalf from investigations relevant to the works but the Contractor shall be responsible for his own interpretation thereof. The contractor shall engage his investigating agency with prior approval of the Engineer from the approved list of such agencies by MCGM or Govt at his cost initially before commencing actual work and which shall be reimbursed immediately subject to satisfaction of the Engineer for faithful compliance and submission of required data regarding such investigation within specified time.
3. The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of works / items / quantities, or in Bill of Quantities, which rates and prices shall, except as otherwise provided cover all his obligations under the Contract and all matters and things necessary for proper completion and maintenance of the works. No extra charges consequent on any misunderstanding.
4. **Not Foreseeable Physical Obstructions or Conditions:** If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer. On receipt of such notice, the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Contractor, determine:

- any extension of time to which the Contractor is entitled and
- The amount of any costs which may have been incurred by the Contractor by reason of such obstructions or conditions having been encountered, which shall be added to the Contract Price.
- and shall notify the Contractor accordingly. Such determination shall take account of any instruction which the Engineer may issue to the Contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer which the Contractor may take in the absence of specific instructions from the Engineer. However such costing shall be got approved by the competent authority as governed vide rules prevailing with authority.

**5. Office for the Engineer (Works costing upto Rs.50 Lakhs)**

The Contractor shall at his own cost and to satisfaction of the Engineer provide a small temporary office, at the work-site which will include tables, chairs and lockers for keeping the records. He shall also make necessary arrangements for drinking water, telephone with a pre-requisite of e-governance and electronic communication. These offices are not to be allowed on public roads without the written instruction of the Engineer. These offices should be preferably located within 50 to 500 m of the worksite. In case the office is more than 500m away from the worksite, the contractor is to provide conveyance for Municipal Staff.

**6. Office for the Engineer (Works costing above Rs. 50 lakhs)**

The Contractor shall at his own cost and to satisfaction of the Engineer provide a temporary office at the work-site which will include tables, chairs and lockers for keeping the records. He shall also make necessary arrangements for drinking water, latrines, with doors, windows, locks, bolts and fastenings sufficient for security for the Engineer, and his subordinates, as close to the works from time to time in progress as can be conveniently arranged, and shall at his own cost furnish the office with such chairs, tables, lockers, locks and fastenings as may be required by the Engineer, and no expense of any kind in connection with the erection or upkeep of the offices or fittings shall be borne by the Corporation, but all such work shall be carried out by the Contractor and the expenses thereof defrayed by him. The Contractor shall also make water connections and fit up stand pipe with a bib tap at each office. The latrines and the water connections shall be subject to all the conditions herein elsewhere laid down for temporary water connection and latrines generally with all requisite equipments for e-governance and electronic and digital communication. These offices are not to be allowed on public roads without the written instruction of the Engineer. These offices should be preferably located within 50 to 500 m of the worksite. In case the office is more than 500m away from the worksite, the contractor is to provide conveyance. Also, for staff working beyond working hours the contractor has to provide conveyance.

**7. Permission for provision and removal of office on completion of work:**

The tenderer shall obtain permission for provision of site office, cement go- down, store, etc. on payment of necessary cost implication. The cement go-down, Watchman cabins, etc. shall be provided as directed and shall be removed by the Tenderers on completion of the work at their cost. It is binding on the Tenderer to fulfill requirements of Environmental Authorities. The location of such office shall be finalized and got approved from the Engineer before erection/commencement work.

## **8 Contractor's office near works:**

The Contractor shall have an office near the works at which notice from the Commissioner or the Engineer may be served and shall, between the hours of sunrise and sunset on all working days, have a clerk or some other authorized person always present at such office upon whom such notices may be served and service of any notices left with such clerk or other authorized person or at such office shall be deemed good service upon the Contractor and such offices shall have pre-requisite facilities for e- governance.

## **69. Official Secrecy:**

The Contractor shall of all the persons employed in any works in connection with the contract that the India Official Secrets Act 1923 (XIX of 1923) applies to them and will continue to apply even after execution of the said works and they will not disclose any information regarding this contract to any third party. The contractor shall also bring into notice that, any information found to be leaked out or disclosed the concern person as well as the Contractor will be liable for penal action; further the Corporation will be at liberty to terminate the contract without notice.

## **70. Subsequent Legislation:**

If on the day of submission of bids for the contract or any later date, there occur changes to any National or State stature, Ordinance, decree or other law or any regulation or By-laws or any local or other duly constituted authority or the introduction of any such National or State Statute, Ordinance, decree or by which causes additional or reduced cost.

## **71. Patent, Right and Royalties:**

The contractor shall save harmless and indemnify the Corporation from and against all claims and proceedings for or on account of infringement of any Patent rights, design trademark or name of other protected rights in respect of any constructional plant, machine work, or material used for or in connection with the Works or any of them and from and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. Except where otherwise specified, the contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the works or any of them.

## **72. Payments, Tax and Claims:**

### **• The limit for unforeseen claims**

Under no circumstances whatever the contractor shall be entitled to any compensation from MCGM on any account unless the contractor shall have submitted a claim in writing to the Eng-in-change within 1 month of the case of such claim occurring.

### **▪ No interest for delayed payments due to disputes, etc:**

It is agreed that the Municipal Corporation of Greater Mumbai or its Engineer or Officer shall not be liable to pay any interest or damage with respect of any moneys or balance which may be in its or its Engineer's or officer's hands owing to any dispute or difference or claim or misunderstanding between the Municipal Corporation of Greater Bombay or its Engineer or Officer on the one hand and the contractor on the other, or with respect to any delay on the part of the Municipal Corporation of Greater Bombay or its Engineer or Officers in making periodical or final payments or in any other respect whatever.

### **73. Settlement of Disputes:**

- **Termination of contract for death**

If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the legal representative of the individual Contractor or the proprietor of the proprietary concern and in case of partnership, the surviving partners, are capable of carrying out and completing the contract, the Commissioner shall be entitled to cancel the contract as to its uncompleted part without the Corporation being in any way liable to payment of any compensation to the estate of the deceased Contractor and or to the surviving partners of the Contractor's firm on account of the cancellation of the contract. The decision of the Commissioner that the legal representative of the deceased Contractor or surviving partners of the Contractor's firm cannot carry out and complete the contract shall be final and binding on the parties. In the event of such cancellation the Commissioner shall not hold estate of the deceased Contractor and or surviving partners of the Contractor's firm liable in damages for not completing the contract.

- **Settlement of Disputes:**

If any dispute or differences of any kind whatsoever other than those in respect of which, the decision of any person is, by the Contract, expressed to be final and binding) shall arise between the Employer and the Contractor or the Engineer and the Contractor in connection with or arising out of the Contract or carrying out of the Works (Whether during the progress of the Works or after their completion and whether before or after the termination, abandonment or breach of the Contract) it, the aggrieved party may refer such dispute within a period of 7 days to the concerned Addl. Municipal Commissioner who shall constitute a committee comprising of three officers i.e. concerned Deputy Municipal Commissioner or Director (ES&P), Chief Engineer other than the Engineer of the Contract and concerned Chief Accountant. The Committee shall give decision in writing within 60 days. Appeal on the Order of the Committee may be referred to the Municipal Commissioner within 7 days. Thereafter the Municipal Commissioner shall constitute a Committee comprising of three Addl. Municipal Commissioners including Addl. Municipal Commissioner in charge of Finance Department. The Municipal Commissioner within a period of 90 days after being requested to do so shall give written notice of committee's decision to the Contractor. Save as herein provided such decision in respect of every matter so referred shall be final and binding upon both parties until the completion of the works, and shall forthwith be given effect to by the Contractor who shall proceed with the works with due diligence, whether he requires arbitration as hereinafter provided or not. If the Commissioner has given written notice of the decision to the Contractor and no Claim to arbitration has been communicated within a period of 90 days from receipt of such notice the said decision shall remain final and binding upon the Contractor.

### **74. Arbitration and Jurisdiction:**

If the Commissioner shall fail to give notice of the decision as aforesaid within a period of 90 days after being requested as aforesaid, or if the Contractor be dissatisfied with any such decision, then and in any such case the Contractor may within 90 days after receiving notice of such decision or within 90 days after the expirations of the first named period of 90 days (as the case may be) require that the matter or matters in dispute be referred to arbitration as hereinafter provided. All disputes or differences in respect of which the decision (if any) of the Commissioner has not become final and binding as aforesaid shall be finally settled by Arbitration as follows:

Arbitration shall be effected by a single arbitrator agreed upon the parties. The arbitration shall be conducted in accordance with the provisions of the Arbitration Act, 1996 or any statutory modifications thereof, and shall be held at such place and time within the limits of Brihan Mumbai as the arbitrator may determine. The decision of the arbitrator shall be final and binding upon the parties hereto and the expense of the arbitration shall be paid as may be determined by the arbitrator. Performance under the Contract shall, if reasonably be possible, continued during the arbitration proceedings and payment due to the Contractor by the Employer shall not be withheld unless they are the subject matter of arbitration proceedings. The said arbitrator shall have full power to open up, review and revise any decision, opinion, direction, certification or valuation of the Commissioner and neither party shall be limited in the proceedings before such arbitrator to the evidence or arguments put before the Commissioner for the purpose of obtaining his said decision. No decision given by the Commissioner in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitrator on any matters whatsoever relevant to the disputes or difference referred to the arbitrator as aforesaid. All awards shall be in writing and for claims equivalent to 5,00,000 or more such awards shall state reasons for amounts awarded. The expenditure of arbitration shall be paid as may be determined by arbitrator.

In case of any claim, dispute or difference arising in respect of a contract, the cause of action thereof shall be deemed to have arisen in Mumbai and all legal proceedings in respect of any claim, dispute or difference shall be instituted in a competent court in the City of Mumbai only.

**i)** In case of a contract where the contract price and/or contract value is less than Rs 5,00,00,000/- (Rupees Five Crore only), any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination shall be referred to a mutually agreed arbitral tribunal in accordance with the Arbitration and Conciliation Act, 1996(Amended up to date). The arbitral tribunal shall consist of a sole arbitrator, as mutually agreed upon by the parties and the said dispute shall be finally resolved by the said arbitral tribunal. The decision of the arbitral tribunal shall be in writing (with reasons) and which will be final and binding upon the parties hereto and the expenses of the arbitration shall be paid as may be determined by the arbitral tribunal. Theseat of the arbitration shall be Mumbai. The venue of arbitration shall be within the limits of Brihan Mumbai. The language of the arbitration shall be English.

If the parties fails to appoint mutually agreed arbitral tribunal, within the period of 30 days from the date of application seeking arbitration in the dispute, the arbitral tribunal shall be appointed by the recognized arbitral instruction i.e. Mumbai Centre for International Arbitration (approved by Government of Maharashtra under G.R. No ARP/Case No.1/2017/D-19 Dated 28-02-2017) as per the Arbitration Rules of the Mumbai Centre for International Arbitration then in force (“MCIA Rules”).

**ii)** In case of a contract where the contract price and/or contract value is Rs 5,00,00,000/- (Rupees Five Crore only) or more, any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination shall be referred to and finally resolved by the recognized Arbitral Institution i.e. Mumbai Centre for International Arbitration (approved by Government of Maharashtra under G.R. No ARP/Case No.1/2017/D-19 Dated 28-02-2017) as per the Arbitration Rules of the Mumbai Centre for International Arbitration then in force(“MCIA Rules”) The arbitral tribunal shall consist of a sole arbitrator. The seat of the arbitration shall be Mumbai. The language of the arbitration shall be English. In either case, the law governing this Arbitration agreement and the contract shall be Indian Law.

## **75. Copyright:**

The copyright of all drawings and other documents provided by the Contractor under the contract shall remain vested in the Contractor or his sub-contractors as the case may be the employer shall have a license to use such drawings and other documents in connection with the design, construction, operation, maintenance of the works. At any time the Employer shall have further license without additional payment to the Contractor to use any such drawings or documents for the purpose of making any improvement of the works or enlargement or duplication of any part thereof, provided that such improvement, enlargement, or duplication by itself or in conjunction with any other improvements, enlargements or duplications already made in accordance with the further license does not result in the duplication of the whole works.

## **76. Receipts to be signed in firm's name by any one of the partners:**

Every receipt for money which may become payable or for any security which may become transferable to the Contractor under these present shall, if signed in the partnership name by any one of the partners, be a good and sufficient discharge to the Commissioner and Municipal Corporation in respect of the money or security purporting to be acknowledged thereby, and in the event of death of any of the partners during the pendency of this contract, it is hereby expressly agreed that every receipt by any one of the surviving partners shall, if so signed as aforesaid, be good and sufficient discharge as aforesaid provided that nothing in this clause contained shall be deemed to prejudice or effect any claim which the Commissioner or the Corporation may hereafter have against the legal representatives of any partners so dying or in respect of any breach of any of the conditions thereof, provided also that nothing in this clause contained shall be deemed prejudicial or affect the respective rights or obligations of the Contractors and of the legal representatives of any deceased Contractors interest.

## **Proprietary data**

All documents and other information supplied by the Authority or submitted by an Applicant to the Authority shall remain or become the property of the Authority. Applicants are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Application. The Authority will not return any Application or any information provided along therewith.

## **77. Correspondence with the Applicant**

Save and except as provided in this TENDER, the Authority shall not entertain any correspondence with any Applicant in relation to the acceptance or rejection of any Application.

## **78. Price Variation Clause**

The Contractor shall be reimbursed or shall refund to the Corporation as he case may be the variation in the value of the work carried out from time to time, depending on whether the prices of material and labour as a whole rise or fall, and the method adopted for such computations shall be as given below, it being clearly understood that the contractor shall have no claim for being reimbursed on the ground that the price of a particular material or group of materials have risen beyond the limits of the presumptions made in the following paras, however, no price variations shall be made applicable for contracts upto 12 months:

(A) Controlled materials: Price variations shall be permitted in respect of these materials the price level of which is controlled by the Government or its agency. The rate ruling on the date

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of submission of the tender shall be considered as the basic price of such material for adjustment. Any variation in this rate shall be considered for reimbursement to the contractor or refund to be claimed from the contractor as the case may be. The contractor shall, for the purpose of adjustment submit in original the relevant documents from the suppliers.

(B) Labour and other materials: For the purpose of this contract and for allowing reimbursement of refund on account of variation of prices of (i) labour, and (ii) materials other than materials mentioned in A above, computation will be based on the formula enunciated below which is based on the presumptions that :

i)——The general price level of labour, rises or falls in proportion to the rise or fall of consumer price index number 9 (general) for working class in Mumbai.

ii)——The general price level of materials rises or falls in proportion to rise or fall of whole-sale price index as published by ‘Economic Adviser to Govt. of India’.

iii)——And that the component of labour is to the extent of 30 percent of 88 percent and the component of materials is to the extent of 70 percent of 88 percent of the value of the work carried out. The remaining 12 percent being the presumptive profit of the contractor.

a)—————Formula for Labour component:

$$VL = \frac{(0.88 R) \times 30}{100} \times \frac{(I - IO)100}{IO}$$

b)—————Formula for Material component :

$$VM = \frac{(0.88 R \times 70 - C) \times (W - WO)}{100 - WO}$$

Where –

VL = Amount of price variation to be reimbursed or claimed as refund on account of general rise or fall of index referred to above.

I = Consumer Price Index number of working class for Mumbai (declared by the Commissioner of Labour and Director of Employment, Mumbai) applicable to the period under reference (base year ending 2004-05 as 100 i.e. new series of indices).

IO = Consumer price index number for working class for Mumbai (declared by the Commissioner of labour and Director of Employment, Mumbai) prevailing, on the day of 28 days prior to the date of submission of the tender.

VM = The amount of price variation to be reimbursed or claimed as refund on account of general rise or fall of wholesale price index for period under reference.

W = Average wholesale price index as published by Economic Adviser to Govt. of India applicable to the period under reference.

WO = Wholesale price index as stated above prevailing on the day of 28 days prior to the date of submission of the tender.

R = Total value of the work done during the period under reference as recorded in the Measurement Book excluding water charges and sewerage charges but including cost of excess in respect of item upto 50 percent

C = Total value of Controlled materials used for the works as recorded in Measurement Book and paid for at original basic rate plus the value of materials used .

i) The quantity of the Controlled material adopted in working out the value of 'C' shall be inclusive of permitted wastages as / if mentioned in specifications.

i) The basic rate for the supply of controlled material shall be inclusive of all the components of cost of materials excluding transport charges incurred for bringing the material from place of delivery to the site. Computations based on the above formula will be made for the period of each bill separately and reimbursement will be made to (when the result is plus) and refund will claimed from (when the result is minus) the contractor's next bill. The above formulae will be replaced by the formulae in Annexure-I as and when mentioned in special conditions of contract

The operative period of the contract for application of price variation shall mean the period commencing from the date of commencement of work mentioned in the work order and ending on the date when time allowed for the work order and ending on the date when time allowed for the work specified in the contract for work expires, taking into consideration, the extension of time, if any, for completion of the work granted by Engineer under the relevant clause of the conditions of contract in cases other than those where such extension is necessitated on account of default of the contractor. The decision of the Engineer as regards the operative period of the contract shall be final and binding on the contractors.

ii) Where there is no supply of controlled items to contractor the component 'C' shall be taken as zero.

(A) Adjustment after completion: If the Contractor fails to complete the works within the time for completion adjustment of prices thereafter until the date of completion of the works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices whichever is more favorable to the employer, provided that if an extension of time is granted, the above provision shall apply only to adjustments made after the expiry of such extension of time.

(B) Price variation will be calculated similarly and separately for extra items and / or excess quantities and provisional sums calculated under Sub Clause 10 (b)A (i)&(ii) and Sub Clause 10 (b) B(ii) based on the above formula/formulae in Annexure-I as and when mentioned in Special conditions of contract; IO and WO being the indices applicable to the date on which the rates under Sub Clause 10 (a)A (i)&(ii) and Sub Clause 10 (a) B(iii) are fixed. No price variation shall be admissible for FAIR items created during execution.

#### **79. Maximum Price Variation shall be as follows:**

<b>Time period of Project</b>	<b>Maximum limit of Price Variation</b>
Upto 12 Months	No Variation allowed
Above 12 Months to 24 Months	5%
Above 24 Months	10%

**\*—Approval of AMC/MC shall be obtained before invitation of tender in case of any changes in above.**

**Note:**

**1) —The extension in time period for the projects originally estimated including monsoon results in change of price variation slabs as mentioned above i.e. from first slab to second slab or from second slab to third slab, then the maximum limit of original slab will prevail.**

**2) —Operative period shall mean original or extended time period of contract.**

**For example:**

<b>Extension of Time period</b>	<b>Maximum limit of Price Variation</b>
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If original period of 11 Months <b>including monsoon</b> extends to 16. The operative period will be 11+5 Months	No Variation allowed
If original period of 11 Months <b>excluding monsoon</b> extends to 16. The operative period will be 11+5 Months	5%

Price Variation during Extended Period of Contract:

**i. Extension Due To Modification & Extension for delay due to MCGM :**

The price variation for the period of extension granted shall be limited to the amount payable as per the Indices. In case the indices increases or decreases, above/below the indices applicable, to the last month of the original or extended period vide clause 8(l)(a)(i) and (ii) of standard GCC

**ii. Extension Of Time For Delay Due To Contractor :**

a) The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increase, above the indices applicable, to the last month of the original completion period or the extended period vide above clause 8(l)(a)(i) and (ii) of standard GCC.

b) The price variation shall be limited to the amount payable as per the indices, in case the indices decrease or fall below the indices applicable, to the last month of original / extended period of completion period vide above clause 8(l)(b) of standard GCC, then lower indices shall be adopted.

**iii. Extension of Time For Delay due to reasons not attributable to MCGM and Contractor (Reference Cl. 8 (d) of Standard GCC):**

The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increases or decreases, above/below the indices applicable, to the last month of the original period.

**80. Payment:**

**Interim Payment:**

(i) Interim bills shall be submitted by the Contractor from time to time (but at an interval of not less than one month) for the works executed. The Engineer shall arrange to have the bills verified by taking or causing to be taken, where necessary, the requisite measurement of work.

(ii) Payment on account for amount admissible shall be made on the Engineer certifying the sum to which the Contractor is considered entitled by way of interim payment for all the work executed, after deducting there from the amount already paid, the security deposit / retention money and such other amounts as may be deductible or recoverable in terms of the contract.

(iii) On request, the contractor will be paid upto 75 percent of the value of the work carried out as an adhoc payment in the first week of next month after deducting there from recoveries on account of advances, interest, retention money, income tax etc. The balance payment due will be paid thereafter.

(iv) No interim payment will be admitted until such time the Contractor have fully complied with the requirement of the Condition no. 8 (g) and 8 (h) concerning submission and approval of Network Schedule for the works, as detailed in Condition 8 (h). A fixed sum shall be held in abeyance at the time of next interim payment for non-attainment of each milestone in the network and shall be released only on attainment of the said milestone.

(v) An interim certificate given relating to work done or material delivered may be modified or corrected by a subsequent interim certificate or by the final certificate. No certificate of the Engineer supporting an interim payment shall of itself be conclusive evidence that any work or materials to which it relates is / are in accordance with the contract.**Banning/ De-Registration of Agencies of Construction works in MCGM**

**\* The regulations regarding Demotion/ Suspension Banning for specific period or permanently / De-Registration shall be governed as per the respective condition in Contractor Registration Rules of MCGM.**

### **81. JOINT VENTURE**

**In case if Joint Venture is allowed for the Project, the guidelines for JV as follows shall be incorporated in the Tender Document :**

- a) Joint Venture should be allowed only when the number of identifiable different works is more than one and/or the estimated cost of tender is **more than Rs.100 Crore**. JV shall also be allowed for complex technical work below Rs.100 Crores with the approval of concerned AMC
- b) Separate identity/name shall be given to the Joint Venture firm.
- c) Number of members in a JV firm shall not be more than three in normal circumstances, if the work involves only one discipline (say Civil or Electrical). If number of members in JV is required to be more than three, then approval of concerned AMC needs to be sought.
- d) A member of JV firm shall not be permitted to participate either in individual capacity or as a member of another JV firm in the same tender.
- e) The tender form shall be purchased and submitted in the 'name of the JV firm or any constituent member of the JV.
- f) Normally EMD shall be submitted only in the name of the JV and not in the name of constituent member. However, EMD in the name of lead partner can be accepted subject to submission of specific request letter from lead partner stating the reasons for not submitting the EMD in the name of JV and giving written confirmation from the JV partners to the effect that the EMD submitted by the lead partner may be deemed as EMD submitted by JV firm.
- g) One of the members of the JV firm shall be the lead member of the JV firm who shall have a majority (at least 51%) share of interest in the JV firm. The other members shall have a share of not less than 20% each in case of JV firms with up to three members and not less than 10% each in case of JV firms with more than three members. In case of JV firm with foreign member(s), the lead member has to be an Indian firm with a minimum share of 51%.
- h) A copy of Letter of Intent or Memorandum of Understanding (MoU) executed by the JV members shall be submitted by the JV firm along with the tender. The complete details of

the members of the JV firm, their share and responsibility in the JV firm etc. particularly with reference to financial technical and other obligation shall be furnished in the agreement.

i) Once the tender is submitted, the agreement shall not be modified/alterd/terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited. In case of successful tenderer, the validity of this agreement shall be extended till the currency of the contract expires.

j) Approval for change of constitution of JV firm shall be at the sole discretion of the MCGM. The constitution of the JV firm shall not be allowed to be modified after submission of the tender bid by the JV firm except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. In any case the Lead Member should continue to be the Lead Member of the JV firm. Failure to observe this requirement would render the offer invalid.

k) Similarly, after the contract is awarded, the constitution of JV firm shall not be allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract condition.

l) On award of contract to a JV firm, a single Performance Guarantee shall be required to be submitted by the JV firm as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization advance, machinery Advance etc. shall be accepted only in the name of the JV firm and no splitting of guarantees amongst the members of the JV firm shall be permitted.

m) On issue of LOA, an agreement among the members of the JV firm (to whom the work has been awarded) has to be executed and got registered before the Registrar of the Companies under Companies Act or before the Registrar / Sub-Registrar under the Registration Act, 1908. This agreement shall be submitted by the JV firm to the MCGM before signing the contract agreement for the work. (This agreement format should invariably be part of the tender condition). In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited and other penal actions due shall be taken against partners of the JV and the JV. This joint venture agreement shall have, inter-alia, following clauses:-

i. **Joint and several liability** - The members of the JV firm to which the contract is awarded, shall be jointly and severally liable to the Employer (MCGM) for execution of the project in accordance with General and Special conditions of the contract. The JV members shall also be liable jointly and severally for the loss, damages caused to the MCGM during the course of execution of the contract or due to no execution of the contract or part there- of.

ii. **Duration of the Joint Venture Agreement** -It shall be valid during the entire period of the contract including the period of extension if any and the maintenance period after the work is completed.

iii. **Governing Laws** - The Joint Venture Agreement shall in all respect be governed by and interpreted in accordance with Indian Laws.

iv. **Authorized Member** -Joint Venture members shall authorize one of the members on behalf of the Joint Venture firm to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to

this authorized member of the JV firm. No member of the Joint Venture firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the employer in respect of the said tender/contract. **Documents to be enclosed by the JV firm along with the tender:**

- v. In case one or more of the members of the JV firm is/are partnership firm(s), following documents shall be submitted:
  - a. Notary certified copy of the Partnership Deed,
  - b. Consent of all the partners to enter into the Joint Venture Agreement on a stamp paper of appropriate value (in original).
  - c. Power of Attorney (duly registered as per prevailing law) in favor of one of the partners to sign the MOU and JV Agreement on behalf of the partners and create liability against the firm.
- vi. In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:
  - a. Affidavit on Stamp Paper of appropriate value declaring that his Concern is a Proprietary Concern and he is sole proprietor of the Concern OR he is in position of "KARTA" of Hindu Undivided Family and he has the authority, power and consent given by other partners to act on behalf of HUF.
  - vii. In case one or more members is/are limited companies, the following documents shall be submitted:
    - a. Notary certified copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement, authorizing MD or one of the Directors or Managers of the Company to sign MOU, JV Agreement, such other documents required to be signed on behalf of the Company and enter into liability against the company and/or do any other act on behalf of the company.
    - b. Copy of Memorandum and articles of Association of the Company.
    - c. Power of Attorney (duly registered as per prevailing law) by the Company authorizing the person to do/act mentioned in the para
      - (a) above.
  - n) All the members of the JV shall certify that they have not been black listed or debarred by MCGM from participation in tenders/contract in the past either in their individual capacity or the JV firm or partnership firm in which they were members / partners.
  - o) Credentials & Qualifying criteria: Technical and financial eligibility of the JV firm shall be adjudged based on satisfactory fulfillment of the following criteria:

**Technical eligibility criteria:** In case of Work involving single discipline, the Lead member of the JV firm shall meet at least 35% requirement of technical capacity as stipulated in tender document.

**OR**

In case of composite works (e.g. works involving more than one distinct component such as Civil Engineering works, M&E works, Electrical works, etc. and in the case of major

bridges, substructure and superstructure etc.), at least one member should have satisfactorily completed 35% of the value of any one component of the project work so as to cover all the components of project work or any member having satisfactorily completed 35% of the value of work of each component during last seven financial years.

**In such cases, what constitutes a component in a composite work shall be clearly defined as part of the tender condition without any ambiguity.**

**Financial eligibility criteria:** The contractual payments received by the JV firm or the arithmetic sum of contractual payments received by all the members of JV firm in any one of the previous three financial years and shall be at least **100% of the estimated value** of the work as mentioned in the tender.

## 82. Penalty for delay:

Following schedule is strictly to be followed during the execution of work. If the time line given are missed then penalty as follows will be impose to the perspective bidder.

The delay penalty will not be carried forward. Delay for respective activity will only be considered.

Sr. No	Schedule of activity to be completed	Time line	Cumulative. Time	Penalty
1	Preliminary work such as soil investigation, detailed design such as structural and architectural etc barricading, demolition of existing structure, mobilization, Etc.	1 Month	1 Month	0.5% Contract Cost Per week & Part thereof
2	Excavation, foundation work up to ground level Etc	2 Months	3 Month	0.5% Contract Cost Per week & Part thereof
3	Completion up to plinth/stilt/top of basement Etc	1 Months	4 Month	0.5% Contract Cost Per week & Part thereof
4	Completion work of RCC frame work/ upto final Top Level	8 Months	12 Month	0.5% Contract Cost Per week & Part thereof
5	Completion of Brick Work, plumbing, laying of electrical conduits Etc	3.5Months	15.5 Month	0.5% Contract Cost Per week & Part thereof
6	Completion of finishing items such as plaster, flooring, painting, installation of lift firefighting Etc	2Months	17.5 Month	0.5% Contract Cost Per week & Part thereof
7	Handing over after full completion in all respect to MCGM staff	15 Days	18 Month	0.5% Contract Cost Per week & Part thereof

After penalty at each stage, the schedule has to be re-aligned.

Maximum amount of penalty shall not exceed 10% of contract sum.

MCGM reserves the right to terminate the contract once 10% penalty is reached.

If the Contractor fails to complete the works and clear the site on or before the Contract or extended date(s) / period(s) of completion, he shall, without prejudice to any other right or remedy of Municipal Corporation on account of such breach, pay as agreed compensation, amount calculated as stipulated below (or such smaller amount as may be fixed by the Engineer) on the contract value of the whole work or on the contract value of the time or group of items of work for which separate period of completion are given in the contract and of which completion is delayed for every week that the whole of the work of item or group of items of work concerned remains uncompleted, even though the contract as a whole be completed by the contract or the extended date of completion. For this purpose the term 'Contract Value' shall be the value of the work at Contract Rates as ordered including the value of all deviations ordered:

\*——Completion period for projects (originally stipulated or as extended) exceeding 6 months and not exceeding 2 years: **to the extent of maximum 1 percent per week.**

When the delay is not a full week or in multiple of a week but involves a fraction of a week the compensation payable for that fraction shall be proportional to the number of days involved.

Provided always that the total amount of compensation for delay to be paid this condition shall not exceed the under noted percentage of the Contract Value of the item or group of items of work for which a separate period of completion is given.

**(i)** Completion period (as originally stipulated or as extended) exceeding 6 months and not exceeding 2 years : **7½ percent.**

The amount of compensation may be adjusted set off against any sum payable to the contractor under this or any other contract with the Municipal Corporation.

**- penalty to be proposed by executive engineer and imposed by Deputy chief engineer**

**-Appeal:**

**I) Contractor can appeal against the penalty imposed upto one crore to Jt. M.C. (SWM).**

**II) Contractor can appeal against the penalty imposed more than one crore to AMC (P).**

### **83. Action And Compensation Payable In Case Of Bad Work And Not Done As Per Specifications**

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in-charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Vigilance Department of the MCGM or any organization engaged by the MCGM for Quality Assurance and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in-charge of the work or to the officer of Vigilance Department, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 8.e. of the general condition of contract in section 9 of tender document (for Compensation for delay) for this default. In such case the Engineer-in Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the Engineer in charge may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in- Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

If the penalization amount exceeds maximum limit with respect to Clause 8.e of Standard General Conditions of Contract, then a show cause notice shall necessarily be issued to the contract as to why the contract should not be terminated.

*The above clause is summarized to make it easy to understand as follows:*

- 1. The Engineer-in-charge shall issue notice to the contractor for rectifying the defects or redoing of the work if necessary, within specific time to achieve the desired quality and quantity of the work and this should be governed by clause 8.f and 9.b of Stand-ard General Conditions of Contract.*
- 2. If the contractor fails to comply the same, only then, the contractor shall be liable to pay compensation at the same rate as under clause 8.e of the Standard General Condition of Contract (for Compensation for delay) for this default.*
- 3. If the penalization amount exceeds the maximum limit, then the contractor will be liable for being banned/ deregistered from business dealings with MCGM and this shall be governed by relative provision in Registration Rules of MCGM and Standard Gen-eral Conditions of Contract.*
- 4. This penalization shall be levied only on account of delay in work, unsound, imperfect or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of quality inferior to that contracted for or otherwise not in accordance with the con-tract.*

## **86. Contractors remain liable to pay compensation:**

In any case in which any of the powers conferred upon the Engineer In-charge by the **relevant clauses** in documents that form a part of contract as exercised or is exercisable in the event of any future case of default by the Contractor, he is declared liable to pay compensation amounting to the whole of his security deposit. The liability of the Contractor for past and future compensation shall remain unaffected.

In the event of the Executive Engineer taking action against these **relevant clauses**, he may, if he so desires, take possession of all or any tools and plant, materials and stores in or upon the work of site thereof or 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, or in the case of contract rates not being applicable at current market rates to be certified by the Executive Engineer, may after giving notice in writing to the Contractor or his staff of the work or other authorized agent require him to remove such tools and plants, materials or stores from the premises within a time to be specified in such notice and in the event of the Contractor failing to comply with any such requisition, the Executive Engineer may remove them at the contractors expense of sell them by auction or private sell on account of the Contractor at his risk in all respects and certificate of the Executive Engineer as to the expense of any such removal and the amount of the proceeds an expense of any such sell be final and conclusive against the Contractor.

## **87.No Claim To Any Payment Or Compensation Or Alteration In Or Restriction Of Work**

a) If at any time after the execution of contract documents, the Engineer shall for any reason whatsoever, desires that the whole or any part of the works specified in the Tender should be suspended for any period or that the whole or part of the work should not be carried out, at all, he shall give to the Contractor a Notice in writing of such desire and upon the receipt of such notice, the Contractor shall forthwith suspend or stop the work wholly or in part as required after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury the work already done or endanger the safety thereof, provided that the decision of the Engineer as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the contractor.

The Contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.

b) Where the total suspension of Work Order as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving 10 days prior notice in writing to the Engineer within 30 days of the expiry of the said period of 90 days, of such intention and requiring the Engineering to record the final measurement of the work already done and to pay final bill. Upon giving such Notice, the Contractor shall be deem to have been discharged from his obligations to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the contractor within a period of 90 days from the receipt of such Notice in respect of the work already done by the

contractor. Such payment shall not in any manner prejudice the right of the contractor to any further compensation under the remaining provisions of this clause.

c) Where the Engineer required to Contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate, the Contractor shall be entitled to apply to the Engineer within 30 days of the resumption of the work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained ideal on the site of on the account of his having an to pay the salary of wages and labour engaged by him during the said period of suspension provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate or such suspension or in respect of any such suspension whatsoever occasion by unsatisfactory work or any other default on his part, the decision of the Engineer in this regard shall be final and conclusive against the contractor.

### **88. Contractor to supply plant, ladder, scaffolding, etc and is liable for damages arising from non provision of lights, fencing, etc.**

The Contractor shall supply at his own cost all material, plant, tools, appliances, implements, ladders, cordage, tackle scaffolding and temporary works requisite or proper for the proper execution of the work, whether, in the original altered or substituted form and whether included in the specification of other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with the requirements of the Eng-In-Charge as to any matter as to which under these conditions is entitled to be satisfied, or which is entitled to require together with the carriage therefore to and from the work.

The Contractor shall also supply without charge, the requisite number of person with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurements of examination at any time and from time to time of the work or materials, failing which the same may be provided by the Engineer In- charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof, or offers sufficient portion thereof.

The contractor shall provide all necessary fencing and lights required to protect the public from accident and shall also be bound to bear the expenses of defence of every suit, action or other legal proceedings, that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit action or proceedings to any such person or which may with the consent of the contractor be paid for compromising any claim by any such person

### **89. Prevention of Fire :**

The contractor shall not set fire to any standing jungle, trees, brushwood or grass without a written permit from the Engineer In-charge. When such permit is given, and also in all cases when destroying cut or dug up trees brushwood, grass, etc., by fire, the contractor shall take necessary measure to prevent such fire spreading to or otherwise

damaging surrounding property. The Contractor shall make his own arrangements for drinking water for the labour employed by him.

**90.** Compensation for all damages done intentionally or unintentionally by contractor's labour whether in or beyond the limits of MCGM property including any damage caused by spreading the fire shall be estimated by the Engineer In-charge or such other officer as he may appoint and the estimate of the Engineer in-charge to the decision of the Dy. Chief Engineer on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand failing which the same will be recovered from the Contractor as damages or deducted by the Engineer In-charge from any sums that may be due or become due from MCGM to contractor under this Contract or otherwise. Contractor shall bear the expenses of defending any action or other legal proceedings that may be brought to prevent the spread of fire and he shall pay any damages and costs that may be awarded by the Court in consequence.

**91.** In the case of Tender by partners, any change in the constitution of the firm shall be forthwith, notified by the contractor through the Engineer In-charge for his information.

**92. Action where no specifications :**

In the case of any class of work for which there is no such specifications, such works shall be carried out in accordance with the specifications and in the event of there being no such specifications, then in such case, the work shall be carried out in all respects in accordance with all instructions and requirements of the Engineer In- charge.

**93.Safety and medical help :**

(i) The Contractor shall be responsible for and shall pay the expenses of providing medical help to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by MCGM, the same shall be recoverable from the contractor forthwith and be included without prejudice to any other remedy of MCGM from any amount due or that may become due to the Contractor.

(i) The contractor shall provide necessary personal safety equipment and first-aid box for the use of persons employed on the site and shall maintain the same in condition suitable for immediate use at any time.

( i) The workers shall be required to use the safety equipments so provided by the contractor and the contractor shall take adequate steps to ensure the proper use of equipments by those concerned.

(iv) When the work is carried on in proximity to any place where there is risk or drawing all necessary equipments shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.

**94.** No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or in the case of clearance of works, on account of ant delay in according to sanction of estimates.

**95. Anti-malaria and other health measures:**

Anti-Malaria and other health measures shall be taken as directed by the Executive Health Officer of MCGM. Contractor shall see that mosquitogenic conditions are created

so as to keep vector population to minimum level. Contractor shall carry out anti-malaria measures in the area as per the guidelines issued by the Executive Health Officer of MCGM from time to time.

In case of default, in carrying out prescribed anti-malaria measures resulting in increase in malaria incidence, contractor shall be liable to pay MCGM on anti- malaria measures to control the situation in addition to fine.

**SECTION 10**  
**SPECIFICATIONS**  
**& SELECTION OF**  
**MATERIAL**

## **SPECIFICATIONS & SELECTION OF MATERIAL**

The tender is prepared on the basis of Unified Schedule of Rates and specifications 2013. The specifications of the items of USOR are available on MCGM portal <http://portal.mcg.gov.in> under the Tender tab. Hence the deserving contractor shall either download the same from MCGM portal or the same may be collected in the soft copy format at the time of purchasing the tender from this office.

