TENDER DOCUMENT

For

PART PLUMBING REPALCEMENT, PATCH PLASTER & TERRACE WATERPROOFING AND DUCT PAINTING WORK

for

Evershine Grandeur Co-op. Hsg. Soc. Ltd.

At Behind Inorbit Mall, Mindspace, Malad (West), Mumbai - 400 064.

DATE OF ISSUE: 30th Dec 2019

TIME OF ISSUE: 11:00 am onwards

DATE OF SUBMISSION: 6th Jan 2020

TIME OF SUBMISSION: 6:00 pm at Society Office

Prepared by

CSR Consultant and Associates

"Building repair and restoration Consultant "

Registered Office: Kandivali Gurudatta CHS, Dahanukar wadi, Kandivali (W), Mumbai – 400 067.

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INVITATION TO TENDER

Sealed item rate un-conditional tenders are invited from contractors of repute, having adequate resources, well established in the line and experienced in the execution of similar works of comparable magnitude for the following work.

1. Name and Nature of work:	Partial Plumbing, waterproofing and Painting work for Evershine Grandeur Co-op Hsg. Soc. Ltd. At Behind Inorbit Mall, Mindspace, Malad (West), Mumbai - 400 064.
2. Last date of issue of Tender:	**04/01/2020**
3. Date, Time and Place for submission of tender document.:	**06/01/2020 till 6pm at Society Office**
4. Address:	Evershine Grandeur Co-op. Hsg. Soc. Ltd. at Behind Inorbit Mall, Mindspace, Malad (West), Mumbai - 400 064.
5. Tender collection:	In working days from **30/12/2019 to 04/01/2020** at society office of the Evershine Grandeur Co-op. Hsg. Soc. Ltd. at the address given above on payment of Rs. 3,000/- (Rupees Three Thousand only) in cash non-refundable.
6. Earnest Money deposit:	In form of Demand Draft / Cheque amounting to Rs. 1,00,000/- (Rupees One lac Only) favouring Evershine Grandeur Co-op. Hsg. Soc. Ltd.
7. Time of Completion:	**Phase – I** to comprise of Civil Repairs, Plumbing and waterproofing works to be completed in 4 months. **Phase – II** shall carry touchups crack filling and painting works post monsoon in 4 months.
8. Defect Liability period:	One year from the date of completion. 5 yrs for waterproofing as per OEM manufacturer.
9. Retention amount:	Retention of 5% will be deducted from each

	R.A. bill till the total amount of work is completed.
10. Tender validity:	10 months from the last date of submission of tender documents.
11. Period of mobilization:	4 days from the date of Letter of indent.
12. Interim Bill:	RA bill triplicate copy to be submitted to Consultant via Society.
13. Arbitration / Jurisdiction :	Mumbai jurisdiction
14. Insurance:	As applicable for labour and third party Insurance
15. Cost calculation for extra work:	15% profit towards actual cost of materials and labour.
16. For any queries:	Tenderer should submit in writing on or before 29/12/2019 to Society on above timings. Queries may be answered promptly by Society or Consultant.
17. Work Schedule:	Work is divided in Phase I and Phase II. Phase I shall comprise of Civil repairs, Plumbing, Structural repairs and Crack filling. Phase II shall comprise of rectifications of work already carried, if any, Crack filling and Painting works to completion of project.

CSR Consultant and Associates Mumbai 400 067

DEFINITION OF TERMS

1. "SOCIETY" /on whose behalf the enquiry is issued by the consultant and shall mean **"Evershine Grandeur Co-op Hsg. Soc. Ltd."** and will include his / her / their legal representative (s) successor (s), assignee (s) as well as his / her / their authorized officer(s).

2. "Tenderer" shall mean the firm / party / company who quotes / submit offer on enquiry.

3. "Contractor" shall mean the successful Tenderer / contractor whose tender has been accepted by the society and on whom the order is placed by Society and shall include his / her / their assign(s) legal representatives(s).

4. "Project Management Consultant" / Consultant / PMC / Civil Engineer / Structural Engineers / advisers shall mean CSR Consultant and Associates.

5. "Engineer" shall mean the project Engineer or his authorized representative, who is appointed / nominated by the consultant to supervise and be in charge of the work at site.