### **SELECTION OF MATERIAL**

1. All materials brought on the site of work and meant to be used in the same, shall be the best of their respective kinds and to the approval of the Engineer. The Engineer or his representative will accept that the materials are really the best of their kinds, when it is proved beyond doubt that no better materials of the particular kind in question are available in the market.
2. The contractor shall obtain the approval of the Engineer of samples of all materials to be used in the works and shall deposit these samples with him before placing an order for the materials with the suppliers. The materials brought on the works shall conform in every respect to their approved samples. Fresh samples shall be deposited with the Engineer whenever the type or source of any material changes.
3. The contractor shall check each fresh consignment of materials as it is brought to the site of works to see that they conform in all respects to the Specifications of the samples approved by the Engineer, or both.
4. The Engineer will have the option to have any of the materials tested to find out whether they are in accordance with the Specifications and the Contractor will bear all expenses for such testing. All B bills, vouchers and test certificates, which in the opinion of the Engineer or his representative are necessary to convince him as to the quality of the materials or their suitability shall be produced for his inspection when required.
5. Any materials that have not been found to conform to the specifications will be rejected forthwith and shall be removed from the site by the contractor at his own cost within 24 hours.
6. The Engineer shall have power to cause the Contractors to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.
7. **Notwithstanding the source, the sand shall be washed using sand washing machine before use.**

**SPECIFICATIONS & SELECTION OF**  
**MATERIAL i.e MINIMUM**  
**SPECIFICATIONS**

		<b>MINIMUM FACILITIES to be provided PER TENEMENT</b>		
<b>A) Total Carpet Area - Residential tenement</b>		<b>300 sq.ft. (27.87 sq.mt.)</b>	<b>600 sq.ft. (55.76 sq.mt.)</b>	<b>Make</b>
		- Living room (1 No.)	- Living room (1 No.)	All the smple of amterials, fittings, finishes etc. shall be got approved before execution from Chief Engineer and Municipal Architect
		- Bedroom (1 No.)	- Bedroom (2 No.)	
		- Cooking Alcove (1 No.)	- kitchen (1 No.)	
		- Bathroom (1 No.)	- Bathroom (2 No.)	
		- W.C. (1 No.)	- W.C. (2 No.)	
		- Wash Basin (1 No.)	- Wash Basin (2 No.)	
<b>1) Living room/ Bedroom</b>	Flooring	<ul style="list-style-type: none"> <li>Vitrified flooring of size of minimum 600 mm x 600 mm with 100 mm high skirting.</li> <li>Interior wall finish should be with 3 coats Royale Luxury Emulsion paint of</li> <li>Solid core both side laminate door having fire resistance of not less than 1 hour. The door to be provided with a mortice lock of Godrej/Everite/Prima/Plaza/Harrison or equivalent, an eye hole with lensed eye piece, 6" handle on both sides, one tower bolt of 10" on inner side, safety chain, Godrej/Everite/Prima/Plaza/ Harrison or equivalent lock for each tenements and common facility rooms.</li> <li>Min 1.5 m x 1.2 m high Anodized Aluminum sliding window with mosquito jali having 3 glass shutters &amp;</li> </ul>	<ul style="list-style-type: none"> <li>Vitrified flooring of size of minimum 600 mm x 600 mm with 100 mm high skirting.</li> <li>Interior wall finish should be with 3 coats Royale Luxury Emulsion paint of</li> <li>Solid core both side laminate door having fire resistance of not less than 1 hour. The door to be provided with a mortice lock of Godrej/Everite/Prima/Plaza/Harrison or equivalent, an eye hole with lensed eye piece, 6" handle on both sides, one tower bolt of 10" on inner side, safety chain, Godrej/Everite/Prima/Plaza/ Harrison or equivalent lock for each tenements and common</li> <li>facility rooms.</li> <li>Min 1.5 m x 1.2 m high</li> </ul>	<ul style="list-style-type: none"> <li>Flooring: Kajaria/Johnson /Nitcon/Orient/Modern/ Somany.</li> <li>Asian/Berger/ Nerolac/Dulux paints.</li> <li>Door: As specified</li> <li>All door fixtures shall be of brushed stainless Steel of reputed Make.</li> <li>Electrical switches: Havells / Roma / Anchor.</li> <li>Electrical wiring: Polycab, Finolex.</li> </ul>
	Painting			
	Doors			
	Windows			
	Electrical			

		one mosquito jalli shutters).	Anodized Aluminum sliding window with mosquito jali having 3 glass shutters & one mosquito jalli shutters).	
		<ul style="list-style-type: none"> <li>Minimum 2 light points, 1 fan point, 1 cable T. V. point, 1 bell point (in living room only) and 5 Amp. point in each room.</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 2 light points, 1 fan point, 1 cable T. V. point, 1 bell point (in living room only) and 5 Amp. point in each room.</li> </ul>	
<b>2) Cooking Alcove</b>	Flooring  Painting	<ul style="list-style-type: none"> <li>Vitrified flooring of minimum size 600 mm x 600 mm with 100 mm high skirting.</li> </ul>	<ul style="list-style-type: none"> <li>Vitrified flooring of minimum size 600 mm x 600 mm with 100 mm high skirting.</li> </ul>	<ul style="list-style-type: none"> <li>Flooring: Kajaria/Johnson/Nitcon/Orient/Modern/Somany.</li> <li>Asian/Berger/Nerolac/Dulux</li> </ul>
	Windows	<ul style="list-style-type: none"> <li>Interior wall finish should be with 3 coats of Royale Luxury Emulsion</li> </ul>	<ul style="list-style-type: none"> <li>Interior wall finish should be with 3 coats of Royale Luxury Emulsion</li> </ul>	<ul style="list-style-type: none"> <li>paints or equivalent.</li> </ul>
	Cooking platform	<ul style="list-style-type: none"> <li>1.2 m x 1.2 m Anodized Aluminum glass sliding window with provision of exhaust fan.</li> <li>Min. size 1.8 m x 0.6 m width finished with Polished Granite Platform with Stainless Steel sink of size 450 mm x 450 mm and ceramic tile dado upto min 1200 mm above platform level till window top level for the length of the platform.</li> </ul>	<ul style="list-style-type: none"> <li>1.2 m x 1.2 m Anodized Aluminum glass sliding window with provision of exhaust fan.</li> <li>Min. size 1.8 m x 0.6 m width finished with Polished Granite Platform with Stainless Steel sink of size 450 mm x 450 mm and ceramic tile dado upto min 1200 mm above platform level till window top level for the</li> </ul>	

			length of the platform.	
	Plumbing Electrical	<ul style="list-style-type: none"> <li>• 'C' class, concealed plumbing lines PVC Pipes, PVC Nahani trap with cover plate below sink.</li> </ul>	<ul style="list-style-type: none"> <li>• 'C' class, concealed plumbing lines PVC Pipes, PVC Nahani trap with cover plate below sink.</li> </ul>	<ul style="list-style-type: none"> <li>• Plumbing: I.S.I. quality (Watertec Pvt. Ltd, Finolex Industries Ltd.)</li> </ul>
		<ul style="list-style-type: none"> <li>• 2 light points, 1 fan point, 1 exhaust fan point, 2 plug point of 5 amps and an additional point of 15 Amps.</li> </ul>	<ul style="list-style-type: none"> <li>• 2 light points, 1 fan point, 1 exhaust fan point, 2 plug point of 5 amps and an additional point of 15 Amps.</li> </ul>	<ul style="list-style-type: none"> <li>• Electrical switches: Havels/Roma/ Anchor.</li> <li>• Electrical wiring: Polycab, Finolex.</li> </ul>
<b>3) Bath &amp; WC</b>	Flooring Door Frame	<ul style="list-style-type: none"> <li>• Anti skid tiles for bath &amp; WC flooring of size 600mm X 600mm and dado of vitrified tiles 600 mm x 600 mm upto full height.</li> </ul>	<ul style="list-style-type: none"> <li>• Anti skid tiles for bath &amp; WC flooring of size 600mm X 600mm and dado of vitrified tiles 600 mm x 600 mm upto full height.</li> </ul>	<ul style="list-style-type: none"> <li>• Flooring:Kajaria/Johnson/Nitcon/Orient/Modern/Somany</li> </ul>
	Doors Shutters	<ul style="list-style-type: none"> <li>• Granite Frame in double patti as per specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Granite Frame in double patti as per specifications</li> </ul>	<ul style="list-style-type: none"> <li>• FRP Door approved by</li> </ul>
	Plumbing Windows Electrical	<ul style="list-style-type: none"> <li>• FRP door Shutters of size 0.75m x 2.10 m.</li> <li>• Concealed plumbing of 'C' class PVC pipes.</li> <li>• Brass with C. P. Shower</li> <li>• 0.6 m x 0.9 m Anodized Aluminum windows with translucent glass</li> </ul>	<ul style="list-style-type: none"> <li>• FRP door Shutters of size 0.75m x 2.10 m.</li> <li>• Concealed plumbing of 'C' class PVC pipes.</li> <li>• Brass with C. P. Shower</li> <li>• 0.6 m x 0.9 m Anodized Aluminum windows with translucent glass</li> </ul>	<ul style="list-style-type: none"> <li>• MCGM.</li> <li>• Plumbing: I.S.I quality (Watertec Pvt. Ltd., Finolex Industries Ltd.)/Zenith/Jain KOHLER/Jaquar.</li> </ul>
	Exhaust Fan	louveres on granite frame provided with exhaust fan point	louveres on granite frame provided with exhaust fan point	<ul style="list-style-type: none"> <li>• Electrical</li> </ul>
	WC	<ul style="list-style-type: none"> <li>• 1 power plug for geyser (in bathroom) and 1 light point each in bathroom &amp; WC.</li> </ul>	<ul style="list-style-type: none"> <li>• 1 power plug for geyser (in bathroom) and 1 light point each in bathroom &amp; WC.</li> </ul>	<ul style="list-style-type: none"> <li>wiring: Polycab, Finolex.</li> <li>• Sanitaryware: Jaquar, Cera, Parryware.</li> </ul>
		<ul style="list-style-type: none"> <li>• 1 Exhaust fan point for both W.C. and bath</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Exhaust fan point for both W.C. and bath</li> </ul>	<ul style="list-style-type: none"> <li>• Bath &amp; WC</li> </ul>
		<ul style="list-style-type: none"> <li>• Indian Orissa pan 23" size with 15 liters concealed flushing tank.</li> </ul>	<ul style="list-style-type: none"> <li>• Indian Orissa pan 23" size with 15 liters concealed flushing tank.</li> </ul>	<ul style="list-style-type: none"> <li>areas shall be made water tight with grouting and water proof</li> </ul>

				treatment.
<b>The amenities i. e. Balwadis, Welfare halls ,Society offices etc shall be provided as per provisions in DCR following above mentioned specifications.</b>				
4) All mild steel work will be finished with 2 coats of enamel paint over one coat of anti rust primer.				
5) All Rain water waste and soil pipes shall be in UPVC for all upper floors & C.I. for ground / Stilt floor.				
6) All windows will be well protected by mean of R.C.C. Chajja (or R.C.C inset/ boxing) of at least 450 mm.				
<b>General:</b>				
<p>1) All internal walls/ceiling shall be form finished exposed concrete with neat cement primer or brick masonry with min 12 mm thk cement plaster (including on R.C.C. structural members.)</p> <p>2) Internal surface (wherever not dadoed or tiled) will be finished with two coats of oil bound distemper of approved shade and color over a coat of primer and one coat of Birla putty.</p> <p>3) Window/ louvered window will be provided with 18 mm thk polished granite/ pre-cast concrete at sill, sides and top of window including Concrete at sill.</p> <p>4) All electrical/TV wiring shall run through PVC casing/capping, copper wiring.</p> <p>5) All taps/ faucets will be of brass with chromium plating.</p> <p>6) All door hinges and hardware will be of brass with chromium plating.</p> <p>7) Kotah stone wherever used shall be min 25 mm thick with uniform greenish colour.</p> <p>8) Rectified &amp;Vitrified /Ceramic tiles wherever used shall be first quality of uniform size, colour and edges evenly leveled.</p> <p>9) Fixed Box Type M.S. Grill (of opening not more than 100 mm) to be provided on outside of all windows and at least 300 mm outer distance to be maintained for Box grill. The M.S. Grill shall be made up of 12 mm x 12 mm square bars welded to M.S. flats 4 mm thk. Anti corrosive treatment to the steel reinforcement as per Cement Polymer Composite Coating (C.P.C.U.) method developed by C.E.C.R.I. including cleaning the bar means of any established mechanical or manual method or as per detailed PWD Specifications.</p> <p>10) The all steel REINFORCEMENT bars used should be Fusion Bonded Epoxy Coating (FBEC) as per IS: 13620-1993 Specifications.</p>				

<b>Item Specification for Civil/structural/plumbing/fire fighting works and General works</b>				

Sr. No.	MCGM Bldg. USOR 2018	Description	Unit	Remark
		<b>Part A : Civil Works</b>		
		Note:		
		Tenderers are advised to visit the site and acquaint themselves with the existing site conditions before quoting		
1	R2-CS-RM-72	To carry out total station survey of open plot with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking the traverse on open plot by nails, carrying out detailed levelling at a longitudinal and lateral interval of 10m(i.e. forming grid of 10mx10m), plotting cross sections, cross distance, preparing drawings on Auto cad to the scale of 1:500, mentioning all the dimensions on the plan,super imposing CTS plan/DP remarks/demarcation plan and supplying 3 hard copies and 1 soft copy in C.D. form.. etc.	upto 1000 Sqm	
2	R2-CS-RM-73	--do-- for every additional 1000sqm area or part thereof	each 1000 Sqm	
		<b>Excavation.</b>		
3	R2-CS-EW-5	Excavation by using splitters for foundations, substructures, base-ments, tanks, sumps, walls, chambers, manholes, trenches, poles, pits & general building works in hard rock, reinforced concrete, for depths/lifts upto 1.5M, including drilling, breaking in small pieces, mucking, dressing/trimming the sides, leveling of bottoms, manual dewatering, removing rank vegetation, backfilling in layers not more than 200mm thickness, watering, consolidating, compacting to achieve not less then 97% Modified Proctor density conforming to relevant IS, stacking in measurable heaps for future use within owners space or disposing within an initial lead of 150m as directed by Engineer-in-Charge, loading, unloading, leveling excluding shoring, strutting etc. complete. Note: 1) The rate includes the handling/supporting the existing utilities such as cables, drains, pipes, water mains etc. 2) It also includes the royalty and other taxes if any.	cum	
4	R2-CS-EW-11	Filling in plinth, floors, trenches, pits with approved excavated materials, murum / good earth in layers not exceeding 200mm including breaking of clods, watering, consolidating each layer in filled up area by rolling and compacting with roller/ plate compactor as required to achieve not less than 97% modified proctor density conforming to relevant IS etc. complete as directed by Engineer In charge. Note: 1) The rate includes the royalty and other taxes if any.	cum	
5	R2-CS-EW-25	Providing and Laying 230mm thick Rubble Stone for Pitching on sloping ground or wherever directed, properly arranging and placing the rubble stones to achieve a plane top surface, set in regular line & slope, including breaking, laying gravel, quarry spells underneath and manually packing the voids	cum	

		with rubble chips, tuck pointing with cement mortar 1:2 up to 25mm deep, etc. complete as specified & as directed. (Note: The rate includes the royalty and other taxes if any)		
		<b>Concrete work</b>		
6	R2-CS-CW-3	Providing and laying in position ready mixed plain cement concrete, with cement content as per approved design mix by Engineer-in-charge and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work, including pumping of R.M.C. from transit mixer to site of laying and curing, including the cost of centering, shuttering and finishing, including cost of curing, admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge.		
	R2-CS-CW-3-a	All works upto plinth level.		
7	R2-CS-CW-3-a-1	M-20 grade plain cement concrete (cement content considered @ 260 kg/cum as per IS 456 table showing minimum cement content).	Cum	
	R2-CS-CW-7	Providing and laying in position ready mixed design mix M-20 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying and the cost of centering, shuttering, finishing and excluding reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. The Mix design as per particular specifications shall be got approved by Engineer-in-Charge before execution of the item. The rate shall include cost of all specified materials and operations at all levels and heights, including the cost of centering, shuttering and excluding reinforcement which shall be paid under relevant item. (Note :- Cement content considered in this item is @ 300 kg/cum as per IS 456 table showing minimum cement content. No extra will be paid nor any amount will recovered on account of variation of cement in mix design as per specifications for controlled concrete).		
		All works (including Centering & Shuttering)		
8	R2-CS-CW-7-a	Foundations, footings, bases of columns, rafts, pilecap	Cum	
9	R2-CS-CW-7-b	Walls (any thickness) including attached buttresses, retaining wall, shear wall, diaphragm wall, trench, pit walls, etc	Cum	
10	R2-CS-CW-7-c	Slabs, Suspended floors, roofs, landings, balconies, canopy and access platform	Cum	
11	R2-CS-CW-7-d	Lintels, beams, plinth beams, girders, floor beam, coping.	Cum	
12	R2-CS-CW-7-e	Columns, Pillars, Piers, Posts and Struts.	Cum	
13	R2-CS-CW-7-f	Stairs (waist slab), folded slab, inclined slab	Cum	
14	R2-CS-CW-7-g	Spiral staircases (including landing).	Cum	
15	R2-CS-CW-16	Extra and over for providing richer RMC of M-25 grade cement concrete instead of M20 (Note :- Cement content considered in this item is @ 330 kg/cum as per IS 456 table showing minimum cement content.)	Cum	
16	R2-CS-CW-17	Extra and over for providing richer RMC of M-30 grade cement concrete instead of M20 (Note :- Cement content considered in this item is @ 340 kg/cum as per IS 456 table showing minimum cement content.)	Cum	

17	R2-CS-CW-18	Extra and over for providing richer RMC of M-35 grade cement concrete instead of M20 (Note :- Cement content considered in this item is @ 350 kg/cum as per IS 456 table showing minimum cement content.)	Cum	
18	R2-CS-CW-19	Extra and over for providing richer RMC of M-40 grade cement concrete instead of M20 (Note :- Cement content considered in this item is @ 360 kg/cum as per IS 456 table showing minimum cement content.)	Cum	
19	R2-CS-CW-20	Extra and over for providing richer RMC of M-45 grade cement concrete instead of M20 (Note :- Cement content considered in this item is @ 435 kg/cum as per IS 456 table showing minimum cement content.)	Cum	
20	R2-CS-CW-21	Extra and over for providing richer RMC of M-50 grade cement concrete instead of M20 (Note :- Cement content considered in this item is @ 450 kg/cum as per IS 456 table showing minimum cement content.)	Cum	
	R2-CS-CW-35	Providing and fixing in position steel bars reinforcement of various diameters for R.C.C. pile, pile caps, footings,raft,retaining wall,shear wall, lift wall, foundations, slabs, beams, columns, canopies, staircases, newels, chajjas, lintels, pardies, coping, fins, arches, etc. as per detailed designs, drawings and bar bending schedules,including straightening, cutting, bending, hooking the bars, binding with wires or tack welding, supporting as required etc. all complete at all levels.		
21	R2-CS-CW-35-e	Corrosion Resistant Steel (500 CRS D)	MT	
		<b>Piling work</b>		
22	R2-CS-PLG-5.1	specified diameter and fabricated from 6.0mm to 8.0mm thick plates as per detailed drawings and designs including cutting, bending to required shape, welding, painting with Red Oxide paint etc. complete as specified and Directed.	MT	For pile foundation if req.
	R2-CS-PLG-1-1	(Part 1, Section 2) by boring through all kinds of soils/ Sand /Rock by rotary hydraulic rigs using temporary casing up to stable strata / bentonite mud circulation as specified, from tip to cut-off elevation of piles. Reinforced Cement Concrete work of filling the bore (after placement of reinforcement cage as per drawing) with M25 grade Ready Mix Concrete using 43 Grade Ordinary Portland Cement confirming to IS : 8112, of approved make and brand with minimum cement content of 400 kg/m <sup>3</sup> and with water -cement ratio, including the water contained in aggregates (10mm to max 20mm size), not exceeding 0.45, with approved plasticizer as specified, including placing of concrete from tip to minimum of 600mm above the specified cutoff level, breaking pile head to cutoff level and exposing pile reinforcement for embedment in pile cap, Disposing & levelling of bored/excavated material suitably at locations approved by the local authorities including all lead and lifts, all complete for piles having diameter of (Pile will be measured for payment for length between pile tip to cut-off level along the pile axis. Reinforcement shall be Note : Cost of temporary casing s phaaidl Bsee pinacruarterelyd) by the Contractor.		
23	R2-CS-PLG-1-1-a	500 mm	Rmt	
24	R2-CS-PLG-1-1-b	600 mm	Rmt	
25	R2-CS-PLG-1-1-c	750 mm	Rmt	
26	R2-CS-PLG-1-1-d	900 mm	Rmt	
	R2-CS-PLG-2-3	<b>Extra over rate for items CS-PLG-1 &amp; 2 for using M35 instead of M 25</b>		
27	R2-CS-PLG-2-3-a	400 mm	Rmt	

28	R2-CS-PLG-2-3-b	450 mm	Rmt	
29	R2-CS-PLG-2-3-c	500 mm	Rmt	
30	R2-CS-PLG-2-3-d	600 mm	Rmt	
31	R2-CS-PLG-2-3-e	750 mm	Rmt	
32	R2-CS-PLG-2-3-f	900 mm	Rmt	
33	R2-CS-PLG-14	Carrying out low strain pile integrity test on 300mm / 350 mm / 400mm diameter pile including all arrangements for test, equipments/accessories, materials, labour, submission of test report etc but excluding the cost of installation of job pile (installation of pile shall be paid seperately as per relevent items)all complete as per specification and as directed by the engineer-in-charge.	Nos	All pile should be tested.
34	R2-CS-PLG-14.1	450 mm	Nos	
35	R2-CS-PLG-14.2	500 mm	Nos	
36	R2-CS-PLG-14.3	600 mm	Nos	
37	R2-CS-PLG-14.4	750 mm	Nos	
38	R2-CS-PLG-14.5	900 mm	Nos	
	R2-CS-PLG-21	Conducting routine vertical load test for 1.5 times safe load carrying capacity by means of High Strain Dynamic Load Test including provision and erection of crane- hammer-drop mechanism, acceleration and displacement velocity transducers to record both force and velocity including excavation, dewatering, preparation of pile head including building up of pile, additional reinforcement if any etc. all complete as per approved method (ASTM D4945-89), submission of test report, specifications and instructions of the Engineer for piles of following diameter :		Min. 5% of total no. Of piles.
39	R2-CS-PLG-21.1	400 mm	Nos	
40	R2-CS-PLG-21.2	450 mm	Nos	
41	R2-CS-PLG-21.3	500 mm	Nos	
42	R2-CS-PLG-21.4	550 mm	Nos	
43	R2-CS-PLG-21.5	600 mm	Nos	
44	R2-CS-PLG-21.6	750 mm	Nos	

45	R2-CS-PLG-21.7	900 mm	Nos	
	R2-CS-PLG-20	Carrying out <b>Lateral Load Test</b> on single working pile up to maximum test load of <b>one and half times the safe load capacity</b> as specified in accordance with <b>IS 2911 part-4</b> including all necessary arrangements such as jacks, measuring devices, submission of test report etc. complete as required. (For this test two working piles will be considered as test piles. Arrangements shall be made to record deflection, etc. of both the piles. However, testing both these piles will be considered as one test only.		Min. 5% of total no. Of piles.
46	R2-CS-PLG-20.1	400 mm	Nos	
47	R2-CS-PLG-20.2	450 mm	Nos	
48	R2-CS-PLG-20.3	500 mm	Nos	
49	R2-CS-PLG-20.4	550 mm	Nos	
50	R2-CS-PLG-20.5	600 mm	Nos	
51	R2-CS-PLG-20.6	750 mm	Nos	
52	R2-CS-PLG-20.7	900 mm	Nos	
	R2-CS-PLG-22	Supplying Hot Rolled steel sheet piles having properties described in respective specifications or/ and shown in drawings (Z or U type with sectional modulus of minimum 2500 cm <sup>3</sup> , steel grade S430 GP with minimum yield strength of 430 MPa, minimum thickness 12.0 mm thickness, with Larssen interlocks and applying recommended sealant for complete watertightness (if required) & using suitable corner sections as per site condition) .Installing the same to line and level including making reformed steel sheet piles at required positions as corners, junction, wedges etc. as per approved drawing and specification in single or group jointing by welding properly, installing vertically along the alignment with the help of equipments like air compressors,excavator mounted / crane mounted vibro hammers / Impact Hammers / Hydraulic Pressing Hammers / vibrating drives powered by electric or hydraulic motor or combination of both based on the site requirements through the grooves to interlock together, wedges to make up for the permissible deviation of piles from the plumb lines caused during pile driving, slipped piles with the adjacent ones are found or loosened or dislocated during or after installation , sheet piles shall be pulled out and replaced with new ones or redone including necessary modification to the sheet pile to suit the grove of existing sheet piles , including cost and conveyance of all materials, hire charges of equipments, hire charges of crane/rigs, cost of electrodes, mobilisation and demobilisation charges, all labour, other incidentals etc complete. ( No extra payment shall be made for cost of extraction and replacement for installing of sheet pile deviating the specification or rejected by Engineer -in-charge. The rate is inclusive of providing guide frames, cost of installation pit, formation and removal of earthen bund etc.). Payment shall be made on actual depth of sheet pile installation.		If req.
53		Permanent sheet piles		
	R2-CS-			

54	PLG-22.1	(a) For depth 0 to 5 m below ground level	Sqm	
55	R2-CS-PLG-22.2	(b) For depth 0 to 10 m below ground level	Sqm	
56	R2-CS-PLG-22.3	(c) For depth 0 to 15 m below ground level	Sqm	
		<b>Water proofing</b>		
57	R2-CS-AT-01	Providing Pre-constructional anti-termite treatment conforming to IS-6313 (part II) using chloropyrifos EC 20 Emulsion or equivalent of 1% concentration by weight for creating barrier under and all around foundation pits, wall trenches, basement excavation, backfill in immediate contact with foundation and treating the top surface of plinth filling, junction of wall & floor, along the external perimeter of building, expansion joints, surrounding of pipes, water conduits and at places suggested and as directed by Engineer-In-Charge covering 10 years guaranty. (plinth area should be considered for measurement and payment.)	Sqm	
58	R2-CS-WP-20	Providing and laying damp-proof course 50mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	Sqm	
59	R2-CS-WP-33	Providing waterproofing treatment from outside to basement lift-pits and other under ground structures during construction. The treatment shall be started after the P.C.C. bedding for the base slab or raft slab is laid. On the P.C.C. bedding a waterproofing layer based on cement with rough shahabad stones of 20 to 25 mm thick well pointed in the joints with 1:3 C.S. 40 mm thick for floors and 20 mm thick for sides with cement float and water proofing compound as per specifications shall be laid. Then the surface shall be superimposed by regular R.C.C. raft or base slab as per design. After completion of the raft / base slab and side walls the treatment of waterproofing layer shall be continued along the outer surface of the walls upto a height of 30 cm above the adjacent ground level. (The excavation of the side around the walls shall be filled with soft earth by the contractor ). The total thickness of the treatment shall be 65 mm to 75 mm for floors and 32 mm to 38 mm for walls.	Sqm	For lift pit, basement & under ground storage tank.
		Note: (a) Where no space is available on the outer side of the walls, the following procedure shall be adopted :- Brick masonry walls of adequate strength shall be provided by the contractors at the outside level of the walls of basement. The treatment shall then be done as described above for flooring and on the inner face of the brick masonry upto a height of 30 cm above adjoining ground level. The surface shall then be superimposed by regular R.C.C.raft slab and walls. The thickness of the treatment for floor and walls shall be same as stated above.		
60	R2-CS-WP-27-a	Waterproofing the terrace slab and staircase roof slab with average 100 mm thick concrete of broken brick bats and cement mortar (1:4) in the proportion of 2 parts of brick bats and 1 part of mortar, laid in proper slope (1:100) well rammed, watered and consolidated with vata 15 cm at junction of walls and Indian patent stone flooring 1:2:3 (12.5 mm chips) 40 mm thick and with admixture of approved water proofing compound as per manufacturers specifications laid after grouting the surface of brickbat coba with neat cement slurry in alternate suitable squares to required slope as directed including filling in joints with bitumen and cleaning the slab top of all dust and loose material; tamping, finishing and curing complete as directed and specified. (Horizontal measurements clear between walls will be paid for).	Sqm	
		NOTE: (1) Expansion joints to be provided for the full depth. (2) Expansion joints to be so provided that the area of each bay does		

		not exceed 10 Sqm		
61	R2-CS-WP-38-a	Providing waterproofing treatment through specialized agencies to the dado portion of the R.C.C. side walls upto 1.5 m height from floor area of water closets, bath-rooms, kitchens, washing places, sanitary blocks etc. by giving „INJECTIONS“ treatment with waterproofing compound and cement solution. The walls will then be plastered with waterproof cement plaster in 1:4 c.s. 12 mm to 15 mm thk. Finally the walls shall be covered with jointless waterproof plaster in 1:3 c.s. 12 to 15 mm thick finished rough for receiving tiles. The average thickness of complete treatment shall not be less than 25 mm. (The actual treated area will be measured and paid for).	Sqm	For dado of WC, Bath, washing places & kitchen,etc. Upto full height.
62	R2-CS-WP-38-b	Do- -Do- brickwall without injection treatment.	Sqm	
63	R2-CS-WP-37	Providing waterproofing treatment through specialized agencies as per their specifications to the flooring of water closets, bathrooms, kitchen, nahanies, washing places, sanitary blocks etc. by giving INJECTIONS with cement solution with water proofing compound into the floor slab so as to make it consistent, homogeneous and impervious against leakage, seepage etc. The sunk portion shall then be covered with brickbat waterproof coba in 1:5 c.s. of required thickness with necessary gradient for easy flow of water. Finally the floor shall be covered with joint less waterproof cement plaster in 1:3 c.s. 12 mm to 15 mm thick finished rough for receiving tiles. The average thickness of complete treatment shall not be less than 100 mm. The soil pan area will not be deducted. ( After completion of work leakage test shall be carried out after impounding the water for 7 days without any extra cost. The actual treated area will be measured and paid for).	Sqm	
		<b>Masonry work</b>		
	R2-CS-MW-1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 3.5 and above in foundation and plinth in:		Brickwork upto plinth level.
64	R2-CS-MW-1-a	Cement mortar 1:3 (1 cement : 3 coarse sand)	Cum	
65	R2-CS-MW-33	Providing and laying autoclaved aerated (cellular) cement blocks masonry with more than 100 mm thick AAC blocks in cement mortar 1:4 (1 cement : 4 coarse sand ) including RCC stiffeners. The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work, racking of joints, scaffolding and curing,etc. completed as directed by Engineer-in-Charge.	Cum	Brickwork for superstructure.
		<b>Plaster</b>		
66	R2-CS-PL-03	Providing and applying 6 mm thick internal ceiling plaster in single coat in cement mortar 1:3 with white cemetecious wall putty (Birla white or equivalent) finish at all heights and locations for concrete surfaces including hacking of concrete surface, watering, finishing, curing, scaffolding etc. complete.	Sqm	All ceiling plaster.
	R2-CS-PL-08	Providing and applying 20 mm thick internal sand faced cement plaster at all heights and locations in cement mortar specified below in two coats for masonry (except stone masonry) and concrete surfaces including racking out joints, hacking of concrete surface, watering, finishing, curing, scaffolding etc complete as directed By Engineer In Charge.		All internal plaster.
67	R2-CS-PL-08-a	In cement mortar 1:2	Sqm	

	R2-CS-PL-17	Providing and applying 25 mm thick external sand faced cement plaster with neat cement rendering upto 10m from ground level and at all locations in cement mortar proportion specified below in two coats for masonry (except stone masonry) and concrete surfaces including providing <b>water proofing</b> compound to the first coat of plaster as per manufacturers specification, racking out joints, hacking of concrete surface, finishing, curing, scaffolding etc complete as directed By Engineer In Charge. Min. time lag between two coats shall be 24 hours.(as per IS 2402 of 1963.)		All external plaster.
68	R2-CS-PL-17-a	In Cement mortar 1:1	Sqm	
69	R2-CS-PL-25	Extra for every additional height of 3 m or part thereof above 10m from ground level for all types of external plastering.	Sqm	For external plaster only.
	<b>R2-CS-PN</b>	<b>PAINTING WORKS</b>		
		Note:- 1) Rates of all the items in painting section are inclusive of staging or scaffolding wherever necessary of any height for internal painting and upto 10m height from ground level for external painting. Refer separate item for additional external painting work above 10m from ground level. 2) The manufacturer's representative should be present when the work of waterproof cement paint is being carried out and guide to the labour staff of the contractors as regards the proportion of the mix of paint and water and method of applying the paint etc. is concerned. 3) The contractors must produce a certificate from the manufacturers that the work is carried out satisfactorily under the supervision of representative of the manufacturers and that requisite quality and quantity of cement paint as being actually used on the particular work and that the entire work has been carried out in a satisfactory and workmen like manner.		
70	R2-CS-PN-1	Providing and applying three coats of White/colour wash to any surface with lime wash prepared from quick lime of best quality by adding blue/colour pigments and glue of approved colour, quality in required quantities at all height and locations as directed including scaffolding, cleaning and preparing surfaces for painting with broom, coir and sand paper if necessary or by any other approved means etc. complete as directed by Engineer-in-charge.	Sqm	For lift pit, refuse area.
71	R2-CS-PN-6	Providing and applying first single coat of approved primer and two coats of luster paint of an approved make and colour as per manufacturers specifications to any surface, at all height and locations as directed including scaffolding, cleaning and preparing surfaces for painting by any approved means etc. complete as directed by Engineer-in-charge.	Sqm	for internal surface paint.
72	R2-CS-PN-15	Extra over item no. CS-PN-7 to CS-PN-12 on exterior painting work of height more than 10 m from ground level for additional height of 3m or part thereof.	Sqm	
	R2-CS-PN-4	Providing and applying first single coat of approved primer and two coats of synthetic enamel paint/flat oil paint of an approved make and colour as per manufacturers specifications to surfaces specified below, at all height and locations as directed including scaffolding, cleaning and preparing surfaces for painting by any approved means etc. complete as directed by Engineer-in-charge.		For WC, bath ceiling.
73	R2-CS-PN-4-a	For plastered wall surface	Sqm	
74	R2-CS-PN-10	Providing and applying first coat of approved Waterproof primer, and two coats of waterproof acrylic based textured exterior paint of an approved make and colour as per manufacturers specifications to textured sand faced or other surfaces, upto 10m height from ground level and at all locations as directed including preparing surfaces for painting by any approved means, scaffolding, cleaning and curing etc. com-	Sqm	For external surface paint.

		plete as directed by Engineer-in-charge.		
	R2-CS-PN-17	Lettering or numbering of 65 mm to 75mm height with synthetic enamel paint in any approved colour, style and pattern, including french polishing or synthetic enamel painting the back ground with three coats of approved colour etc. complete as directed by Engineer-in-charge.		
75	R2-CS-PN-17-b	With synthetic enamel / oil paint of golden colour	No	
	<b>R2-CS-FL</b>	<b>FLOORING WORKS</b>		
		Notes: 1) All the rates are include all necessary conveyance and delivery, handling, unloading, storing, fabrication, hoisting, scaffolding, lead, lift, all labour for finishing to required shape and size, setting, fitting and fixing in position, straight cutting and waste, return of package and other incidental operations.		
	R2-CS-FL-01	Providing and laying polished natural stone as specified below (Machine cut) of an approved quality and size for paving /flooring in plain and/or diamond /approved pattern including cement mortar bedding of 25 mm thick in 1:4 proportion, cement float, machine cutting, dressing, leveling, jointing, filling the joints with neat cement slurry or with required pigment, machine polishing at site, curing, finishing, etc complete as directed by Engineer In Charge.		
76	R2-CS-FL-01-c	25 to 30 mm thk. Kota stone of size 0.430m x0.56m (17"x22")	Sqm	For flooring of common passage, refuse area, machine rooms, staircase landing etc.
77	R2-CS-FL-01-1	18 mm thk. Steel Gray Granite tiles/slab	Sqm	For entrance lobby flooring.
	R2-CS-FL-07	Providing and laying 8mm thk. ceramic tiles as specified below conforming to I.S.15622-2006 for flooring of an approved, quality, make, size and pattern /design, for flooring including cement mortar bedding of 25 mm thick in 1:4 proportion, neat cement float, cutting, leveling, jointing, filling the joints by neat cement slurry or approved colour grout, curing, finishing etc complete as directed by Engineer In Charge.		
78	R2-CS-FL-07-c	Light coloured antiskid / matt ceramic tiles	Sqm	For WC, bath & washing places.
	R2-CS-FL-9	Providing and laying 800 x 800 x 10 mm thk. vitrified tiles as specified below conforming to I.S.15622-2006 with water absorption less than 0.08% for flooring of an approved, quality, make, pattern and size for flooring including cement mortar bedding of 25 mm thick in 1:4 proportion, cutting, leveling, jointing, filling the joints by neat cement slurry or approved colour grout, curing, finishing etc complete as directed by Engineer In Charge.		
79	R2-CS-FL-9-a	Light coloured glazed vitrified tiles	Sqm	Inside flat area flooring.
	R2-CS-FL-21	Providing and fixing polished natural stone tiles /slab as specified below of approved quality, pattern and colour for flush/projected skirting and risers including preparing the surface and levelling in the desired line, backing of 20 thk. cement mortar in porportion 1:3, square cut top edge or chamfered top edge in cement mortar 1:3, cement float, machine cutting, leveling, jointing, filling the joints with neat cement or pigment mixed with cement, polishing, finishing, curing etc complete as directed by Engineer In Charge.		

80	R2-CS-FL-21-d	15 to 20mm thk. Kota stone for height upto 150 mm	Rmt	Scurting For common passage, refuse floor area, machine rooms, staircase landing & staircase risers etc.
	R2-CS-FL-26	Providing and fixing 10mm thk. vitrified tiles as specified below conforming to I.S. 15622-2006 of approved quality, pattern and colour for flush/projected skirting and risers including preparing the surface and levelling in the desired line, backing of 20 thk. cement mortar in proportion 1:3, square cut top edge or chamfered top edge in cement mortar 1:3, cement float, machine cutting, leveling, jointing, filling the joints with neat cement slurry or pigments mixed with cement, finishing, curing etc complete as directed by Engineer In Charge.		Scurting for inside flat area.
81	R2-CS-FL-26-a	Light coloured glazed vitrified tiles for height upto 150mm	Rmt	
82	R2-CS-FL-21-o	15 to 20mm thk. Kota stone for height upto 300 mm	Rmt	For staircase trade, sill refuse floor area scurting.
	R2-CS-FL-34	Providing and fixing 8mm thk. ceramic tiles as specified below conforming to I.S. 15622-2006 of approved quality, pattern and colour for dado in the dry area including preparing the surface and levelling in the desired line, backing of 20 thk. cement mortar in proportion 1:3, square cut top edge or chamfered top edge in cement mortar 1:3, cement float, machine cutting, leveling, jointing, filling the joints with neat cement slurry or approved colour grout, finishing, curing etc complete as directed by Engineer In Charge.		
83	R2-CS-FL-34-a	Light coloured glazed ceramic tiles	Sqm	For dado of WC, Bath, washing places & kitchen,etc. Upto full height.
	R2-CS-FL-39	Providing and fixing rough natural stone slab as specified below of approved quality, pattern and colour for treads including preparing the surface and levelling in the desired line, in cement mortar 1:4, cement float, machine cutting, leveling, jointing, smooth cement plastering along the sides to match the existing surface in cement mortar 1:3, filling the joints with neat cement or pigment mixed with cement, polishing, finishing, curing etc complete as directed by Engineer In Charge.		
84	R2-CS-FL-39-e	Ruby red, jet black, Hasan green Granite for width upto 300 mm	Rmt	For window frames, lift entrance frame
	R2-CS-FL-46	Providing and constructing raised platform of 750 mm wide and 600 to 750mm high using minimum 40mm thick polished kadappa stone slab base with minimum 15mm thk. polished stone top as specified below of approved quality, colour and texture, supported by both side polished, 40mm thk. and minimum 700mm wide kadappa spaced at not more than 1200mm clear, including polished facia of min. 100mm height as specified below with champhered/ rounded at the top edges, jointing in approved adhesives, machine cutting, making opening for sink and fixing the same in position, leveling, smooth cement plastering along the sides to match the existing surface in cement mortar, filling the joints with pigment mixed with cement, cleaning, finishing, curing etc complete as directed by Engineer In Charge. (The cost of providing the sink shall be paid extra as per plumbing items)		
85	R2-CS-FL-46-c	Ruby red / jet black / Hasan green Granite slab at top and facia	Rmt	Kitchen platform.

86	R2-CS-FL-56	Rounding the edge in quarter round shape of the stonework specified below including high gloss machine polishing as directed by Engineer In Charge. Shahbad stone/ Kadappa stone/ Tandur stone/ Kota stone/ Any type of marble/ Any type of Granite stone	Rmt	For window frames, lift entrance frame.
87	R2-CS-FL-57	Rounding the edge in half round shape of the stonework specified below including high gloss machine polishing as directed by Engineer In Charge. Shahbad stone/ Kadappa stone/ Tandur stone/ Kota stone/ Any type of marble/ Any type of Granite stone	Rmt	For kitchen platform.
88	R2-CS-FL-55	Mirror Polishing on marble work/ granite work/ stone work to give high gloss finish including levelling the surface neat, cleaning etc. complete as directed by Engineer In Charge	Sqm	
	R2-CS-FL-04	Providing and laying rough natural stone tiles 25 mm to 30 mm thick of an approved quality and size for paving / flooring including cement mortar bedding of 25 mm thick in 1:4 proportion, cement float, pointing in cement mortar 1:3, cutting, dressing, leveling, jointing, pointing, curing, finishing etc complete as directed by Engineer In Charge.		
89	R2-CS-FL-04-e	25 to 30 mm thk. rough Ruby red, jet black, Hasan green granite stone	Sqm	For entrance lobby floor.
	R2-CS-FL-28	Providing and fixing polished natural stone tiles as specified below of approved quality, pattern and colour for dado including preparing the surface and levelling in the desired line, backing of 20 thk. cement mortar in porportion 1:3, square cut top edge or chamfered top edge in cement mortar 1:3, cement float, machine cutting, leveling, jointing, filling the joints with neat cement or pigment mixed with cement, polishing, finishing, curing etc complete as directed by Engineer In Charge.		
90	R2-CS-FL-28-1	18mm thk. Ruby red, jet black, Hasan green Granite	Sqm	For entrance lobby dado.
91	R2-CS-FL-15	Providing and fixing 50 mm thick precast concrete interlocking paving block of concrete grade M30 for non traffic areas like footpath, paving etc. and as per the approved size, pattern, shape, colour, make, conforming to IS 15658, including 30mm thick sand bedding and edge confinements in cement mortar 1:3, laying in perfect line and grade etc. complete.	Sqm	Building surrounding area wherever req.
		<b>Wood works</b>		
	R2-CS-WW-06	Providing and fixing superior quality single leaf B.W.P. grade solid core flush door shutters of standard make conforming to IS:2202-1991 (Part I & II) including one coat of primer, putty and 2 coats of synthetic enamel paint on both faces etc. with 12 mm thk teak wood lipping all around all around etc. complete (Hinges, aldrep & standard door hardware to be paid separately)		
92	R2-CS-WW-06-b	30mm thick shutter	Sqm	
93	R2-CS-WW-06-c	35mm thick shutter	Sqm	Bedroom door.
94	R2-CS-WW-06-d	40mm thick shutter	Sqm	Main door.

95	R2-CS-PV-05	made of styles and rails of a UPVC hollow section of size 59x24 mm and wall thickness 2 mm ± 0.2 mm with inbuilt edging on both sides. The styles and rails mitered and joined at the corners by means of M.S. galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a UPVC hollow section of size 100x24 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a UPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, as per manufacturer's specification etc. complete as directed. (For W.C. and bathroom door shutter).	Sqm	For WC, bath & washing places.
96	R2-CS-PV-07	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitered at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size as per manufacturers specification etc. complete as directed.	Rmt	For WC, bath & washing places.
97	R2-CS-WW-31	Providing and fixing <b>fire doors with 2 hour</b> fire rating conforming to IS: 3614 (Part 2), BS 476 (Parts 20 & 22), ISO 834 ; 45 mm thick fully flush, double skin door shell with lock seam joints at stile edges made from 1.25 mm thick galvanized steel sheet including door frames made from 1.6 mm thick galvanized steel sheet formed to double rebate profile of size 143 mm x 57mm as per manufacturer's instructions, door frames and shutter primed with Zinc Phosphate stoving Primer and finished with Polyurethane Aliphatic grade or epoxy paint including ironmongery consisting of stainless steel ball bearing butt hinges 3 mm thick fixed flush to the frame and shutter, full width horizontal handles (panic bar), concealed flush bolts, door closers, other standards fixtures and fasteners, etc. complete for the following clear opening sizes:	Sqm	For staircase doors, etc.
		Item to include all necessary fixtures and fastenings [ fire rated ] including heavy duty SS hinges min 4 per shutter, tower bolts, door stoppers, handles, mortise lock, push plates, kick plates, door closers, etc. Complete.		
		Single leaf shutter without glass vision panel.		
98	R2-CS-WW-13	Providing and fixing vision panel of size 300mm x 300mm in any type of door with 6mm thick glass including T.W. beading etc. complete as directed bt Engineer in charge.	No.	For staircase doors, etc.
		<b>Hardware</b>		
	R2-CS-HW-01	Providing and fixing <b>mortise lock</b> of approved make manufactured as per IS:2209 and 6607 and as described below for doors with necessary fixtures and materials and labour etc. complete.		
99	R2-CS-HW-01-c	Chromium plated Brass mortice latch and lock with round knob	Nos	Main door 1 per flat.
	R2-CS-HW-02	Providing and fixing <b>peep hole</b> as described below manufactured as per IS wherever applicable for doors with necessary fixtures and materials and labour etc. complete.		
100	R2-CS-HW-02-c	Brass peep hole	Nos	Main door 1 per flat.
		Providing and fixing <b>door stopper</b> as described below of ap-		

	R2-CS-HW-03	proved make manufactured as described below and as per IS:1823- 1992 for doors with necessary materials and labour cost etc. complete.		
101	R2-CS-HW-03-c	Stainless steel door stopper	Nos	All doors.
	R2-CS-HW-04	Providing and fixing <b>butt hinges</b> as described below, manufactured as per relevant IS for door & windows with necessary materials and labour costs etc. complete.		
102	R2-CS-HW-04-d-3	125 mm Long	Nos	For WC, bath & washing places doors.
103	R2-CS-HW-04-d-4	150 mm Long	Nos	For main doors, staircase doors.
	R2-CS-HW-06	Providing and fixing <b>aldrops of 16 mm diameter bars</b> manufactured as per IS:2681-1991, wherever they apply for doors and windows with necessary materials and labour etc. complete.		
104	R2-CS-HW-06-d-1	250 mm long.	Nos	For WC, bath & washing places doors on both sides.
105	R2-CS-HW-06-d-2	300 mm long.	Nos	For main doors, bedroom doors staircase doors on both sides.
	R2-CS-HW-09	Providing and fixing <b>handles</b> as described below, manufactured as per IS:208-1992 for doors and windows and with necessary materials and fixtures like screws etc. and all labour etc. complete.		
106	R2-CS-HW-09-d-2	150 mm long.	Nos	For WC, bath & washing places doors on both sides.
107	R2-CS-HW-09-d-3	200 mm long.	Nos	For main doors, bedroom doors staircase doors on both sides.
	R2-CS-HW-08	Providing and fixing <b>tower bolts</b> as described below conforming to IS:204-1992 (Part I,II) for doors & windows with necessary materials and labour etc. complete.		
108	R2-CS-HW-08-c-3	200 mm long.	Nos	For main doors, bedroom doors staircase doors.
109	R2-CS-HW-19	Providing and fixing stainless steel door chain including necessary stainless steel screws etc complete as directed by Engineer In Charge.	No.	For main doors 1 per flat.
		<b>Aluminium work</b>		
110	R2-CS-AW-02	Providing and fixing in position three track aluminum window of extruded modular and anodized aluminum sections of approved make and of size 92 mm x 45.5 mm x 1.5 mm thk (wt 1.659 kg/Rm) for bottom and 92 mm x 31.75 mm x 1.3 mm thk. (wt 0.933 kg/Rm) for top and sides mounted on anodized aluminum rectangular frame of size 100mm x 40mm x 1.3mm.(Wt 0.976 kg/m) The shutter comprising of bearing bottom and top of size 40mm x 18 mm x 1.25 mm thk (wt. 0.417 Kg/Rm) Interlocking section of size 40mm x 26.7 mm x 1.10 mm thk. (Wt. 0.469 kg./Rm) and hand sides of 40mm x 18mm x 1.25	Sqm	For bedroom windows with 1 mosquito net

		mm thk (wt. 0.417kg/Rm) with 5 mm thick plain / frosted / tinted glass fixed in shutter including approved quality neoprene gasket, fixtures, fastenings and accessories like PVC rollers, PVC weep holes, locks, handles etc. complete as directed by Engineer In Charge. (Note: anodic film must not be less than 15 microns i.e. AC-15 as per IS, the anodizing must be scaleted by keeping the anodized section in boiling de-anodized water for a period of one hour)		panel.
111	R2-CS-AW-03	Providing and fixing in position four track aluminum window of extruded modular and anodized aluminum sections of approved make and of size 122.2 mm x 45.5 mm x 1.3 mm thk (wt 1.829 kg/Rm) for bottom and 122.2 mm x 31.75 mm x 1.2 mm thk. (wt 1.093 kg/Rm) for top and sides mounted on anodized aluminum rectangular frame of size 127mm x 25.4mm x 1.3mm(1.052 kg/m) The shutter comprising of bearing bottom and top of size 40mm x 18 mm x 1.25 mm thk (wt. 0.417 Kg/Rm) Interlocking section of size 40mm x 26.7 mm x 1.10 mm thk. (Wt. 0469 kg./Rm) and hand sides of 40mm x 18mm x 1.25 mm thk (wt. 0.417kg/Rm) with 5 mm thick plain / frosted / tinted glass fixed in shutter including approved quality neoprene gasket, fixtures, fastenings and accessories like PVC rollers, PVC weep holes, locks, handles etc. complete as directedby Engineer In Charge. (Note: anodic film must not be less than 15 microns i.e. AC-15 as per IS, the anodizing must be scaleted by keeping the anodized section in	Sqm	For hall windows with 1 mosquito net panel.
		boiling de-anodized water for a period of one hour)		
112	R2-CS-AW-04	Providing and fixing in position aluminum louvered window with anodised aluminum frame of approved make and of size 40mm x 20mm x 2.0mm (wt. 0.605 kg/Rm) including adjustable aluminum frame, 4 to 6mm thk. frosted glass, fixtures and fastenings etc. complete as directed by by Engineer In Charge.	Sqm	For WC, bath windows.
	R2-CS-SL-12	Providing and Fixing MS Safety grill of weight specified below for windows as per design including fabricating the grill using M.S. square / round bar, flats and angles including painting with one coat of red oxide zinc chromate primer and two coats of synthetic enamel paint of approved colour and brand etc complete as directed.		
113	R2-CS-SL-12-b	Grill weighing 15 to 20 kg / sqm	Sqm	For all windows(box grill except WC & bath windows) & open passages,
		<b>PLUMBING</b>		
114	R2-CS-PS-1	Providing and fixing water closet squatting pan (Indian type W.C. pan ) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
	R2-CS-PS-1-a	White Vitreous china Orissa pattern <b>W.C. pan</b> of size 580x440mm with integral type foot rests.	each	
115	R2-CS-PS-141	Providing and fixing PTMT angle <b>stop cock 15 mm</b> nominal bore, weighing not less than 85 gms	each	

116	R2-CS-PS-127	Providing and fixing <b>C.P. brass bib cock</b> of approved quality conforming to IS:8931 :		
	R2-CS-PS-127-a	15 mm nominal bore	each	
117	R2-CS-PS-7	Providing and fixing <b>wash basin with C.I. brackets</b> ,15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :		
	R2-CS-PS-7-a	White Vitreous China <b>Wash basin size 630x450 mm</b> with a pair of 15 mm C.P. brass pillar taps.	each	
118	R2-CS-PS-30	Providing and fixing 600x450 mm bevelled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.		
119	R2-CS-PS-68	Providing and fixing <b>PTMT Bottle Trap</b> for Wash basin and sink		
	R2-CS-PS-68-a	<b>Bottle trap 31mm single piece</b> moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms.	each	
120	R2-CS-PS-297	P/F Jaquar make shower, necessary accessories shower arm with flange continental series sr. no. 483	each	
121	R2-CS-PS-100	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
	R2-CS-PS-100-b	150 mm diameter	each	
122	R2-CS-PS-131	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 a) 15 mm nominal bore		
	R2-CS-PS-131-a	15mm nominal bore	each	
123	R2-CS-PS-70	Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with a minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colour. Weighing not less than 88 gms.	each	
124	R2-CS-PS-143	Providing and fixing PTMT soap Dish Holder having length of 138mm,breadth 102mm, height of 75mm with concealed fitting arrangements,weighing not less than 106 gms.	each	
125	R2-CS-PS-10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :		
	R2-CS-PS-10-a	Kitchen sink with drain board		
	R2-CS-PS-10-a-1	510x1040 mm bowl depth 250mm.	each	
126	R2-CS-PS-128	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms		
	R2-CS-PS-128-a	15 mm nominal bore	each	

	R2-CS-PS-96	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
127	R2-CS-PS-96-a	15 mm nominal bore	each	
128	R2-CS-PS-96-b	20 mm nominal bore	each	
	R2-CS-PS-86	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with on-step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.		
129	R2-CS-PS-86-a	15 mm nominal outer dia Pipes	Rmt	
130	R2-CS-PS-86-b	20 mm nominal outer dia Pipes	Rmt	
	R2-CS-PS-85	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with on-step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Internal work, Exposed on wall.		
131	R2-CS-PS-85-a	15 mm nominal outer dia Pipes	Rmt	
132	R2-CS-PS-85-b	20 mm nominal outer dia Pipes	Rmt	
133	R2-CS-PS-85-c	25 mm nominal outer dia Pipes	Rmt	
134	R2-CS-PS-85-d	32 mm nominal outer dia Pipes	Rmt	
135	R2-CS-PS-85-e	40 mm nominal outer dia Pipes	Rmt	
		<b>EXTERNAL WATER SUPPLY</b>		
	R2-CS-PS-87	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement ,trenching ,refilling & testing of joints complete as per direction of Engineer in Charge.		
136	R2-CS-PS-87-d	32 mm nominal outer dia Pipes	Rmt	
137	R2-CS-PS-87-e	40 mm nominal outer dia Pipes	Rmt	
138	R2-CS-PS-87-f	50 mm nominal outer dia Pipes	Rmt	
		<b>TERRACE LOOPING</b>		
	R2-CS-PS-87	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement ,trenching ,refilling & testing of joints complete as per direction of Engineer in Charge.		
139	R2-CS-PS-87-h	75 mm nominal internal dia Pipes For Upper 2 Floors Seperate Loop (Domestic)	Rmt	
140	R2-CS-PS-87-i	100 mm nominal internal dia Pipes	Rmt	

	R2-CS-PS-87	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement ,trenching ,refilling & testing of joints complete as per direction of Engineer in Charge.		
141	R2-CS-PS-87-f	50 mm nominal outer dia Pipes	Rmt	
142	R2-CS-PS-138-A	Providing and fixing enclosed type <b>water meter</b> (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :80 mm dia nominal bore	each	
143	R2-CS-PS-139-	Providing and fixing C.I. <b>dirt box strainer</b> for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS :2373 :80 mm dia	each	
	A			
144	R2-CS-PS-115	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:4:8 ( 1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick, finished with a floating coat of neat cement complete as per standard design :		
	R2-CS-PS-115-a	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	
		Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :		
145	R2-HE-7-23-C	25 mm nominal bore	each	
146	R2-HE-7-23-F	upto 50mm	each	
	R2-CS-PS-95	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
147	R2-CS-PS-95-a	25 mm nominal bore	each	
148	R2-CS-PS-95-b	32 mm nominal bore.	each	
149	R2-CS-PS-95-c	40 mm nominal bore	each	
150	R2-CS-PS-95-d	50 mm nominal bore	each	
	R2-HE-7-19	Providing and fixing gun metal ISI mark non-return valve Screwed End of following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge		
151	R2-HE-7-19-c	25 mm nominal bore	each	
152	R2-HE-7-19-d	32 mm nominal bore	each	
153	R2-HE-7-19-e	40 mm nominal bore	each	
154	R2-HE-7-19-f	50 mm nominal bore	each	

155	R2-CS-PS-191	Providing and fixing in position uPVC/SWR pipe 75 mm dia. in any position including all fittings and accessories, making joints / connections water tight with solvent cement, scaffolding if necessary and making good the damages if any (excluding excavation and refilling the trenches) etc. complete as specified and directed.(No separate payment shall be made for fittings and accessories).	Rmt	
156	R2-CS-PS-192	Providing and fixing in position uPVC/SWR pipe 110 mm dia. in any position including all fittings and accessories, making joints / connections water tight with solvent cement, scaffolding if necessary and making good the damages if any (excluding excavation and refilling the trenches) etc. complete as specified and directed.(No separate payment shall be made for fittings and accessories).	Rmt	
157	R2-CS-PS-222	75 mm C.I nahani trap with grating with 75 mm C.I. bend with cleaning	each	
158	R2-CS-PS-27	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
159	R2-CS-PS-27-a	Semi rigid pipe		
160	R2-CS-PS-27-a-2	40 mm dia	each	
161	R2-CS-PS-202	Providing and fixing in position uPVC/SWR pipe 160 mm dia. in any position including all fittings and accessories, making joints / connections water tight with solvent cement, scaffolding if necessary and making good the damages if any (excluding excavation and refilling the trenches) etc. complete as specified and directed.(No separate payment shall be made for fittings and accessories).	Rmt	
		CI DROP PIPE FROM CEILING TO NEAREST IC / GT		
		Providing and fixing soil, waste and vent pipes :		
162	R2-CS-PS-34-a-2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989. 100 MM	Rmt	
163	R2-CS-PS-34-b-2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989. 75 MM	Rmt	
		EXTERNAL DRAINAGE		
164	R2-CS-PS-166	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :		
	R2-CS-PS-166-c	180x150 mm size P type		
	R2-CS-PS-166-c-1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	
	R2-CS-PS-163	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
165	R2-CS-PS-163-a	100 mm diameter	Rmt	
166	R2-CS-PS-163-b	150 mm diameter	Rmt	
167	R2-CS-PS-163-c	200 mm diameter	Rmt	
	R2-CS-PS-164	Providing and laying cement concrete 1:4:8 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :		

168	R2-CS-PS-164-a	100 mm diameter S.W. pipe	Rmt	
169	R2-CS-PS-164-b	150 mm diameter S.W. pipe	Rmt	
170	R2-CS-PS-164-c	200 mm diameter S.W. pipe	Rmt	
171	R2-CS-PS-194	Constructing brick masonry inspection chamber 90cm x 45cm x30cm in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making haunches, channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design.	each	
172	R2-CS-PS-195	Extra on item CS-PS-194 for additional depth above 30 cm of 230 mm brick walls	Rmt	
173	R2-CS-PS-196	Providing & fixing M. S. angled ISA 5050 of 6 mm. welded frame for rectangular inspection chamber of 90 cm x 45 cm. with, 1 : 2 : 4 R. C. C. cover of approved design, 50mm. thick fixed complete including cement sand filleting 1 : 1 in C. S. complete as directed (Including fixing in cement mortar with cement and sand filleting around C. I. Frame and removal of the existing frame and cover if any. The frame and cover must be weighed before fixing in position. ) (The dimension specified are clear inside dimensions of the frames. In case of M. S. angled frame, the proper hold fasts &fastening should be embedded in c.c. )	Each	
174	R2-CS-PS-197	P/F R.C.C. cover on inspection chamber of size 90 cm x 45 cm. and 50 mm. thick, etc., directed.	Each	
175	R2-CS-PS-198	Open half-round S.W. pipe above 75 mm, upto 150 mm channel filled in cement and sand mortar 1: 2 above.	Rmt	
176	R2-CS-PS-199	Providing and fixing open half round Hume pipe channel with collar etc. in cm. (1:2) laid complete 150 mm dia.	Rmt	
177	R2-CS-PS-200	Providing and fixing open half round Hume pipe channel without collar etc. in cm. (1:2) laid complete 150 mm dia. (Note deduct Rs. 14.00 per R.M. if collar is not required). For Surface Rain Water Drainage	Rmt	
178	R2-CS-PS-201	Providing and fixing open half round Hume pipe channel with collar etc. in cm. (1:2) laid complete 250 mm dia. (Note deduct Rs. 17.00 per R.M. if collar is not required). For Surface Rain Water Drainage	Rmt	
179	R2-CS-PS-168	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :		
180	R2-CS-PS-168-a	100 mm dia. R.C.C. pipe	Rmt	
181	R2-CS-PS-168-b	150 mm dia. R.C.C. pipe	Rmt	
182	R2-CS-PS-168-c	250 mm dia. R.C.C. pipe	Rmt	
183	R2-CS-PS-168-d	300 mm dia. R.C.C. pipe	Rmt	
184	R2-CS-PS-168-e	450 mm dia. R.C.C. pipe	Rmt	
	R2-CS-	Constructing brick masonry circular type manhole 0.91 m internal dia		

	PS-170	at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as		
		per standard design :		
	R2-CS-PS-170-a	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :		
185	R2-CS-PS-170-a-1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	
186	R2-CS-PS-171	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m		
	R2-CS-PS-171-a	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Rmt	
187	R2-CS-RM-97	Providing & fixing composite hot press glass fibre reinforced mosquito proof lid for water storage tank, for prevention of malaria including transport, locking arrangement etc. complete as directed For tank capacity above 3000 liters.	each	
188	R2-CS-PS-290	PROVIDING & FIXING 40MM PRESSURE REDUCING VALVE ON DOWN TAKE WATER SUPPLY PIPES (Diaphragm type with in-built ss strainer)	each	
189	R2-CS-PS-291	PROVIDING & FIXING 32MM PRESSURE REDUCING VALVE ON DOWN TAKE WATER SUPPLY PIPES (Diaphragm type with in-built ss strainer)	each	
	R2-CS-PS-95	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
190	R2-CS-PS-95-E	65 mm nominal bore	each	
191	R2-CS-PS-95-F	80mm	each	
192	R2-SWD-142	Constructing single water entrance of internal size 0.50m x 0.60m with cast-in-situ coping in M-20 grade, fixing of grating in M -20 as per standard drawings (Dwg No. MCGM/SWD/2013-14), etc complete as specified and as directed by Engineer-in-Charge. (excluding excavation, providing and fixing of gratings and frame)	each	

193	R2-SWD-169	Providing & Fixing 0.60m X 0.50m clear internal size of M.S. Galvanised hinged type grating and frame (weighing minimum 71 kg) with minimum 75 microns zinc coating by hot dipped galvanising the MS grating and frame as per IS 2629. (The contractor shall furnish the certificate of galvanising from the Galvaniser.) including testing ,inspection of material sample and finished product in presence of M.C.G.M. Engineers (3 nos.) at manufacturer's works, as per Standard Specification no SP-SWD-3 etc complete as specified & as directed by Engineer-in-Charge.	each	
		<b>Part B : Firefighting / Electrical / Elevator Works</b>		
		<b>Section D : Firefighting Works</b>		
		<b>FIRE EXTINGUISHERS</b>		
194	R2-ME-15-30-c	Supply and installation of ABC type fire extinguisher (6 kg).	Nos	
195	R2-ME-15-31-a	Providing and keeping in position standard sand bucket filled with clean sand and painted red from outside at various places in podium and stilt.	Nos	
		<b>PUMP ROOM</b>		
196	PUMPS T-144M3H 120M	Horizontal End Suction Back Pull Out Pumpset Casing:Cast Impeller:Bronze Motor: 75kW -100HP 2900 RPM electric motor of Crompton greaves/ Kirloskar Make. Suction X Discharge Pipe Size(mM) : 100 X 80 Pumpset mounted on MS fabricated base frame supplied with coupling, coupling guard & foundation bolts. Application: Main Hydrant Pump Duty: 144 m3h @ 120m	Nos	
197	R2-ME-6-4-ak	Centrifugal Monobloc Pumpset 12.5 H. P. three phase motor, Head range: (6-36 mtr) Discharge Range: (6-37 lps) (80 X 65 mm)	Nos	
198	PUMPS T-144M3H 120M	Horizontal End Suction Back Pull Out Pumpset Casing:Cast Impeller:Bronze Motor: 75kW -100HP 2900 RPM electric motor of Crompton greaves/ Kirloskar Make. Suction X Discharge Pipe Size(mM) : 100 X 80 Pumpset mounted on MS fabricated base frame supplied with coupling, coupling guard & foundation bolts. Application: Main Sprinkler Pump Duty: 144 m3h @ 120m	Nos	
199	PMPST-14.4M3 H 120M	Multistage Vertical Inline Pumpset 15HP Suction X Discharge Pipe Size(mm): 50 x 50 Phase: Three Phase, 440 Volts, 50Hz Stages: 10 Application: Jockey Pump Duty: 14.6 m3h @ 120m	Nos	
	R2-ME-15-15	Providing and fixing in position G.I. Heavy grade 'C' class pipes (I.S. 1239 part I) with screwed on couplings/ fittings (I.S. 1239 Part II) including disconnecting arrangement (unions / Flanges) as necessary clamping to wall beams and ceilings with hangers and clamps anchor fasteners wherever required to firmly support piping, testing to 1.5		

		times to working pressure for minimum 2 hours after installation and painting as required by Fire Authority after primer cost.		
200	R2-ME-15-15-a	150 mm	Rmt	
201	R2-ME-15-15-b	100 mm	Rmt	
202	R2-ME-15-15-c	80 mm	Rmt	
203	R2-ME-15-15-e	50 mm	Rmt	
204	R2-ME-15-15-h	25 mm	Rmt	
	R2-ME-6-13	Wafer type butterfly valves: (sp-me-ts-72)		
205	R2-ME-6-13-b	50 mm dia.	Nos	
206	R2-ME-6-13-d	80 mm dia.	Nos	
207	R2-ME-6-13-e	100 mm dia.	Nos	
208	R2-ME-6-13-f	150 mm dia.	Nos	
	R2-ME-15	Sluice valves (flanged)		
209	R2-ME-15-9-a	80 mm dia.	Nos	
210	R2-ME-15-9-c	150 mm dia	Nos	
		Providing and fixing in position C.I. Double flanged non return valves of 150mm dia Kirloskar or other approved make including fixing with all nuts bolts, gaskets etc complete.		
211	R2- ME-15-7-c	150 mm dia.	Nos.	
212	ME-UGPG-FF-F26	Supporting and installing cast iron dual plate wafer type PN 16 double flanged type non-return valve including nuts bolts 1.6 mm thick compressed asbestos gasket including matching flanges complete.- 80 mm N	Nos	
	R2-Me-15-5	End line Strainer		
213	R2-Me-15-5-c	150 mm	Nos	
214	R2-Me-15-5-a	80 mm	Nos	
	R2-Me-15-13	Pressure guages (sp-me-ts-71)		
215	R2-Me-15-13-a	Supplying and installing pressure gauge of 100 mm Ø., 0-300 PSI or 0- 14 kg per cm square fitted with 12/15 mm Ø. pad cock valve, and G.I. pipe, elbow etc	Nos.	
216	R2-ME-9-64-b	Providing and fixing 50mm dia ball drain valve.( in pump room )	Nos.	
		Ball valves		
217	R2-ME-9-64-d	25 mm dia	Nos	
218	R2-Me-15-23	Supplying and installing Danfoss make pressure switch with 12/15 mm dia isolation Valve, GI nipple, elbow etc. in an approved manner as per specification.	Nos	
219	R2-Me-15-21	Supplying and installing Air Vessel of 300 mm Ø 1.5m in height M.S. tank installed inside pump house as per specification	Nos	
		<b>SPRINKLER &amp; SPRAYER SYSTEM</b>		
	R2-ME-	Providing and fixing in position G.I. Heavy grade 'C' class pipes (I.S. 1239 part I) with screwed on couplings/ fittings (I.S. 1239 Part II) including disconnecting arrangement (unions / Flanges) as necessary clamping to wall beams and ceilings with hangers and clamps anchor		

	15-15	fasteners wherever required to firmly support piping, testing to 1.5 times to working pressure for minimum 2 hours after installation and painting as required by Fire Authority after primer cost.		
220	R2-ME-15-15-a	150 mm	Rmt	
221	R2-ME-15-15-c	80mm	Rmt	
222	R2-ME-	65 mm	Rmt	
	15-15-d			
223	R2-ME-15-15-e	50 mm	Rmt	
224	R2-ME-15-15-f	40 mm	Rmt	
225	R2-ME-15-15-g	32 mm	Rmt	
226	R2-ME-15-15-h	25 mm	Rmt	
227	R2-Me-15-26-a	Providing, fixing, testing and commissioning of Quartzoid Bulb Sprinkler Head With Temperature Rating 68 Deg. C., Universal Deflector, UL / FM Approved in Brass or C.P. finish, pendent type, 15 mm dia ., as per TS.	Nos.	
228	VNS-FF-31	Supplying & fixing Sprinkler heads quartzoid bulb type pendent type sprinklers (straight throw) 93 Deg. C Temperature. (for Kitchen)	Nos	
		Supplying & erecting vane type water flow detector suitable for detecting flow of water in wet sprinkler pipe of main line or branch lines of 75/80 mm dia having following features 1) Visual Switch Activation 2) Rugged Switch Assembly 3) Heavy Duty Alluminium pipe Saddles 4) Durable Metal Encloser 5) Steel U Bolts For Secure Mounting 6) Two SPDT ( Single Pole Double Track ) Synchronised Switches 7) Serviceable Without Draining Pipes		
229	R2-ME-15-26-c	80 mm	Nos	
230	ME-17-1-I	Providing and fixing 25mm dia ball test valve with side mirror	Nos.	
231	ME-17-6	Providing and fixing in position 150 mm size sprinkler installation control valve with all trims, Alarm motor and going, pressure gauge (2 Nos) Water flow switch (1 No.) pressure switch (1 No.) drain and test valve with associated piping 1 No. 150 NB sluice valve on the under-side of control valve approved and listed by TAC.	Nos	
232	R2-ME-15-22	Supplying and erecting 20/25mm Ø G.M.air release cock, with necessary G.I. coupling to be fitted on top of Air vessel or on wet riser as per specification	Nos	
	R2-Me-15-13	Pressure guages (sp-me-ts-71)		
233	R2-Me-15-13-a	Supplying and installing pressure gauge of 100 mm Ø., 0-300 PSI or 0- 14 kg per cm square fitted with 12/15 mm Ø. pad cock valve, and G.I. pipe, elbow etc	Nos.	
234	R2-Me-15-7-a	Supplying and installing double flange NRV 80 mm	Nos	
235	R2-me-15-6	butterfly valves: (sp-me-ts-72)		
236	R2-ME-15-6-a	80mm dia.	Nos	
237	R2-ME-2-3-a	Sprinkler and Jockey Pump Pressure Switch Cable 1.1 kV grade stranded Cu conductor, XLPE insulated, extruded PVC inner and FRLS outer sheathed, galvanised steel round or strip armoured cables (SP-ME-TS- 6) 2C x 1.5 sq.mm. Cu.Armoured Cable	Rmt	
		<b>HYDRANT SYSTEM</b>		

		Providing and fixing in position G.I. Heavy grade 'C' class pipes (I.S. 1239 part I) with screwed on couplings/ fittings (I.S. 1239 Part II) including disconnecting arrangement (unions / Flanges) as necessary clamping to wall bems and ceilings with hangers and clamps anchor fasteners wherever required to firmly support piping, testing to 1.5 times to working pressure for minimum 2 hours after instalation and painting as required by Fire Authority after primer cost.		
238	R2-Me-15-15-a	150 mm	Rmt.	
239	R2-Me-15-15-c	80mm	Rmt	
240	R2-ME-15-8-d	Supplying and installing Stainless Steel Double outlet hydrant valve fitted with necessary accessories complete as per Specification	Nos.	
241	R2-ME-15-8-c	Supplying and installing Stainless Steel single outlet hydrant valve fitted with necessary accessories complete as per Specification	Nos	
		Supplying and installing cast iron double flange sluice valve 150 mm dia.as per Specification		
242	R2-ME-15-9-c	150 mm dia	Nos	
243	R2-ME-15-18	Supplying and installing wall mounting swinging Hose reel drum fitted with 19 mm dia. 30m high pressure polypropylene (Polyhose) long fitted with necessary accessories complete as per specification	Nos.	
244	R2-Me-15-11-a	Providing and fixing in position 2 lengths of 15 M long flexible canvas rubber lined hose reels 63 dia with adapter, branch pipe and nozzle and stroking them in metal cabinets with lockable glass shutters and fixing the metal cabinet at ground level in a location where it can be easily spotted including painting tec. complete.	Nos.	
245	R2-Me-15-19	Supplying and installing fire brigade Header of 150 mm Ø, for supplying water in fire tank as per specification	Nos.	
246	R2-ME-2-3-a	ISI Marked Armoured Cu cables as per TS for following -Hydrant, Jockey Pump Pressure Switch Cable 2C x 1.5 sq.mm. Cu. - Armoured Cable	Rmt	
247	R2-Me-15-14-a	Supplying and erecting one no. Brass orifice plate having 6 mm. thickness, 140 mm outer dia of 140 mm at every single outlet hydrant valve	Nos.	
248	R2-Me-15-22	Supplying and erecting 20/25mm Ø G.M.air release cock, with necessary G.I. coupling to be fitted on top of Air vessel or on wet riser as per specification	Nos.	
249	R2-ME-15-20	Supplying and installing fire brigade Header (Siamese Connection) of 150 mm Ø for supplying water to wet riser system as per specification	Nos	
		<b>Fire Alarm System Public Address System</b>		
250	R2-Me-15-32-a	"Supply, Installation, Testing & Commissioning of Microprocessor based 1 loop capacity expandable to 10 loops, Networkable Analogue Addressable type fire alarm control panel with Display and Fully functional QWERTY type keypad.The panel shall be equipped with 20% spare capacity with each loop having a maximum loading of 130 detectors and 130 devices in one loop.	Nos	
251	R2-Me-15-32-m	SITC of Providing LCD Analog Active addressable fire detection repeater panel conforming to the intents of specifications complete as approved with TAC, Fire Authority With Test/Accept/Reset Facility.	Nos	
252	R2-Me-15-32-d	Providing, laying, testing and commissioning of Intelligent Photoelectric Smoke Detector	Nos	
253	R2-Me-15-32-i	Providing, laying, testing and commissioning of Programmable Electronic Sounders (Hooters):	Nos	
254	R2-Me-15-32-h	Providing, laying, testing and commissioning of Addressable Manual Fire Alarm Box (manual station)	Nos	
255	R2-Me-15-32-c	Providing, laying, testing and commissioning of 2Cx1.5 sq.mm armoured RED colour copper FRLS cable with necessary saddles, screws, junction boxes, sleeves, elbows couplings etc. for Fire alarm System	Nos	

256	R2-Me-15-32-e	Supply, Installation, testing & commissioning of Intelligent Heat Detector along with mounting box & termination glands	Nos	
257	R2-ME-12-10-n	Supply and installation of 250 watts amplifier with USB	Nos	
258	R2-ME-12-10-l	Wiring for speakers with 24/0.2 multicore twin twisted flexible copper.	Mtr	
259	R2-ME-12-10-i	Supply & installation of 6W/100V wall mounting box speakers.	Nos	
260	R2-ME-12-10-j	Supply & installation of Unidirectional Dynamic Vocal & Speech Microphone	Nop	
		<b>Total Of Section "D" .....</b>		
		<b>Section E : Electrical Works</b>		
	1	<b>Common Utility Panel for BUILDING D</b>		
		<b>Incomer 1 – 2 and Bus coupler</b>		
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
261	R2-ME-1-17-s	63 Amps TPN MCB	NO	
	F	<b>Bus Bars</b>		
	R2-ME-1-9	Bus bar chambers, using CRCA Sheet steel SWG 16, powder coated, rust protected enclosure. IP protection for chamber shall be IP43. Bus bar supports shall be SMC (each at every 300mm). Incoming and outgoing Cable termination provision shall be provided with 3mm undrilled gland plate. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
262	R2-ME-1-9-b	60 /63A TPN with tinned copper bars of size 20 x 3 mm.	Mtr.	
263	R2-ME-1-9-g	Cubical Panel (Fabricated from CRCA sheet steel SWG 16, powder coated, rust protected enclosure, IP 52)	Cubic mtr.	
264	ME-1-11-l	Ring type current transformer Accuracy class 1, having burden of 15 VA & ratio of 60/5.	NO	
265	ME-1-11-ae	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
266	ME-1-11-ag	Digital Ammeter with accuracy class 1, built in selector switch facility shall be provided. Ammeter Shall be Suitable for CT secondary 5A	NO	
267	ME-1-11-ah	Digital Voltmeter with accuracy class 1, built in selector switch facility shall be provided.	NO	
		<b>Outgoing</b>		
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
268	R2-ME-1-17-h	16A/20A, DP MCB	NO	
269	R2-ME-1-17-r	32A, TPN MCB	NO	
	1	<b>Common Utility Panel for BUILDING E</b>		
		<b>Incomer 1 – 2 and Bus coupler</b>		
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
270	R2-ME-1-17-s	63 Amps TPN MCB	NO	
	F	<b>Bus Bars</b>		

	R2-ME-1-9	Bus bar chambers, using CRCA Sheet steel SWG 16, powder coated, rust protected enclosure. IP protection for chamber shall be IP43. Bus bar supports shall be SMC (each at every 300mm). Incoming and outgoing Cable termination provision shall be provided with 3mm un-drilled gland plate. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
271	R2-ME-1-9-b	60 /63A TPN with tinned copper bars of size 20 x 3 mm.	Mtr.	
272	R2-ME-1-9-g	Cubical Panel (Fabricated from CRCA sheet steel SWG 16, powder coated, rust protected enclosure, IP 52)	Cubic mtr.	
273	ME-1-11-1	Ring type current transformer Accuracy class 1, having burden of 15 VA & ratio of 60/5.	NO	
274	ME-1-11-ae	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
275	ME-1-11-ag	Digital Ammeter with accuracy class 1, built in selector switch facility shall be provided. Ammeter Shall be Suitable for CT secondary 5A	NO	
276	ME-1-11-ah	Digital Voltmeter with accuracy class 1, built in selector switch facility shall be provided.	NO	
		<b>Outgoing</b>		
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
277	R2-ME-1-17-h	16A/20A DP MCB	NO	
278	R2-ME-1-17-r	32A, TPN MCB	NO	
	3	<b>Plumbing Panel for D Building</b>		
279	R2-ME-6-3-ap	Submersible Pump set suitable for 150 mm borehole with: 10 H.P. three phase electric motor Discharge: 690 lpm at 28 m head to 240 lpm at 86 m head Pump body: Cast Iron, Impeller: Bronze LTB2 , Shaft SS410 Pump delivery diameter 65 mm.	Nos.	
280	R2-ME-6-3-ao	Submersible Pump set suitable for 150 mm borehole with: 10 H.P. three phase electric motor Discharge: 510 lpm at 26 m head to 120 lpm at 94 m head Pump body: Cast Iron, Impeller: Bronze LTB2 , Shaft SS410 Pump delivery diameter 50 mm Q(350 lpm) x H(85m)	Nos	
		<b>Incomer 1 – 2</b>		
	N	<b>MCB</b>		
281	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
	R2-ME-1-17-s	63 Amps TPN MCB	NO	
		<b>CHANGEOVER SWITCHES</b>		
	R2-ME-1-4	Change Over Switch as per IEC 60947 Part 1 & 3 / IS 13947 part 1 & 3 to be enclosed in CRCA Sheet steel 18/20 SWG standard with powder coated, rust protected(if 16/18 SWG/1.62/1.21 mm Nost avilable) with PVC insulated cu wires for interconnection, bus bar, earthing terminal, and all other accessories to complete the work. Changeover switch shall be wall/column mounted. Enclosure shall be weather proof. Colour shade shall be as per IS 5. MS angle iron frame to mount the unit is included.IP for enclosure shall be IP43 for Indoor unit and IP 55 for Outdoor unit		
282	R2-ME-1-4-g	63 Amp. 415V 4P Changeover Switch with CRCA sheet steel powder coated enclosure.	NO	
	F	<b>Bus Bars</b>		
	R2-ME-1-9	Bus bar chambers, using CRCA Sheet sheet SWG 16, powder coated, rust protected enclosure. IP protection for chamber shall be IP43. Bus bar supports shall be SMC (each at every 300 mm). Incoming and outgoing Cable termination provision shall be provided with 3mm un-drilled gland plate. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		

283	R2-ME-1-9-b	60 /63A TPN with tinned copper bars of size 20 x 3 mm.	Mtr.	
284	R2-ME-1-9-g	Cubical Panel (Fabricated from CRCA sheet steel SWG 16, powder coated, rust protected enclosure, IP 52)	Cubic mtr.	
285	ME-1-11-ac	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
		<b>Outgoing</b>		
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
286	R2-ME-1-17-m	32A, TP MCB	NO	
287	R2-ME-1-17-l	16A/20A, TP MCB	NO	
	S	<b>Starter For Motors: (Complete with interconnections &amp; Wiring)</b>		
	R2-ME-1-22	Following rating starters. Enclosure for starter shall be Corrosion resistant powder coated CRCA enclosure with IP54 protection class shall be suitable for chemical factories, polluted industrial and dusty agricultural environment. Starters shall be provided with terminal block with proper terminal marking for ease of wiring. Terminal block can accommodate both aluminum & copper cables. Starter shall be provided with ON / OFF Indication lamps and Start / Stop Push buttons. Components for motor starter shall have type 2 co-ordination compliance and built in single phase protection. Colour shade shall be RAL 7032 smoke gray as per IS 5.		
288	R2-ME-1-22-c	Automatic Star Delta Starter for 5 H.P to 15 H.P	NO	
	4	<b>Plumbing Panel for E Building</b>		
289	R2-ME-6-3-ap	Submersible Pump set suitable for 150 mm borehole with: 10 H.P. three phase electric motor Discharge: 690 lpm at 28 m head to 240 lpm at 86 m head Pump body: Cast Iron, Impeller: Bronze LTB2 , Shaft SS410 Pump delivery diameter 65 mm.	Nos.	
290	R2-ME-6-3-ao	Submersible Pump set suitable for 150 mm borehole with: 10 H.P. three phase electric motor Discharge: 510 lpm at 26 m head to 120 lpm at 94 m head Pump body: Cast Iron, Impeller: Bronze LTB2 , Shaft SS410 Pump delivery diameter 50 mm Q(350 lpm) x H(85m)	Nos	
		<b>Incomer 1 – 2</b>		
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
291	R2-ME-1-17-s	63 Amps TPN MCB	NO	
		<b>CHANGEOVER SWITCHES</b>		
	R2-ME-1-4	Change Over Switch as per IEC 60947 Part 1 & 3 / IS 13947 part 1 & 3 to be enclosed in CRCA Sheet steel 18/20 SWG standard with powder coated, rust protected(if 16/18 SWG/1.62/1.21 mm Nost avilable) with PVC insulated cu wires for interconnection, bus bar, earthing terminal, and all other accessories to complete the work. Changeover switch shall be wall/column mounted. Enclosure shall be weather proof. Colour shade shall be as per IS 5. MS angle iron frame to mount the unit is included.IP for enclosure shall be IP43 for Indoor unit and IP 55 for Outdoor unit		
292	R2-ME-1-4-g	63 Amp. 415V 4P Changeover Switch with CRCA sheet steel powder coated enclosure.	NO	
	F	<b>Bus Bars</b>		

	R2-ME-1-9	Bus bar chambers, using CRCA Sheet sheet SWG 16, powder coated, rust protected enclosure. IP protection for chamber shall be IP43. Bus bar supports shall be SMC (each at every 300 mm). Incoming and outgoing Cable termination provision shall be provided with 3mm undrilled gland plate. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
293	R2-ME-1-9-b	60 /63A TPN with tinned copper bars of size 20 x 3 mm.	Mtr.	
294	R2-ME-1-9-g	Cubical Panel (Fabricated from CRCA sheet steel SWG 16, powder coated, rust protected enclosure, IP 52)	Cubic mtr.	
295	ME-1-11-ae	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
		<b>Outgoing</b>		
	N	<b>MCCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection,testing & commissioning etc. as required.		
296	R2-ME-1-17-m	32A, TP MCB	NO	
297	R2-ME-1-17-l	16A/20A, TP MCB	NO	
	S	<b>Starter For Motors: (Complete with interconnections &amp; Wiring)</b>		
	R2-ME-1-22	Following rating starters. Enclosure for starter shall be Corrosion resistant powder coated CRCA enclosure with IP54 protection class shall be suitable for chemical factories, polluted industrial and dusty agricultural environment. Starters shall be provided with terminal block with proper terminal marking for ease of wiring. Terminal block can accommodate both aluminum & copper cables. Starter shall be provided with ON / OFF Indication lamps and Start / Stop Push buttons. Components for motor starter shall have type 2 co-ordination compliance and built in single phase protection. Colour shade shall be RAL 7032 smoke gray as per IS 5.		
298	R2-ME-1-22-c	Automatic Star Delta Starter for 5 H.P to 15 H.P	NO	
	5	<b>Fire Pump Panel for D &amp; E Building</b>		
		<b>Incomer 1 &amp; 2</b>		
	N	<b>MCCB</b>		
	R2-ME-1-18	Unit rate of 415V, 10kA/16kA, Moulded case circuit breaker with Thermal magnetic overload suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
299	Fair	400Amps 4p, MCCB	NO	
	F	<b>Bus Bars</b>		
	R2-ME-1-9	Bus bar chambers, using CRCA Sheet SWG 16, powder coated, rust protected enclosure. IP protection for chamber shall be IP43. Bus bar supports shall be SMC (each at every 300mm). Incoming and outgoing Cable termination provision shall be provided with 3mm undrilled gland plate. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
300	R2-ME-1-9-f	400 A TPN with Tinned Copper bars of 50 x 10mm	Mtr.	
301	R2-ME-1-9-g	Cubical Panel (Fabricated from CRCA sheet steel SWG 16, powder coated, rust protected enclosure, IP 52)	Cubic mtr.	
302	ME-1-11-u	Ring type current transformer Accuracy class 1, having burden of 5 VA & ratio of 400/5.	NO	
303	ME-1-11-ae	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
304	ME-1-11-ag	Digital Ammeter with accuracy class 1, built in selector switch facility shall be provided. Ammeter Shall be Suitable for CT secondary 5A	NO	
305	ME-1-11-ah	Digital Voltmeter with accuracy class 1, built in selector switch facility shall be provided.	NO	
		<b>Outgoing</b>		
	O	<b>MCCB</b>		

	R2-ME-1-18	Unit rate of 415V, 10kA/16kA, Moulded case circuit breaker with Thermal magnetic overload suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
306	R2-ME-1-18-g	200 A, TPN MCCB	NO	
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
307	R2-ME-1-17-m	32A, TP MCB	NO	
308	ME-1-11-d	AC, 0-200 Amp. 96 mm. dia/sq. Moving iron, Analog Flush type panel mounted ammeter with accuracy class 1.0, scale type 90°, suitable for 500V, with connecting necessary PVC wire, side clamp, leads and lugs with suitable 3 way (for RYB) on/off selector switch.	NO	
309	ME-1-11-q	Ring type current transformer Accuracy class 1, having burden of 5 VA & ratio of 200/5.	NO	
310	ME-1-11-ae	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
	S	<b>Starter For Motors: (Complete with interconnections &amp; Wiring)</b>		
	R2-ME-1-22	Following rating starters. Enclosure for starter shall be Corrosion resistant powder coated CRCA enclosure with IP54 protection class shall be suitable for chemical factories, polluted industrial and dusty agricultural environment. Starters shall be provided with terminal block with proper terminal marking for ease of wiring. Terminal block can accommodate both aluminum & copper cables. Starter shall be provided with ON / OFF Indication lamps and Start / Stop Push buttons. Components for motor starter shall have type 2 co-ordination compliance and built in single phase protection. Colour shade shall be RAL 7032 smoke gray as per IS 5.		
311	R2-ME-1-22-j	Automatic Star Delta Starter for 100 H.P	NO	
312	R2-ME-1-22-c	Automatic Star Delta Starter for 5 H.P to 15 H.P	NO	
	7	<b>DG Distribution Panel</b>		
		<b>Incomer</b>		
313	Fair	S.I.T.C of 630 Amp 4p MCCB in metal enclosure 36 KA thermal mag.	NO	
	F	<b>Bus Bars</b>		
	R2-ME-1-9	Bus bar chambers, using CRCA Sheet steel SWG 16, powder coated, rust protected enclosure. IP protection for chamber shall be IP43. Bus bar supports shall be SMC (each at every 300mm). Incoming and outgoing Cable termination provision shall be provided with 3mm un-drilled gland plate. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
314	R2-ME-1-9-f	400 A TPN with Tinned Copper bars of 50 x 10mm	Mtr.	
315	R2-ME-1-9-g	Cubical Panel (Fabricated from CRCA sheet steel SWG 16, powder coated, rust protected enclosure, IP 52)	Cubic mtr.	
316	ME-1-11-ab	Ring type current transformer Accuracy class 1, having burden of 15 VA & ratio of 800/5.	NO	
317	ME-1-11-ae	Neon indicating lights suitable to work 250V 50 c/s A.C. With low burden and flush type with colours RYB set of 3 lights.	NO	
318	ME-1-11-ag	Digital Ammeter with accuracy class 1, built in selector switch facility shall be provided. Ammeter Shall be Suitable for CT secondary 5A	NO	
319	ME-1-11-ah	Digital Voltmeter with accuracy class 1, built in selector switch facility shall be provided.	NO	
		<b>Outgoing</b>		
	O	<b>MCCB</b>		
	R2-ME-1-18	Unit rate of 415V, 10kA/16kA, Moulded case circuit breaker with Thermal magnetic overload suitable for DB mounting complete with connection, testing & commissioning etc. as required.		