6. "Contract" shall mean the order, associated specifications article of agreement, conditions including other documents agreed upon between Society and Contractor, duly signed.

7. "Valid Contract" means accepted terms and conditions / agreement between Society / Society and Tenderer / Contractor ,approved plan / drawing by society and concerned passing authority, bar charts, this tender document, approved payment schedule, lien if any, any other documents which explains Technical / Architect and Legal points necessary o execution of the project, duly signed, govt. duty paid and registered.

8. "Proposed Contract" means accepted terms and conditions between Society / Society for process of agreement, from concerned authority for execution of various works / process / due performance in order to complete / execute the valid contract.

9. "Specifications" shall mean Technical Specifications for job and material and collectively all the terms and stipulation contained in those portions of the contract known as General Conditions, an special conditions and any modification as may be made or to be made pertaining to the method and manner of performing the work or to the qualities of the materials to be furnished under this contract.

10. "Drawing" shall mean collectively the drawing referred to in the contract, with altogether new and / or such supplementary drawing as the consultant may issue from time to time as also revised drawings.

11. Wherever in this contract the words Directed, Ordered , Required, Designated, Considered necessary, Prescribed or words of like Imports are user, it shall be

understood that the direction, order ,requirement, designation, permission or prescription etc of the Consultant / Society is intended and must. Similarly, the words Approval, Approved, Acceptable, Satisfactory or words of like import shall mean approved by or acceptable or satisfactory tot the Consultant / Engineer unless another meanings is plainly intended.

12. “Week” shall mean calendar week.

13. “Sub-Contractor” shall mean the person named in the contract undertaking a part of the work or any person to whom a part of the contract has been sublet with the consent in writing of Engineer.

14. “Site” shall mean the actual place of the proposed project as detailed in the specifications on any other place where work s is to be executed under the contract.

15. “Plant machinery”, “works” shall mean respectively the goods to be supplied and service to be provided by the contractor under the contract.

16. Phase – I shall be Civil repairs, Patch Plaster, Structural repairs, Part plumbing, Waterproofing and crack filling. Phase – II shall be taken post monsoon, i..e Crack filling, touchups, rectifications, additions of civil works, if any and finally painting works.

17. “Notice in writing” or “Written Notice” shall mean a notice in writing send (unless delivered personally or otherwise proved ot have been received) by registered post to the last known private or business address of the addressee / email and shall be deemed to have been received.

18. “Letter of Indent” shall mean Society letter conveying acceptance of the tender.

19. “Date of commencement” or “Effective of Contract” shall be reckoned two weeks from the date of placing the letter of indent or from date of handing over the site whichever is later.

20. “Act of Insolvency” shall mean any insolvency as defined by Presidency towns Insolvency act or Provincial Insolvency Act or any amending statute.

21. “Engineers Instructions” shall mean any drawings and / or instructions oral and / or in writing details, directions and explanations, issued by Engineer / Consultant from time to time.

22. :Final Completion: shall mean, when the work included in the contract has been completed in all respects as pe the specifications, drawings, Directions and the site has been cleared including the removal of labour camps, and all other facilities put up by the contractor for the execution of contract.

23. The “Appointing Authority” for the purpose of arbitration shall be the any person so designated by the society management.

24. “Construction equipment means all machinery, plant, apparatus, parts, appliances, instruments, articles and things required for erection, construction and completion of the work required for the project or any portion thereof and the operation thereof, including maintenance items, spare parts and initial supplies required for performance of the work.

25. “Supervisor” shall mean the successive control and directions given by Society or their authorized representative in relation to contract work.

26. “Virtual completion Certificate” shall mean the final certificate issued by the consultant after clearing of the site.

27. “Temporary works” means temporary construction of any kind in an around site required during execution, completion and maintenance of the works by the Contractor at their own cost and risks.

28. “EMD” means Earnest Money Deposit to be drawn in the form of Demand draft / cheque only in favour of the clients duly signed and stamped. No interest will be paid on any tender deposit.