320	Fair	400Amps 4p, MCCB	NO	
	N	<b>MCB</b>		
	R2-ME-1-17	Unit rate of 240V/415V, 'C' Curve, 10kA, Miniature circuit breaker suitable for DB mounting complete with connection, testing & commissioning etc. as required.		
321	R2-ME-1-17-s	63 Amps TPN MCB	NO	
		<b>CABLES AND END TERMINATIONS</b>		
		<b>L. T. CABLES</b>		
	Y	<b>Cables: Supply &amp; laying "XLPE cables" on walls or through existing trenches etc.</b>		
		LV Cables of following sizes to be laid buried in ground/ laid in cable trays in ready made trenches, cables shall be fitted on wall / ceiling by the means of saddle & spacers. Miscellaneous items such as cable dressing accessories like nylon tie, Aluminum clamps, GI cleats, cable tags etc. are included in the scope. Removal of empty drums, cartoons and making the site normal as instructed by Purchaser client is included in scope.		
	R2-ME-2-1	<b>1.1 kV grade stranded Al conductor, XLPE insulated, extruded PVC inner and outer sheathed, galvanised steel round or strip armoured cables</b>		
322	R2-ME-2-1-ab	3.5C x 240sqmm	Rmt	
323	R2-ME-2-1-z	3.5C x 150sqmm	Rmt	
324	R2-ME-2-1-w	3.5C x 70sq.mm	Rmt	
	R2-ME-2-3	<b>1.1 kV grade stranded Cu conductor, XLPE insulated, extruded PVC inner and outer sheathed, galvanised steel round or strip armoured cables</b>		
325	R2-ME-2-3-s	4 C x 10 sq.mm 2XWY	Rmt	
326	R2-ME-2-3-o	4 C x 6 sq.mm 2XWY	Rmt	
327	R2-ME-2-3-k	4 C X 4 sq.mm. 2XWY	Rmt	
328	R2-ME-2-3-j	3 C X 4 sq.mm. 2XWY	Rmt	
329	R2-ME-2-3-f	3 C X 2.5 sq.mm. 2XWY	Rmt	
	AD	<b>Cable End Termination For Aluminium Cables : (SP-METS-6)</b>		
	R2-ME-2-11	Cable end terminations for LV, XLPE/PVC insulated, PVC sheathed, armoured/ unarmoured cables including supply and fixing of Double compression cable glands, stripping of cable insulation, supply and fixing of aluminium lugs for aluminium cables for all phases and crimping the same to the conductor for the following cables. Miscellaneous items like cable lugs, G.I nut - bolts and G.I washers , consumables and other hardware materials as required to make the installation complete, are in the scope. All G.I Nut, bolt and washers shall be HDGI with 80 micron. One set of termination includes gland, lugs for cable core & accessories		
330	R2-ME-2-11-aa	3.5C x 240sqmm	Set	
331	R2-ME-2-11-y	3.5C x 150sqmm	Set	
332	R2-ME-2-11-v	3.5C x 70sq.mm	Set	
	AE	<b>Cable End Termination For Copper Cables :</b>		

	R2-ME-2-12	Cable end terminations for LV, XLPE/PVC insulated, PVC sheathed, armoured/ unarmoured cables including supply and fixing of Double compression cable glands, stripping of cable insulation, supply and fixing of tinned plated copper lugs for copper cables for all phases and crimping the same to the conductor for the following cables. Miscellaneous items like cable lugs, G.I nut - bolts and G.I washers , consumables and other hardware materials as required to make the installation complete, are in the scope. All G.I Nut, bolt and washers shall be HDGI with 80 micron. One set of termination includes gland, lugs for cable core & accessories		
333	R2-ME-2-12-s	4 C x 10 sq.mm 2XWY	Set	
334	R2-ME-2-12-r	4 C x 6 sq.mm 2XWY	Set	
335	R2-ME-2-12-q	4 C X 4 sq.mm. 2XWY	Set	
336	R2-ME-2-12-h	3 C X 4 sq.mm. 2XWY	Set	
337	R2-ME-2-12-g	3 C X 2.5 sq.mm. 2XWY	Set	
	P	<b>MCBs in 16SWG sheet steel metal box</b>		
	R2-ME-1-19	MCBs In 16 SWG CRCA sheet steel enclosure, powder coated, wall / column mounted with provision for support arrangement, 2 earthing terminal, Incoming & outgoing cable terminal etc. with required hardware & fasteners. All MCBs shall be rated for 10kA, 'C' curve type. Colour shade shall be RAL 7032 Smoke gray as per IS 5. IP 43 Enclosure.		
338	R2-ME-1-19-b	16/32 Amp. TPN MCB ( For Lift)	No.	
	U	<b>Earth Leakage Circuit Breaker/ Residual Current Circuit Breaker</b>		
	R2-ME-1-25	ELCBs In 16 SWG CRCA sheet steel enclosure, powder coated, wall / column mounted with provision for support arrangement, 2 earthing terminal, Incoming & outgoing cable terminal etc. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
339	R2-ME-1-25-f	40A 4 Pole ELCB ( with 30 mA sensitivity) (For Lift)	No.	
	AO	<b>WIRING FOR MAINS</b>		
		Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLSZH insulated copper conductor wire in surface/ recessed medium class PVC conduit as required		
340	R2-ME-3-21-c	2 X 4 sq. mm + 1 X 4 sq. mm earth wire in 25mm Conduit	Rmt	
	K	<b>Distribution Board with MCB incomer &amp; outgoing</b>		
	R2-ME-1-14	Distribution board with metal door of various sizes on wall/ Column/ floor mounting, with required hardware & fasteners. For MCCB incomers, ON/OFF & TRIP indication lamps shall be provided. All MCBs shall be rated for 10kA, 'C' curve type. All the DBs are ready-made DBs inclusive of MCCB, MCB, terminal connectors, earth bus, neutral bus, undrilled gland plate and earth terminals (2nos.) Cost of DBs include rates of DB, MCB, MCCB & other accessories		
		<b>For Flats</b>		
340	R2-ME-1-14-i	IP 42 Wall/column Mounted distribution board with one no of 32A DP MCB as incomer and 6 nos 6A SP MCB as outgoing (12 way SPN DB) <b>Note: Refer line diagram for ingoing and outgoing MCB/ELCB</b>	No.	

	R2-ME-1-25	ELCBs In 16 SWG CRCA sheet steel enclosure, powder coated, wall / column mounted with provision for support arrangement, 2 earthing terminal, Incoming & outgoing cable terminal etc. Colour shade shall be RAL 7032 Smoke gray as per IS 5.		
342	R2-ME-1-25-i	40A 2 Pole ELCB ( with 30 mA sensitivity) (For above SPN DB)	No.	
	A0	<b>WIRING FOR SUB MAINS/ CIRCUIT WIRING</b>		
		Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLSZH insulated copper conductor wire in surface in casing and capping as required from Flat DBs/ switchboard to switchboard.		
343	R2-ME-3-23-b	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire in 20 x 12 mm (1/2")	Mtr	
344	R2-ME-3-23-c	2 X 4 sq. mm + 1 X 4 sq. mm earth wire in 25 x 12 mm ( 3/4")	Mtr	
	AP	<b>POINT WIRING</b>		
		Point wiring by using FRLSZH insulated copper conductors (along-with same size of FRLSZH insulated copper conductor for earthing & 3 plate ceiling rose) : PVC conduit concealed with modular switches & FRLSZH wires.		
345	R2-ME-3-26-a	Light /Fan / Ex. fan Points Concealed Manner with Modular switches & FRLSZH wires (First category material) Light point	No.	
346	R2-ME-3-26-a	Light /Fan / Ex. fan Points Concealed Manner with Modular switches & FRLSZH wires Fan Points	No.	
347	R2-ME-3-26-a	Light /Fan / Ex. fan Points Concealed Manner with Modular switches & FRLSZH wires Exhaust Fan Points	No.	
348	R2-ME-3-26-c	5A/6A - 3/5 Half Plug Concealed Manner with Modular switches & FRLSZH wires (First category material)	No.	
349	R2-ME-3-26-b	3/5 Pin Independent Plug (IP) Concealed Manner with Modular switches & FRLSZH wires	No.	
350	R2-ME-3-26-d	Bell Point with Bell / Buzzer & 1 Bell Push Concealed Manner with Modular switches & FRLSZH wires	No.	
351	R2-ME-4-15-c	'S' type M.S. fan hook fabricated from suitable dia. M.S. rod & suitable size M.S. brackets, nut bolts, washers for fixing ceiling fan on trusses. The 'S' type hook & bracket shall be painted in approved manner.	No.	
352	R2-ME-3-42-i	15 / 5 A / 6 A Combined Power Plug Socket Point with Fuse and Indicating Lamp, One 15 Amp SP Switch	No.	
		<b>COMMON AREAS LIGHTING</b>		
	R2-ME-1-15	IP43&30 SPN, TPN, Vertical TPN Distribution board with metal door of various sizes on wall/ Column/ floor mounting, with detachable gland plate, terminal connectors and other required hardware & fasteners. DB shall be designed with provision for FP MCB/ Isolator/ RCCB / RCBO as incomer & SP / TP MCB as outgoing as per requirement. (Cost of the DBs will be without MCB, MCCB). DB shall be as per IS 8623- 1 & 3 / IEC 61439- 1 & 3.		
		<b>For Staircase And Lobby Lighting</b>		
353	R2-ME-1-15-ak	IP 43 TPN Distribution Board with metal door (Box only) 12 Way ( 8 + 36 way)	No.	
354	R2-ME-1-17-v	1#32A 4P MCB (Incomer)	No.	
355	R2-ME-1-25-i	3# 40Amp. 2Pole ELCB (Sub- Incomer)	No.	
356	R2-ME-1-17-i	3# 32A DP MCB (Sub- Incomer)	No.	
357	R2-ME-1-17-c	24# 16A/20A SP MCB (Outgoing)	No.	
		<b>For Parking &amp; External Lighting</b>		
358	R2-ME-1-15-aj	IP 43 TPN Distribution Board with metal door (Box only) 8 Way ( 8 + 24 way)	No.	
359	R2-ME-1-17-v	1# 32A 4P MCB Incomming	No.	

360	R2-ME-1-25-i	3# 40Amp. 2Pole ELCB (Sub- Incomer)	No.	
361	R2-ME-1-17-i	3# 32A DP MCB (Sub- Incomer)	No.	
362	R2-ME-1-17-b	12# 10A SP MCB Outgoing	No.	
	R2-ME-2-1	1.1 kV grade stranded Al conductor, XLPE insulated, extruded PVC inner and outer sheathed, galvanised steel round or strip armoured cables		
363	R2-ME-2-1-g	3C x 2.5 Sq.mm	Mtr	
		Point wiring by using FRLSZH insulated copper conductors (along with same size of FRLSZH insulated copper conductor for earthing & 3 plate ceiling rose) : PVC conduit concealed with modular switches & FRLSZH wires.		
364	R2-ME-3-26-a	Light /Fan / Ex. fan Points Concealed Manner with Modular switches & FRLSZH wires (First category material) Light point	No.	
365	R2-ME-3-26-a	Light /Fan / Ex. fan Points Concealed Manner with Modular switches & FRLSZH wires Exhaust Fan Points	No.	
366	R2-ME-3-26-c	5A/6A - 3/5 Half Plug Concealed Manner with Modular switches & FRLSZH wires (First category material)	No.	
367	R2-ME-3-42-k	Group Control Point Wiring 4-8 Points Controlled by One 15 A SP Switch	No.	
	Q	<b>Supply, Install, Testing &amp; Commissioning of switchboards in following configurations: (16SWG GI Junction Box Complete with Earthing terminal, Interconnection &amp; wiring)</b>		
	R2-ME-1-20	16 SWG G I Junction Box of various sizes For loop in loop out cables. Junction box shall have suitable no. of knock out for incoming & outgoing cables. Cables shall be terminated in 10A heavy duty connector. Cost of the connector shall be included in the cost of Junction box. Colour shade shall be RAL 7032 Siemens gray as per IS 5. (IP55)		
368	R2-ME-1-20-b	100 x 100 x 50mm G.I. junction box with knock out & 10 Amp Connector block/strip (For External Lighting )	No.	
369	R2-ME-1-20-e	100mm x 100mm x 50mm size GI Junction box with knock out & 1 No. 5Amp. SP switch & 5 Amp. Three Pin Socket for local isolation.	No.	
370	R2-ME-1-20-d	100mm x 100mm x 50mm size GI Junction box with knock out & 1 No. 5Amp. SP switch for local ON, OFF operation. (for lift and passage lighting)	No.	
		<b>LIGHTING FIXTURES &amp; CEILING FANS</b>		
	BG	<b>T-5 Fixtures (SP-ME-TS-20)</b>		
	R2-ME-4-5	Light fixtures complete with: a) All fixing accessories, mounting Brackets etc. necessary for completeness of installation. b) Lamp of specified wattage c) Electronic ballast of suitable capacity as per specification		
371	R2-ME-4-34-a	1X 18W	No.	
372	R2-ME-4-33-c	12-15W	No.	
	BI	<b>FANS (SP-ME-TS-28)</b>		
373	R2-ME-4-12-e	Ceiling fan of 1400 mm sweep with all accessories including Electronic Regulator for completing installation as per specification.	No.	
374	R2-ME-4-12-b	Ceiling fan of 900 mm sweep with all accessories including Electronic Regulator for completing installation as per specification.	No.	
375	R2-ME-4-12-h	Exhaust fan of 230 mm sweep, 1400 RPM, with 450 CFM free air delivery, AC 230V/415V , 50 Hz, single phase / three phase complete with all necessary accessories for completing installation as per specification.	No.	
	R2-ME-4-32	<b>Downlighter/Wall mounted LED:-</b>		
376	R2-ME-4-32-b	9-10 W	No.	

	R2-ME-4-21	Energy saver bulkhead luminaire, made of cast aluminum body pretreated and stove enameled paint with poly carbonate housing in various colours duly wired with ballast and all accessories mounted on a CRCA sheet steel tray,a high impact clear prismatic heat & UV resistant poly carbonate diffuser with protection class of at least IP 54 <b>(SP-ME-TS-23)</b>		
377	R2-ME-4-21-b	with 9/11W CFL lamp	No.	
	BQ	<b>ENERGY SAVING FIXTURES</b>		
	R2-ME-4-26	<b>Corrosion Proof Energy Saver luminaire (SP-ME-TS-21) (For External )</b>		
378	R2-ME-4-26-c	20W LED Street Light Luminaire with Polycarbonate Diffuser IP65 - High Impact proof multipurpose utility lighting for ROAD lighting and also could be ceiling & wall mounted. Designed to be Energy Saver, Dust proof, Weatherproof, corrosion proof and high impact proof against vandalism. The housing comprises of Aluminum extruded body wired with high powered LED, Electronic Driver. High Powered LED mounted on Aluminum clad PCB A clear UV resistant Polycarbonate Diffuser/cover is hinged to the housing with silicon rubber gasket.	No.	
379	R2-ME-10-3-e	Swan neck type bracket for fixing HPMV / HPSV lamp fixtures mounting on wall / shed etc. 0.5 to 1.2 Mtrs.	No.	
	p	<b>METER ROOM ( MCBs in 16SWG sheet steel metal box)</b>		
	R2-ME-1-19	MCBs In 16 SWG CRCA sheet steel enclosure, powder coated, wall / column mounted with provision for support arrangement, 2 earthing terminal, Incoming & outgoing cable terminal etc. with required hardware & fasteners. All MCBs shall be rated for 10kA, 'C' curve type. Colour shade shall be RAL 7032 Smoke gray as per IS 5. IP 43 Enclosure.		
380	R2-ME-1-19-a	16/32 Amp. DP MCB (For Flats)	No.	
381	R2-ME-1-19-c	63 Amp. TPN MCB (For Common area Panel & Plumbing Panel)	No.	
382	R2-ME-3-14	Providing single phase electric energy meter's board wiring by using 2 wires of 3/20 SWG PVC insulated copper conductor wires complete with fixing on board by using H.G. brass clips,terminations, etc.	Mtr.	
	G	<b>1.1 KV GRADE COPPER FLEXIBLE WIRE WITH SINGLE PVC INSULATED "METER LEADS" COMPLETE WITH FLEXIBLE PVC CONDUIT, END TERMINATIONS, CLIPPINGS ETC.:</b>		
383	R2-ME-1-10-c	1.1 kV grade 2 nos. (P+N) copper conductor flexible cable of area 4.0 sq mm and 1no. (E) 2.5 sq. mm copper cable for 30/32 Amp. single phase switch.	Mtr.	
384	R2-ME-1-10-d	1.1 kV grade 4 nos. (3P+N) copper conductor flexible cable of area 6.0 sq mm and 1no. (E) 2.5 sq. mm copper cable for 30 /32 Amp. three phase switch.	Mtr.	
		<b>Telephone &amp; Television:</b>		
		Supply, Install, Test & Commission of following surface switchboards, each consisting switches / sockets / fan regulators / T.V.sockets		
385	CE 5-12-012FAE 265	<b>TV Socket</b>	No.	
386	R2-ME-12-4-c	RG 6 Copper	Mtr.	
387	R2-ME-12-4-e	RG 11	Mtr.	

388	R2-ME-12-5-d	PVC box & cover plate with RJ-11 for Telephone access only	No.	
	R2-ME-12-3	<b>SITC OF ARMoured JELLY FILLED TELEPHONE CABLES</b>		
389	R2-ME-12-3-a	Armoured Telephone Cable - 10 pair	Mtr.	
390	R2-ME-12-2-a	PVC Telephone Cable - 2 pair	Mtr.	
	R2-ME-12-6	<b>M. S. Junction Box for EPABX:</b>		
391	R2-ME-12-6-e	200 pair M. S. Junction Box for EPABX:	No.	
392	R2-ME-12-6-c	50 pair M. S. Junction Box for EPABX:	No.	
393	R2-ME-12-6-a	10 pair M. S. Junction Box for EPABX:	No.	
	R2-ME-12-8	<b>ONLY PVC CONDUITS LAYING (SP-ME-TS-61)</b>		
394	R2-ME-12-8-a	25mm. - Only PVC Conduits laying	Rmt.	
	CT	<b>Lightning Protection(SP-ME-TS-37)</b>		
395	R2-ME-7-2	Lightning Protection of 5 pronged air terminal as per of technical specification. Earth continuity conductor and earthing pits for the same as per requirement & rate. Earth station as per above specification & rate.	No.	
396	R2-ME-7-3-a	25 x 3 mm GI (length : 300 mm)	Mtr	
397	R2-ME-7-1-b	Earthing station with 100mm Dia., 13mm thick, 3000 mm long CI pipe earth pit as per IS 3043. The earth pit shall be provided with watering pipe (Class B) with wire messed funnel, 25x3 GI strip / 8 SWG GI wire up to chamber (wire or strip size as per fault level), disconnecting links with 600 x 600 mm (clear) RCC chamber & heavy duty 3mm thick CI chequered plate cover with hinge & stainless steel bolts. Bentonite/ Charcol & Salt shall be provided for earth pits. Excavation, back filling, removal of excess soil is included in the scope	No.	
	CV	<b>Earthing Continuity Conductors</b>		
	R2-ME-7-4	Supply & installation of Earth conductor of the following sizes to be cleared on wall\ columns with nuts & bolts or laid in cable tray /buried in ground including cutting, drilling, tapping, jointing by welding, connecting to equipment, painting to welded portion by black bitumen paint and with all necessary GI hardware & accessories to complete the work		
398	R2-ME-7-4-m	Bare G.I. Conductor size 8 SWG	Rmt	
399	R2-ME-7-4-f	25 x 6mm GI	Rmt	
400	R2-ME-7-4-e	25 x 3mm G.I.	Rmt	
	CS	<b>Earthing (SP-ME-TS-37)</b>		
401	R2-ME-7-1-c	Earthing station with 600 mm x 600 mm x 6 mm galvanized iron plate and 50 mm dia G.I pipe 300 mm long G.I pipe (Class B or better) earth pith as per IS 3043, The earth pit shall be provided with watering pipe (Class B) with wire messed funnel , 25 x 3 G.I strip / 8 SWG GI wire upto chamber (wire or strip size as per fault level ), disconnecting links with 600 x 600 mm (clear) RCC chamber and heavy duty 3mm thick CI Exchequer plate cover with hinge & stainless steel bolts. Bentonine / Charcoal & Salt be provided for earth pits. Excavation, back	No.	

		filing , removal of excess soil is included in the scope.		
	MA-R2-ME-160	<b>D.G.SET WITH PANEL (SP-ME-TS-31)</b>		
402	R2-ME-6-17-o	250KVA	NO	
	R2-ME-6-18	SITC OF AUTOMATIC MAINS FAILURE PANEL SUITABLE TO DG SET		
403	R2-ME-6-18-p	250 KVA	NO	
	R2-ME-2-19	Supply and laying of Heavy duty RCC Hume pipe for road crossing, below plinth beam of following size as diameter.		
404	R2-ME-2-19-b	150mm Dia.	Mtr.	
405	R2-ME-11-1-k	Construction of brick masonry Rectangular chamber of 3' x 1.5' x 2' depth size with C.I. cover	JOB	
406	R2-ME-2-8	Excavating the trenches and refilling, reinstatement of the same after the cable is laid in approved manner (750 mm deep, 600 mm wide), in all types of soils 1 Cu. Mtr. = 2.2 RMT.	Cu. Mtr.	
407	R2-ME-2-9	Excavating the trenches and refilling the same after the cable is laid in approved manner (Size of trench: 750 mm deep, 600 mm wide) in concrete/ masonry / asphalt. 1 Cu. Mtr. = 2.2 RMT. And reinstatement.	Cu. Mtr.	
		<b>Total of Section 'E'.....</b>		
		<b>Section F : Elevators</b>		
408	FAIR	Supplying Installation Testing and Commissioning of <b>21 stops Stretcher lift</b> at SWM Conservancy Staff Quarters Specification Make: KONE /OTIS/ Mitsubishi/ Schindler/ Johnson/Thyssenkrup <b>G + 20 Flrs, 21 Stops</b> (opening on the same side), capacity-13 Persons, Speed(mps) 1.75MPS, Rise-60.3 Mtrs. <b>Capacity 1020 Kg 15 Persons DLP: 2 Years</b>	No.	
409	FAIR	2) Supplying Installation Testing and Commissioning of <b>21 stops Passenger lift</b> at SWM Conservancy Staff Quarters Specification Make: KONE/ OTIS/ Mitsubishi/ Schindler/ Johnson/Thyssenkrup <b>G + 20 Flrs, 21 Stops</b> (opening on the same side), capacity-10 Persons, Speed(mps) 1.75MPS, Rise-60.3 Mtrs . <b>Capacity 680 Kg 10 Persons DLP: 2 Years</b>	No.	
		<b>Note- 1) Items to be operated in this tender having minimum Specification is given herewith for preparation of BOQ to be by tenderer. 2) All items to be operated will be of</b>		

		<b>minimum Class I(Premium) specification available as given above or available in USOR-2018. If item is not available in USOR-2018, then same should be taken from Schedule rate prevailing in schedule to be used by State PWD/CPWD/Railway/MES of Class I(Premium) material and specification.</b>		
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<b>B. FACILITIES IN EACH BUILDING</b>				
<b>1) Staircase</b>			<ul style="list-style-type: none"> <li>• Minimum 1.2 m wide staircase flight with single piece kotah stone treads &amp; risers R.C.C. Pardi with S. S. pipe as handrail and minimum height of 1.05 m.</li> <li>• M. S. Collapsible gate at Entrance at Gr. Floor with two coats of enamel paint over a coat of primer.</li> <li>• FRP door at terrace level as approved by MCGM.</li> </ul>	
	Electrical		<ul style="list-style-type: none"> <li>• The staircase shall be well lit and well ventilated with glazed aluminum sliding window and/or RCC grill.</li> <li>• 1 light point at each landing level and mid landing level.</li> <li>• Fire resistance rating for staircase FRD, lift lobby/protected lobby.</li> </ul>	<ul style="list-style-type: none"> <li>• Electrical wiring: Polycab, Finolex</li> </ul>
<b>2) Lift</b>			<ul style="list-style-type: none"> <li>• Minimum capacity of 8 persons and design as per relevant IS codes and given specifications.</li> <li>• Maintenance by the manufacturer for a period of 10 years after O.C.C.</li> </ul>	<ul style="list-style-type: none"> <li>• Lift: Schindler/Otis/Johnson/ Omega</li> </ul>
<b>3) Electric meter room</b>			<ul style="list-style-type: none"> <li>• Provide individual meters for the tenements and to be located in a meter room at ground/stilt floor level.</li> <li>• Separate meter for common lighting facility, lifts, passage lighting, pumps/ STP.</li> <li>• The meter room shall be well ventilated and provided with a lockable door and Fire Resistance Door.</li> </ul>	
<b>4) Parapet</b>			<ul style="list-style-type: none"> <li>• Terrace parapet should be min. of 125 mm thick RCC or 230 mm thick brick masonry of minimum 1.20 m height with minimum 100 mm thick RCC M30 coping on top.</li> </ul>	
<b>5) Internal corridors/ Lobby</b>	Flooring		<ul style="list-style-type: none"> <li>• Granite finish tiles with 100 mm skirting of the same for entrance lobby &amp; Polish Kotah flooring with jaisalmer/ marble inlay for corridors/passages with 100 mm skirting of the same.</li> </ul>	<ul style="list-style-type: none"> <li>• Flooring: Kajaria/Johnson/ Nitcon/Spartek.</li> </ul>
	Painting			

	Number plates Electrical	<ul style="list-style-type: none"> <li>• Synthetic enamel painting on walls upto 1.50 m ht. Rest of the wall area and ceiling shall be OBD in shade of same color (Two coats over a coat of primer)</li> <li>• Silver anodized aluminum plates of minimum 50 mm ht.</li> <li>• 1 light point at 2.40 m ht. at every 6 m interval in common passage. Individual switches for bell to each flat.</li> </ul>	<ul style="list-style-type: none"> <li>• Paint: Asian Paint/ Goodlas Nerolac/Berge.</li> <li>• Electrical:</li> </ul>
			Bajaj/Havells/ Wipro.
			<ul style="list-style-type: none"> <li>• Electrical wiring:</li> </ul>
			Polycab, Finolex.
<b>6) O. H. water Tank:</b>	Plumbing	<ul style="list-style-type: none"> <li>• R.C.C. with slab and M.S. covers for MH on top with proper locking arrangement. Water proofing to be provided with injection grouting Internal and external water proof plaster. M. S. ladder to overhead water tanks. Plumbing inlets and outlets will be hidden from general view by means of a barrier wall.</li> </ul>	<ul style="list-style-type: none"> <li>• Plumbing: I.S.I. quality (Watertec Pvt Ltd, Finolex Industries Ltd.)</li> <li>• All work to be done as per concerned Statutory Authority.</li> </ul>
		<ul style="list-style-type: none"> <li>• A separate water tank shall be provided in case of water from bore well in case where municipal water supply is not available or insufficient and separate water tanks and lines for domestic and fire &amp; flushing water system.</li> </ul>	
		<ul style="list-style-type: none"> <li>• Capacity of OHT/UGT as per MCGM norms and that of fire tank as per CFO.</li> </ul>	
<b>7) Ducts/Shafts</b>		<ul style="list-style-type: none"> <li>• It is desirable that all vertical plumbing may be hidden from view and pass through external vertical ducts.</li> <li>• Similarly all electrical wiring telephone wires, internal and TV cables will pass through special ducts provided for the purpose and accessible through lockable doors.</li> </ul>	<ul style="list-style-type: none"> <li>• Ducts shall be designed to facilitate easy access for repair maintenance purpose in future.</li> </ul>
<b>8) Terrace water proofing</b>		<ul style="list-style-type: none"> <li>• The terrace floor slab shall be water proofed. Brick bat coba shall be used for providing proper gradient for drainage of rain water to nearest down take rain water pipes.</li> <li>• The terrace shall be finished with white glazed china mosaic.</li> </ul>	As per Specifications.
<b>9) External wall finish and Appearance</b>		<ul style="list-style-type: none"> <li>• External facades of the buildings shall be neat and with pleasing aesthetics and color combinations. The wall surface shall be finished with</li> </ul>	<ul style="list-style-type: none"> <li>• Paint: Asian Paint/ Goodlas Nerolac/Berger.</li> </ul>

		Waterproof OS and sand faced plaster in two coats plaster in case of brick masonry construction or exposed in case of monolithic concrete construction. In either case, the wall surface will be painted externally with rain coat paint of Dr. Fixit or 100% cement weather proof paint of ISI Mark Company. Extra polymer coating of ISI marks company on all the exterior dead walls.	
<b>C. INFRASTRUCTURE FACILITIES</b>			
<b>1) Compound Wall</b>		<ul style="list-style-type: none"> <li>Min.1.5 m height with RCC pillars/beams 230 mm thick brick masonry wall with pillars as required and R.C.C coping on top.</li> </ul>	
<b>2) Gate</b>		<ul style="list-style-type: none"> <li>M. S. Ornamental gate with good design of Min. size 4.5m to 6.0m wide 1.5 m height with M.S. frame &amp; Grill with track on wheel, locking arrangement.</li> </ul>	
<b>3) Plinth Protection</b>		<ul style="list-style-type: none"> <li>Minimum 1.00 m plinth protection in PCC 150 mm thick. M 25 all around building with soling below over finished Ground level with paver blocks of 80 mm thick.</li> </ul>	
<b>4) Vehicular access / Parking lots</b>		<ul style="list-style-type: none"> <li>Well paved WBM roads with tarmac for vehicular access building on all layout roads and in open parking area. Walkways, footpaths etc. with cement lacquered coated paver blocks 80 mm thick/trimix concrete on 15 cm thick M30 concrete around building with min. width for maneuvering of fire engine as suggested by CFO.</li> <li>Parking areas shall be provided as per provision in layout, if any.</li> </ul>	
<b>5) Lighting</b>		<ul style="list-style-type: none"> <li>General light points around building and along compound wall are to be provided with light post wherever required. The Entrance gate will be well lit with decorative lights.</li> </ul>	
<b>6) Security Guard cabin</b>		<ul style="list-style-type: none"> <li>A well lit and well ventilated security guard cabin is to be provided near all entrance gates.</li> </ul>	
<b>7) Common toilet</b>		<ul style="list-style-type: none"> <li>A common toilet for security guards and other personnel shall be provided at ground floor level complete with WC, washbasin and bathing facility. The toilet will be well lit and ventilated complete with dado tiling upto full height.</li> </ul>	<ul style="list-style-type: none"> <li>Sanitary Fittings: Jaquar, Cera, Parryware</li> </ul>
<b>8) Undergroun d water tank</b>		<ul style="list-style-type: none"> <li>An RCC Underground water tank as per statutory requirements and norms with man-holes and man-hole</li> </ul>	

<b>&amp; pumps, pump rooms</b>		<p>covers with locking arrangement and pump room and pumps including standby arrangement (or submersible pumps) to be provided. Separate UG tank compartments and pumping arrangement for domestic and flushing water and fire requirements.</p> <ul style="list-style-type: none"> <li>• Water proofing treatment to UG tank by injection grouting/IS approved chemical base treatment from inside &amp; outside and bottom with box type water proofing treatment.</li> </ul>	
<b>9) Sewerage</b>		<ul style="list-style-type: none"> <li>• All waste water soil pipes shall be connected to external sewage system through gully traps and glazed stoneware pipes. Brick masonry with smooth cement plastered chambers with heavy duty CI/ FRCC covers shall be provided at required intervals through the route of stoneware pipes/ RCC Pipes The discharges will be in municipal sewer if available or in septic tanks, designed and built to necessary size. The discharges will finally end in soak pits.</li> <li>• Sewage treatment plant with separate UG tank for treated soil water shall be provided for water re-cycling.</li> </ul>	<ul style="list-style-type: none"> <li>• UPVC down take pipe with 6" dia. and 1' dia. R.C.C pipe connecting to main sewerage line.</li> </ul>
<b>10) Storm water drainage</b>		<p>The runoff water at ground level and road / paved areas will be drained through storm water drains (properly covered by CI/RCC heavy duty grated covers) and connected to the UG water harvesting tank through a water treatment media for recycling and as per SWD remarks issued by MCGM.</p>	
<b>11) Electric sub station</b>		<p>As per approval/remarks/requirement of D. C. rules/norms &amp; utility supplier.</p>	
<b>12) Rain water, sewage treatment plant, Septic tank, solar energy system, fire fighting systems</b>		<p>As per approval/remarks/requirement of D. C. rules &amp; MCGM.</p>	

**Note: All the work is to be executed following the latest Indian and relevant Indian standard codes for material, workmanship and quality.**

## NORMS FOR STRUCTURAL DESIGN

1. The structural design to be based on criteria and loading as mentioned below :

The exposure condition for foundation shall be taken to cater for any chemical contents of the soil and existing marine clay. For super structure, the exposure condition shall also be taken as severe. Also the requirement of durability as per IS 456:2000 shall be met.

For protection of all the RCC members, coal Tar-epoxy coating shall be applied on all the surfaces in contact with soil or ground.

Type of cement is to be used if sulphate/chloride or both are present and in this case minimum cement content as per relevant stipulations of IS : 456 – 2000 is to be adopted.

In the area located near creek and exposed to saline atmosphere, cover shall be maintained for structure as per relevant clause of IS 456:2000. The minimum grade of concrete for RCC work should be M-40.

- i) The area is located in seismic zone – III, hence the buildings are to be designed for seismic forces in Zone- III and as per the relevant clauses in IS: 1893 – 2002, IS: 456 – 2000 and ductile detailing as per IS: 13920 – 1993 shall be adopted.
  - ii) The stipulations given in IS 4326 – 1993 shall be followed wherever applicable.
  - iii) RCC walls shall be designed in accordance with Section – 5 or Annexure – B of IS : 456 – 2000 and satisfy the requirement of clause 32 of IS : 456 – 2000 except as modified by the provision of IS : 13920 – 1993 and IS : 1893 – 2002.
  - iv) Over head/ Underground water tank (water retaining structures) should be designed as un-cracked sections as per IS: 3370.
  - v) In case of pile foundation IS: 2911 (Part I to IV) latest revised version is to be adopted.
  - vi) Plasticiser or other admixtures to be used shall be as per the approval of the Engineer-in-charge before starting the work as per approved list mentioned.
- a) RCC element to be provided with the continuity reinforcement to prevent cracking due to fixity condition included because of the continuity with other elements.
- b) The panel walls shall be designed for wind load.
- c) Soil in foundation and plinth filling shall be compacted or consolidated or given any other suitable treatment so as not to undergo volume changes due to consolidation or due to proximity of ground water or surface water.
- d) The proposed site is situated at the place where reclamation is to be carried out on marshy/slushy soil. It is quite possible that mass excavation, heavy de-watering may be required during execution of sub-structure.
- e) The external wall shall extend at least 150 mm below finished ground level. The external wall and plinth protection shall be so designed so as to prevent entry of rodent into the building.

- f) Cold joints in concrete shall be properly cleaned and painted with epoxy or equivalent bonding agent.
- g) The Contractor /Developer shall note that the cost involved in carrying out experimental design/alternate methodology, design, if any, as provided in IS 456 including behavior of units/joints etc., for Non Conventional construction or equivalent, and/or taking the expert opinion from the expert selected by MCGM, in the event of difference of opinion between the Contractor /Developer and the MCGM shall be to the Contractor /Developers account. The expert's opinion shall be binding on both the parties.

**1.1** The structural design shall be based on the latest revised version of following ISI and any other relevant ISI codes (BIS).

- a) Recommendation for detailing of reinforcement in IS-5225 1969 reinforced concrete works.
- b) Code of practice for Design and Construction of Foundation IS-1904 1986 in soils :

**General requirements.**

- c) Schedule of unit weight of building materials IS 1911 1967
- d) Code of Practice for design loads (other than Earthquake) for buildings and structures  
Part-5 Special loads and load combinations IS 875 (Part-5): 1987
- e) Earthquake resistant design and construction of buildings – Code of Practice IS 4326 : 1993
- f) Criteria for earthquake resistant design of Structure IS 1893 : 2002
- g) Ductility Detailing IS 13920 : 1993
- h) Explanatory hand book on Masonry Design & Construction by Bureau of Indian Standards (S & T: 1991)
- i) Code of practice for plain & reinforced concrete IS 456 : 2000
- j) Element design IS456 : 2000  
IS 1904:1986  
IS 2911 (Part-I): 1979  
IS2911 (Part-2&3):1980  
& IS 2911(Part-4): 1985

The foundation shall be so engineered that short term and long term settlement (including differential settlement between adjoining columns/walls) is within permissible limits as per stipulations of IS 1904 and IS 456 : 2000.

Open foundations or *precast/cast in situ pile* foundations will be adopted as per the site conditions and no extra cost will be claimed for modifications, if required, in designing and providing suitable foundations as per the requirements of strata.

## **1.2 PROCEDURE FOR SUBMISSION OF STRUCTURAL DESIGN:**

The Contractor /Developer shall have to submit the structural design calculation in Stadd pro software / or any other validated software along with structural drawing to proof consultant appointed by MCGM through Engineer-in-charge and IIT/VJTI.

These structural drawing and design calculations will be proof checked by proof consultant and issued to concerned Engineer-in-charge for execution purpose.

## **1.3 STRUCTURAL ADEQUACY CERTIFICATE:**

Structural adequacy certificate along with structural design and indemnity bond on Rs. 100/- Stamp Paper to be submitted at the time of final submission of design calculations and structural drawings for proof checking by the Developer. These documents shall be duly validated by proof consultants.

## **NORMS OF PLUMBING**

**2.0** Design shall be as per National / building Code – Latest or as per the relevant guidelines of local authorities in this matter.

### **2.1 WATER SUPPLY:**

- a) Consumption – As per relevant guidelines of local authorities in this matter.
- b) Family size 5/tenement
- c) Overhead capacity – 50 % of day requirement with free board of 0.3 mt. as per IS standards.
- d) Underground tank capacity - 100% of one day requirement
- e) Top of underground tank shall be 0.15 mt. flushed with ground with sloped edges above finish plot level.
- f) Duration for availability of water for pumping shall be assumed as per relevant guidelines of local authority in this matter – 100% stand by electric pumps shall be provided. Separate electric meter shall be provided.
- g) All the water pumps shall be submersible pumps with automatic control panel with water level indicator having 50% standby arrangement of pumps.
- h) The pumps shall be so designed that the entire overhead tanks shall be filled within 2 hours and stop with automatic sequential controller.
- i) The power supply arrangement to the pumping station including XLPE 3.5 Core armoured cables of suitable size shall be laid from sub-station with earthing arrangement.
- j) The work shall contain required switchgear, starter, and capacitor with separate metering arrangement including energy meter as per MSEDCL/TATA POWER/RELIANCE ENERGY requirements.
- k) The design should be got approved before execution from Engineer-in-charge.

- l) Separate tested water meter with stand by water meter of ISI Mark & with Test Report, shall be provided for each underground tank. The location of water meter should be nearest to the compound wall with approval from MCGM's competent authority.
- m) UPVC pipe of appropriate – class shall only be allowed for piping for pipe line.
- n) Design shall be such as to ensure equal and simultaneously flow (tolerance  $\pm 15$  min) for all tenements.
- o) Testing of acceptance of the system as per B.I.S. with minimum of 5 kg/sq.cm. for internal and 7.5 kg/sq.cm. for all external pipes.
- p) Teflon/Synthetic tape shall be used for jointing.
- q) All UPVC pipes embedded in wall shall be well covered by bitumen dipped spun yarn.
- r) At terrace level criss-crossing of pipe line shall not be permitted. All pipe lines shall run along the parapet walls.
- s) Shower Rose brass CP with swivel joining 50 dia. to be provided.
- t) Water taps: All water taps should be of heavy class.
- u) Stop cock should be provided for the wash basin and flushing tank. In addition to this stop cock should also be provided at the entry of the water supply pipe into the tenement.
- v) Deep seal nahani trap with grating to be providing in bath area, and below kitchen sink with appropriate size as approved by EIC.
- w) Aluminum ladder of 450 mm width of adequate length and structural sections shall be provided to each of the overhead water storage tanks. The inclination, hand railing steps etc. shall be structurally sound and safe to climb up all as approved by EIC.

## **2.1 SEWERAGE:**

- a) Single stack and one pipe system shall be accepted.
- b) CI pipe for ground floor upto first inspection chamber and for above PVC pipes shall be used with Epoxy joints. The pipes shall be fixed on proper MS flats brackets (50mm wide x 6 mm thick Mild steel flats) and GI 'U' clamp and nuts with, 50 mm gap from wall.
- c) All hidden joints shall be provided with flash stripes.
- d) No joints shall be permitted in wall, slab or columns.
- e) Rat-Guards shall be provided on the pipes.
- f) Joints with floors/walls and fixtures shall be treated/caulked with Epoxy mortar. Joint filler for PVC pipes shall be spun yarn soaked in cement 20mm deep further 20mm with CM: 1:2 and further top with min 10 mm epoxy mortar finished at 45°.
- g) Acceptance testing – smoke test.
- h) C.I Nahani trap below kitchen sink is compulsory. "P" type bottle trap with PVC East pipe 40 mm dia for wash hand basin should be provided.
- i) Single piece PVC pipe from WC upto flushing cistern to be provided.
- j) No combined pipe for S.W. Drains and sewerage shall be permitted.

- k) All P & S trap shall be deep seal with seal not less than 80 mm.
- l) PVC will be accepted for soil and waste water pipes / C.I. pipe of required dia. is to be provided upto 1<sup>st</sup> floor level.
- m) PVC water spouts to be provided over the slab of in every W.C. & Bath.
- n) All pipe lines shall be painted in oil paint of colour of external wall.