ELIGIBILITY CRITERIA

A. Tenders received after the due date and time, shall not be entertained. Tenderer authorized representative may attend the tender opening at which time the price and other relevant details shall be read out. Tender opening date will be mentioned elsewhere. However, the Consultants reserve the rights to reject all the tenders or the lowest or any other tender which is in the best judgment of the consultants does not appear to be in the best interest and the tenders shall have no cause of action or claim against the consultants or its officers, employees, successors for rejection of his tenders.

B. Tendering is open to all contracting firms who fulfill the requirements set over herein for financial standing past experience of executed works of similar nature and organization structure, capability with at least one qualified Civil Engineer with minimum experience in the field of repairs and rehabilitation. Tenders are required to furnish the information in the format of the schedule mentioned below and which are attached at the end of the Bill of Quantities summary sheet in the tender.

C. They are also required to furnish necessary documentary evidence in support of their competence under the above schedules. The data / document furnished should be true or if the Tenderer has attempted to conceal any data unfavorable to him his tender will be liable to be rejected.

D. The Tenderer are requested to take a special note of the fact that only those Tenderer who meet the minimum requirement for this work in respect of financial standing qualification possession of plant and equipments past experience of executing similar repair works and their organization capability will only be considered for evaluation an scrutiny. The tenders in respect of which these requirements are not fulfilled will be rejected without assigning any reasons. The Tenderers are requested to please take a special note of the fact that the above mentioned qualifications will form an important consideration for evaluation and scrutiny in additions to their financial offer. The

E. Tenderers are also requested to note that the information called for should be invariably given in the formats of schedules accompanying and not in any other form. In case the space available in the schedules is inadequate, the Tenderer may furnish this information on separate sheets, which should be invariable in the formats asked for.

F. The terms of payment are defined under terms special condition of contract. The Consultants shall not under any circumstances relax these terms of payment and will not conduct any alternative payment term. Tenderer should therefore in their own interest note this provision to avoid rejection of their tenders.

G. The firm / company should have experience of at least **5 years** of handling comprehensive waterproofing work, structural repairs of RCC frames especially of Industrial and/or Residential societies.

H. The annual turnover of the firm / company should be **Rs. 1.50 crore** in any of the last three years. Last three years turnover statement duly authenticated by a Chartered accountant will be submitted.

I. The Tenderer shall submit copies of work order / work completion certificate of consultants / clients. Appreciation letter or performance letter can be added for consideration of tender benefit.

J. Tenderer shall submit photographs and documentation pertaining to the projects they have completed.

K. All the information asked for shall be submitted only as per the format of the relevant prequalification and to be attached separately. Non-compliance of the formats enclosed shall result in outright rejection of the tender.

L. Tenderer containing false or incomplete information shall be liable to rejection.

M. Tenderer should have done tower projects before (7 storey and above)

N. Tenderer to submit list of machinery, tools and tackles owned by him / her.

O. Must be an authorized applicator of any of the paint company mentioned in the tender.

P. Tenderer will provide details for adequate strength of equipments, labour, force, staff and other resources.

INSTRUCTION FOR FILLING THE TENDER

a. The tender shall be submitted in accordance with these instructions and any tender not confirming there to is liable to be rejected. These instructions shall form part of the Tender and the Contract. Single packet system will consist of covering letter ,earnest money, prequalification documents, commercial terms and conditions, etc along with Schedule of Quantities and Rates filled-in “bill of Quantities” only. Single sealed envelopes containing technical and commercial document will be submitted to Society. Whoever meets the qualification criterion only will be considered while comparing commercially. Society / Consulting Engineer’s decision in this regard will be final.

b. Specified reference in the specifications to any material by trade name or catalogue number shall be considered as establishing a standard of quality and performance and not as limiting competition and Tenderer in any such cases. Contractor may freely use any other product provided that it ensure and equal or higher quality than the standard and meets the Consultants / societies approval.

c. The Tenderer is advised to visit and examine the site for works and its surroundings and obtain for himself on his / her responsibility all information that may be necessary for preparing the bid and entering into a contract. The cost of visiting the site shall be at the Tenderers own expense.

d. Tenderer must give free service warranty. – for leakages / seepages through external surface for 1 years of defect liability period. Minimum warranty as per paint manufacturers shall be extended by Tenderer. However, further extension of the warranty shall be mutually agreed by Contractor with the Owner and Consultant.

e. The tender shall be filled in, signed with all particulars complete and submitted by one duly authorized signatory. The Tenderer shall satisfy the Society that he is competent and authorized to submit the tender and / or to enter into a legally binding contract with the Society by furnishing documentary evidence to that effect. The Tenderer must sign and stamp each page of the tender document while making appropriate entries.

f. It shall be incumbent on the successful and legal tenderer to pay the necessary stamp duty on the contract charges and all the legal charges of **Rs. 3000/-** for preparation of the contract agreement as ruling on the date of execution of the contract.

g. **Security Deposit:** The EMD shall be converted as security deposit till the time that the retention money is not more than the EMD amount.

h. **Labour Employment:** The Contractor shall employ labour in sufficient numbers to maintain the work schedule and quality of workmanship. The Contractor shall not employ any child less than 18 years age. Contractor has to be follow the prescribed norms under clause (b) of sub-section (2) of the factories act 1948.

i. **Arbitration:** All disputes of differences whatsoever which shall at any time i.e. during the execution of the contract or maintenance there of till total completion of the contract between the parties hereto concerning the works shall be effected by the consulting engineer who will act as the arbitration. His decision shall be binding upon both Contractor and Society and the cost of Arbitration shall be born by both the parties i.e. Contractor and Society.

j. **Basic rates of material:** The following rates shall be considered for the duration of the works and any extended period and should be agreed to by the society in writing. The basic rates include cost of material, taxes applicable, transport and loading / unloading. The difference between the actual amount paid by the contractor while bringing the material to site and the cost of materials at the basic rate shall be supported by copies of bill / cash memos indicating excess over the amount worked out. Any variation upto 10% from either side will not be claimed. However, above the variation of 10%, necessary documentation shall be provided for claimant. Change in rate will be applicable only on the 50% of the basis rate provided in the agreement.

a.	Cement (50 kgs bag)	: Rs. 350/-
b.	Sand (per brass)	: Rs. 8,000/-
c.	Reinforcement HYSD per MT	: Rs. 56,000/-
d.	Polymer (per ltr)	: Rs. 220/-
e.	Aggregates / Metal (per 100CFT)	: Rs. 2,900/-
f.	Rubble (per CFT)	: Rs. 2,600/-
g.	Bricks (per nos.)	: Rs. 7.10/-
h.	Brick bats (per 100 CFT)	: Rs. 4,200/-
i.	China chips (per MT)	: Rs. 5,200/-
j.	Texture (25kg bag)	: Rs. 750/-
k.	100% Acrylic paint (per 20 ltrs)	: Rs. 4,200/-
l.	Premium Acrylic paint (per 20 ltrs)	: Rs. 5,200/-
m.	Elastomeric coating (20 ltrs)	: Rs. 5,400/-

k. **TDS:** The clients shall deduct Income Tax at source as decided by the Govt. of India at the time of making the payments and issue the corresponding certificates to the contractor for the payments made to him from time to time.

l. **Water and Electricity**: Contractor has to make own arrangements for water, water storage, electricity for carrying out the repair and other related activity.

m. **Insurance**: The Contractor will ensure that full insurance is available for all workmen at site from commencement to completion. Third party Insurance policy shall be fully paid to the extent of 5 claims of Rs. 2,00,000/- in a year and the receipt for the same shall be produced to the clients. Safety precautions shall be on top priority for workers and residents of the property.

n. **Omission / deletion or change in quantities**: The Tenderers shall not that the quantities mentioned in the schedule of bill of quantities of this tender are approximate. There will be no revision of rates for any change in quantities of any item of work. Also the client / Consultant reserve the right to delete or to omit any of the item work as mentioned in BOQ.

o. The Tender shall complete all the documents in these instruction and elsewhere in the Tender documents. In particular, the Tendered shall complete and submit the following for his tender to be considered as bonafide.
    a. Declaration Letter
    b. Fill BOQ Pricing (commercial) and its Summary, each page duly signed.
    c. List of Plant and Machinery and Personals to be employed on the works.
    d. Details of other works in hand on the date of submission of tender.
    e. Value of similar works executed during the last three years and balance sheet of past three years.