## **2.0 RAIN WATER PIPE:**

- a) Size shall be sufficient to carry storm water discharge due to rain fall intensity of 15. 87 cms/hr. and with run off co-efficient of one.
- b) Approved make PVC SWR grade ultra violet stabilized pipes conforming to IS 4985 with rubber grove socket and with fittings conforming to B.S. 4514 shall be used with all accessories like, treated door access, bends, shoes, access, chips etc. Complete and with C.I. gratings, PVC clamps.
- c) No Spout for discharging rain water shall be allowed except for staircase mid landing, landing, and balconies.
- d) Accept Testing – hydraulic test or Smoke test as per direction of Engineer in charge.
- e) All pipe line shall be suitably painted in oil paint.

## **2.0 INTERNAL ELECTRIFICATION:**

- a) Load to be distributed equally on all three phase.
- b) ELCBS to be provided for each tenement.
- c) Loop in system to be adopted for internal Electrification.
- d) A separate meter box shall be provided in each building. Meter board, tested meter of appropriate capacity and necessary copper wiring shall be provided by the developer. The meter should be 0.6 m. above the ground level.
- e) The work shall conform to the Bureau of Specification of India specifications (ISS 732).
- f) Earthing should be relevant standard accepted by MSEDCL/TATA POWER/RELIANCE ENERGY.
- g) Separate energy meter should be provided for individual staircase / individual tenements / common services.
- h) The developer should get the meter board layout approved from MSEDCL/TATA POWER/RELIANCE ENERGY before execution.
- i) All distribution board shall be in Teak wood or 6 mm thick boiling water proof marine ply with laminated top, brass hinges, brass hooks etc. or as per IS approved MS powder coated distribution box shall be provided.
- j) The meter door shutter shall be as specified and directed by the MSEDCL/TATA POWER/RELIANCE ENERGY & or as directed.

k) Open PVC conduits separately for each tenement are to be provided for common TV antenna and telephoned cables. These conduits will run through the staircase bay / light ventilation duct with junction boxes and each tenement shall be provided with suitable outlets in the living room at a proper place.

### **DESIGN NORMS FOR AREA DEVELOPMENT/SERVICES (ON-SITE)**

#### **WITHIN building complex: (ON SITE DEVELOPMENT)**

All services within the building complex have been termed as “On-site development” or “Area Development”.

#### **RECREATION GROUND (R. G. areas) in layout:**

Layout R. G. areas shall be provided as per provisions in DCR.

The detailed landscape plan from Horticulturist shall be submitted.

That the entire layout R. G. areas shall be duly developed as per DCR, with hardscape & softscape landscape in tune with Environmental Clearance (if MoEF NOC is required for project) and as per the directives of undersigned, before asking for O. C. to rehab building.

The R.G. areas shall be maintained by the Developer for 6 months from the date of handing over of all rehabilitation tenements after issuing O. C.

#### **WATER SUPPLY:**

a) Water supply network shall be design as per I.S. 779 & I.S. 2373-1968 latest version. Water meter chambers of size 900 x 450 mm. clear with C.I. cover with locking arrangement shall be provided.

b) Acceptance testing – hydraulic test.

c) The water supply line shall be connected to the peripheral main/municipal main with prior approval of the Competent Authority. Any additional cost for providing and fixing Specials, such as, Tees, Valves, Ferrules etc., shall be born by the Contractor /Developer.

d) Separate connection of water supply and sewerage shall have to be made for each building and no service lines should pass through any other building.

e) For water supply distribution network design following norms also be considered.

i) Minimum pressure: As per CPHEEO

ii) Minimum dia of peripheral main : 100 mm

iii) Distribution losses : 28%

iv) Transmission losses : 3%

v) Minimum residual pressure : 3.5 mtrs.

Note: The capacity of OHT/UWT and water distribution network shall be as per the 'P Form' and remarks issued by Hydraulic Department of MCGM. That the detailed calculations for the proposed water supply shall be submitted by the Lic. Plumber along with the sizes of pipes mentioned in 'P Form'.

### **SEWERAGE:**

- a) The remarks from SP & PD, MCGM shall be obtained and work shall be executed accordingly.
- b) RCC NP2 or stone ware Glazed pipes of minimum 150mm. diameter or as per design shall be provided.
- c) 900 mm x 450 mm size (internal) chamber with pre-cast S.F.R.C. cover with frame shall be provided. The maximum depth shall not exceed 1.2 m (bottom of channel to cover top). If the depth exceeds 1.2 m. circular conical manholes of 1.2 m. dia. shall be provided.
- d) Chamber shall be provided at every 20 m. distance and as per requirement of change of diameter, direction, level and connections.
- e) All sewerage pipes shall be supported on min. 75 mm. thick hard core and 75 mm. PCC M15 bedding with full encasing and the width of bedding shall be of outer dia of pipe plus 150 mm.
- f) Wherever the drainage pipe crosses the road, the pipe line shall be NP2 Class. The bedding shall be same as describe in (d) above.
- g) All man hole covers within building shall be of heavy duty pre-cast fiber reinforced with M.S. lapping with suitable pre-cast S.F.R.C. frame.
- h) Acceptance test: smoke and hydraulic test as per B.I.S.
- i) The sewerage line should be connected to the peripheral main /municipal main at suitable location with prior approval of the Competent Authority.

### **ELECTRIFICATION :**

- 1) The underground system with armoured cable shall be used and the same should be suitably protected as per standard practice.
- 2) Cable ducts/Trenches shall be provided.
- 3) Separate Energy meter shall be provided for the area lighting / pump house, pump room, lift.
- 4) Fluorescent tube light fixtures to be provided for area lightning with general level of illumination on the ground of 7 LUX.
- 5) Cabling, other electrification works and other related works from meter box to sub-station will be carried out so as to satisfy MCGM/Reliance/Tata POER/MSEDL's requirement.
- 6) Cable (armored aluminum) from mini pillar to individual building along pathways and suitably laid and protected as per standard practice.

- 7) Rules of Maharashtra State Electricity Board, Indian Electricity Acts / Rules and Rules of National Building Code/shall be followed in that order.
- 8) Aluminum wiring shall be permitted.
- 9) Acceptance Testing: Certificate of Electrical Inspector, Govt. of Maharashtra.
- 10) Area lighting in the building should be provided.
- 11) Numbering on the energy meters, D.P. Switch to be done.
- 12) Adequate earthing to be provided as per Indian Electricity Act.

#### **STREET LIGHTING/BUILDING LIGHTING:**

- a) Illumination level – 8 LUX on upto 6 M. wide road, 15 LUX on 10 & 15 M. wide road.
- b) Separate underground armored standard aluminum cables of XLPE to be used of 1.1 K.V. voltage grade.
- c) System is to be designed for 240 v/250 volts. Maximum permissible drop I voltage shall be 4 v.
- d) High pressure sodium vapor lamps of 70 watts for building lighting and 150 watts for street lighting.
- e) It will be desirable to provide controlling arrangement with automatic ON/OFF to be made with timer and energy saving device.
- f) Supply of street light to be fed from controlling point by providing at the street light mini-pillar separate energy meter and protective devices.
- g) Street light G.I. octagonal poles of 7.5 m., height above ground level shall be provided on suitable foundation as approved.
- h) Work shall conform to provisions of Indian Electricity Act./MSEDCL/TATA POWER/RELIANCE ENERGY Rules.
- i) Load sanctions acceptance testing-Certificates of Electrical Inspector Maharashtra State, PWD, MSEDCL/TATA POWER/RELIANCE ENERGY.

#### **POWER SUPPLY:**

##### **ELECTRIC SUB-STATION:**

(The scope of work of the developer will be as per the design approved by MSEDCL/TATA POWER/RELIANCE ENERGY and will include other misc. items also.)

The following major items which are also required to be installed by the developer inside the built up sub-station.

##### **POWER SUPPLY NETWORK :**

The developer has to design, obtain approval of MSEDCL/TATA POWER/RELIANCE ENERGY, execute and commission the entire power supply network sub-station to individual building. The -said works are to be executed on behalf of MSEDCL/TATA POWER/RELIANCE ENERGY and the developer has to obtain their approval in principle first. In fact, MSEDCL/TATA POWER/RELIANCE ENERGY's

approvals and concurrence in writing is required to be taken at every stage, right from beginning to commissioning stage.

Substation shall have compound wall with gate min. 4.25 m wide. One additional fire hydrant 100 mm dia shall be provided by developer on peripheral water supply net work near by the electric sub-station.

### **SPECIFICATIONS:**

The specifications of Materials/Workmanship shall be as per the contract agreement or MSEDCL/TATA POWER/RELIANCE ENERGY's Specifications or relevant Bureau of Indian Standard (BIS), Standard Specifications of Maharashtra State Govt. and or Standard Specifications of National Building Organization and or the specification given by MCGM in that order. Any other specifications if proposed to be used shall be specifically mentioned and got approved.

1 All material to be used in work shall conform to relevant Indian standard specification and wherever available ISI marked material only will be used. All material procured shall be subjected to relevant tests specified in BIS at the frequency specified therein from any Govt. recognized laboratory such as National Test house IIT/Eng College/Polytechnic/MMRDA/PWD.

### **7.0 GURANTEE FOR DURABILITY OF STRUCTURES FOR 50 YEARS**

**7.1** The Contractor/Developer shall ensure that the structure of buildings constructed for the tenements are durable and shall last for the design period of the structure.

**7.2** The strength as well as durability shall be considered explicitly at design stage.

**7.3** The structure shall be designed for loads and stresses as mentioned in IS 456 - 2000 as per provision of OCR. The RCC designed of buildings shall be based on consideration of earthquake forces as per prevailing relevant IS and seismic coefficient shall be assumed for calculation of earthquake forces as prevailing relevant IS codes. The importance factor of the buildings shall be considered as 1.0.

**7.4** There is danger in case of collapse to the lives of the people as the proposed structures are meant for residential use. The Architect/L.S./Consultant/Contractor/Developer shall therefore be more cautious in design and execution of the work.

**7.5** For any type of foundation required for buildings in case, the soil and the sub-soil water at the site has high sulphate and chloride content. The Contractor /Developer shall have to take almost precautions to obtain a dense, concrete of low permeability.

7.6 The Contractor/Developer shall observe methods of controlling while designing and constructing various mechanism of wear and deterioration of concrete so as to make the structure give satisfactory service and safety for design life of the structure.

7.7 In observing the design controls, various codes of practice and design guides, which give recommendations on durability, shall be followed. The minimum cement content, water cement ratio, minimum grade of concrete, minimum cover to reinforcement for exposure conditions of environment in Mumbai city and suburbs and surrounding region shall be strictly followed.

7.8 The mix design and concrete of various grades, shall be as per latest relevant IS specifications keeping in view both strength and durability.

7.9 The concrete shall be of low permeability to be durable. For this purpose,

- The concrete shall be strong and dense with low water cement ratio.
- The concrete shall be compacted thoroughly.
- Sufficient hydration of cement shall be ensured through proper curing methods.
- The aggregate cement ration for given aggregate shall be sufficient to provide adequate workability with low water cement ratio so that concrete can be compacted Use of plasticizer for workability without Increase In water cement ratio, use of self compacting concrete where compaction Is difficult etc.

7.1 The Contractor/Developer shall be responsible for non-deterioration of foundation, proposed by him for design life of the structure and shall ensure the controlling system against the mechanism of their deterioration keeping in view the high content of sulphate and chlorides in the soil and the sub-soil water.

7.2 The Contractor/Developer shall be responsible for the durability of open foundation / pile foundation & RCC pile caps, plinth beams, Super structure, columns, beams cast-in-situ walls of water tanks, lift shaft and machine room etc.

7.3 The Contractor/Developer shall be responsible for design life of the structure against the creep and long term excessive deflection of slabs if used in specific and other structural members (where deflection is the criteria for design) like slabs, beams, lintel etc.

7.4 The Contractor/Developer shall ensure that the work is executed with adequate supervision and that the execution of construction complies with the specifications. For this purpose, the

Contractor /Developer shall carryout various tests on material and finished items as per PWD norms/ relevant IS specifications.

7.5 The curing affects primarily the concrete in the cover to the reinforcement and by definition this is the concrete that protects the reinforcement from corrosion by the ingress of aggressive agent. The Contractor /Developer shall therefore give very special attention to the curing of concrete. The period for curing mentioned in the IS code shall be strictly adhered to. The water used for curing shall be potable.

7.6 The Contractor/Developer shall give special attention to maintain the specified cover during execution as this is very important to transfer the forces in the reinforcement, to provide fire resistance to the steel and to provide an alkaline environment at the surface of the steel.

7.7 The Contractor/Developer shall ensure in the design & construction that there shall be no excessive deflection, creep & cracks in the structure beyond permissible limits.

## **8.0 IMPORTANT NOTE:**

This is a Contract wherein the Contractor /Developer is required to do the structural design and construct the buildings taking into account the requirements of the codes, professional practices, etc. It is not possible to describe in details each and every item of the construction. However, some of the specifications of some of the items have been incorporated in the tender to avoid discrepancies and to have an equal basis for comparison amongst the Contractor/Developers. Certain items may not have been described in this document; however, they form part of this contract as. The Contractor /Developer is supposed to construct the buildings as per Architect/L.S.'s drawings and complete the same in all respect so as to make the tenements habitable and safe. The drawings and design for all services viz. electrical, sewerage, water supply, plumbing & sanitary, rain water disposal etc. shall be submitted by the Contractor /Developer and got approved from MCGM's concerned departments and competent authority.

## **9.0 SUBMISSION REQUIREMENTS:**

Two copies of reports/write up/design and five copies of drawings shall be given duly signed by the Structural / Services Engineer, Contractor /Developer and proof Consultants.

- i) Structural Design – Design criteria, method of analysis, method of design, schematic drawings, references if any, durability considerations, specification, brief, preliminary design & calculations, acceptance criteria, special reference to non-conventional concept, design be made, if the Contractor /Developer is submitting his own design.
- ii) System Designs for buildings & infrastructure works.

- iii) Design brief including specifications and acceptance criteria for ON-SITE Development, and preliminary design calculations.
- iv) Brief on construction method and deployment of resources.
- v) Quality Control/Assurance brief including proposed organizational set up testing facility and frequency of testing for different materials.
- vi) A site/layout plan showing the proposed development including services with north direction scale (1:1000).
- vii) Cluster plans showing ON-SITE development under the scope. Scale (1:500).
- viii) Details of rehab units – Plans, Elevations, sections, type of foundations, founding level etc. Scale (1:100)
- ix) Soft copy of all above submission in a compact disk (CD).

7.0 The Contractor/Developer shall submit the following documents to SRA Cell & Engineering Div. in required no. of copies duly signed by the Architect/L.S./designer and Contractor /Developer.

- 1) Detailed layout with dimension for execution – Scale (1:200)
- 2) Detailed working drawing for each type of building – Scale 1:50.
- 3) Structural, water supply, plumbing, electrification design brief and calculation sheets.
- 4) Working structural drawings including bar bending.
- 5) Working drawing for ON-SITE development scale 1:50.
- 6) **Quality Assurance System:** This include detailed working programme with help of professional Consultant associated with the work and also ensure the quality of work.
- 7) **Quality Assurance Manual:** A quality Assurance Manual constituting a base document out fixing policy procedure, compliances, acceptance criteria and documentation etc.
- 8) MS project /PERT /CPM including material – labour, resources, planning and organizational chart.

The final copies shall be given only after obtaining approval of competent authority.

### **SELECTION OF MATERIAL**

- 1) All materials brought on the site of work and meant to be used in the same, shall be the best of their respective kinds and to the approval of the Engineer. The Engineer or his representative will accept that the materials are really the best of their kinds, when it is proved beyond doubt that no better materials of the particular kind in question are available in the market.
- 2) The contractor shall obtain the approval of the Engineer of samples of all materials to be used in the works and shall deposit these samples with him before placing an order for the materials with the suppliers. The materials brought on the works shall conform in every respect to their approved samples. Fresh samples shall be deposited with the Engineer whenever the type or source of any material changes.

- 3) The contractor shall check each fresh consignment of materials as it is brought to the site of works to see that they conform in all respects to the Specifications of the samples approved by the Engineer, or both.
- 4) The Engineer will have the option to have any of the materials tested to find out whether they are in accordance with the Specifications and the Contractor will bear all expenses for such testing. All Bills, vouchers and test certificates, which in the opinion of the Engineer or his representative are necessary to convince him as to the quality of the materials or their suitability shall be produced for his inspection when required.
- 5) Any materials that have not been found to conform to the specifications will be rejected forthwith and shall be removed from the site by the contractor at his own cost within 24 hours.
- 6) The Engineer shall have power to cause the Contractors to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.
- 7) Notwithstanding the source, the sand shall be washed using sand washing machine before use.

## **11.0 SPECIFICATIONS FOR FABRICATION OF STRUCTURAL STEEL**

### **A) SCOPE**

- i. This specification covers the general requirements for supply where specified, fabrication and delivery at site of structural steel. The bill of quantities covers the specific requirements for the project. The two parts are complementary and are to be read together for a correct interpretation of the provisions of this specification.
- ii. This specification also covers design of all connections and substituted members, preparation of all shop fabrication drawings, inspection and shop painting of structures.

### **B). APPLICABLE CODES & SPECIFICATIONS**

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

In case of discrepancy between this specification and other documents referred to herein, this specification shall govern.

#### a) Materials

- i. IS : 808                      Dimensions for Hot Rolled Steel sections

- ii. IS : 801                   Dimensions for Cold Formed light gauge steel sections
- iii. IS : 814                   Covered Electrodes for Manual Metal Arc Welding of Carbon and Carbon Manganese Steel
- iv. IS : 1161                  Steel Tubes for structural purposes
- v. IS : 1239                  Mild steel tubes, tubulars and other Wrought steel fittings
  - Part 1 - Mild steel tubes
  - Part 2 - Mild steel Tubulars and other wrought steel pipe fittings
- vi. IS : 1363                  Hexagon Head Bolts, Screws and Nuts of product ( Parts 1 to 3) Grade C
  - (Size range M5 to M64)
- vii. IS : 1367                 Technical Supply Conditions for Threaded Fasteners (All Parts)
- viii. IS : 1852                Rolling and Cutting Tolerances for Hot Rolled Steel Products
- ix. IS : 1977                 Structural Steel (Ordinary Quality)
- x. IS : 2062                  Steel for General Structural Purposes
- xi. IS : 2074                 Ready Mixed Paint, Air drying, Red Oxide Zinc Chrome and Priming
- xii. IS : 3502                Steel Chequered Plate
- xiii. IS : 3757                High Strength Structural Bolts
- xiv. IS : 5369                General Requirements for Plain Washers and Lock Washers
- xv. IS : 5372                 Taper Washers for Channels
- xvi. IS : 5374                Taper Washer for I Beams
- xvii. IS : 6610                Heavy Washers for Steel Structures
- xviii. IS : 8500               Structural Steel-microalloyed (medium and high strength qualities)

b) Codes Of Practice

- 1. IS : 800                    Code of Practice for General Construction in Steel
- 2. IS : 801                    Code of practice for use of Cold formed light gauge steel structural members in general building construction
- 3. IS : 803                    Code of practice for design, fabrication and erection of vertical mild steel cylindrical welded storage tanks
- 4. IS : 806                    Code of practice for use of steel tubes in general building construction
- 5. IS : 816                    Code of Practice for use of Metal Arc Welding for General construction in Mild Steel
- 6. IS : 822                    Code of Procedure for Inspection of Welds
- 7. IS : 1182                  Recommended Practice for Radiographic examination of Fusion - Welded Butt Joints in Steel Plates

8. IS : 1200 Method of Measurement in Building Civil Engineering Works
9. IS : 1477 Code of Practice for Painting of (Parts 1 & 2) Ferrous Metals in Buildings
10. IS : 2595 Code of Practice for Radiographic Testing
11. IS : 3658 Code of Practice for Liquid Penetrant Flaw Detection
12. IS : 4000 High strength bolts in Steel Structures - Code of Practice
13. IS : 5334 Code of Practice for Magnetic Particle Flaw Detection of Welds
14. IS : 7215 Tolerances for Fabrication of Steel Structures
15. IS : 9595 Recommendations for Metal Arc Welding of Carbon and Carbon Manganese Steel
16. IS: 819 - Code of practice for Resistance Spot welding for light Assemblies  
in mild steel.
17. IS: 823 - Procedure Code for metal arc welding of mild steel.
18. IS: 824 - Code of practice for welding of structure subject to Dynamic loading.
19. IS: 1261 - Code of practice for seam welding in mild steel.
20. IS: 1323 - Code of practice for oxy-acetylene welding for structural work in mild steel

### **C) STEEL MATERIALS**

Steel materials shall comply with the specifications laid down under clause 2.0 and/or as called for on the design drawings.

All materials used shall be new, unused and free from defects.

Steel conforming to IS: 1977 or ASTM shall be used only for the following:

Fe310-0(St 32-0) : For general purposes such as door/ window frames, grills, steel gates, handrails, fence posts, tee bars and other non-structural use.

Fe410-0(St 42-0) : For structures not subjected to dynamic loading other than wind loads such as: Platform roofs, foot over bridges, building, factory sheds etc.

Fe410-0(St 42-0) : grade steel shall not be used a) if welding is to be employed for fabrication. b) if site is in severe earthquake zone. c) if plastic theory of design is used.

### **D) DRAWINGS PREPARED BY THE VENDOR/CONTRACTOR**

- i. The VENDOR/CONTRACTOR shall prepare all fabrication and erection drawings based on the structural design for the entire work. All the drawings for the entire work shall be prepared in metric

- ii. units. The drawings shall preferably be of one standard size and the details shown there in shall be clear and legible.
- iii. The VENDOR/CONTRACTOR shall not commence detailing unless ENGINEER's design drawings are officially approved for preparation of shop drawings. The VENDOR/CONTRACTOR shall be responsible for the correctness of all fabrication drawings. Fabrication drawings shall be revised by the VENDOR/CONTRACTOR to reflect all revisions in design drawings as and when such revisions are made by the ENGINEER.
- iv. All fabrication drawings shall be submitted to the ENGINEER for approval.
- v. No fabrication drawings will be accepted for ENGINEER's approval unless checked and approved by the VENDOR/CONTRACTOR's qualified structural engineer and accompanied by an erection plan showing the location of all pieces detailed. The VENDOR/CONTRACTOR shall ensure that connections are detailed to obtain ease in erection of structures and in making field connections.
- vi. Fabrication shall be started by the VENDOR/ CONTRACTOR only after ENGINEER's approval of fabrication drawings. Approval by the ENGINEER of any of the drawings shall not relieve the VENDOR/CONTRACTOR from the responsibility for correctness of engineering & design of connections, workmanship, fit of parts, details, material, errors or omissions of any and all work shown thereon. The ENGINEER's approval shall constitute approval of the size of members, dimensions and general arrangement but shall not constitute approval of the connections between members and other details. The CONTRACTOR will solely be responsible for any sort of delay in fabrication/ erection work.
- vii. The drawings prepared by the VENDOR/CONTRACTOR and all subsequent revisions etc. shall be at the cost of the VENDOR/CONTRACTOR for which no separate payment will be made.

## **E) FABRICATION**

### **i)General**

Fabrication activity shall be strictly started only after final approval of fabrication/erection drawing from owner and engineer. All workmanship and finish shall be of the best quality and shall conform to the best approved method of fabrication. All materials shall be finished straight and shall be machined/ground smooth true and square where so specified. All holes and edges shall be free of burrs. Shearing and chipping shall be neatly and accurately done and all portions of work exposed to view shall be neatly finished. Unless otherwise directed/ approved, reference may be made to relevant IS codes for providing standard fabrication tolerance. Material at the shops shall be kept clean and protected from weather.

## **ii)Connections**

- a) Shop/field connections shall be as per approved fabrication drawings.
- b) In case of bolted connections, taper washers or flat washers or spring washers shall be used with bolts as necessary. In case of high strength friction grip bolts, hardened washers be used under the nuts or the bolt heads whichever are turned to tighten the bolts. The length of the bolt shall be such that atleast one thread of the bolt projects beyond the nut, except in case of high strength friction grip bolts where this projection shall be atleast three times the pitch of the thread.
- c) In all cases where bearing is critical, the unthreaded portion of bolt shall bear on the members assembled. A washer of adequate thickness may be provided to exclude the threads from the bearing thickness, if a longer grip bolt has to be used for this purpose.
- d) All connections and splices shall be designed for full strength of members or loads as per design drawings. Column splices shall be designed for the full tensile strength of the minimum cross section at the splice.
- e) All members likely to collect rain water shall have drain holes provided.

## **iii)Straightening**

All materials shall be straight and, if necessary, before being worked shall be straightened and/or flattened by pressure and shall be free from twists. Heating or forging shall not be resorted to without the prior approval of the ENGINEER in writing. The straightening work shall be carried out as per IS: 1852 Class B

iv)Cutting, punching, drilling, welding and fabrication tolerances shall be generally as per relevant IS codes.

## **v) Rolling And Forming**

Plates, channels, R.S.J. etc., for portal columns, girts, gantry girders, etc., shall be accurately laid off and rolled or formed to required profile/ shape as called for on the drawings. Adjacent sections shall be match-marked to facilitate accurate assembly, welding and erection in the field.

## **vi) High Strength Friction Grip Bolting**

- a) Inspection after tightening of bolts shall be carried out as stipulated in the appropriate standards depending upon the method of tightening and the type of bolt used.

## **vii) Welding**

- a) Welding procedure shall be submitted to ENGINEER for approval. Welding shall be entrusted to only qualified and experienced welders who shall be periodically tested and graded as per IS 817, IS: 7310 (Part 1) and IS: 7318 (Part 1).

b) While fabricating plated beams and built up members, all shop splices in each component part shall be made before such component part is welded to other parts of the members. Wherever weld reinforcement interferes with proper fit-up between components to be assembled for welding, these welds shall be ground flush prior to assembly.

c) Approval of the welding procedure by the ENGINEER shall not relieve the CONTRACTOR of his responsibility for correct and sound welding without undue distortion in the finished structure.

d) No welding shall be done when the surface of the members is wet nor during periods of high wind.

e) Each layer of a multiple layer weld except root and surfaces runs may be moderately peened with light blows from a blunt tool. Care shall be exercised to prevent scaling or flaking of weld and base metal from overpeening.

f) No welding shall be done on base metal at a temperature below -5 Deg.C. Base metal shall be preheated to the temperature as per relevant IS codes.

g) Electrodes other than low-hydrogen electrodes shall not be permitted for thicknesses of 32 mm and above.

h) Inspection of Welds

All welds shall be inspected for flaws by any of the methods described under clause 6 "Inspection".

The choice of the method adopted shall be determined by the ENGINEER.

i) The correction of defective welds shall be carried out as directed by the ENGINEER without damaging the parent metal. When a crack in the weld is removed, magnetic particle inspection or any other equally positive means as prescribed by the ENGINEER shall be used to ensure that the whole of the crack and material upto 25 mm beyond each end of the crack has been removed. Cost of all such tests and operations incidental to correction shall be to the VENDOR /

CONTRACTOR's account.

### **viii) Tolerances**

The dimensional and weight tolerances for rolled shapes shall be in accordance with IS:1852 for indigenous steel and equivalent applicable codes for imported steel. The tolerances for fabrication of structural steel shall be as per IS:7215.

### **ix) End Milling**

Where compression joints are specified to be designed for bearing, the bearing surfaces shall be milled true and square to ensure proper bearing and alignment.

## **F)INSPECTION**

- i. The VENDOR/ CONTRACTOR shall give due notice to the ENGINEER in advance of the works getting ready for inspection. All rejected material shall be promptly removed from the shop and replaced with new material for the ENGINEER's approval / inspection. The fact that certain material has been accepted at the VENDOR / CONTRACTOR's shop shall not invalidate final rejection at site by the ENGINEER if it fails to conform to the requirements of these specifications, to be in proper condition or has fabrication inaccuracies which prevents proper assembly nor shall it invalidate any claim which the ENGINEER may make because of defective or unsatisfactory materials and/or workmanship.
- ii. No materials shall be painted or despatched to site without inspection and approval by the ENGINEER unless such inspection is waived in writing by the ENGINEER.
- iii. The VENDOR / CONTRACTOR shall provide all the testing and inspection services and facilities for shop work except where otherwise specified.

IV. For fabrication work carried out in the field the same standard of supervision and quality control shall be maintained as in shop fabricated work. Inspection and testing shall be conducted in a manner satisfactory to the ENGINEER.

**Inspection and tests on structural steel members shall be as set forth below :**

**a) Material Testing**

If mill test reports are not available for any steel materials the same shall be got tested by the VENDOR/CONTRACTOR to the ENGINEER's satisfaction to demonstrate conformity with the relevant specification.

**b)Tests on Welds**

**Magnetic Particle Test**

Where welds are examined by magnetic particle testing, such testing shall be carried out in accordance with relevant IS codes. If heat treatment is performed, the completed weld shall be examined after the heat treatment. All defects shall be repaired and retested. Magnetic particle tests shall be carried out using alternating current. Direct current may be used with the permission of the ENGINEER.

**Liquid Penetrant Inspection**

In the case of welds examined by Liquid Penetrant Inspection, such tests shall be carried out in accordance with relevant IS Code. All defects shown shall be repaired and rechecked.

**Radiographic Inspection**

All full strength butt welds shall be radiographed in accordance with the recommended practice for radiographic testing as per relevant IS code.

### **c) Dimensions, Workmanship & Cleanliness**

Members shall be inspected at all stages of fabrication and assembly to verify that dimensions, tolerances, alignment, surface finish and painting are in accordance with the requirements shown in the VENDOR/CONTRACTOR's approved fabrication drawings and the ENGINEER's drawings.

### **d) Test Failure**

In the event of failure of any member to satisfy inspection or test requirement, the CONTRACTOR shall notify the ENGINEER or his authorised representative. The VENDOR / CONTRACTOR must obtain permission from the ENGINEER before repair is undertaken. The quality control procedures to be followed to ensure satisfactory repair shall be subject to approval by the ENGINEER.

2 The ENGINEER has the right to specify additional testing as he deems necessary, and the additional cost of such testing shall be borne by the MCGM, only in case of successful testing.

3 The VENDOR / CONTRACTOR shall maintain records of all inspection and testing which shall be made available to the ENGINEER or his authorised representative.

### **G) SHOP MATCHING**

For structures like portals etc. shop assembly is essential. For other steel work, such as purlins along with bracings may have to be shop assembled to ensure satisfactory fabrication, obtaining of adequate bearing areas etc. if so desired by the ENGINEER. All these shop/ field assemblies shall be carried out by VENDOR/ CONTRACTOR at no extra cost to the MCGM.

### **H) DRILLING HOLES FOR OTHER WORKS**

As a part of this Contract, holes in members required for installing equipment or steel furnished by other manufacturers or other contractors shall be drilled by the VENDOR/ CONTRACTOR at no extra cost to the MCGM. The information for such extra holes will be supplied by the ENGINEER.

### **I) MARKING OF MEMBERS**

- i. After checking and inspection, all members shall be marked for identification during erection. This mark shall correspond to distinguishing marks on approved erection drawings and shall be

- ii. legibly painted and stamped on it. The erection mark shall be stamped with a metal dye with figures at least 20 mm high and to such optimum depth as to be clearly visible. All erection marks shall be on the outer surface of all sections and near one end, but clear of bolt holes. The marking shall be so stamped that they are easily discernible when sorting out members. The stamped marking shall be encircled boldly by a distinguishable paint to facilitate easy location.
- iii. Erection marks on like pieces shall be in identical locations. Members having lengths of 7.0 m or more shall have the erection mark at both ends.

## **J) ERRORS**

Any error in shop fabrication which prevents proper assembling and fitting up of parts in the field by moderate use of drift pins or moderate amount of reaming will be classified by the ENGINEER as defective workmanship. In case ENGINEER rejects such material or defective workmanship, the same shall be replaced by the materials and workmanship conforming to the ENGINEER's requirements by VENDOR / CONTRACTOR free of cost at site.

## **K) PAINTING**

All fabricated steel material, except those galvanised shall receive protective paint coating  
Galvanising of fabricated steel wherever specified,

# **12.0 SPECIFICATIONS FOR ERECTION OF STRUCTURAL STEEL**

## **A) SCOPE**

This specification covers the general requirements for erection of structural steel. It covers the supply and delivery of all necessary materials, labour, scaffolding, tools, tackles, equipment and everything that is necessary for the satisfactory completion of the job on schedule. Tender Data Sheet covers the specific requirements for the project. The two parts are complementary and are to be read together for a correct interpretation of the provisions of this specification, where requirements of the two sections conflict, those of Tender Data Sheet shall govern.

## **B) APPLICABLE CODES & SPECIFICATIONS**

The following specifications, standards and codes are made a part of this specification. All standards, specifications and codes of practice referred to herein shall be the latest editions, including all applicable official amendments and revisions

In case of discrepancy between this specification and other documents referred to herein, this specification shall govern. In case of discrepancy between tender drawings and this specification, the tender drawings shall govern Structural

IS: 800	Code of Practice for General Construction in Steel
IS: 801	Code of Practice for Use of Cold Formed Light Gauge Steel Structural Members in General Building Construction
IS: 806	Code of Practice for Use of Steel Tubes in General Building Construction
IS: 7205	Safety Code for Erection of Structural Steel Work IS:
7215	Tolerances for Fabrication of Steel Structures
IS: 4000	High Strength Bolts in Steel Structure - Code of Practice
AISC	Specifications for Design, Fabrication and Erection of Buildings

### **C) ERECTION SCHEME**

Each Bid shall be accompanied by a broad erection scheme with dates and estimated completion time for various parts of the work prepared by BIDDER after a thorough study of the Bid drawings and the site conditions. This erection scheme shall describe the methods proposed to be employed by BIDDER for transporting his equipments, tools, tackles, gas cylinders, electrodes and all that is necessary to site, unloading, transporting within the site, handling, assembling, hoisting and erecting of the structural steel components and the type, capacity and quantity of equipment that BIDDER proposes to bring to site for all these operations. The scheme shall also indicate the strength and tradewise composition of the work force and supervisory personnel that will be deployed by BIDDER for the various operations.

### **D) ERECTION PROGRAMME**

i. Within two weeks of the acceptance of his Bid, the successful BIDDER shall submit, a detailed erection programme. This programme shall be accompanied by a layout plan identifying the areas

proposed for unloading, main storage, subsidiary storage, assembly and the transportation of equipment and fabricated material between the storage and work areas. The layout shall clearly indicate the points at which proposed erection begins, direction in which it is proposed to progress, the deployment of equipment, access route for cranes to reach work areas, etc. The locations and extent of site offices and stores shall also be indicated in detail on the above layout. Full details of the method of handling, transport, hoisting and erection including false work/staging, temporary bracing, guying, etc. shall be furnished by CONTRACTOR in this erection programme along with complete details of the quantity and capacity of the various items of erection equipment that will be used. A site organisation chart showing the number of supervisory personnel, and the number and composition of the various gangs shall also accompany the erection programme.

ii. Any modifications to the erection programme directed by ENGINEER for the reasons of inadequacy of the quantity and/or capacity of the erection equipment, erection personnel and supervisors, temporary bracing, guying etc., or safety of the erection methods, or stability of the erected portions of structures, or unsuitability of the erection sequence due to interference with the work of other agencies shall be incorporated by CONTRACTOR and the work shall be carried out in accordance with the revised programme. Approval by ENGINEER shall not relieve CONTRACTOR from the responsibility for the safe, sound, accurate and timely erection of structural steel work as required by ENGINEER/OWNER. CONTRACTOR shall also make no extra claims for bringing additional equipment to site for erection, if so directed by ENGINEER. CONTRACTOR shall be deemed to have visualised all erection problems while bidding for the work and no additional compensation shall be claimed on this account.

## **E) SITE OPERATIONS**

i. An experienced and qualified Superintendent shall be in full time charge of the job.

ii. CONTRACTOR shall complete all preliminary works at site well before the arrival of structural steel, such as establishment of a well equipped and adequately staffed site office, stores, unloading gantry, unloading and pre-assembly yard, labour quarters if any, electrical and water connections, electrical winches, derricks, cranes, compressors, all tools and tackles, rivet guns, welding sets, torque wrenches, spud wrenches, staging, etc. as well as experienced erection and supervisory personnel as part of this contract and any other work that may be necessary so as to start erection immediately after the arrival of the first batch of steel at site.

iii) CONTRACTOR shall furnish at his own expense, the necessary non-inflammable staging and hoisting materials or equipment required for the erection work and shall remove and take them away after completion of the job. CONTRACTOR shall also provide necessary passageways, fences, safety belts, helmets, lights and other fittings to the satisfaction of OWNER/ENGINEER and to meet the rules of local authorities and for protection to his men and materials. A licensed electrician shall be kept on the job for the entire duration of the work to maintain CONTRACTOR's electrical equipment and connections.

iv) CONTRACTOR must ensure suitable safety precautions in consultation with ENGINEER against all existing electrical installations which are live in the adjacent structures.

v) If a portion of the work of the project area cannot be made available to CONTRACTOR for his activities due to operations being carried out by other agencies, he shall suitably modify his sequence of operations so as to continue work without interruption. CONTRACTOR shall work in coordination with other agencies working on the project site and plan his work suitably so as not to hinder the progress of construction at site.

vi) Crane fitness shall be checked by competent person and fitness of Operating person shall be certified by ENGINEER at site.

#### **F) ACCEPTANCE OF STEEL, ITS HANDLING & STORAGE**

- i. Point of delivery of fabricated steel shall be as specified in Tender Data Sheet.
- ii. CONTRACTOR shall carefully check the steel to be erected at the time of acceptance. Any fabrication defects observed should be brought to the notice of OWNER/ ENGINEER.
- iii. No dragging of steel shall be permitted. All shall be stored 300mm above ground on suitable packing to avoid damage. It shall be stored in the order required for erection, with erection marks visible. All storage areas shall be prepared and maintained by CONTRACTOR. Steel shall not be stored in the vicinity of areas where excavation or grading will be done and, if so stored temporarily, this shall be removed by CONTRACTOR well before such excavation and/or grading commences to a safe distance to avoid burial under debris.
- iv. Scratched or abraded steel shall be given a coat of primer specified under tender Data Sheet for protection after unloading and handling prior to erection. All milled and machined surfaces shall be properly protected from rust/corrosion by suitable coating and also from getting damaged.

## **G) ANCHOR BOLTS & FOUNDATIONS**

- i. CONTRACTOR shall carefully check the location and layout of anchor bolts embedded in foundations constructed, to ensure that the structures can be properly erected as shown on the drawings, any discrepancy in the anchor bolts/foundation shall be reported to ENGINEER.
- ii. Levelling of column bases to the required elevation may be done either by providing shims or three nuts on the upper threaded portion of the anchor bolt. All shim stock required for keeping the specified thickness of grout and in connection with erection of structures on foundations, crane brackets or at any other locations shall be of good M.S. plates and shall be supplied by CONTRACTOR at his cost.
- iii. A certain amount of cleaning of foundations and preparing the area is considered normal and shall be carried out by CONTRACTOR at not extra cost.
- iv. Where beams bear in pockets or on walls, bearing plates shall be set and levelled as part of the work.

## **H) ASSEMBLY & CONNECTIONS**

- i. Field connections may be effected by either riveting, bolting, welding or by use of high strength friction grip bolts as specified in Data Sheet-A, and as shown on the design and erection drawings.
- ii. All field connection work shall be carried out in accordance with enclosed Tender Data Sheet. All bolts, nuts, washers, rivets, electrodes required for field connections shall be supplied by Erector free of cost.
- iii. All assembling shall be carried on a level platform.
- iv. Drifts shall be used only for drawing the work to proper position and must not be used to such an extent as to damage the holes. Size of drifts larger than the nominal diameter of hole shall not be used. Any damaged holes or burrs must be rectified to the satisfaction of ENGINEER.
- v. Corrections of minor misfits and reasonable amount of reaming and cutting of excess stock from rivets shall be considered as a part of erection. Any error in the shop, which prevents proper fit on a moderate amount of reaming and slight chipping or cutting, shall be immediately reported to ENGINEER.

## **I) ERECTION**

- i. All structural steel shall be erected as shown on the drawings. Proper size steel cable slings, etc., shall be used for hoisting. Guys shall not be anchored to existing structures, foundations, etc. unless so permitted by ENGINEER in writing. Care shall be taken to see that ropes in use are always in good condition.

- ii. Steel columns in the basement, if any, are to be lowered and erected carefully with the help of a crane and/or derrick without damaging the basement walls steel or floor.
- iii. Structural steel frames shall be erected plumb and true. Frames shall be lifted at such points that they are not liable to buckle and deform. Trusses shall be lifted only at node points. In the case of trusses, roof girders, all of the purlins and wind bracing shall be placed simultaneously and the columns shall be erected truly plumb on screed bars over the pedestals. All steel columns and beams shall be checked for plumb and level individually before and after connections are made. Temporary bracings shall be introduced wherever necessary to take care of all loads to which the structure may be subjected, including erection equipment and the operation thereof. Such bracings shall be left in place as long as may be required for safety and stability.
- iv. As erection progresses, the work shall be securely bolted to take care of all dead load, wind, seismic and erection stresses.
- v. No riveting or welding or final bolting shall be done until the structure has been properly aligned and approved by ENGINEER. No cutting, heating or enlarging of the holes shall be carried out without the prior written approval of ENGINEER.
- vi. Test certificates as specified in Tender Data Sheet shall be furnished by CONTRACTOR.

## **J) INSPECTION**

ENGINEER/OWNER or their authorised representatives shall have free access to all parts of the job during erection and all erection shall be subjected to their approval. In case of faulty erection, all dismantling and re-erection required will be at CONTRACTOR's cost. No paint shall be applied to rivet heads or field welds or bolts until these have been approved by ENGINEER.

## **k) TOLERANCES**

Tolerances mentioned below shall be achieved after the entire structure or part thereof is in line, level and plumb. The tolerances specified below do not apply to steel structures where the deviations from true position are intimately linked with and directly influence technological process. In such cases, the tolerances on erected steel structures shall be as per recommendations of process technologists/suppliers which will be indicated in the drawings.