p. The Society reserves the right to adjust arithmetical or other errors in the tender in accordance with the following general rules. In the event of discrepancy between words and figures quoted, the description in words shall prevail. Similarly, in the event of an error in the amount column arising as a result of wrong extension, the unit or item rates shall be regarded as firm and extension amended accordingly.

q. This is an item rate measurement contract based on priced Bill of Quantities. The item rates shall be valid for the entire duration of the contract and / or extension thereof. Tenderer shall not that the prices and rates inserted in the Bill of Quantities, are to be the full inclusive value of works described under each item including all costs and expenses including Govt. Levies, royalties, duties, work contract, octroi, etc which may be required in, and for the construction of the works described whether specifically mentioned or not, together will all general risks liabilities and obligations set for the or implied in the documents on which the tender is based. The society will not be responsible for any pay for expenses or losses which may be incurred by any Tenderer in the preparation and submission of the Tender, or in any activity connected therewith. As soon as the successful Tenderer is advised of the award of the contract to him all future expenses and all taxes etc to be incurred by him shall be deemed to be covered by the prices quoted in his tender.

r. **Multiplying factor for uneven surface** for painting work

a.	Panelled doors and paneled windows –	x 1.3.
b.	Flush doors -	x 1.2
c.	Fully ventilation or louvered windows-	x 1.8
d.	Sheeted steel door and windows-	x 1.1
e.	Rolling shutter top cover included-	x 1.2
f.	Hand railing, pipes bend-	x 1.2
g.	Corrugated A.C. Sheets-	x 1.2

h. M.S. grill- x 1.5
i. Jali sheets- x 1.2

s. Before Tendering, the Tenderer shall visit the site of works and in any case shall be deemed to have done so in order to get acquainted himself /herself with the nature of the site and the conditions in which the works are to be executed.

t. Safety rules: Contractor to ensure and arrange at his cost all safety provisions as per CPWD, ISI for all labour, directly or indirectly employed in the work for performance of this contract. First aid facilities shall be provided by the contractor at site place.

u. The Tender documents duly completed in all respects along with tender drawings (if any) and all other accompanying documents shall be submitted and delivered as required in the Tender Notice in a plain sealed envelope super scribed **"Structural Repair, Patch Plaster, Part Plumbing and Painting work" for Evershine Grandeur Co-op Hsg. Soc. Ltd."** At Behind Inorbit Mall, Mindspace, Malad (West), Mumbai - 400 064.

v. The Consultants will open the tenders, including submission in presence of society members in society office. Tenders received without the EMD shall be considered as non-responsive, shall be rejected outright. Consultants will open the envelopes / Bidding Company profiles / Packages of those Tenderers for which valid tender guarantees have been received and examined whether the tenders are complete and are in general order as specified in tender.

w. Subletting: The contractor shall not sublet or attempt to sublet the whole of work. Except where otherwise provided by the contract, the Contractor shall not sublet any apart of the work without the prior written approval from the Consultant / Clients. The approval if necessary shall not be unreasonably withheld and such approval, if given shall not relieve the Contractor from any liability or obligation under defaults and neglect of any sub-contractor.

x. Phases of Work: The work shall be divided in 2 phases. We name it as Pre- monsoon and post monsoon. Pre-monsoon to take care for all Civil repairs and crack filling works. Post monsoon, rectifications, if any for the work carried, cracks filling and painting work.

y. Bamboo scaffolding: Have asked for two rates with 2 options.

OPTION-1: Keeping the bamboo during the monsoon period, rectifying them while reworking post monsoon for Phase II from safety point of view.
OPTION-2: Bamboo scaffolding will be removed after completion of Phase I and then re-erect, post monsoon for Phase II. Therefore the areas mentioned in sft has been doubled for this option.