### **Columns**

- i) Deviation of column axes at foundation top level with respect to true axes :
  - (a) In longitudinal direction :  $\pm 5$  mm
  - (b) In lateral direction :  $\pm 5$  mm

- ii) Deviation in the level of bearing surface of columns at foundation top with respect to true level :  $\pm 5$  mm
- iii) Out of plumbness (verticality) of column axis from true vertical axis, as measured at column top :
- (a) For columns upto and including 15 metres in height :  $\pm 1/1000$  of column height in mm or  $\pm 15$ mm whichever is less
- (b) For columns exceeding 15 metres in height :  $\pm 1/1000$  of column height in mm or  $\pm 20$  mm whichever is less
- iv) Deviation in the level of bearing surface of columns at foundation top with respect to true level :  $\pm 5$  mm
- v) Out of plumbness (verticality) of column axis from true vertical axis, as measured at column top :
- (a) For columns upto and including 15 metres in height :  $\pm 1/1000$  of column height in mm or  $\pm 15$ mm whichever is less
- (b) For columns exceeding 15 metres in height :  $\pm 1/1000$  of column height in mm or  $\pm 20$  mm whichever is less
- vi) Deviation in straightness in longitudinal and transverse planes of column at any point along the height :  $\pm 1/1000$  of column height in mm or  $\pm 10$  mm whichever is less
- vii) Difference in erected position of adjacent pairs of columns along length or across width of building prior to connecting trusses/ beams with respect to true distance :  $\pm 10$  mm
- viii) Deviation in any bearing or seating level with respect to true level :  $\pm 5$  mm
- ix) Deviation in differences in bearing levels of a member on adjacent pair of columns both across and along the building :  $\pm 10$  mm

- i) Shift at the centre of span of top chord the vertical plane of bottom chord :  $\pm 1/250$  of height of truss in member with respect to mm or  $\pm 15$  mm whichever passing through the centre is less
- ii) Lateral shift of top chord of truss at the centre of span from the vertical plane :  $\pm 1/1500$  of span of truss in mm or  $\pm 15$  mm whichever is less  
**passing through the centre of supports of the truss**
- iii) Lateral shift in location of truss from its true vertical position :  $\pm 10$  mm
- iv) Lateral shift in location of purlin true position :  $\pm 5$  mm
- v) Deviation in difference of bearing levels of trusses or beams from the true difference : i)  $\pm 20$  mm for trusses  
ii) For beams  
Depth < 1800mm :  $\pm 6$  mm  
Depth > 1800mm :  $\pm 10$  mm
- vi) Deviation in sag in chords and diagonals of truss between node points :  $1/1500$  of length in mm or 10mm whichever is smaller
- 11.2.7 Deviation in sweep of trusses, beams etc. the horizontal plane :  $1/1000$  of span in mm in the in subject to a maximum of 10 mm

### **Crane Girders & Rails**

- i) Shift in the centre line of crane rail with respect to centre line of web of crane girder :  $\pm 5$  mm
- ii) Shift in plan of alignment of crane rail with respect to true axis of crane rail at any point :  $\pm 5$  mm
- iii) Difference in alignment of crane rail in plan measured between any two points 2 metres apart along rail :  $\pm 1$  mm
- iv) Deviation in crane track with respect to time gauge

- (a) For track gauges upto and including 15 metres :  $\pm 5$  mm
- (b) For track gauges more than 15 metres :  $\pm [5 + 0.25 (S-15)]$   
 true gauge where S in metres is
- v) Deviation in the crane rail level at any point from true level :  $1/1200$  of the gauge distance or  $\pm 10$ mm whichever is less
- vi) Difference in the crane rail actual levels between any two points 2 metres apart along the rail length :  $\pm 2$  mm
- vii) Difference in levels between crane track rails at  
 (a) Supports of crane girders :  $\pm 15$  mm  
 (b) Mid span of crane girders :  $\pm 20$  mm
- viii) **Relative shift of crane rail surfaces at a joint in plan and elevation transition** : **2 mm subject to grinding surfaces for smooth**
- Relative shift in the location of crane stops (end buffers) along the crane tracks with track gauge S in mm :  $1/1000$  of track gauge S in mm subject to maximum of 20 mm

## **L) Painting**

Cleaning with shot blasting SA 2.5 before applying primer, Two shop coats of epoxy red oxide zinc phosphate primer of 30 microns each, One shop coat and one site coat of epoxy CR enamel of 30 microns each and touch-up with spray painting after erection.

**SECTION 11**  
**FRAUD AND CORRUPT**  
**PRACTICES**

## **FRAUD AND CORRUPT PRACTICES**

- The Applicants and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, the Authority may reject an Application without being liable in any manner whatsoever to the Applicant if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process.
- Without prejudice to the rights of the Authority under relevant Clause herein above, if an Applicant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, such Applicant shall not be eligible to participate in any tender or RFQ issued by the Authority during a period of 2 (two) years from the date such Applicant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
- For the purposes of this Clause , the following terms shall have the meaning hereinafter respectively assigned to them:

(A) **“corrupt practice”** means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly, with the Bidding Process or the LOA or has dealt with matters concerning the Concession Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process); **or** save and except as permitted under the relevant sub clause, engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LOA or after the execution of the Concession Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Concession Agreement, who at any time has been or is a legal, financial or technical adviser of the Authority in relation to any matter concerning the Project;

(B) **“fraudulent practice”** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process ;

(C) **“coercive practice”** means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any persons participation or action in the Bidding Process;

(D) **“undesirable practice”** means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any

manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and

**(E) “Restrictive practice”** means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

**(F)** If the Employer/Financier determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days’ notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of relevant Clause shall apply as if such expulsion had been made.

**(G)** Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with relevant Clause.

For the purposes of this Sub-Clause:

i. “corrupt practice” is the offering, giving, receiving to soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

i. “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes Financier staff and employees of other organizations taking or reviewing procurement decisions.

ii. “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

iv. “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

v. “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

vi. “obstructive practice” is deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede the Financier investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

vi. acts intended to materially impede the exercise of the Financier’s inspection and audit rights provided .

vii. “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

ix. ”parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, noncompetitive levels.

x. a “party” refers to a participant in the procurement process or contract execution.

# **SECTION 12**

## **PRE BID MEETING**

## **PREBID MEETING**

Pre-bid meeting of the interested parties shall be convened at the designated date, time and place. A maximum of three representatives of each Applicant shall be allowed to participate on production of authority letter from the Applicant.

During the course of Pre-bid meeting, the Applicants will be free to seek clarifications and make suggestions for consideration of the Authority. The Authority shall Endeavor to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

Pre-Bid Meeting venue	Office of the AMC(P) Conference Hall, Second Floor, Municipal Head office Annexe Building, Mahapalika Marg, Mumbai – 400 001.
Pre-Bid Meeting Date & Time	09.11.2021 from 15:00 Hrs

**SECTION –13**  
**LIST OF**  
**APPROVED**  
**BANKS**

## **LIST OF APPROVED BANKS**

The following Banks with their branches in Greater Mumbai and in suburbs up to Virar and Kalyan have been approved only for the purpose Banker's guarantee from 1997-98 onwards until further instructions.

The Bankers Guarantee issued by branches of approved Banks beyond Kalyan can be accepted only if the said Banker's Guarantee is countersigned by the branch of the same Bank, within the Mumbai Limit categorically endorsing said bankers Guarantee is binding on the endorsing Branch of the bank w limits and is liable to be on forced against the said branch of the Bank in case the contractor/supplier furnishing the bankers Guarantee.

### **List of approved Banks:-**

<b>A</b>	<b>SBI and its Subsidiary Banks</b>
1	State Bank of India
2	State Bank of Bikaner & Jaipur
3	State Bank of Hyderabad
4	State Bank of Mysore
5	State bank of Patiyala
6	State Bank of Saurashtra
7	State Bank of Travancore
<b>B</b>	<b>Nationalized Banks</b>
8	Allahabad Bank
9	Andhra Bank
10	Bank of Baroda
11	Bank of India
12	Bank of Maharashtra
13	Central Bank of India
14	Dena Bank
15	Indian Bank
16	Indian Overseas Bank
17	Oriental Bank of Commerce
18	Punjab National Bank
19	Punjab & Sindh Bank
20	Syndicate Bank.
21	Union Bank of India
22	United Bank of India
23	UCO Bank
24	Vijaya Bank
24A	Corporation Bank
<b>C</b>	<b>Scheduled Commercial Bank</b>
25	Bank of Madura Ltd
26	Bank of Rajasthan Ltd
27	Banaras State Bank Ltd
28	Bharat Overseas bank
29	Catholic Syrian Bank Ltd

30	City Union bank Ltd
31	Development Credit Bank
32	Dhanalaxmi Bank Ltd.
33	Federal Bank Ltd
34	Indsind Bank Ltd
35	I.C.I.C.I. Banking Corporation Ltd
36	Global Trust Bank Ltd.
37	Jammu & Kashmir Bank Ltd.
38	Karnataka Bank Ltd.
39	Karur Vysya Bank Ltd.
40	Laxmi Vilas Bank Ltd.
41	Nedugundi Bank Ltd.
42	Ratnakar Bank Ltd.
43	Sangli Bank Ltd.
44	South Indian Bank Ltd
45	S.B.I. Corporation & Int Bank Ltd.
46	Tamilnadu Mercantile Bank Ltd.
47	United Western Bank Ltd.
48	Vysya Bank Ltd.
<b>D</b>	<b>Scheduled Urban Co-op Banks</b>
49	Abhyudaya Co-op Bank Ltd
50	Bassein Catholic Co-op Bank Ltd
51	Bharat Co-op Bank Ltd
52	Bombay Mercantile Co-op Bank Ltd
53	Cosmos Co-op Bank Ltd
54	Greater Mumbai Co-op Bank Ltd
55	Janata Sahakari Bank Ltd
56	Mumbai District Central Co-op Bank Ltd
57	Maharashtra State Co-op Bank Ltd
58	New India Co-op Bank Ltd
59	North Canara GSB Co-op Bank Ltd
60	Rupee Co-op Bank Ltd
61	Sangli Urban Co-op Bank Ltd
62	Saraswat Co-op Bank Ltd
63	Shamrao Vitthal Co-op Bank Ltd
64	Mahanagar Co-op Bank Ltd
65	Citizen Bank Ltd.
66	Yes Bank Ltd.
<b>E</b>	<b>Foreign Banks</b>
67	ABM AMRO (NY) Bank
68	American Express Bank Ltd.
69	ANZ Grinlays Bank Ltd
70	Bank of America N.T. & S.A.
71	Bank of Tokyo Ltd
72	Bankindosuez
73	Banque Nationale de Paris.
74	Barclays Bank

75	City Bank N.A.
76	Hongkong & Shanghai Banking Corporation.
77	Mitsui Taiyokbe Bank Ltd
78	Standard Chartered Bank
79	Cho hung Bank

# **SECTION –14**

## **APPENDIX**

**FORM OF TENDER**

To

The Municipal Commissioner for Greater Mumbai Sir,

I/ We have read and examined the following documents relating to the construction of

- i. Notice inviting tender.
- ii. Directions to tenderers (General and special)
- iii. General condition of contract for Civil Works of the Municipal Corporation of Greater Mumbai as amended up to date.
- iv. Relevant drawings
- v. Specifications.
- vi. Special directions
- vii. Annexure A and B.
- viii. Bill of Quantities and Rates.

1A. I/We \_\_\_\_\_  
 \_\_\_\_\_ (full name in capital letters, starting with surname),  
 the Proprietor/ Managing Partner/ Managing Director/ Holder of the Business, for the  
 establishment / firm / registered company, named herein below,

do hereby offer

to.....  
 .....  
 ...  
 .....  
 ...

Referred to in the specifications and schedule to the accompanying form of contract of the rates entered in the schedule of rates sent herewith and signed by me/ us” (strike out the portions which are not applicable).

1B. I/We do hereby state and declare that I/We, whose names are given herein below in details with the addresses, have not filled in this tender under any other name or under the name of any other establishment /firm or otherwise, nor are we in any way related or concerned with the establishment /firm or any other person, who have filled in the tender for the aforesaid work.”

2. I/We hereby tender for the execution of the works referred to in the aforesaid documents, upon the terms and conditions, contained or referred to therein and in accordance with the specifications designs, drawings and other relevant details in all respects.

\* At the rates entered in the aforesaid Bill of Quantities and Rates.

3. \_\_\_\_\_ Ac  
 cording to your requirements for payment of Earnest Money amounting to Rs. \_/- (Rs. \_)  
 I/We have deposited the amount through online payment gateways with the C.E. of the Corporation not to bear interest

4. I/We hereby request you not to enter into a contract with any other person/s for the execution of the works until notice of non/acceptance of this tender has first been communicated to me/us, and in consideration of yours agreeing to refrain from so doing I/we agree not to withdraw the offer constituted by this tender before the date of communication to me/us of such notice of non/acceptance, which date shall be not later than ten days from the date of the decision of the Standing Committee or Education Committee of the Corporation, as maybe required under the Mumbai Municipal Corporation Act, not to accept this tender.(Subject to condition 5 below).

5. I/We also agree to keep this tender open for acceptance for a period of 180 days from the date fixed for opening the same and not to make any modifications in its terms and conditions which are not acceptable to the Corporation.

6. I/We agree that the Corporation shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely, if.

**a** I/We fail to keep the tender open as aforesaid.

**b** I/We fail to execute the formal contract or make the contract deposit when called upon to do so.

**c** I/we do not commence the work on or before the date specified by the Engineer in his work order.

7. I/We hereby further agree to pay all the charges of whatsoever nature in connection with the preparation, stamping and execution of the said contract.

8. I/We further agree that, I/we shall register ourselves as ‘Employer’ with the Bombay Iron and Steel Labour Board’ and fulfill all the obligatory provisions of Maharashtra Mathadi, Hamal and other Manual workers (Regulation of Employment and Welfare) Act 1969 and the Bombay Iron and Steel unprotected workers Scheme 1970.

9. “I/We..... have failed in the accompanying tender with full knowledge of liabilities and, therefore, we will not raise any objection or dispute in any manner relating to any action, including forfeiture of deposit and blacklisting, for giving any information, which is found to be incorrect and against the instructions and directions given in this tender.

10. “I/We further agree and undertake that in the event it is revealed subsequently after the allotment of work/contract to me/us, that any information given by me/us in this tender is false or incorrect, I/We shall compensate the Municipal Corporation of Greater Mumbai for any such losses or inconvenience caused to the Corporation in any manner and will not resist any claim for such compensation on any ground whatsoever. I/we agree and undertake that I/we shall not claim in such case any amount by way of damages or compensation for cancellation of the contract given to me/us or any work assigned to me/us or is withdrawn by the Corporation,”

Address

Yours faithfully,

.....

Digital Signature of the Tenderer or the Firm

1. ....  
.
2. ....  
.
3. ....  
.
4. ....  
.
5. ....  
.

Full Name and private residential address  
of all the partners constituting the Firm  
No.....

A/c

1. ....  
Bank.....

Name

of

2. ....  
Branch.....

Name

of

3. ....  
.....

Vender

No.....

4. ....

5. ....

# **AGREEMENT FORM**

Tender / Quotation

dated.....20...

Standing Committee/ Education Committee Resolution No. ....

CONTRACT FOR THE WORKS .....

This agreement made this day of ..... day .....

Two Thousand .....

Between

inhabitants of Mumbai, carrying on business at .....

.....in  
Mumbai under the style and name of M/s.  
.....

.....(Herein after called “the contractor of the one part  
and Shri. ....

the Jt.M.C.(S.W.M.) (hereinafter called “The Commissioner” in which expression are included unless the inclusion is inconsistent with the context, or meaning thereof, his successor or successors for the time being holding the office of Jt.M.C. (S.W.M.)of the second part and the Municipal Corporation of Greater Mumbai (hereinafter called “the Corporation”) of the third part, WHEREAS the contractor has tendered for the construction, completion and maintenance of the works described above and his tender has been accepted by the Commissioner (with the approval of the Standing Committee/Education Committee of the Corporation NOW THIS THIS AGREEMENT WITNESSETH as follows:-

1) In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract for works hereinafter referred to:-

2) The following documents shall be deemed to form and be read and constructed as a part of this agreement viz.

- a) The letter of Acceptance
- b) The Bid:
- c) Addendum to Bid; if any
- d) Tender Document
- e) The Bill of Quantities:

- f) The Specification:
- g) Detailed Engineering Drawings
- h) Standard General Conditions of Contracts (GCC)
- i) All correspondence documents between bidder and MCGM
  - 3) In consideration of the payments to be made by the Commissioner to the contractor as hereinafter mentioned the contractor hereby covenants with the Commissioner to
    - construct, complete and maintain the works in conformity in all respects with the provision of the contract.
  - 4) The Commissioner hereby covenants to pay to the Contractor in consideration of the construction, completion and maintenance of the works the contract sum, at times and in the manner prescribed by the contract.

IN WITNESS WHERE OF the parties hereto have caused their respective common seals to be herein to affixed (or have hereunto set their respective hands and seals) the day and year above written.

Signed, Sealed and delivered by the Contractors

.....  
 .....  
 .....  
 .....  
 .....  
 .....

In Presence of

Trading under the name and style of

.....  
 .....

.....  
 .....

Full Name

Address

Contractors

Signed by the Jt.M.C. (S.W.M.) in the presence of Ex.....City/WS/ES

.....  
 .....

.....  
 ....  
 .....  
 .....

Jt. M.C. (S.W.M.)

1.

The Common Seal of the Municipal Corporation of Greater Mumbai was hereunto affixed on the ..... ..20 in the presence of two members of the Standing Committee.

2.

And in the presence of the Municipal Secretary

**Annexure-B**

**PRE-CONTRACT INTEGRITY**

(On Rs. 500/- Stamp Paper)

The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:-

1. The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the MCGM, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.

2. The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the MCGM or otherwise in procuring the

Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

3. The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

4. The Bidder will not accept any advantage in exchange for any corrupt

practice, unfair means and illegal activities.

5. The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the MCGM or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

6. The Bidder shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the MCGM as part of the business relationship, regarding plans, technical proposals and business details, including information

contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

7. The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

8. The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

9. The Bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, the Authority may reject an Application without being liable in any manner whatsoever to the Applicant if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process For the purposes of this Clause 9, the following terms shall have the meaning herein after respectively assigned to them:

“fraudulent practice” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process;

2. “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any persons participation or action in the Bidding Process;

3. “undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and

4. “restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair

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Bid  
ding  
Proce  
ss.

### Annexure- C

(On Rs. 500/- Stamp Paper)

### DECLARATION CUM INDEMNITY BOND

I, \_\_\_\_\_ of \_\_\_\_\_, do hereby declared and undertake as under.

1. I declare that I have submitted certificates as required to Executive engineer (Monitoring) at the time of registration of my firm/company \_\_\_\_\_ change in the contents of the certificates that are submitted at the time of registration.

2. I declare that I in capacity as Manager/ Director/ Partners/ Proprietors of \_\_\_\_\_ has not been charged with any prohibitory and /or penal action such as banning(for specific time or permanent)/de-registration or any other action under the law by any Government and/or

Semi Government and/or Government undertaking.

3. I declare that I have perused and examined the tender document including addendum, condition of contract, specifications, drawings, bill of quantity etc. forming part of tender and accordingly, I submit my offer to execute the work as per tender documents at the rates quoted by me in capacity as \_\_\_\_\_.

4. I further declare that if I am allotted the work and I failed to carry out the allotted work in accordance with the terms and conditions and within the time prescribed and specified, MCGM is entitled to carry out the work allotted to me by any other means at my risk and cost, at any stage of the contract.

5. I also declare that I will not claim any charge/damages/compensation for non availability of site for the contract work at any time.

6. I declare that I will positively make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge

Signature of Tenderer/Bidder

**BANKERS GURANTEE IN LIEU OF CONTRACT DEPOSIT**

THIS INDENTURE made this \_\_\_\_\_ day of \_\_\_\_\_

THE \_\_\_\_\_ BANK incorporated under the

English/Indian Companies Acts and

carrying on business in Mumbai

(hereinafter referred to as 'the

bank' which expression shall be deemed to

and \_\_\_\_\_ assigns)of \_\_\_\_\_ the

\_\_\_\_\_

\_\_\_\_\_

inhabitants

carrying on

business at \_\_\_\_\_

style and name of

M/s. \_\_\_\_\_

consultant') of the

second part Shri. \_\_\_\_\_

THE MUNICIPAL COMMISSIONER FOR GREATER MUMBAI

(hereinafter

referred to as 'the commissioner'

which expression

shall be deemed,

also to include his

successor or

successors for the

time being in the

said office of

Municipal

Commissioner) of

the third part and

THE MUNICIPAL

CORPORATION

OF GREATER

MUMBAI

(hereinafter referred

to as 'the

Corporation') of the

fourth part

WHEREAS the

consultants have

submitted to the

Commissioner

tender for the

execution of

the

" \_\_\_\_\_

\_\_\_\_\_ and the terms of such tender /contract require that the consultants shall deposit with the

Commissioner as/contract deposit/ earnest money and /or the security a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_)

when any such tender is accepted by the Commissioner, the contract to be entered into in furtherance thereof by the consultants will provide that such deposit shall remain with and be appropriated by the Commissioner towards the Security - deposit to be taken under the contract and be redeemable by the consultants, if they shall duly and faithfully carry out the terms and provisions of such contract and shall duly satisfy all claims properly chargeable against them there under AND WHEREAS the consultants are constituents of the Bank and in order to facilitate the keeping of the accounts of the consultants, the Bank with the consent and concurrence of the consultants has requested the Commissioner to accept the undertaking of the Bank hereinafter contained, in place of the contractors depositing with the Commissioner the said sum

as earnest money and /or security as aforesaid AND WHEREAS accordingly the Commissioner has agreed to accept such undertaking NOW THIS AGREEMENT WITNESSES that in consideration of the premises, the Bank at the request of the consultants ( hereby testified ) UNDERTAKES WITH the commissioner to pay to the commissioner upon

demand in writing , whenever required by him , from time to time , so to do , a sum not exceeding in the whole Rs. \_\_\_\_\_

) under the terms of the said tender and /or the contract .The

B.G. Is valid upto \_\_\_\_\_ "Not

withstanding anything what has been stated above, our liability under the guarantee is restricted to Rs. \_\_\_\_\_

only and guarantee shall in force upto \_\_\_\_\_

unless the demand or claim under this guarantee is made on us in writing on before

all your right

under above guarantee shall be forfeited and

we  
s  
h  
a  
l

I be released from all  
liabilities under the  
guarantee thereafter”

IN WITNESS

WHEREOF

WITNESS (1) \_\_\_\_\_

Name \_\_\_\_\_

address \_\_\_\_\_

WITNESS (2) \_\_\_\_\_

Name and \_\_\_\_\_ the duly constituted

\_\_\_\_\_ the Bank and the said Messer’s \_\_\_\_\_

\_\_\_\_\_ (Name

B

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)

-

Name and \_\_\_\_\_

address \_\_\_\_\_

WITNESS (2) \_\_\_\_\_

Name and \_\_\_\_\_

For Messer’s \_\_\_\_\_

address \_\_\_\_\_

have here into set their respective  
hands the day and year first above  
written.

**The amount shall  
be inserted by  
the Guarantor,  
representing the  
Contract Deposit  
in Indian Rupees.**

## Annexure-D

### Schedule of Payment-I

**The Successful bidder/ contractor shall be paid in following stages consistent with actual work done.**

Sr. No.	Activity/phase of recommendation of Project work	%
1	On submission of detailed design, conceptual plan , methodology, architectural and structural design etc	5 %
2	Approval given from department	2%
3	On Completion of Foundation	8%
4	On Completion up to Plinth	10%
5	On Completion of 25% of RCC Work	7%
6	On Completion of 50% of RCC Work	7%
7	On Completion of 75% of RCC Work	7%
8	On Completion of 100% of RCC Work	7%
9	On Completion of Masonry Work	11%
10	On Completion of internal Plaster	3%
11	On Completion of internal Plumbing	3%
12	On Completion of internal Painting	1%
13	On Completion of external Plaster	5%
14	On Completion of external Plumbing	1%
15	On Completion of external Painting	2%
16	On Completion of Flooring	6%
17	On Completion of Internal and External Electrical Works	2%
18	On Completion of :-Doors/Windows/Grills Lifts	2%
19	On Completion of lifts	2%
20	On Completion of lifts All U.Gs.&O.H.Ts	2%
21	On Completion of Electrical meters	1%
22	On Completion of Access road &internal pathways with streetlights etc.	1%
23	On Completion of Drainage network with S.T.P (if applicable),S.W.D , Water mains	2%
24	On Completion of Compound wall with	1%

	main gate R.G.area etc	
25	Occupation Certificate	2%
	Total	100%

**sd/-**  
**DyChE (AYC)**

**Note :Above is weightage allotted to the activities and the proportionate payment can be made subject to the actual work done and subject to applicable terms and condition.**

**: PROFORMA :**

**PROFORMA-I**

The List of similar works as stated in Para 'A' of Post Qualification during **last Seven years:-**

<b>PROFORMA-I</b>									
Sr. No	Name of Project	Name Employer	Stipulated date of Completion	Actual Date of Completion	Actual Cost of Work done	Total BUA	Total No of tenements	No of stories	Methodology and technology followed
1	2	3	4	5	6				

**Note:**

α) Scanned Attested Copies of Completion/Performance certificates from the Engineer-in- Charge for each work should be annexed in the support of information furnished in the above proforma.

β) Works shall be grouped financial year-wise.

**PROFORMA-II (Financial Capability)**

Yearly Turnover of Civil Engineering Construction works during **last Five years.**

<b>PROFORMA-II</b>					
<b>Sr. No.</b>	<b>Financial Year</b>	<b>Annual Turnover of Civil Engineering works</b>	<b>Updated value to Current year</b>	<b>Average of last 5 years</b>	<b>Page No.</b>
1					
2					
3					
4					
5					
<b>TOTAL</b>					

**Note:** The above figures shall tally with the Audited Balance Sheets uploaded by the tenderers duly certified by Chartered Accountant.

**PROFORMA-III :-**

**At least Similar work, as stated in Para ‘A’ of Post Qualification during last Seven years..**

<b>Name the project</b>	<b>Name the Employer</b>	<b>Cost of the Project</b>	<b>Date of issue of Work Order</b>	<b>Stipulated Date of Completion</b>	<b>Actual Date of Completion</b>	<b>Actual cost of work done</b>	<b>Remarks explaining reasons for delay , if any</b>	<b>Total BUA</b>	<b>Total No. of tenements</b>	<b>No of stories</b>	<b>Methodology and technology followed</b>
1	2	3	4	5	6	7	8	9	10	11	12

**Note:** Scanned Attested Copies of Completion/Performance certificates from the Engineer-in- Charge for each work should be annexed in the support of information furnished in the above proforma.

**PERSONNEL : PROFORMA-IV**

PROFORMA-IV					
Sr. No.	Post	Name  (Prime Candidate /Alternate)	Qualification	Work Experience	
				No. of years	Name of Project
1	Project Manager				
2	Quality Control Engineer				
3	Site Engineer				
4	Site Supervisor				

**Note:** Scanned Attested Copies of qualification certificates and details of work experience shall be submitted / uploaded.

**MACHINERY : (For Special Work only)**

PROFORMA-V/A			
Sr. No.	Equipment	Number	Owned/Leased/Assured Access
1	2	3	4
PROFORMA-V/B			
Sr. No.	Equipment	Number	Owned
1	2	3	4

--	--	--	--

**Note :** The tenderers shall furnish/upload the requisite Scanned Attested documents of Ownership/leased of Machineries. The undertaking from the suppliers will not be accepted.

**PROFORMA-VI/A**  
**Details of Existing Commitments and Ongoing Works**

<b>PROFORMA-VI/A</b>							
<b>Description of the Work</b>	<b>Place</b>	<b>Contract No. &amp; Date</b>	<b>Name &amp; Address of the Employer</b>	<b>Value of Contract in Rs.</b>	<b>Schedule date of Completion</b>	<b>Value of work remaining to be completed</b>	<b>Anticipated date of completion</b>
1	2	3	4	5	6	7	8

**Note:** Scanned Attested Copies of Completion/Performance certificates from the Engineer-in-Charge for each work should be annexed in the support of information furnished in the above proforma.

**PROFORMA-VI/B:**

**PROFORMA-VI/B**

**Details of works for which bids are already uploaded-**

<b>Description of the Work</b>	<b>Place</b>	<b>Name &amp; Address of the Employer</b>	<b>Value of Contract in Rs.</b>	<b>Time Period</b>	<b>Date on which decision is expected</b>	<b>Remarks</b>
1	2	3	4	5	6	7

~~**Note:** Scanned Attested Copies of certificates from the Engineer-in-Charge for each work should be annexed in the support of information furnished in the above proforma.~~

**PROFORMA-VII :**  
**LITIGATION HISTORY**

<b>Other Party (ies)</b>	<b>Employer</b>	<b>Cause of Dispute</b>	<b>Amount involved.</b>	<b>Remarks showing Present Status.</b>
1	2	3	4	5

**Annexure – E**

**Irrevocable**

**Undertaking** (On

Rs.500/- Stamp Paper)

I Shri. / Smt. .... aged, ..... years Indian inhabitant. Proprietor / Partner / Director of M/s. .... resident at.....do hereby give Irrevocable undertaking as under,

- 1) I say & undertake as specified in section 171 of CGST Act, 2017, any reduction in rate of tax on supply of goods or services or the benefit of input tax credit shall be mandatorily passed on to MCGM by way of commensurate reduction in prices.
- 2) I further say and undertake that I understand that in case the same is not passed on and is discovered at any later stage, MCGM shall be at liberty to initiate legal action against me for its recovery including, but not limited to, an appeal to the Screening Committee of the GST Counsel.
- 3) I say that above said irrevocable undertaking is binding upon me/my partners/ company / other Directors of the company and also upon my/ our legal heirs, assignee, Executor, administrator etc.
- 4) If I fail to compliance with the provision of the GST Act, i shall be liable for penalty/ punishment or both as per the provisions of GST Act. Whatever has been stated herein above is true & correct to my/our own knowledge & belief. Solemnly affirmed at DEPONANT

This day of BEFORE ME

Interpreted Explained and Identified by me

# MUNICIPAL CORPORATION OF GREATER MUMBAI

Sub:-

Schedule - I

Technical Data Sheet of Stretcher lift 13 passengers.

Sr. No.	Description	Particulars
1	Make	
2	Type	
3	Capacity	
4	Speed	
5	Type of drive	
6	Travel	
7	Serving floors	
10	Lift pit depth	
12	Lift Car details	
13	Car gate details	
14	Landing gate details	
15	Method of operation & control	

**Schedule - II**

**Technical details to be furnished by tenderer**

**(Tender is liable to be rejected if the details given below are not furnished in this format)**

Sr.	Items	Passenger lift
1	Type and Make of Lift	
2	Capacity of Lift	
3	Lift Speed (MPS)	
4	Type of drive for Lift	
5	Hoist Motor Details	
a.	Type and Make	
b.	HP, RPM and operating	
	Voltage	
c.	Insulation class	
d.	Duty (Starts per hour)	
6	Lift car size	
7	Car Gate Opening	
8	Landing Gate Opening	
9	Method of Operation	
10	<u>Ropes :</u>	
A	Main suspension Ropes	
i.	Size	
ii.	Construction	
iii.	No. of ropes	

iv.	Roping	
v.	Factor of safety	
B	Ropes for Governor	
i.	Size	
ii.	Construction	
iii.	No. ropes	

**Seal**

**Trading under the name and style of**

**Signature of Tenderer**

**Schedule - III**

**1) H.P. Calculation of Hoist Motor : (For Stretcher lift 884 Kgs, Gr + 21 Floors)**

**2) Roping : (Explanation/Calculation for consideration of roping for the lift.)**

**Seal**

**Trading under the name and style of**

**Signature of Tenderer**  
**Schedule - IV**

Deviation from specifications

The Tenderer shall state briefly any deviation contained in his main offer from the specification. If the deviations are listed in a covering letter then reference of the letter shall be made below.

Item or Clause	Deviation	Covering letter page

**Seal & Signature of Tenderer with Date**

**Schedule - V**

Tender drawings and publications

The Tenderer shall furnish a list of drawings, publications, copies of type test certificate and other literature illustrating the equipments offered in his tender. The copy of each item listed shall be uploaded with the tender.

Title	Reference

Seal & Signature of Tenderer with Date

# **SECTION – 15**

## **TYPICAL DRAWINGS**

**SECTION – 16**  
**FINANCIAL BID FORM**  
**& OTHERS**

# (FORM 'B')

## **Financial Bid Form 'B'**

Sub: Bid No- 7200016405

Due Date of e-Tender: As on cover  
page.

<b>Sr. No.</b>	<b>Brief description and office estimate</b>
<b>1.</b>	

I/We have received, read and am/are agreeable to the content of page no. \_\_\_ to page no. including the Bill of Quantities while quoting the percentages offered. I/We have considered the contents of the documents contained in the above mentioned pages and into thereof, I/We have signed the documents.

Name and Title of Signatory:

Name of Tenderer(s):

Address:

E-Mail Address of the firm:

Telephone numbers:

**Digital Signature of Tenderer(s)  
Trading under the Name and style of**

(A separate sheet must be filled, scanned and uploaded in packet B along with e-tendering)

## बृहन्मुंबई महानगरपालिका

### परिपत्रक

प्र.ले./वित्त/प्रकल्प/शहर/१७ दिनांक: ०६.०९.२०१७

विषय: जीएसटी अंमलबजावणीनंतर महानगरपालिकेतील कंत्राटांत होणा-या बदलाबाबत.

- संदर्भ: १) शासन परिपत्रक क्र.जीएसटी-१०१७/प्र.क्र.८१/कराधान-१ दिनांक १९, ऑगस्ट, २०१७.  
२) परिपत्रक क्र. प्र.ले./वित्त/प्रकल्प/शहर/१६ दिनांक: ३१.०८.२०१७  
३) परिपत्रक क्र. प्र.ले./वित्त/प्रकल्प/शहर/८ दिनांक: १४.०७.२०१७

दिनांक १ जुलै, २०१७ पासून वस्तु व सेवा कर अंमलात आला असून त्या अनुषंगाने महाराष्ट्र शासनाच्या वित्त विभागाने उपरोक्त संदर्भ क्र. १ च्या परिपत्रकान्वये मार्गदर्शक सूचना प्रसूत केल्या आहेत. सदर सूचनांच्या अंमलबजावणीसाठी महापालिकेने संदर्भ क्र. २ अन्वये परिपत्रक जारी केले आहे. सदर शासन परिपत्रकातील मार्गदर्शक सूचनांची महापालिकेत अंमलबजावणी करण्याच्या दृष्टीने खालील प्रमाणे अतिरिक्त निदेश देण्यात येत आहेत.

- १) शासन परिपत्रकातील बाब क्र. १ :- दिनांक २२ ऑगस्ट, २०१७ नंतर काढण्यात येणारी कंत्राटे:

यापुढे मागविण्यात येणाऱ्या, प्रत्येक दरपत्रिका/अतारांकित निविदा/ई-निविदांमध्ये वस्तु व सेवाकराच्या बोजाचा विचार करूनच निविदाकारांनी दरपत्रिका/अतारांकित निविदा/ई-निविदांचे दर सादर करण्यासाठी उपरोक्त संदर्भित क्र. ३ परिपत्रकामध्ये दिलेल्या अटीचा, त्याचप्रमाणे खालील अटीचाही समावेश करावा.

“Chapter XXI-Miscellaneous, section 171(1) of GST Act, 2017 governs the ‘Anti Profiteering Measure’ (APM).

As per the provision of this section, ‘Any reduction in rate of tax on any supply of goods or services or the benefit of input tax credit shall be passed on to the recipient by way of commensurate reduction in prices’

Accordingly, the contractor should pass on the complete benefit accruing to him on account of reduced tax rate or additional input tax credit, to MCGM.

Further, all the provisions of GST Act will be applicable to the tender.”

- २) ज्या दरपत्रिका/अतारांकित निविदा/ई-निविदा २२ ऑगस्ट, २०१७ पूर्वी मागविलेल्या आहेत व ज्यांचा लिफाफा अ उघडण्यात आलेला नसून त्यांच्या नियत दिनांकास अजूनही अवधी शिल्लक आहे, अशा दरपत्रिका/अतारांकित निविदा/ई-निविदांच्या बाबतीत, सक्षम प्राधिकार्याच्या मान्यतेने, शुद्धीपत्रकाद्वारे (Corrigendum), वरिल बाब क्रमांक १ मध्ये दिलेल्या अटीचा समावेश करावा व त्यासाठी आवश्यक असल्यास नियत दिनांक वाढविण्यात (Extend) यावी.

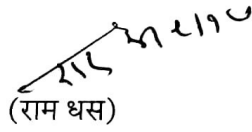
३) अतितात्काळ कामे:

शासन परिपत्रकाप्रमाणे, अतितात्काळ स्वरूपाच्या कामाबाबतच्या निविदांची प्रक्रिया पूर्ण करण्यात येऊन त्यांचे कार्यारंभ आदेश देण्यात यावेत. मात्र सदर निविदा स्विकृत करताना जीएसटी अंतर्गत येणाऱ्या कराचा बोजा लक्षात घेऊन कंत्राटदाराशी वाटाघाटी करून दर कमी करण्याचा प्रयत्न करण्यात यावा. तथापि, त्याआधी अशी कामे अतितात्काळ असल्याबाबतच्या समर्थनिय सविस्तर कारणासंह प्रस्ताव सादर करून संबंधित अतिरिक्त आयुक्त यांची प्रशासकिय मान्यता घेणे आवश्यक आहे.

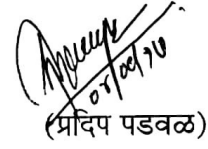
सर्व खातेप्रमुख/सहा.आयुक्त/वैद्यकिय अधिष्ठाता यांनी त्यांच्या अखत्यारीतील सर्व अधिकारी/कर्मचारी यांना उपरोक्त सूचनांची काटेकोरपणे अंमलबजावणी करण्याचे आदेश द्यावेत.

  
(स.क.आव्हाड)

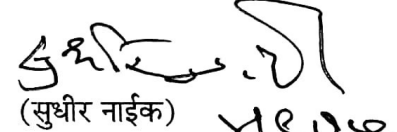
प्रमुख लेखापाल (पा.पु.म.नि.)

  
(राम धस)

उप आयुक्त (म.ख.खा.)

  
(प्रदिप पडवळ)

प्रमुख लेखापाल (वित्त) प्र.

  
(सुधीर नाईक)

उप आयुक्त (सा.प्र.)



(डॉ. संजय मुखर्जी)

अतिरिक्त आयुक्त (प्रकल्प)

## बृहन्मुंबई महानगरपालिका

### परिपत्रक

क्र.प्र.ले./वित्त/प्रकल्प/२४ दिनांक: १०.१०.२०१७

विषय: जीएसटी अंमलबजावणीनंतर महानगरपालिकेतील कंत्राटांत होणाऱ्या बदलाबाबत.

- संदर्भ: १) शासन परिपत्रक क्र.जीएसटी-१०१७/प्र.क्र.८१/कराधान-१ दिनांक १९ ऑगस्ट, २०१७  
२) प्र.ले./वित्त/प्रकल्प/शहर/१६ दिनांक ३१.०८.२०१७  
३) प्र.ले./वित्त/प्रकल्प/शहर/१७ दिनांक ०६.०९.२०१७  
४) शासन परिपत्रक क्र.जीएसटी-१०१७/प्र.क्र.१५५/कराधान-१ दिनांक ११ सप्टेंबर, २०१७  
५) प्र.ले./वित्त/प्रकल्प/शहर/१९ दिनांक १५.०९.२०१७

जीएसटीच्या अंमलबजावणीच्या अनुषंगाने, उपरोक्त संदर्भिय परिपत्रकांन्वये मार्गदर्शक सूचना दिलेल्या असून त्यामध्ये अंशतः सुधारणा / काही नविन सुचना खालील प्रमाणे देण्यात येत आहेत.

- १) **प्रगतीपथावरिल कामे-** उपरोक्त संदर्भ क्र.२ स्थित परिपत्रकामध्ये कंत्राटदारांच्या देयकांतून जीएसटीच्या अनुषंगाने १० टक्के रक्कम अनामत ठेवण्याचे सूचित केले आहे. त्याऐवजी आता ५ टक्के रक्कम अनामत खाती (GL Code.340100122) ठेवण्यात यावी.

कंत्राटदाराकडून सनदी लेखापालाचे प्रमाणपत्र जोपर्यंत सादर केले जात नाही तोपर्यंत कंत्राटदाराच्या देयकातून ५ टक्के रक्कम अनामत खाती रोखून ठेवावी. तत्पूर्वी, कंत्राटदार सनदी लेखापालाचे प्रमाणपत्र सादर करण्यास सहमत आहे याबाबतचे तसेच ५ टक्के रक्कम रोखून ठेवण्यास कंत्राटदाराची हरकत नाही याबाबतचेही कंत्राटदाराकडून संमतीपत्र घेण्यात यावे. कंत्राटदाराने सनदी लेखापालाचे प्रमाणपत्र सादर केल्यानंतर, GST-Anti Profiteering Measure च्या अनुषंगाने महापालिकेस येणे असलेली रक्कम, समायोजित करून जर रक्कम शिल्लक राहत असेल, तर ती अनामत रक्कम कंत्राटदारास परत करावी. तथापि, जर कंत्राटदार सनदी लेखापालाचे प्रमाणपत्र प्रत्येक देयकाच्या वेळी सादर करत असेल, तर त्यानुसार महापालिकेस येणे असलेली रक्कम त्या प्रत्येक देयकामधून समायोजित करण्यात यावी. अंतिम देयकाचे अधिदान करण्यासाठी कंत्राटदाराकडून सनदी लेखापालाचे प्रमाणपत्र घेणे आवश्यक आहे, केवळ त्यानंतरच कंत्राटदाराची ५ टक्के अनामत रक्कम, कंत्राट सुरक्षा रक्कम (C.D.), रिटेंशन मनी (R.M.), बँक हमीपत्र (Performance.B.G.) कंत्राटदारास परत करण्याबाबतची विहित कार्यवाही करता येईल.



२) **नविन कामांबाबत:** कंत्राटदाराने कार्यादेश मिळाल्यापासून ६ महिन्यांच्या आत सनदी लेखापालाचे प्रमाणपत्र सादर करणे आवश्यक आहे.

कंत्राटदाराकडून सनदी लेखापालाचे प्रमाणपत्र जोपर्यंत सादर केले जात नाही तोपर्यंत कंत्राटदाराच्या देयकातून ५ टक्के रक्कम अनामत खाती रोखून ठेवावी. तत्पूर्वी, कंत्राटदार सनदी लेखापालाचे प्रमाणपत्र सादर करण्यास सहमत आहे याबाबतचे तसेच ५ टक्के रक्कम रोखून ठेवण्यास कंत्राटदाराची हरकत नाही याबाबतचेही कंत्राटदाराकडून संमतीपत्र घेण्यात यावे. कंत्राटदाराने सनदी लेखापालाचे प्रमाणपत्र सादर केल्यानंतर, GST-Anti Profiteering Measure च्या अनुषंगाने महापालिकेस येणे असलेली रक्कम, समायोजित करून जर रक्कम शिल्लक राहत असेल, तर ती अनामत रक्कम कंत्राटदारास परत करावी. तथापि, जर कंत्राटदार सनदी लेखापालाचे प्रमाणपत्र प्रत्येक देयकाच्या वेळी सादर करत असेल, तर त्यानुसार महापालिकेस येणे असलेली रक्कम त्या प्रत्येक देयकांमधून समायोजित करण्यात यावी. अंतिम देयकाचे अधिदान करण्यासाठी कंत्राटदाराकडून सनदी लेखापालाचे प्रमाणपत्र घेणे आवश्यक आहे, केवळ त्यानंतरच कंत्राटदाराची ५ टक्के अनामत रक्कम, कंत्राट सुरक्षा रक्कम (C.D.), रिटेंशन मनी (R.M.), बँक हमीपत्र (Performance.B.G.) कंत्राटदारास परत करण्याबाबतची विहित कार्यवाही करता येईल.

३) **कार्यकारी मंजूरी प्राप्त झालेली कामे:** वरील संदर्भ क्र.५ स्थित परिपत्रकाच्या अनुषंगाने, ज्या निविदा रद्द करून पुन्हा निविदा मागविण्याबाबतचे निदेश देण्यात आलेले आहेत, अशा प्रकरणी जर, सदर कामांना सक्षम प्राधिकाऱ्याची/स्थायी समितीची कार्यकारी मंजूरी प्राप्त झालेली असेल आणि अशा कामांसाठी अद्याप पुनर्निविदा मागविण्यात आलेल्या नाहीत अशा कामांच्या निविदा रद्द न करता, Anti Profiteering Measures च्या अनुषंगाने कंत्राटदाराकडून Annexure – A प्रमाणे प्रतिज्ञापत्र (Irrevocable Undertaking) घ्यावे. तसेच कंत्राटदार सनदी लेखापालाचे प्रमाणपत्र सादर करण्यास सहमत आहे असे संमतीपत्र घेण्यात यावे. त्याचप्रमाणे सनदी लेखापालाचे प्रमाणपत्र आणि ५ टक्के अनामत रक्कम, अंतिम देयक आणि कंत्राटदाराच्या इतर अनामत ठेवी व बँक हमीपत्रे परत करण्याबाबत उपरोक्त अनु. क्र.२ प्रमाणे कार्यवाही करावी. त्याचप्रमाणे, संदर्भिय क्र.५ स्थित परिपत्रकातील अनु क्र. ३-अ(अ ते इ) प्रमाणेही कार्यवाही करावी.



## बृहन्मुंबई महानगरपालिका

### परिपत्रक

प्र.ले./वित्त/प्रकल्प/शहर/२८ दि. १०.११.२०१७

विषय: महानगरपालिकेद्वारे हाती घेण्यात येणारी विविध प्रकल्प कामे तसेच खरेदी करण्यात येणा-या वस्तु व सेवा इत्यादीबाबतच्या निविदांमध्ये वस्तु व सेवा कराच्या अनुषंगाने घ्यावयाचे विशेष परिशिष्ट-१ (Special Annexure-I) बाबत.

संदर्भ: १) प्र.ले./वित्त/प्रकल्प/शहर/३३ दि.०४.०३.२०१७

२) प्र.ले./वित्त/प्रकल्प/शहर/१२०अे दि.०८.०५.२०१७

३) प्र.ले./वित्त/प्रकल्प/शहर/८ दि.१४.०७.२०१७

संदर्भित परिपत्रकांन्वये वस्तु व सेवाकराच्या अनुषंगाने, निविदांमध्ये निविदाकाराने त्याच्या देकारामध्ये समाविष्ट असलेल्या सर्व करांची माहिती Special Annexure-I मध्ये दर्शविण्याबाबत वेळोवेळी यथोचित सूचना देण्यात आल्या आहेत.

संदर्भित परिपत्रकानुसार, निविदेतील अनुषंगिक अटी व शर्तीनुसार निविदाकाराने निविदा सादर करावयाच्या अंतिम दिनांकास लागू असलेल्या सर्व करांसहित दर उद्धृत करणे आवश्यक आहे. तसेच सदर Special Annexure-I मध्येही निविदाकाराने दर उद्धृत करताना विचारात घेतलेले कर, कराची टक्केवारी व रक्कम, दिलेल्या रकान्यात दर्शविणे आवश्यक आहे. तथापि, काही खातेप्रमुखांकडून काही प्रकरणी कंत्राटदाराच्या नियुक्तीसाठी लघुत्तम निविदाकाराची शिफारस करणारे प्रस्ताव व मसुदापत्र लेखाविभागास पडताळणीसाठी सादर केले असता, निविदाकाराने लिफाफा 'क' मध्ये उद्धृत केलेला दर व त्या अनुषंगाने आलेली रक्कम आणि Special Annexure-I मध्ये उद्धृत केलेली रक्कम, कराची टक्केवारी अथवा कराची रक्कम इत्यादींमध्ये तफावत/विसंगती असल्याचे निदर्शनास येत आहे. त्यामुळे अशा प्रकरणी कंत्राटदार म्हणून नियुक्तीसाठी निविदाकाराची शिफारस करताना खालील निर्देशांचे पालन करावे.

१. प्रथम लघुत्तम निविदाकार (L1) ठरविण्यासाठी निविदेचे मूल्यमापन (Tender Evaluation) करताना निविदाकारांनी सॅप कार्यप्रणालित लिफाफा 'क' मध्ये उद्धृत केलेला दर तसेच रक्कम व त्या अनुषंगाने आलेला निविदा तुलनात्मक तक्ता (Bid Comparison Statement Generated by SAP) हा अंतिम समजण्यात यावा.

२. निविदा दाखल करावयाच्या अंतिम दिनांकास (Last date of Tender Submission) लागू असलेले कर, सदर निविदेस त्यावेळी लागू होते असे विचारात घेऊन आणि प्रथम लघुत्तम निविदाकाराने (L1 as per 'C' packet, i.e. Bid Comparison Statement Generated by SAP) निविदेसोबत Special Annexure-I अपलोड केलेले असेल तरच व आवश्यक असल्यास, प्रथम लघुत्तम निविदाकाराकडून सुधारीत Special Annexure-I घेण्यात यावे. तथापि, ज्या प्रकरणी प्रथम लघुत्तम निविदाकाराने निविदेसोबत अपलोड केलेल्या Special Annexure-I मध्ये नमूद केलेली कराची टक्केवारी, निविदा सादर करावयाच्या शेवटच्या दिनांकास लागू असलेल्या जीएसटी दरापेक्षा जास्त असल्यास, प्रथम लघुत्तम निविदाकाराकडून स्पष्टीकरण घ्यावे.
३. प्रथम लघुत्तम निविदाकाराशिवाय (L1 as per 'C' packet, i.e. Bid Comparison Statement Generated by SAP) अन्य निविदाकारांशी वाटाघाटी (Negotiations) करू नयेत.
४. जीएसटी अंमलबजावणीनंतर सर्व प्रकारच्या वस्तु व सेवा खरेदी मधील कर स्वतंत्रपणे दर्शविणे अनिवार्य आहे. याकरीता कार्यालयीन कामकाजात सुलभता येण्यासाठी निविदांमध्ये Special Annexure-I बाबतची अट समाविष्ट करण्यात आली असून त्याअनुषंगाने निविदाकारांकडून Special Annexure-I घेण्यात येते. कोणत्याही परिस्थितीमध्ये निविदेचे मूल्यमापनासाठी, प्रथम लघुत्तम निविदाकार ठरविण्यासाठी (Tender Evaluation i.e. deciding L1) Special Annexure-I प्रमाण मानता येणार नाही.
५. महापालिकेने वस्तु व सेवाकराच्या अनुषंगाने निविदाकारांनी उद्धृत केलेल्या दरामधील कररचना/कर रक्कम Special Annexure-I मध्ये दिलेल्या विहित नमून्यात जाहिर करण्याबाबत संदर्भित परिपत्रकांन्वये निर्देश देण्यात आले होते. आता वस्तु व सेवाकराचे दर, रचना इत्यादी बाबी जाहिर झालेल्या असून Special Annexure-I ची प्रासंगिकता संपुष्टात आली आहे. यास्तव, यापुढील मागविण्यात येणाऱ्या निविदा/अतारांकित निविदा/दरपत्रक यांमध्ये Special Annexure-I घेणे आवश्यक नाही. यास्तव संदर्भित क्र.३ स्थित परिपत्रकामध्ये कराबाबत दिलेल्या अटीमध्ये खालील प्रमाणे बदल करण्यात येत आहे.

**Tax:**

“G.S.T. and other state levies/cess which are not subsumed under GST will be applicable. The tenderer shall quote inclusive of all taxes. It is clearly understood that MCGM will not bear any additional liability towards payment of any Taxes & Duties.

Wherever the services to be provided by the Tenderers, falls under Reverse Charge Mechanism, the Price quoted shall be exclusive of GST, but inclusive of Taxes/ Duties/ Cess other than GST, if any.

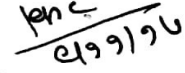
Rates accepted by MCGM shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations in market rates; increase in taxes/ any other levies / tolls etc. except that payment / recovery for overall market situation shall be made as per Price Variation.”

यापुढील मागविण्यात येणाऱ्या निविदा/अतारांकित निविदा/ दरपत्रक यांमध्ये कराबाबत उपरोक्त अटीचा समावेश करावा.

सर्व खातेप्रमुख , रूग्णालयांचे अधिष्ठाता, सहायक आयुक्त, उपप्रमुख लेखापाल तसेच सर्व लेखाअधिकारी यांनी उपरोक्त सुचनांचे काटेकोर पालन करावे.

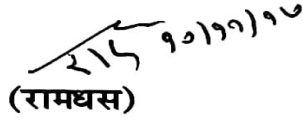
  
(रा.क.आक्हाड)

प्रमुख लेखापाल(पा.पु.म.नि.)

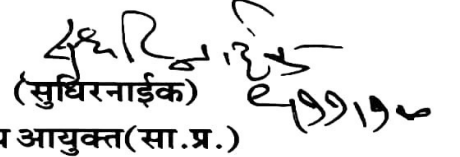
  
२१/११/१७

(हेमलता येखे)

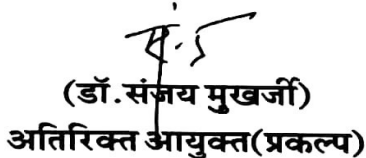
प्रमुख लेखापाल (वित्त)

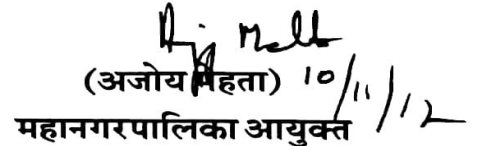
  
(रामधस)

उप आयुक्त(म.ख.खा.)

  
(सुधिरनाईक) २१/११/१७

उप आयुक्त(सा.प्र.)

  
(डॉ.संजय मुखर्जी)  
अतिरिक्त आयुक्त(प्रकल्प)

  
(अजोय महता) १०/११/१७  
महानगरपालिका आयुक्त

वस्तु पुरवठ्याच्या देयकांमधून GST-TDS कपात करण्यात येवू नये.

इ) ज्या सेवा आणि वस्तु यांचा पुरवठा दि.३०.०९.२०१८ पर्यंत झालेला आहे आणि देयक दिनांक (Invoice date) ३०.०९.२०१८ किंवा त्यापूर्वीची असल्यास अशा सेवा व वस्तु पुरवठ्याच्या देयकांमधून GST-TDS कपात करण्यात येवू नये. तथापि ज्या सेवा आणि वस्तु यांचा पुरवठा दि.३०.०९.२०१८ पर्यंत झालेला असला तरी देयक दिनांक (Invoice date) ०१.१०.२०१८ किंवा त्यानंतरची असल्यास GST-TDS कपात करणे अनिवार्य आहे.

ई) ज्या सेवा व वस्तुच्या पुरवठ्यापोटी दि.३०.०९.२०१८ पर्यंत आगाऊ रक्कमेचे (Advance Payment) अधिदान केलेले आहे. अशा सेवा व वस्तुच्या पुरवठ्यासाठी दि.०१.१०.२०१८ किंवा त्यानंतर प्राप्त होणा-या देयकामधून वसूल करावयाची आगाऊ रक्कम वजा जाता उर्वरित रक्कमेवर GST-TDS कपात करणे अनिवार्य आहे. (Net of Advance Value in such respective invoice)

उ) महाराष्ट्र वस्तु व सेवा कर अधिनियमाच्या कलम १४२(१३) अन्वये जेथे पुरवठादाराने दि.३०.०६.२०१७ पूर्वी वस्तु व सेवांचा पुरवठा केलेला असेल तसेच कामाचे देयक देखील दि.३०.०६.२०१७ पूर्वी सादर केलेले असेल अशा देयकांचे अधिदान जरी दि. ०१.०७.२०१७ नंतर होणार असले तरी अशा देयकांना GST लागू होत नसल्यामुळे, अशा देयकांमधून GST-TDS ची कपात करण्यात येवू नये. तथापि अशा देयकांचे अधिदान करताना MVAT Act 2002 नुसार कार्यकंत्राट कराची (Works Contract Tax) वसूली करण्यात यावी.

३) वस्तु व सेवा कर अधिनियम २०१७ च्या कलम ५१ नुसार महानगरपालिकेमार्फत वस्तु व सेवा कर अंतर्गत टीडीएस कपात करण्याची अंमलबजावणी करण्याकरिता महानगरपालिकेने टॅन निहाय GST-TDS अंतर्गत नोंदणी केलेली आहे.

४) सॅप कार्यप्रणाली अंतर्गत कंत्राटदारांच्या देयकातून वसूल करण्यात येणारा GST-TDS प्रत्येक विभागाने/खात्याने खाली नमूद नव्याने निर्माण केलेल्या लेखा संकेतांकाखाली जमा करणे आवश्यक आहे.

GL	GL Description	Tax Code		Rate
		For Bill Payment	For Advance Payment	
350200425	IGST TDS	G1	GA	2%
350200434	SGST TDS	G2	GB	1%
350200435	CGST TDS	G3	GC	1%

५) सॅप अंतर्गत देयक नोंदीच्या Transaction Code मध्ये (Miro, FB60, F-47)नव्याने खालील प्रमाणे fields तयार करण्यात आलेल्या आहेत. त्यामध्ये संबंधितांनी अचूक माहिती नोंदवावी.

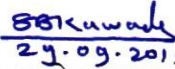
1. Contract value
2. Invoice No
3. Invoice Value excluding GST
4. GSTIN Number
5. Exempt/Unregistered (Tick Box)


यास्तव देयक पडताळणी, मंजूर व Document Post करणा-या सर्व संबंधित लेखा अधिकारी व कर्मचारी यांनी GST-TDS ची वजावट अचूक झालेली आहे तसेच वरील नमूद सर्व fields अचूक भरले आहेत, याची Document Post करण्यापूर्वी खातरजमा करण्यात यावी.


- ६) संबंधित महिन्यात कंत्राटदारांच्या देयकातून वसूल केलेल्या GST-TDS चा भरणा शासनाकडे करण्या -बरोबरच GSTR-7 या नमुन्यात मासिक विवरणपत्रपुढील महिन्याच्या १० तारखेच्या आत सादर करणे अनिवार्य आहे तसेच त्यापुढील ५ दिवसांत GSTR-7A या नमुन्यात कंत्राटदाराना TDS Certificate ई-माध्यमातून उपलब्ध करून द्यावयाचे आहे. अशाप्रकारे जमा झालेल्या कराचा भरणा, विवरणपत्र GSTR-7 व प्रमाणपत्र GSTR-7A बाबतची कार्यवाही अर्थसंकल्प 'अ' च्या बाबतीत लेखा अधिकारी (रोख) शहर, अर्थसंकल्प 'ग' च्या बाबतीत लेखा अधिकारी (रोख) पापुमनि व अर्थसंकल्प 'ई' च्या बाबतीत लेखा अधिकारी (ठेव उपविभाग) शिक्षण निधी या कार्यालयाकडून केली जाईल.


उपरोक्त मार्गदर्शकपर सूचना संक्षिप्त स्वरूपात नमुद केलेल्या असून जीएसटी-टीडीएसची कपातीबाबत **Law Committee of GST Council** यांनी प्रसूत केलेल्या **ready reckoner** मधील सविस्तर मार्गदर्शक सूचनांचा अवलंब करावा.

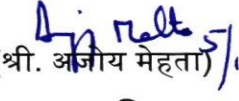
वस्तु व सेवा कर अधिनियम २०१७ अंतर्गत कलम ५१ नुसार जीएसटी-टीडीएसची कपात करतांना काही त्रुटी राहिल्यास महानगरपालिकेवर दंडात्मक कारवाई होऊ शकते. यास्तव सर्व खाते प्रमुख, सहाय्यक आयुक्त, अधिष्ठाता (रुग्णालय), उपप्रमुख लेखापाल तसेच सर्व लेखा अधिकारी यांनी उपरोक्त सूचनांची योग्य प्रकारे अंमलबजावणी होईल याची दक्षता घ्यावी.



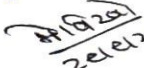

  
29.09.2018  
(श्रीम. सुलोचना कवडे)  
प्रमुख लेखापाल (कोषागार)

  
29/09/18  
(श्री. रामदास आन्हाड)  
प्रमुख लेखापाल (पापुमनि)

  
22/09/18  
(श्री. प्रदिप पडवळ)  
प्रमुख लेखापाल(वित्त)प्र

  
(श्री. संजय सेठी)  
मा. अतिरिक्त मनपा आयुक्त (प्रकल्प)

  
5/10/18  
(श्री. अजीय मेहता)  
मा. महानगरपालिका आयुक्त

  
29/9/18  
  
29/9/18  
  
29/09/2018  
  
29/09/2018

# MUNICIPAL CORPORATION OF GREATER MUMBAI

## CIRCULAR

U/No.MGC/F/6342 dated 5.5.2018

**Sub.:** Revised guidelines regarding barricades being used during the execution of various infrastructure development projects by MCGM in Mumbai.

Various infrastructure development projects are being executed by MCGM for the betterment of citizens of Mumbai. During the course of execution of the projects, it is necessary to provide strong and secured barricading as a safety measure to avoid any mishaps as well as to avoid nuisance to vehicular and pedestrian traffic. Nowadays, the following types of barricades are being used exclusively in MCGM as per the convenience of various departments at different sites.

1. Water/sand fillable PVC Metro barricades.
2. RW 7.45 (G.I. sheets of 22 gauge fixed on 3 inch dia. Wooden bullies buried in existing road sufficiently)
3. RW 7.36 (G.I. sheets of 22 gauge fixed on MS Angle post buried in half the depth in drums of 20 litres capacity in 1:3:6 concrete)
4. Structural steel barricade for major trenches having depth more than 2.00 meters.

Thus from the above, it can be seen that there is no uniformity in provision of barricades as they are of different size and shape. Further it is also observed that the continuity is not maintained in providing the barricading keeping gaps in between thus endangering the safety of vehicular as well as pedestrian traffic. Also the barricades are not being cleaned, thus further adding to shabbiness. Further Mumbai being the financial capital of India, people from all over the world visit the city daily and to maintain good image of city the following decisions are taken.

A) Only two type of barricades having department wise colour coding are proposed to be used depending upon the nature of work i.e. Minor and Major.

i) **Minor works:** Barricading made out of 1.5 mm thick MS plate fixed on M.S. angle post/ frame of 65 mm X 65 mm X 6 mm having height of 1.5 m supported on as shown in Annex-I.

ii) **Major works:** Structural steel barricade made out of 1.50 mm thick M.S. Plate ISMB 250, ISLC 250X50mm and ISA 50mmX50mmX6 mm having of size 2.5 m X 2 m as shown in Annex-II.

B) The department wise colour coding for the barricading shall be as under:-

i) H.E. & W.S.P. department – **Blue**

ii) Roads, Traffic, Bridges and Coastal Roads department– **Yellow**

iii) S.P. & S.O department – **Green**

iv) S.W.D., Building Maintenance department & for ward works –  
**Red**

C) The basic principle behind installing secured and continuous barricading is to ensure the safety of vehicular as well as pedestrian traffic and residents in the nearby vicinity of the project. Due to non-installation of appropriate barricades on sites if any mishap occurs leading to injury or loss of life, then the contractor and contractor's Engineer in-charge will be liable for the consequent action.

D) During the course of execution of project, if it is noticed that the contractor has not provided barricading then a penalty of Rs.1000/- per meter per day will be imposed upon the contractor and will be deducted from the due Bill. This penalty shall be a part of penalty as per tender condition.

E) Details of the work shall be prominently displayed on the central panel of the barricades along-with the Social Slogans as given in Annexure III and the Cycle of the same shall be maintained.

F) *The contractor shall provide and install the barricading alongwith the slogans printed as per the Annexure III, at his own cost and no payment will be made for this, however the contractor shall quote the bid accordingly by considering the cost of barricading.*

“

The condition shall be included in the tender as given below.

Barricading shall be provided free of cost as per Circular vide U/No.MGC/F/6342 dated 5.5.2018 and as per Annexure I, II and III of Standard drawings and specifications with slogans and department wise colour codes.” The copy of circular will be attached to the tender as a part of tender document.

This circular will be applicable for the new tenders proposed to be invited from 01.05.2018 and also the corrigendum shall be attached to tenders which are uploaded. However, for the projects wherein the tenders are already invited, the barricading shall be provided strictly as per tender condition. All the details (Annexure I, II & III of Standard drawings and specifications with slogans and department wise colour codes, sketches and department wise colour coding) are uploaded on MCGM portal.

This circular shall come in force with immediate effect.

sd/- 20.4.2018

(Shri V.P . Chithore)

**Dir.(ES&P)**

sd/- 20.4.2018

(Shri R. B. Bambale)

**D.M.C.(S.E.)**

sd/- 21.4.2018

(Shri Vijay Singhal)

**A.M.C.(E.S.)**

sd/- 21.4.2018

(Dr. Shri Sanjay Mukherjee)

**A.M.C.(P.)**

sd/- 5.5.2018

(Shri Ajoy Mehta)

**M. C.**

sd/-16.5.2018

(Shri P. R. Kadam)

**D.M.C.(S.E.)**

**SECTION -17**  
**SCHEDULE OF**  
**PAYMENT**

**The Successful bidder/ contractor shall be paid in following stages consistent with actual work done.**

Sr. No.	Activity/phase of recommendation of Project work	%
1	On submission of detailed design, conceptual plan , methodology, architectural and structural design etc	5 %
	Approval given from department	2%
1	On Completion of Foundation	8%
2	On Completion up to Plinth	10%
3	On Completion of 25% of RCC Work	7%
4	On Completion of 50% of RCC Work	7%
	On Completion of 75% of RCC Work	7%
	On Completion of 100% of RCC Work	7%
5	On Completion of Masonry Work	11%
6	On Completion of internal Plaster	3%
	On Completion of internal Plumbing	3%
	On Completion of internal Painting	1%
	On Completion of external Plaster	5%
7	On Completion of external Plumbing	1%
	On Completion of external Painting	2%
8	On Completion of Flooring	6%
	On Completion of Internal and External Electrical Works	2%
	On Completion of :-Doors/Windows/Grills Lifts	2%
	On Completion of lifts	2%
	On Completion of lifts All U.Gs.&O.H.Ts	2%
	On Completion of Electrical meters	1%
	On Completion of Access road & internal pathways with streetlights etc.	1%
	On Completion of Drainage network with S.T.P (if applicable),S.W.D , Water mains	2%

9	On Completion of Compound wall with main gate R.G.area etc	1%
10	Occupation Certificate	2%
	Total	100%

**-Sd-  
Dy.Ch.E.(AYC)**

**Note:**

**Above is weightage allotted to the activities and the proportionate payment may be made subject to the actual work done and subject to applicable terms and condition.**

**SECTION -18**  
**Additional Directions**  
**to Tenderer**

## **Additional Directions to Tenderer**

1. The Municipal Corporation of Greater Mumbai (Corporation) proposes to 'carry out the subject work Municipal Corporation of Greater Mumbai and owned by it. These special conditions of contract shall be applicable to all sections of the Bill of Quantities and Tender Document. Any contradiction in interpretation of contract items or terms thereby shall be as interpreted by the Engineer in charge and shall be final and binding on the contractor.
2. Wherever it is mentioned in the specifications, schedule of quantities / lump sum work or conditions, that the Contractor shall perform certain work or provide certain facility, it is implied that he does so at his own cost, unless stated otherwise. This cost should include cost of material, labour, equipment, clearing the site, cleaning etc., required for that work and any other direct or indirect expenditure done on that work. All material, site test and testing of tender items shall be subject to the approval of the Engineer- in Charge and if required the Engineer-in Charge may require additional tests to be conducted by reputed engineering institutions such as VJTI, SPCE, IIT (Mumbai), UDCT, CBRI (Roorkee) etc at the cost of the contractor.
3. The work shall be measured in Metric Units.
4. All the tolerances will be as per relevant I.S. Codes.
5. Contractor shall comply with all the safety standards as included but not limited to conditions given here.
6. Contractor has to visit site to acquaint himself of the site conditions, extent of job to be carried out to be seen physically. On the submission of the offers it will be deemed that the contractor is fully aware of site conditions and the full extent of the work. The rates quoted by the Contractor in the Bill of Quantities are binding to the Contractor

irrespective of any variation in the quantity. Any contradiction in interpretation of contract items thereby shall be as interpreted by the Engineer-in Charge and shall be final and binding on the contractor.

7. The bidder whose tender is accepted will be informed of the same by the Corporation. The submission of a tender by bidder does not entitle him to any claims whatsoever.
8. The Contractor shall strictly follow all security rules of the Corporation particularly bearing upon the inward and outward movements of people and equipment and shall; also execute the work in such a manner so as to cause the minimum disturbance to the working of the Owner and the neighbourhood in general without causing any negative deviation whatsoever in the time limit of the works.
9. The Contractor shall strictly follow all security rules of the Corporations, particularly bearing upon the inward and outward movements of people and equipment and shall also execute the work in such a manner so as to cause minimum disturbance to the functioning of the work places and traffic.
10. The Contractor will have to co-ordinate with other agencies working at site for day-to-day work.
11. The General Conditions of Contract are suppressed by Special Condition & Additional Conditions wherever there is contradiction in Interpretation of contracts and interpretation of the Engineer-in Charge shall be final and binding on the contractor.
12. Site clearance on completion of work shall be within two week. The entire site is to be cleaned of all waste to the satisfaction of Engineer-in Charge / Corporation. All debris generated by the work shall be the property of the contractor and shall be immediately removed from site at the cost of the contractor.
13. In case the material specifications are altered & the Corporation supplies the material, the Contractor shall install the same. The

installation rates shall be derived from Tender Rates or from the City Engineers Department's

Fair Market Schedule of Rates for Building Construction Works 2009 or other MCGM approved schedules or its latest revision as may be applicable.

14. The Tender Specification & Drawings are the copy right of the M.C.G.M. Tenderer are not permitted to copy / reproduce the same in part or whole for any other works.
15. It is a possibility that the execution of certain work cannot or may not be permitted to be carried out during the operational hours. Contractor will have to plan accordingly.
16. While carrying out the work the contractor has to ensure that silence, decency is maintained and accident free work is done with best workmanship.
17. On award of the contract a bar chart especially for the phasing needs to be drawn up by the successful contractor and submitted for comments/approval to the Engineer-in Charge.
18. Contractor on award of work shall submit within 7 days to Engineer-in Charge, details about type of display board he propose to put up at site. Its design, matter, size etc. shall be approved by Engineer-in Charge.
19. The Contractor shall carry out at his own cost, the surveying of the plot / building, and shall get a plan / sections / elevations / details and quantities of items to be executed, prepared based on the survey. He shall also record the existing plot levels and the abutting road levels.
20. The contractor should provide full day and night time security guards for security purpose and to assist traffic police to avoid congestion in traffic from and full completion of work at his own cost.
21. The contractor should arrange labourer at his own cost for works such as removing, shifting etc. required for clearance of site.

22. The contractor should rectify the damaged works during execution of work allotted to him at his own cost as per instructions of Engineer-in-Charge.
23. In case of any increase or decrease or variation in the scope of work the tenderer will not be entitled to any claims on that behalf. The tenderer may note while submitting the tender.
24. All materials brought on the site of work and meant to be used in the same, shall be the best of their respective kinds and to the approval of the Engineer. The Engineer or his representative will accept that the materials are really the best of their kinds, when it is proved beyond doubt that no better materials of the particular kind in question are available in the market.
25. The contractor shall obtain the approval of the Engineer of samples of all materials to be used in the works and shall deposit these samples with him before placing an order for the materials with the suppliers. The materials brought on the works shall conform in every respect to their approved samples. Fresh samples shall be deposited with the Engineer whenever the type or source of any material changes.
26. The contractor shall check each fresh consignment of materials as it is brought to the site of works to see that they conform in all respects to the Specifications of the samples approved by the Engineer, or both.
27. The Engineer will have the option to have any of the materials tested to find out whether they are in accordance with the Specifications and the Contractor will bear all expenses for such testing. All bills, vouchers and test certificates, which in the opinion of the Engineer or his representative are necessary to convince him as to the quality of the materials or their suitability shall be produced for his inspection when required.
28. Any materials that have not been found to conform to the specifications will be rejected forthwith and shall be removed from the site by the contractor at his own cost within 24 hours.

29. The Engineer shall have power to cause the Contractors to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.
30. Notwithstanding the source, the sand shall be washed using sand washing machine before use.
31. No extra payment will be made for transporting and disposal of surplus Material from excavation after refilling etc. / debris for clearing of site after completion of respective work.
32. No extra payment will be made for adequate propping, scaffolding at various levels during erection of the work.
33. No extra payment will be made for removal of plant / ficus growth, ferrous fixtures and inclusive of providing barricades, dust screens, tarpaulin shields, etc.
34. No separate payment will be made for dewatering the water seeping in the trenches and foundation pits opened while executing excavation and other foundation works. The possibility of high water table should be kept in mind while quoting the percentage.
35. While excavating the trenches for foundation utmost care shall be taken that the foundation of adjoining structures will not be disturbed.
36. Materials brought on the site or debris will not be allowed to be stacked on road & footpath.
37. The tenderer / contractor will have to make adequate shielding arrangement by putting necessary hoardings, screen or gunny bags, etc. so as to avoid any accident or nuisance to the occupants during the work without any extra payment.
38. The Contractor shall provide barricading for protection of **site at his own cost**. The barricading shall be provided as per item no. R2-CS-RM-71 of USOR-2018. No extra payment will be made for barricading work.
39. In case of any discrepancy in drawings, BOQ items, and specifications, decision given by Engineer in charge shall be final and binding on the contractor.
40. The Corporation will not be responsible for any delay that may be caused due to unforeseen circumstances and no compensation on this account will be paid.

41. The tenderer shall intimate the concerned authorities before starting the work and execute the work priority fixed by the Engineer-in Charge. The inventory of serviceable and unserviceable material must be taken jointly with Engineer/his representative & representative of User Department before starting of work.
42. At the time of execution of repair / restoration works, the tenderer may require to temporarily shift and refix the electrical, plumbing and mechanical installations. Any damage to the electrical, plumbing and mechanical installations shall be restored by the tenderer. No extra payment shall be made to the tenderer on this account.

**Revised Guidelines Regarding Barricades**  
**MUNICIPAL CORPORATION OF GREATER MUMBAI**  
**CIRCULAR**

U/No.MGC/F/6342 dated 5.5.2018

**Sub.:** Revised guidelines regarding barricades being used during the execution of various infrastructure development projects by MCGM in Mumbai.

Various infrastructure development projects are being executed by MCGM for the betterment of citizens of Mumbai. During the course of execution of the projects, it is necessary to provide strong and secured barricading as a safety measure to avoid any mishaps as well as to avoid nuisance to vehicular and pedestrian traffic. Nowadays, the following types of barricades are being used exclusively in MCGM as per the convenience of various departments at different sites.

1. Water/sand fillable PVC Metro barricades.
2. RW 7.45 (G.I. sheets of 22 gauge fixed on 3 inch dia. Wooden bullies buried in existing road sufficiently)
3. RW 7.36 (G.I. sheets of 22 gauge fixed on MS Angle post buried in half the depth in drums of 20 litres capacity in 1:3:6 concrete)
4. Structural steel barricade for major trenches having depth more than 2.00 meters.

Thus from the above, it can be seen that there is no uniformity in provision of barricades as they are of different size and shape. Further it is also observed that the continuity is not maintained in providing the barricading keeping gaps in between thus endangering the safety of vehicular as well as pedestrian traffic. Also the barricades are not being cleaned, thus further adding to shabbiness. Further Mumbai being the financial capital of India, people from all over the world visit the city daily and to maintain good image of city the following decisions are taken.

- A) Only two type of barricades having department wise colour coding are proposed to be used depending upon the nature of work i.e. Minor and Major.
- i) **Minor works:** Barricading made out of 1.5 mm thick MS plate fixed on M.S. angle post/ frame of 65 mm X 65 mm X 6 mm having height of 1.5 m supported on as shown in Annex-I.
  - ii) **Major works:** Structural steel barricade made out of 1.50 mm thick M.S. Plate ISMB 250, ISLC 250X50mm and ISA 50mmX50mmX6 mm having of size 2.5 m X 2 m as shown in Annex-II.
- B) The department wise colour coding for the barricading shall be as under:-
- i) H.E. & W.S.P. department – **Blue**
  - ii) Roads, Traffic, Bridges and Coastal Roads department – **Yellow**
  - iii) S.P. & S.O department – **Green**
  - iv) S.W.D., Building Maintenance department & for ward works – **Red**
- C) The basic principle behind installing secured and continuous barricading is to ensure the safety of vehicular as well as pedestrian traffic and residents in the nearby vicinity of the project. Due to non-installation of appropriate barricades on sites if any mishap occurs leading to injury or loss of life, then the contractor and contractor's Engineer in-charge will be liable for the consequent action.
- D) During the course of execution of project, if it is noticed that the contractor has not provided barricading then a penalty of Rs.1000/- per meter per day will be imposed upon the contractor and will be deducted from the due Bill. This penalty shall be a part of penalty as per tender condition.
- E) Details of the work shall be prominently displayed on the central panel of the barricades along-with the Social Slogans as given in Annexure III and the Cycle of the same shall be maintained.
- F) The contractor shall provide and install the barricading alongwith the slogans printed as per the Annexure III, at his own cost and no payment will be made for this, however the contractor shall quote the bid accordingly by considering the cost of barricading.

The condition shall be included in the tender as given below.

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This circular will be applicable for the new tenders proposed to be invited from 01.05.2018 and also the corrigendum shall be attached to tenders which are uploaded. However, for the projects wherein the tenders are already invited, the barricading shall be provided strictly as per tender condition. All the details (Annexure I, II & III of Standard drawings and specifications with slogans and department wise colour codes, sketches and department wise colour coding) are uploaded on MCGM portal.

This circular shall come in force with immediate effect.

sd/- 20.4.2018  
(Shri V.P . Chithore)  
Dir.(ES&P)

sd/- 20.4.2018  
(Shri R. B. Bambale)  
D.M.C.(S.E.)

sd/- 21.4.2018  
(Shri Vijay Singhal)  
A.M.C.(E.S.)

sd/- 21.4.2018  
(Dr. Shri Sanjay Mukherjee)  
A.M.C.(P.)

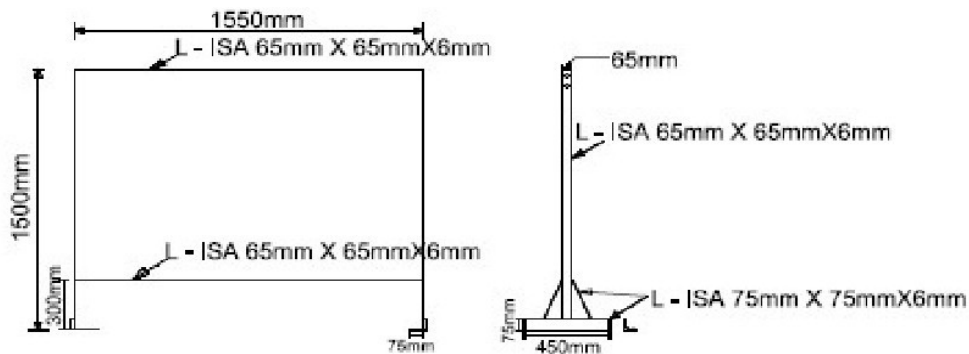
sd/- 5.5.2018  
(Shri Ajoy Mehta)  
M. C.

sd/-16.5.2018  
(Shri P. R. Kadam)  
D.M.C.(S.E.)

## ANNEXURE I

### A) Minor work

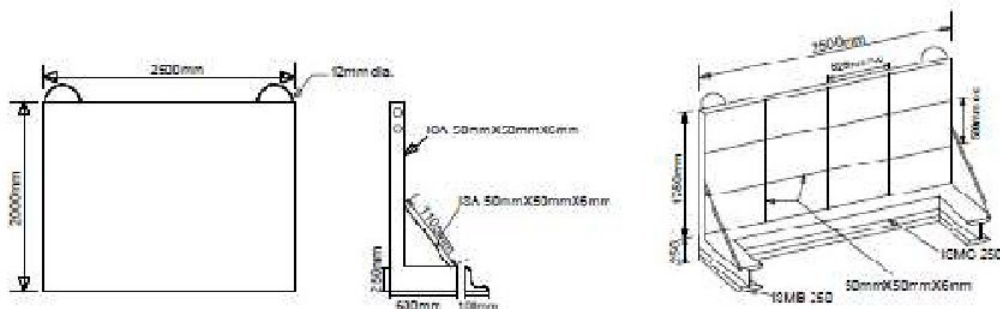
Providing, fabricating and installing the barricading made out of 1.5 m high M.S. Angle post of 65 mm X 65 mm X 6 mm with 1.5 mm thick M.S. Sheet of size 1.55 m X 1.2 m welded to the M.S. angle post/ frames and fixed to 75mm X 75mm X 6 mm angle base as shown in sketch for minor works , displaying of the social slogan as per the Annex - III, daily cleaning of the same to get better appearance and interlocking arrangement to ensure continuity in provision and to avoid gap in between etc complete and as directed by Engineer in-charge.



## ANNEXURE II

### B) Major works:

Providing, fabricating and installing the structural steel barricading made out of 1.5 mm thick M.S. plate of size 2500 mm X 2000 mm, ISMC 250 X 50 channels, M.S. Angles ISA 50 X 50 X 6mm and ISMB 250 as per IS 1161-1 RHS/SHS rolled angle plates of TATA Steel, Lloyd Steel, SAIL, ESSAR steel approved in straight profile of all sizes, shapes and for all work: including stiffeners, bolts and nuts, fillet / butt welding, splicing, machine grinding, of all member joints wherever required to give neat appearance, and daily cleaning the barricading along with displaying of the Deptwise slogans as given in Annexure -III etc with interlocking arrangement to avoid gap in between and as directed by Engineer in-charge.



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ANNEXURE III

**1) HYDRAULIC ENGINEER'S DEPARTMENT/ WATER SUPPLY PROJECTS**

- i) Inconvenience regretted
- ii) Ensuring Mumbai's water supply
- iii) Save water Save life

**2) ROAD, TRAFFIC / BRIDGES DEPARTMENT**

- i) Inconvenience regretted
- ii) Working towards a better tomorrow
- iii) My Mumbai, Green Mumbai

**3) SEWERAGE PROJECTS DEPARTMENT/ SEWERAGE OPERATIONS DEPARTMENT**

- i) Inconvenience regretted
- ii) Reduce Reuse Recycle
- iii) Clean Mumbai , healthy Mumbai

**4) STORM WATER DRAIN DEPARTMENT/ WARD WORKS**

- i) Inconvenience regretted
- ii) Working towards a better tomorrow
- iii) Swatch Bharat

# MUNICIPAL CORPORATION OF GREATER MUMBAI

No.CHE/GEN-412/DP dtd. 28.01.2013

## PUBLIC NOTICE

**Sub:** Proposed modification in DCR1991 for Gr. Mumbai u/s. 37 of M.R. & T. P. Act, 1966, by incorporating new regulation bearing no. 33(26) in respect of the 'Ashray Yojana' intended for providing the Service Quarters to Conservancy Staff working in the SWM Dept. of M.C.G.M.

As per the Mumbai Municipal Corporation Act, 1888, providing conservancy services to the citizens is an obligatory duty of the Municipal Corporation of Greater Mumbai. Conservancy workers are the main force being utilized for sweeping, transportation & disposal of refuse/garbage generated in the city of Mumbai.

Due to peculiar nature and atmosphere of the work, the conservancy workers are prone to health problems and rate of mortality is high in conservancy workers. It is, therefore, necessary to take steps to reduce the possibility of diseases among conservancy workers for which it is necessary to provide good quality housing in the form of Staff Quarters.

M.C.G.M. has therefore decided to implement 'Ashray Yojana' for development /re-development of plots at present occupied by staff quarters for providing staff quarters to all workers & conservancy staff of SWM Dept. through municipal fund. However, due to paucity of land for constructing new tenements there is limitation in making available quarters to entire conservancy staff, hence, it is, decided to develop existing conservancy staff quarters so also any plot as may be identified by M.C.G.M. in Gr. Mumbai through municipal fund with enhanced FSI of 4.00.

Considering the above facts and circumstances, it is necessary to make modification in DCR1991 for Gr. Mumbai u/s. 37 of M.R. & T. P. Act, 1966, by incorporating new regulation bearing no. 33(26) in respect of the 'Ashray Yojana' intended for providing the 'Service Quarters' to all Conservancy Staff working in the SWM Dept. of M.C.G.M.

Municipal Corporation of Greater Mumbai vide resolution No.1299 dtd. 27/12/2013 has sanctioned the proposal of the modification in DCR1991.

Now, therefore, a draft of modification as per the Schedule-A appended hereto, which the M.C.G.M. proposes to make in exercise of the powers conferred by sub-section (1) of section 37 of the said Act; and all powers enabling it in this behalf, is hereby published as required by section 37 and notice is hereby given.

In view of above, suggestion and/or objections are now invited from members of public to the above proposed modification as provided under section 37(1) of M.R.& T.P.Act, 1966. The suggestions/ objections need to be communicated in writing to the Chief Engineer (Development Plan), M.C.G.M., Head Office, Annex Building, 5<sup>th</sup> floor, Mahapalika Marg, Fort, Mumbai -400 001, within a period of one month from the date of publication of this notification.

The draft of the regulation no. 33(26) proposed to be incorporated in DCR1991 with respect to above modification may be inspected in the office of the Chief Engineer (Development Plan) during office hours.

The suggestions/objections received thereafter will not be considered.