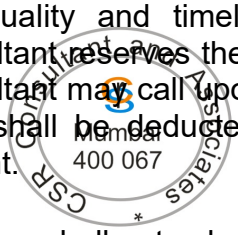
z. Defect Liability period**:** The Contractor shall be responsible to make good and remedy at his / her / their own expenses within such period as may be stipulated by the Consultants any defects which may develop or be noticed before the expiry date of the period from certified date of completion. The defect liability period shall be 12 months from the date of completion certificate issued by the consultants. 2.5% of retention amount shall be released on completion of job. The balance retention amount of 2.5% will be retained for the period of 12 months.

aa. Electric power shall be provided by society. Contractor to make arrangement for measurement of power consumption to the satisfaction of Engineer.

bb. Tenderer or his company or his labour will not carry or execute any kind of repairs, paintings and plumbing work inside the flats of any members residing in the Co-op Housing Society Ltd. during the course of work without the permission from Consultant.

cc. The unit prices quoted by the Tenderer shall include all Government taxes, Octroi, taxes, Royalties or any levies prevailing at the time of submitting the Tender. VAT and Service tax shall be paid extra as applicable. However, Service Tax rate as applicable can be claimed on labour component, if material payment is made to vendors directly by Society. The rates shall be protected for next 8 months from the date of submission of tender document. No increase in tender item rates shall be allowed, under any circumstances.

dd. If at any time during the course of execution of the works, the society is no satisfied with quality and timelines of the work carried out by the contractor, society/ Consultant reserves the right to terminate the contract. At such junctures, Society or Consultant may call upon rates from other contractor and the exceeding difference of rates shall be deducted from the previous contractors retention/ Security deposit amount.



ee. Tenderer shall not sub-contract any part of the works awarded to him, without written permission by Consultant.

ff. The Contractor shall maintain following registers

b. Labour register
c. Work Status Register
d. Daily Schedule status register
e. Material Register
f. Measurement Book
g. Site Instruction Book

SAFETY PRECAUTIONS

1. Contractor will ensure safety of his workers, equipment and society property to the entire satisfaction of Engineer. Society will not be responsible for any injury to Contractor staff or for loss of life.

2. Contractor to take total responsibility for all their tools, material and tackles etc. Society will not be responsible for any loss or damage.

DECLARATION LETTER

Note: All blanks to be filled in by the Tenderer on their Letter heads.

To,

The Secretary,

Evershine Grandeur Co-op Hsg. Soc. Ltd.

Behind Inorbit Mall, Mindspace,

Malad (West), Mumbai - 400 064

SUB: Tender for Structural repairs, Part Plumbing, Patch Plaster & Painting works for residential cum Commercial building Evershine Grandeur Co-op Hsg. Soc. Ltd. at Malad (West), Mumbai.

Dear Sir / madam,

1. Having inspected the site and having examined conditions of contract, specifications, Bill of Quantities for the above named work, we the undersigned offer to carry out the entire work for the sum of Rs. _____ or such other sum as may be ascertained in accordance with the said conditions, all in conformity with the said drawing, conditions of contract, specifications, Bill of Quantities hereto.

2. We undertake, if our tender is accepted, to commence the works and complete and deliver the same within the time stipulated in the tender. We further undertake that on extension of time, we shall pay as liquidated damages to the society, the sum of Rs. 5,000/- per day delay subject to a maximum of 5% of the contract value.

3. Percentage of extra works shall be 15% towards overheads and profits on actual cost of material and labour.

4. We hereby deposit with you earnest money amounting sum of Rs. 1,00,000/- Bank details _____ and we do agree to abide by this tender for a period of 90 days from the date fixed for receiving the same and it shall remain binding on us and may be accepted at any time before the expiry of that period and or before the expiry shall be forfeited by the society, in the event of society accepting my/our tender and I / we fail to take up the work when called upon to do so, fail to keep the tender open as aforesaid, fail to execute the formal contract or make the contract deposit when called upon to do so and do not commence the work on or before the date specified by the society in their work order.

5. We further agree to deduction of 5% from interim payment as well as final bill as retention money. Thus at the end of the project 2.50% retention money of the value of

the work shall be retailed by the society and balance to be released after completion of work. Retention money can be substituted by a bank guarantee of equal amount valid till the same period.

6. We also agree to the conditions that no interest will be payable on EMD, Security deposit and on retention amount deducted from our bill for the period which are withheld. We also agree to pay all the charges, cess, Penalties and taxes of whatsoever nature in preparation, stamping and execution of the said contract.