Proposed Modification

New regulation bearing no. 33(26) proposed to be incorporated in the reg. 33 of DCR1991 as per the Schedule-A appended hereto.

sd/-

(Shri. Rajiv S. Kuknur)  
Chief Engineer  
(Development Plan)

SCHEDULE-A

Following is the proposed new regulation bearing no. 33(26) to be incorporated in the reg. 33 of DCR1991:

**Regulation No.33(26)**

1. Ashray Yojana (Scheme) means development/re-development/re-construction on plots for providing staff quarters to municipal employees engaged in providing Solid Waste Management services to be provided by Municipal Corporation of Greater Mumbai.
2. The scheme shall be permissible on any plots in City, Suburbs or extended Suburbs which are presently being used as SWM staff quarters and/or SWM facility and on any plot which is identified by the Corporation for the implementation of the scheme. The development shall be carried out by Corporation with its own funds.
3. In case the plot identified by the Corporation as above is occupied by slum and/or declared as 'Slums' under Section (4) of Slum Act 1971 or slums on the lands are existing prior to 1.1.1995 or reference date as notified by the Government, the eligible occupant (Residential / Commercial) will be given PAP tenements elsewhere as per the policy

- c) The FSI for the Ashray Scheme in the CRZ area, shall be governed by the MOEF notifications issued from time to time.

**6. Relaxation in Building & other requirements :**

The following relaxation shall be applicable.

- 6.1 In calculation of FSI for all purpose shall be on gross area i.e. without deducting any percentage for Recreation Open Space. This shall not affect the requirement of physical open space keeping aside the said recreation open space on site as per prevailing D.C. Regulations.
- 6.2 The provision in DCR 38(22) relating to balcony will apply to the scheme with following modifications. There shall be no restriction on zone and balcony shall not reduce the marginal open space to less than 3 mtrs. However, as ground level minimum 4.5 mtrs. clear margin shall be maintained.
- 6.3 Areas of common passages not exceeding 2 mtrs. in width provided to give access shall not be counted towards FSI.
- 6.4 Front and marginal open spaces, for building having height up to 24 mtrs., shall be 4.5 mtrs. for these buildings.
- 6.5 Notwithstanding the provisions of D.C. Regulation 29 (Table 10) where the location of the plot abuts road having width of 18.13 mtrs. & above, the front marginal open space shall not be insisted beyond 4.5 mtrs. provided, it is not an express highway or road wider than 52 mtrs.
- 6.6 Where the location of the plot abuts a trained nallah, the marginal open space along the nallah shall not be insisted beyond 4.5 mtrs. from the edge of the trained nallah or as per the requirement of SWD deptt. of MCGM whichever is greater.
- 6.7 The distance between any two buildings shall be less than 6 mtrs.
- 6.8 If the height of the building is more than 24 mtrs., 6 mtrs. wide marginal open space or as per the requirement of CFO whichever is greater.
- 6.9 Pathway and means of access - The ratio between the length of the pathway and the width thereof shall be as below:-

<u>Length</u>	<u>Width</u>
Up to 20 mtrs.	1.5 mtrs.
21 to 30 mtrs.	2.0 mtrs.
31 to 40 mtrs.	2.5 mtrs.
41 to 50 mtrs.	3.0 mtrs.

- 6.10 Between the dimensions prescribed for the pathway and the marginal distances the larger of the two shall prevail. The pathway shall act as an access wherever necessary. The building shall be

- 8.** Religious structures existing prior to the re-development if allowed in accordance with the guidelines issued by the Government from time to time as part of re-development, shall not exceed the area that existed prior to the re-development.
- 9.** For smooth implementation of Ashray Scheme, the SWM staff and workers shall be rehabilitated in the transit camps or other existing staff quarters, municipal PAPs with competent sanction.
- 10.** Those scheme for which approval has been given under any of the provision of DCR can be considered for approval under this regulation.
- 11.** The policy and guidelines regarding allotment of the staff quarters will be decided by the competent authority of the Corporation.
- 12.** Regarding dispute in the Ashray Scheme, the decision of the Corporation will be final and binding.

sd/-

(Shri. Rajiv S. Kuknur)  
**Chief Engineer**  
**(Development Plan)**

# बृहन्मुंबई महानगरपालिका

## परिपत्रक

२०१८-२०१९

क्र. प्रले(को)/रोख/शहर/ २० दिनांक. ०५.१०.२०१८

**विषय-** वस्तू व सेवा कर अधिनियम २०१७, कलम ५१ अन्वये दि.०१.१०.२०१८ पासून करावयाच्या जीएसटी-टीडीएस कपाती बाबत.

**संदर्भ-** १) Trade Circular No. 27T 2017 dated: 07.07.2017

२) शासन परि.क्र.जीएसटी १०१७/प्र.क्र. ८१/कराधान-१ दि. १९.०८.२०१७

३) Central Govt Notification No.50/2018 dated:13.09.2018

४) CBEC Circular No.65 /39 2018 – DOR dated:14.09.2018

५) A ready reckoner for Deductors in GST issued by Law Committee of GST Council dated: 28.09.2018.

वस्तू व सेवा कर अधिनियमाची अंमलबजावणी दि.०१.०७.२०१७ पासून करण्यात आलेली आहे. उपरोक्त संदर्भिय परिपत्रक/अधिसूचनांन्वये दि.०१.१०.२०१८ पासून पुरवठादार/कंत्राटदारांच्या देयकातून उगम स्थानी जीएसटी-टीडीएसची कपात करण्याबाबत निर्देश प्राप्त झालेले आहेत.त्यानुसार संदर्भ क्र. १ ते ४ येथे नमुद केलेले परिपत्रक/अधिसूचना या पूर्वीच प्रसारित करण्यात आलेल्या आहेत. त्याचप्रमाणे संदर्भ क्र. ५ येथे नमुद केलेले दि.२८.०९.२०१८ चे सविस्तर मार्गदर्शनपर ready reckoner महानगरपालिकेच्या संकेत स्थळावर (MCGM PORTAL) सर्व संबंधितांच्या माहिती व कार्यवाहीसाठी उपलब्ध करून देण्यात आले आहे.

- १) वस्तू व सेवा करांतर्गत करपात्र वस्तुंचा पुरवठा, सेवा किंवा दोन्ही यांचा अंतर्भाव असलेल्या ज्या कंत्राटाचे मूल्य (Contract Value) रु. २,५०,०००/- (Excluding GST) पेक्षा जास्त आहे, अशा कंत्राटाच्या देयकातून 2% GST-TDS (1% CGST+1% SGST अथवा 2% IGST )वजा करून त्याचा शासकीय तिजोरीत भरणा करणे आवश्यक आहे.
- २) खालील बाबतीत GST-TDS कपात करण्याची आवश्यकता नाही :-
  - अ) महापालिकेकडून ज्या सेवा RCM अंतर्गत घेतल्या जात आहेत आणि त्यातील GST भरण्याचे दायित्व महानगरपालिकेचे आहे, अशा सेवांच्या देयकांचे अधिदान करताना GST-TDS ची कपात करण्यात येवू नये.
  - ब) करपात्र पुरवठा आणि करमुक्त पुरवठ्याचे एकत्रित कंत्राट मूल्य (Contract Value) जर रु. २,५०,०००/-पेक्षा जास्त आहे, मात्र करपात्र सेवा/पुरवठ्याचे मूल्य (Value) रु. २,५०,०००/- पेक्षा कमी असेल तर अशा सेवा/पुरवठ्याच्या देयकांचे अधिदान करताना GST-TDS ची कपात करण्यात येवू नये.
  - क) वस्तू व सेवा कर मुक्त (GST Exempted) प्राप्त होणा-या सेवा व वस्तू पुरवठ्याबाबत GST-TDS कपात करण्यात येवू नये.
  - ड) वस्तू व सेवा कर अधिनियमांतर्गत अनौदणीकृत पुरवठादाराने सेवा किंवा वस्तू पुरवठा केला असल्यास आणि अशा प्रकरणी RCM अंतर्गत GST भरण्याचे दायित्व महानगरपालिकेचे नसल्यास अशा सेवा व

वस्तु पुरवठ्याच्या देयकांमधून GST-TDS कपात करण्यात येवू नये.

इ) ज्या सेवा आणि वस्तु यांचा पुरवठा दि.३०.०९.२०१८ पर्यंत झालेला आहे आणि देयक दिनांक (Invoice date) ३०.०९.२०१८ किंवा त्यापूर्वीची असल्यास अशा सेवा व वस्तु पुरवठ्याच्या देयकांमधून GST-TDS कपात करण्यात येवू नये. तथापि ज्या सेवा आणि वस्तु यांचा पुरवठा दि.३०.०९.२०१८ पर्यंत झालेला असला तरी देयक दिनांक (Invoice date) ०१.१०.२०१८ किंवा त्यानंतरची असल्यास GST-TDS कपात करणे अनिवार्य आहे.

ई) ज्या सेवा व वस्तुच्या पुरवठ्यापोटी दि.३०.०९.२०१८ पर्यंत आगाऊ रक्कमेचे (Advance Payment) अधिदान केलेले आहे. अशा सेवा व वस्तुच्या पुरवठ्यासाठी दि.०१.१०.२०१८ किंवा त्यानंतर प्राप्त होणा-या देयकामधून वसूल करावयाची आगाऊ रक्कम वजा जाता उर्वरित रक्कमेवर GST-TDS कपात करणे अनिवार्य आहे. (Net of Advance Value in such respective invoice)

उ) महाराष्ट्र वस्तु व सेवा कर अधिनियमाच्या कलम १४२(१३) अन्वये जेथे पुरवठादाराने दि.३०.०६.२०१७ पूर्वी वस्तु व सेवांचा पुरवठा केलेला असेल तसेच कामाचे देयक देखील दि.३०.०६.२०१७ पूर्वी सादर केलेले असेल अशा देयकांचे अधिदान जरी दि. ०१.०७.२०१७ नंतर होणार असले तरी अशा देयकांना GST लागू होत नसल्यामुळे, अशा देयकांमधून GST-TDS ची कपात करण्यात येवू नये. तथापि अशा देयकांचे अधिदान करताना MVAT Act 2002 नुसार कार्यकंत्राट कराची (Works Contract Tax) वसूली करण्यात यावी.

- ३) वस्तु व सेवा कर अधिनियम २०१७ च्या कलम ५१ नुसार महानगरपालिकेमार्फत वस्तु व सेवा कर अंतर्गत टीडीएस कपात करण्याची अंमलबजावणी करण्याकरिता महानगरपालिकेने टॅन निहाय GST-TDS अंतर्गत नोंदणी केलेली आहे.
- ४) सॅप कार्यप्रणाली अंतर्गत कंत्राटदारांच्या देयकातून वसूल करण्यात येणारा GST-TDS प्रत्येक विभागाने/खात्याने खाली नमूद नव्याने निर्माण केलेल्या लेखा संकेतांकाखाली जमा करणे आवश्यक आहे.

GL	GL Description	Tax Code		Rate
		For Bill Payment	For Advance Payment	
350200425	IGST TDS	G1	GA	2%
350200434	SGST TDS	G2	GB	1%
350200435	CGST TDS	G3	GC	1%

- ५) सॅप अंतर्गत देयक नोंदीच्या Transaction Code मध्ये (Miro, FB60, F-47) नव्याने खालील प्रमाणे fields तयार करण्यात आलेल्या आहेत. त्यामध्ये संबंधितांनी अचूक माहिती नोंदवावी.

1. Contract value
2. Invoice No
3. Invoice Value excluding GST
4. GSTIN Number
5. Exempt/Unregistered (Tick Box)

यास्तव देयक पडताळणी, मंजूर व Document Post करणा-या सर्व संबंधित लेखा अधिकारी व कर्मचारी यांनी GST-TDS ची वजावट अचूक झालेली आहे तसेच वरील नमूद सर्व fields अचूक भरले आहेत, याची Document Post करण्यापूर्वी खातरजमा करण्यात यावी.

- ६) संबंधित महिन्यात कंत्राटदारांच्या देयकातून वसूल केलेल्या GST-TDS चा भरणा शासनाकडे करण्या -बरोबरच GSTR-7 या नमुन्यात मासिक विवरणपत्रपुढील महिन्याच्या १० तारखेच्या आत सादर करणे अनिवार्य आहे तसेच त्यापुढील ५ दिवसांत GSTR-7A या नमुन्यात कंत्राटदाराना TDS Certificate ई-माध्यमातून उपलब्ध करून द्यावयाचे आहे. अशाप्रकारे जमा झालेल्या कराचा भरणा, विवरणपत्र GSTR-7 व प्रमाणपत्र GSTR-7A बाबतची कार्यवाही अर्थसंकल्प 'अ' च्या बाबतीत लेखा अधिकारी (रोख) शहर, अर्थसंकल्प 'ग' च्या बाबतीत लेखा अधिकारी (रोख) पापुमनि व अर्थसंकल्प 'ई' च्या बाबतीत लेखा अधिकारी (ठेव उपविभाग) शिक्षण निधी या कार्यालयाकडून केली जाईल.

उपरोक्त मार्गदर्शकपर सूचना संक्षिप्त स्वरूपात नमुद केलेल्या असून जीएसटी-टीडीएसची कपातीबाबत **Law Committee of GST Council** यांनी प्रसृत केलेल्या **ready reckoner** मधील सविस्तर मार्गदर्शक सूचनांचा अवलंब करावा.

वस्तु व सेवा कर अधिनियम २०१७ अंतर्गत कलम ५१ नुसार जीएसटी-टीडीएसची कपात करतांना काही त्रुटी राहिल्यास महानगरपालिकेवर दंडात्मक कारवाई होऊ शकते. यास्तव सर्व खाते प्रमुख, सहाय्यक आयुक्त, अधिष्ठाता (रुग्णालय), उपप्रमुख लेखापाल तसेच सर्व लेखा अधिकारी यांनी उपरोक्त सूचनांची योग्य प्रकारे अंमलबजावणी होईल याची दक्षता घ्यावी.

SSRinwade  
29.09.2018  
(श्रीम. सुलोचना कवडे)

प्रमुख लेखापाल (कोषागार)

श्री. रामदास आव्हाड  
29/09/18  
(श्री. रामदास आव्हाड)

प्रमुख लेखापाल (पापुमनि)

श्री. प्रदिप पडवळ  
29/09/18  
(श्री. प्रदिप पडवळ)

प्रमुख लेखापाल(वित्त)प्र

श्री. संजय सेठी  
(श्री. संजय सेठी)

मा. अतिरिक्त मनपा आयुक्त (प्रकल्प)

श्री. अजीय मेहता 5/10/18  
(श्री. अजीय मेहता)

मा. महानगरपालिका आयुक्त

श्री. संजय सेठी 29/09/18  
श्री. अजीय मेहता 5/10/18  
श्री. प्रदिप पडवळ 29/09/18  
श्री. रामदास आव्हाड 29/09/18



## **Annexure IV**

### **Minimum Requirements for 300 Sq.Ft. Flat are as follows:-**

- ◆ Minimum Floor to Floor Height of any structure/ building- 3.15 m
- ◆ Hall:
  - Safety door along with main door consisting Safety Latch
  - French window with M.S. safety Grill and mosquito jalli.
- ◆ Kitchen:
  - Modular Kitchen
  - Loft
  - Full Dado
  - Window with M.S. safety Grill and mosquito jalli.
  - Exhaust fan
  - Granite (Black or green) kitchen platform (L shape) with SS sink and dry balcony
- ◆ Bedroom:
  - French window with M.S. safety Grill and Mosquito Jalli.
- ◆ WC and Bath
  - Full height Dado
  - Louvred window with mosquito jalli
  - Exhaust Fan in WC
  - Loft
  - Wash basin in passage

### **Minimum Requirements for 600 Sq. Ft. Flat are as follows:-**

- ◆ Minimum Floor to Floor Height of any structure/ building- 3.15 m
- ◆ Hall:
  - Safety door along with main door consisting Safety Latch
  - French window with M.S. safety Grill and mosquito jalli.
- ◆ Kitchen:
  - Modular Kitchen
  - Loft
  - Full Dado
  - French Window with M.S. safety Grill and mosquito jalli.
  - Exhaust fan
  - Granite (Black or green) kitchen platform (L shape) with SS sink and dry balcony
- ◆ Master Bedroom
  - French window with M.S. safety Grill and Mosquito Jalli.
  - Attached Wc and Bath having louvred window with Mosquito Jalli and Exhaust Fan with inside wash Basin.
- ◆ Bedroom:
  - French window of with M.S. safety Grill and Mosquito Jalli.

- ◆ WC and Bath
  - Full height Dado
  - Louvered window with mosquito jalli
  - Exhaust Fan in WC
  - Loft
  - Wash basin in passage

Note:-

- ◆ Clinics, Balwadi, society office, etc wherever feasible shall be provided as per directions of Engineer in-charge.
- ◆ These are the minimum requirements for all flats. The successful bidder shall follow Volume-II Specifications for Common & Building Construction Works-2018 and all other specifications displayed on portal including prevailing norms and rules and directions of engineer-in-charge while designing.

## Annexure –V

### PROFORMA-I

The List of similar works as stated in Para ‘A’ of Post Qualification during **last Seven years:-**

<b>PROFORMA-I</b>									
Sr. no.	Name of Project	Name of Employer	Stipulated date of Completion	Actual Date of Completion	Actual Cost of Work done	Total BUA	Total No. Of tenements	No. of stories	Methodology and technology followed
1									
2									
3									
4									

**Note:**

α) Scanned Attested Copies of Completion/Performance certificates from the Engineer-in- Charge for each work should be annexed in the support of information furnished in the above proforma.

β) Works shall be grouped financial year-wise.

### PROFORMA-III :-

At least Similar work, as stated in Para ‘A’ of Post Qualification during **last Seven years..**

<b>PROFORMA-III</b>											
Name of the project	Name of the Employer	Cost of the Project	Date of issue of Work Order	Stipulated Date of Completion	Actual Date of Completion	Actual cost of work done	Remarks explaining reasons for delay , if any	Total BUA	Total No. Of tenements	No. of stories	Methodology and technology followed
1	2	3	4	5	6	7	8	9	10	11	12

**Note: Scanned Attested Copies of Completion/Performance certificates from the Engineer-in- Charge for each work should be annexed in the support of information furnished in the above proforma.**

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MUNICIPAL CORPORATION OF GREATER MUMBAI

OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

**M.C.G.M.**

**Occupational  
Safety & Health  
(OSH) Policy**

AUG 2019

(Version-01)



MUNICIPAL CORPORATION OF GREATER MUMBAI  
OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY  
STATEMENT

MUNICIPAL CORPORATION OF GREATER MUMBAI provides municipal services to the citizen of Greater Mumbai as an obligatory and discretionary duties.

MUNICIPAL CORPORATION OF GREATER MUMBAI is committed to provide safe & healthy working environment to all employees of MCGM. Contractors, sub-contractors, visitors, other agencies, working for MCGM, etc. and to protect them from any accidental injuries, occupational diseases, etc. We believe that, almost all accidental injuries, occupational diseases, etc. can be avoided by implementing proper safety precautionary measures.


Creating and maintaining safe & healthy working environment is a continuous process and all employees shall participate and perform their duties and responsibilities.

The Occupational Safety & Health (OSH) Policy outlines the objectives, duties and responsibilities of all employees for achieving safe & healthy working environment.

Safety is a prime responsibility of all employees and shall follow the OSH Policy for identifying and eliminating possible hazards in every area of work.

We at MUNICIPAL CORPORATION OF GREATER MUMBAI hereby commit to take Safety on priority and look forward for achieving ZERO ACCIDENT goal.

Date: 23/09/2019

  
Municipal Commissioner



# MUNICIPAL CORPORATION OF GREATER MUMBAI

## OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

### I N D E X

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# MUNICIPAL CORPORATION OF GREATER MUMBAI

## OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

### 1. PREAMBLE

In the year 2009; Govt. of India had declared a 'National Safety Policy' with an objective to have adequate safety at every workplace. On the basis of the policy, 'Directive Principles' as well as 'relevant international instruments', the government is committed to regulate all economic activities for management of safety and health risks at workplaces. The government recognizes that safety and health of workers has a positive impact on productivity and economic and social development.

In MCGM all employees including contractual employees are covered under either Factories Act 1948 & Maharashtra Factories Rules 1963 or the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 & the Maharashtra Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2007. These acts & rules are made so as to ensure Safety, Health and Welfare of the employees.

As per following provisions made under Acts & Rules, it is mandatory to have OSH Policy:-

- Section 7-A (3) of Factories Act 1948.
- Rule 73-L of Maharashtra Factories Rules 1963.
- Section 40(2)(q) of Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996.
- Rule 65 of the Maharashtra Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2007.

To ensure Safety and Health of the all employees of Municipal Corporation of Greater Mumbai, including contractual employees, this 'Occupational Safety & Health Policy' (OSH) is framed in accordance with the Acts & Rules as stated above.



**MUNICIPAL CORPORATION OF GREATER MUMBAI**  
**OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY**

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C-221

## **2. DEFINITIONS**

### **2.1 Accident**

It is an unplanned, unintended event / occurrence that may lead to physical injury, ill health, death or loss of property or in combination of all effects.

### **2.2 Hazard**

It is a physical or chemical condition with the potential of causing injury to personnel, damage to equipment or structure. loss of material or lessening of the ability to perform work.

### **2.3 Incident**

It is an undesired event that could result in loss or downgrade the efficiency of activity.

### **2.4 Injury and ill health**

It is damage to human body in any form.

### **2.5 Mock drill**

It is a method of practising emergency or evacuation plan.

### **2.6 Near miss**

It is an unplanned event that did not result in injury, ill health or damage, but, had the potential to do so, only a fortunate break in the chain of events prevented an injury, fatality or damage.



## MUNICIPAL CORPORATION OF GREATER MUMBAI

### OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

#### 2.7 OSH Policy

Occupational Safety & Health Policy is the written commitment of management to prevent work-related injury, ill health to workers and to provide safe and healthy workplaces.

#### 2.8 Permit To Work (PTW)

A permit to work system is a system stating exactly what work is to be done, by whom, where, and when. A responsible person should assess the work and check safety at each stage.

#### 2.9 Risk

It is likelihood of a specific event occurring within a specified period or under specified circumstances. It is a measure of human injury or damage to environment & economic loss, in terms of both the incident likelihood (probability) & the magnitude of loss, injury or damage (consequences).

#### 2.10 Safety

It is safeguarding men, machine, material & environment, by taking corrective actions / precautionary measures against hazards, to attain an acceptable level of risk by creating safe working conditions.

#### 2.11 Safety Culture

It is habit of employee to act safely for himself & others.

#### 2.12 Safe Operating Procedures (SOPs)

A safe operating procedure (SOP) is a set of written instructions about how activities should be carried out safely.



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**2.13 Tool Box Talk (TBT)**

It is a talk or informal meeting conducted daily by immediate supervisor prior to start of the work for giving instructions about hazards present & safety precautions to be taken while performing the work.

**2.14 Unsafe action**

It is the action / activity carried out by any person by deviating the standard / safe operating procedures, guidelines, instructions, etc.

**2.15 Unsafe condition**

It is the condition in any form which can contribute to cause accident, ill health.

**2.16 Worker / employee**

It is a person performing work or work-related activities that are under the control of the MCGM.

**2.17 Workplace**

It is a place under the control of the MCGM where a worker needs to be or to go for work purposes.



# MUNICIPAL CORPORATION OF GREATER MUMBAI

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### 3. GUIDING PRINCIPLE OF OSH POLICY

All accidents (except natural calamities) are preventable by taking appropriate safety measures & providing safe working conditions.

### 4. SCOPE OF OSH POLICY

The OSH applies to all employees of MCGM, Contractors, sub-contractors, visitors, other agencies, etc. working for MCGM.

### 5. OBJECTIVES OF OSH POLICY

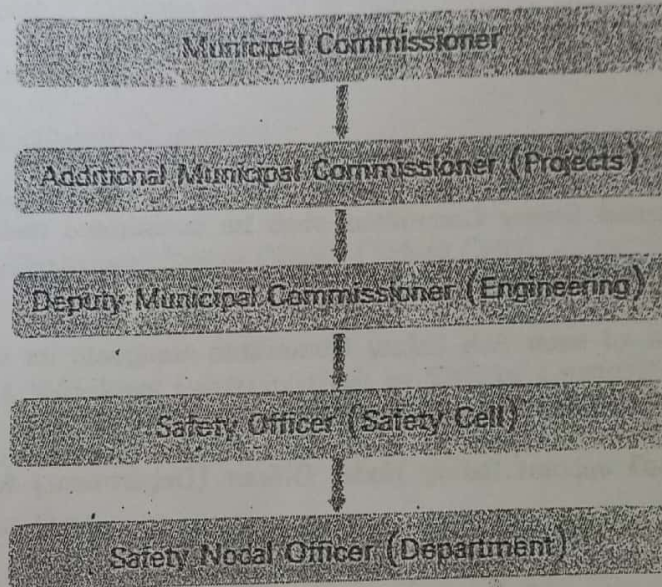
The objectives of OSH policy are as follows-

1. To achieve zero accident.
2. To prevent occupational diseases.
3. To implement Safety Management System at all levels.
4. To establish Management Information System (MIS) for collection & analysis of data related to safety.
5. To comply legal & statutory requirements, as applicable.
6. To fix responsibility & accountability at each levels those are under the scope of the OSH policy.
7. To eliminate hazards & minimise risks by taking effective preventive & protective measures.
8. To assure safe working conditions.
9. To provide guidelines & safe operating procedures.
10. To inculcate and propagate safety amongst employees.
11. To promote safe working practices & safety culture.
12. To provide training to all employees in regards with safety associated with their work.

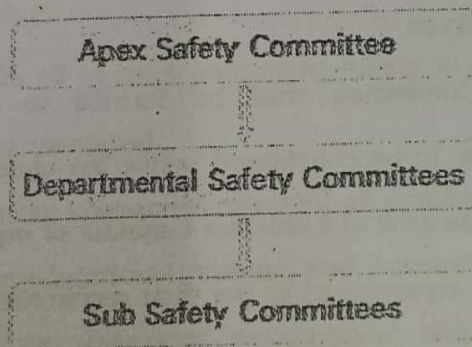


## 6. OSH ORGANISATION

### 6.1 Organisation Structure for OSH



### 6.2 Organisation Structure for Compliance of OSH



### 6.3 Apex Safety Committee

Apex Safety Committee shall be constituted under the chairmanship of Deputy Municipal Commissioner (Engineering).

The Chairman of the Departmental Safety Committees alongwith its worker's representative, shall be the members of the Apex Safety Committee.



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Safety Officer (Safety Cell) shall be the member secretary.

The committee shall meet atleast once in six months. The minutes of the meetings shall be recorded & submitted to Additional Municipal Commissioner (Projects) / Municipal Commissioner.

**6.4 Departmental Safety Committee**

Departmental Safety Committee shall be constituted under the chairmanship of respective Head of Department.

Chairman of each Sub Safety Committee alongwith its worker's representative, shall be members of the Departmental Safety Committee

HoD shall appoint Safety Nodal Officer (Department) for their department. He shall be the member secretary of the committee.

The Departmental Safety Committee shall meet atleast once in three months. The minutes of the meetings shall be recorded & submitted to the higher authorities.

**6.5 Sub Safety Committee**

Sub Safety Committee shall be formed to assist the departmental safety committee. These are to be constituted under the chairmanship of divisional / sectional head, not less than the rank of Executive Engineer or equivalent. Department can have number of sub safety committees as per their requirement.

Atleast one representative from management & one representative from worker from each sub division / sub section shall be the members of the committee. The divisional / sectional head shall appoint one management representative as member secretary of the committee.

The committee shall meet atleast once in a month. The minutes of the meetings shall be recorded & submitted to respective higher authorities.



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### 6.6 Member Secretary of Safety Committee

Each Safety Committee shall have member secretary. The member secretary shall-

1. Arrange safety committee meetings.
2. Prepare & circulate minutes of meetings.
3. Follow up safety related issues discussed in the safety committee meetings with concerned authorities.
4. Collect & compile data related to safety.
5. Coordinate with Safety Officer (Safety Cell).

### 6.7 Management & Workers participation in Safety Committees

Safety Committees shall comprise of equal participation from management & workers representatives.

### 6.8 Functions and duties of the Safety Committees

1. Assisting and co-operating with the management in achieving the objectives of OSH policy.
2. Dealing with all matters concerning safety to arrive at practicable solutions to problems encountered.
3. Creating safety awareness amongst all employees.
4. Undertaking educational, training and promotional activities.
5. Discussion on reports of occupational safety surveys, emergency plans, safety audits, risk assessment, implementation of the recommendations made in the reports, etc. & take necessary remedial actions accordingly.
6. Carrying out safety surveys and identify causes of accidents.



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7. Looking into any complaint made on the likelihood of an imminent danger to the safety of the workers and suggest corrective measures and reviewing the implementation of the recommendations made by it.

### 6.9 Duties of Safety Officer (Safety Cell)

To advise and assist the management in fulfilment of its statutory obligations concerning prevention of personal injuries and maintaining a safe working conditions.

1. To advise the concerned department in planning & organizing measures necessary for the effective control of personal injuries.
2. To carry out detailed job studies of selected jobs & to advise on safety aspects.
3. To check & evaluate the effectiveness of action taken or proposed to be taken to prevent personal injuries.
4. To advise the purchasing & stores department in ensuring high quality & availability of personal protective equipments.
5. To advise on matters related to carrying out plant safety inspections.
6. To carry out plant safety inspection in order to observe the physical condition of work & the work practices & procedures followed by workers & to render advice on measures to be adopted for removing the unsafe physical conditions & prevent unsafe actions by workers.
7. To render advice on matters related to reporting & investigation of industrial accidents & diseases.
8. To investigate selected accidents.
9. To investigate accidents, dangerous occurrences & occupational diseases contracted by workers.
10. To advice on the maintenance of such records as are necessary relating to accidents, dangerous occurrences & occupational diseases.



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11. To advice on preparing a written statement of managements policy (safety policy) in respect of health & safety of workers at work.
12. To promote setting up of safety committees & act as adviser to such committees.
13. To organize in association with the concerned departments, campaigns, competitions, contests & other activities which will develop & maintain the interest of the workers in establishing & maintaining safe conditions of work & procedures.

No Safety Officer shall be required or permitted to do any work which is inconsistent with or detrimental to the performance of his duties.

### 6.10 Update OSH Policy

The OSH policy shall be reviewed & updated by Apex Safety Committee whenever required.

## 7. DUTIES & RESPONSIBILITIES

### 7.1 Director / Deputy Municipal Commissioner

1. To ensure & review implementation of OSH Policy across departments.
2. To suggest improvements in OSH Policy to Apex Safety Committee.
3. To instruct & guide for continuous improvement in safety performance of departments.
4. To motivate & support for creating safety culture in departments.



# MUNICIPAL CORPORATION OF GREATER MUMBAI

## OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

### 7.2 Head Of Department (Chief Engineer / Hydraulic Engineer / City Engineer / Dean / Assistant Municipal Commissioner and equivalent)

1. To ensure implementation of OSH Policy in the department.
2. To form & chair Departmental Safety Committee & to conduct regular meetings.
3. To take necessary steps towards the compliance as directed by Apex Safety Committee.
4. To review compliance of legal & statutory requirements in the department.
5. To arrange to create & maintain management information system for database related to safety.
6. To review & take necessary steps to improve safety performance of department.
7. To ensure that the workers are working in safe working conditions.
8. To ensure adequate budget provisions for the procurement, works, trainings, etc. necessary for creating safe working conditions.
9. Priority shall be given to the proposals related to safety.
10. To ensure periodic health check up of workers.
11. To motivate employees for creating safety culture in department.
12. To visit intermittently at site, plant, etc. for ensuring implementation of safety measures.
13. To ensure the participation of employees in safety related activities such as trainings, workshops, seminars, events, competitions, etc.

### 7.3 Deputy Chief Engineer / Executive Engineer / and equivalent

1. To implement OSH Policy.
2. To ensure the OSH policy is made available to all employees & shall be displayed at prominent places.
3. To form Sub Safety Committees, if required & conduct regular meetings.



# MUNICIPAL CORPORATION OF GREATER MUMBAI

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4. To take necessary steps towards the compliance as directed by Departmental Safety Committee.
5. To ensure compliance, renewal, etc. of legal & statutory requirements such as licences, statutory reports, safety audits, etc. & to take necessary steps on the recommendations of the same.
6. To ensure that the Safe Operating Procedures (SOP), rules, guidelines, instructions, etc. are being followed while carrying out the work.
7. To ensure proper implementation of Permit to Work (PTW) system, wherever applicable.
8. To visit intermittently at site, plant, etc. for ensuring whether safety precautions are being taken.
9. To ensure proper implementation of accident reporting system, including near missed incidences.
10. To report higher authorities about accident, dangerous occurrences, etc. as per statutory requirements.
11. To investigate accidents & dangerous occurrences.
12. To take corrective actions, preventive measures, etc. on the reports received about unsafe conditions, unsafe acts, near missed incidences, imminent danger, etc.
13. To maintain & update management information system for database related to safety.
14. To monitor safety performance report at regular intervals.
15. To conduct periodic health check up of workers.
16. To participate in mock drills & perform activities as defined in the emergency plan. To guide employees during mock drill & emergency.
17. To make adequate budget provision for procurement, works, trainings, etc. necessary for creating safe working conditions.



## MUNICIPAL CORPORATION OF GREATER MUMBAI

### OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

18. Priority shall be given to the proposals related to safety.
19. To arrange regularly trainings, retrainings, etc. on safety for enhancing awareness & creating safe working conditions.
20. To ensure workers participation in safety activities & ensure record of the same shall be maintained.
21. To motivate employees for creating safety culture in division / section.

#### 7.4 Assistant Engineer / Sub-Engineer / Junior Engineer / and equivalent

1. To encourage workers to work safely by conducting monthly safety meetings & safety inspection.
2. To ensure safe working conditions created for carrying out the work.
3. To prepare in consultation with workers the Safe Operating Procedures (SOP) for the activities carried out by them. The same shall be documented & shall be made available to workers in Marathi.
4. To ensure that the Safe Operating Procedures (SOP), rules, guidelines, instructions, etc. are being followed while carrying out the work.
5. To implement Permit to Work (PTW) system, wherever applicable.
6. To renew statutory licences, permits, etc. & to comply with required statutory reports, audits, etc.
7. To maintain & update management information system for database related to safety.
8. To ensure that the required Personal Protective Equipments (PPE) and other Safety Equipments are available & issued to the workers. Proper storage facilities for the same shall be provided. The damaged or unusable equipments shall be replaced by new.
9. To ensure that the tools, tackles, equipments, etc. are in good condition. Proper storage facilities for the same shall be provided. The damaged or unusable tools, tackles, equipments, etc. shall be replaced by new.



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10. Preventive maintenance schedule of the machines, equipments, tools, etc. shall be prepared & the same shall be followed.
11. To visit regularly at site, plant, etc. for ensuring whether safety precautions are being taken.
12. To conduct safety inspection, internal safety audit, etc. at regular intervals.
13. Priority shall be given to the proposals related to safety.
14. To ensure good housekeeping by regular visits to the plants, chowkies, workplace, etc.
15. To implement accident reporting system, including near missed incidences.
16. To guide workers to identify hazards.
17. To report higher authorities about accident, dangerous occurrences, etc. as per statutory requirements.
18. To investigate minor accidents & near missed incidences.
19. To take corrective actions, preventive measures, etc. on the reports received about unsafe conditions, unsafe acts, near missed incidences, imminent danger, etc.
20. To update safety performance report.
21. To participate in safety committee meetings.
22. To participate in mock drills & perform activities as defined in the emergency plan. To guide & explain role of workers in mock drill & emergency.
23. To encourage workers to participate in safety activities like Safety Competitions, Safety Day Celebrations, Safety Trainings, monthly safety meetings, safety committee meetings, etc.
24. To adopt & motivate employees to create safety culture while working in sub divisions / sub sections.



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### OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

#### 7.5 Supervisor / Foreman / Mukadam / and equivalent

1. To follow Safe Operating Procedures (SOP), rules, guidelines, instructions, etc.
2. To help Engineers for preparing Safe Operating Procedures (SOP) for activities carried out by the workers.
3. To encourage workers to work safely by conducting daily toolbox talk (TBT).
4. To inspect & maintain the available or issued Personal Protective Equipments (PPE) and other safety equipments, for their good condition & provide proper facilities for storing the same.
5. To inspect & maintain the tools, tackles, equipments, etc. for their good condition & provide proper facilities for storing the same.
6. To use Permit to Work (PTW) system, wherever applicable.
7. To encourage workers for good housekeeping.
8. To report about any unsafe conditions, unsafe acts, near missed incidences, imminent danger, accident, dangerous occurrences, etc. to Engineer, Safety Committee Member, etc. & accordingly suggest or take corrective actions, preventive measures, etc. for maintaining safe working conditions.
9. To participate in safety inspections, mock drills & perform activities as defined in the emergency plan. Explain role of workers in mock drill & emergency.
10. To encourage workers to participate in safety activities like Safety Competitions, Safety Day Celebrations, Safety Trainings, monthly safety meetings, safety committee meetings, etc.
11. To adopt & motivate safety culture while working.





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7.6 Technician / Skilled Worker / Worker / and equivalent

1. To work safely so as to ensure safety of self, team members and people around.
2. To follow SOPs, rules, guidelines, instructions, etc.
3. To use necessary Personal Protective Equipments (PPE) and other safety equipments while working. The same shall be kept in good condition & stored properly.
4. To use appropriate tools, tackles, equipments, etc. for carrying out the work. The same shall be kept in good condition & stored properly.
5. To concentrate on work.
6. To keep workplace neat & clean by way of good housekeeping.
7. To report about any unsafe condition, unsafe act, near missed incidence, imminent danger, accident, dangerous occurrences, etc. to the Supervisor, Mukadam, Foreman, Engineer, Safety Committee Member, etc. Suggest any corrective actions, preventive measures, etc. to be taken, for maintaining safe working condition.
8. Do not carry out unauthorised work.
9. Do not remove safety guards or other devices provided for the purpose of securing safety, without instructions.
10. To participate in periodical health check up programmes.
11. To cooperate for promotion of safety awareness.
12. To adopt safe practices for maintaining safety culture.
13. To participate in safety inspection, mock drills & perform activities as defined in the emergency plan.
14. To participate in safety activities like Safety Competitions, Safety Day Celebrations, Safety Trainings, Toolbox Meetings, monthly safety meetings, safety committee meetings, etc.
15. To adopt safety culture while working.



## MUNICIPAL CORPORATION OF GREATER MUMBAI

### OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

#### 7.7 Administrative staff

1. To work safely so as to ensure safety of self, team members and people around.
2. To follow office safety guidelines.
3. To maintain good housekeeping.
4. To participate in safety inspection, mock drills & perform activities as defined in the emergency plan.
5. To participate in safety activities like Safety Competitions, Safety Day Celebrations, Safety Trainings, etc.
6. To adopt & motivate others for creating safety culture while working.

#### 7.8 Planning, Designing, Procurement, etc.

1. Necessary precautionary measures shall be taken at the planning, designing & procurement stage of any project, plant, equipment, machines, material & carrying out any work, to the safety aspects of the workers who will be employed in the erection, operation, execution, maintenance, etc. of such works.
2. Necessary precautionary measures shall be planned & designed for safety aspect, considering the hazards.

#### 7.9 Establishment section

1. Record shall be maintained regarding safety training imparted to employees.
2. To maintain & update management information system for database related to safety.

#### 7.10 Account Section

1. Always, any proposal related to safety shall be scrutinised / processed on priority.



# MUNICIPAL CORPORATION OF GREATER MUMBAI

## OCCUPATIONAL SAFETY & HEALTH (OSH) POLICY

2. Budget provision & utilised for OSH activities.

### 7.11 Information Technology Department

1. To design, develop & maintain management information system (MIS) for creating & analysing database related of OSH, as per the requirement of Safety Officer (Safety Cell).

### 7.12 Training Institute, Training Centre, etc.

1. To organise & conduct OSH related training & retraining at regular intervals for all employees.
2. To make arrangement for noting the OSH training, retraining, etc. on employees service record.

### 7.13 Contractor / Sub Contractor / Other agencies, etc.

1. To follow acts & rules as applicable for contract works.
2. To comply necessary legal & statutory requirements.
3. To follow & implement MCGM's OSH Policy.
4. To comply necessary safety information & documents.
5. To provide safe working condition to contractor workers.
6. To work safely so as to ensure safety of self, team members and people around.
7. To provide necessary personal protective equipments (PPE) to contractor workers & ensure usage of the same.
8. To follow the permit to work system (PTW), wherever necessary.
9. To prepare & follow safe operating procedures (SOP).
10. To take corrective actions, preventive measures, etc. on the reports received about unsafe conditions, unsafe acts, near missed incidences, imminent danger, etc.
11. To take necessary steps towards the compliance of safety aspects as directed by MCGM Engineers, authorities, etc.





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9. OSH Performance

The OSH performance of the department, division, section, etc. shall be based on the following parameters -

1. Whether OSH policy statement is displayed at prominent places ?
2. Whether OSH policy is made known to all employees ?
3. Whether statutory requirements are fulfilled ?
4. Does Safety Nodal Officer (Department) or other employee for OSH is appointed ?
5. Whether Safety Committee is formed ?
6. Whether workers participation is in the Safety Committee ?
7. How many meetings of Safety Committee are conducted in a year ?
8. Whether the minutes of the Safety Committee are circulated ?
9. How much budget is utilised for OSH ?
10. Whether accident reporting system is known to all ?
11. Information about number of employees working, number of accidents, mandays worked, etc.
12. How many times internal safety inspections are carried out ?
13. How many employees have been given training / retraining about OSH in a year ?
14. How many OSH celebrations, events, etc. conducted in a year ?
15. Whether safe operating procedures for all works are available ?
16. Whether permit to work system is used wherever necessary ?
17. Whether personal protective equipments as applicable are provided ?
18. Whether employees are using personal protective equipments as required ?
19. Whether measuring instruments, sensors, etc. are regularly calibrated, tested & record is maintained ?
20. Whether lifting tools, tackles, equipments, etc. are regularly tested & record is maintained ?
21. Whether pressure vessels, tanks, cylinders, etc. are regularly tested & record is maintained ?



10. OSH PLEDGE

**National Safety Day - 4th March**  
**SAFETY AND HEALTH PLEDGE**

"On this day, I solemnly affirm that I will rededicate myself to the cause of safety, health and protection of environment and will do my best to observe rules, regulations and procedures and develop attitudes and habits conducive for achieving these objectives.

I fully realise that accidents and diseases are a drain on the national economy and may lead to disablements deaths, harm to health and damage to property, social suffering and general degradation of environment.

I will do everything possible for the prevention of accidents and occupational diseases and protection of environment in the interest of self, family, community, organisation and the nation at large"