7. Until and unless a formal agreement is prepared and executed, this tender, together with your written acceptance thereof, shall constitute a binding contract between us together with all the conditions of contract, specifications, bill of quantities and price, drawings and instructions to Tenderer.

We understand that, you are not bound to accept the lowest or any other tender your may receive.

Signature of Contractor

Company stamp 

Address:-

Dated: _____

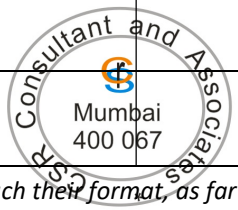
LIST OF EQUIPMENTS AND MECHINERY

Sr. No.	Machinery / Tools	Qty

Contractor can attach their format, as far as the data asked for is provided.

LIST OF CUSTOMERS FOR RELEVANT PROJECTS

Sr. No.	Project name	Address	Chairman / Secretary	Contact Nos.	Duration of work	Value of Work
1					in months	in lacs
2						
3						
4						
5						
6						
7						
8						
9						
10						



Contractor can attach their format, as far as the data asked for is provided.

TECHNICAL SPECIFICATIONS FOR THE PROJECT TO BE ADHERED

PRIMARY INITIATION

1. **SITE INITIATION:** Site study shall be done thoroughly before commencement of work. Schedule shall be discussed with the Engineer for approval. Post approval, shall be submitted to Society managing committee. Preparation for any work, forms an important part of repairs and rehabilitation work and due importance must be given to all surface preparation. Approval and Consultants go ahead is required whenever such surface preparation are mandatory before actual repairs can start. Improper preparation can lead to future failures. All ratios pertain to 53 grade cement. All repairs of structural members must be preceded with proper support system. This structural support system must be worked out for each structural member and structural significance and safety of the whole building is of loads on the treated member. It is mandatory for the contractor to seek consultant's approval. The ultimate responsibility of the support system rests with the contractor and so he is advised to appoint one full time basis an experienced site supervisor / Engineer to co-ordinate with the consultants and supervise the works.

2. **ISI STANDARDS:** In case where no particular specification is given for any item to be operated under the contract, the relevant specification where one exists, of the Indian Standard Institution shall apply.

3. **REMOVAL OF CONCRETE / PLASTER COVER:** The range of removal of plaster / concrete cover shall extend to the limit of crack / hollowness / corrosion of rebar. The governing dimensions of removal shall be based on the minimum dimension and / or shall extend beyond the zone of rusting to a minimum dimension. Concrete surfaces to which treatment are to be applied shall be freshly exposed, parent concrete free of loose and unsound materials. Prepare surfaces by mechanical abrasion unless prohibited by environmental limitation in which case acid etching may be used. Debris removal from site shall be included in the base price itself.

4. **FOUNDATION:** A good base or foundation shall be prepared for successful application of any treatment.

5. **OFFSETS:** All unsound / weak concrete / mortar material shall be first removed by the contractor up to the required depth. Chipping shall continue until there are no offsets in the cavity, which will cause an abrupt change in the thickness of repaired surface. No square shoulders shall be left at the perimeter of the cavity, all edges shall be tapered. The final cut surface shall be critically examined to make sure that it is sound and properly shaped.

6. **MEASUREMENT:** All treated area shall always be measured after chipping is complete. It shall be measured as the nearest geometrical shape. Thickness measurements for structural repair shall be taken as average thickness measurement backward form

theoretical calculations based on chemical consumption. Such cases of average thickness exceeding 25mm shall be paid on prorate basis of quoted rate.

7. **Jacketing for column and beams**: Identified column and beam should be marked. The area or zone to be as square/rectangle as possible the treatment involves the following stages (after every stage, consultants approval is essential. It is require that history card of every member be made consultants signature taken after every stage.. Removal of defective substrata / surface covers concrete and plaster. Removal of lad. Preparation of substrate / surface / cover concrete. Curing.

8. **Release of load carried by the columns and beams:** The contractor will first release all loads carried by the members to be jacketed by a proper system of props plates and planks. The props should be tight against jerks and jolts. The system should ensure that all loads of the slabs, beams, overhangs are properly distributed by passing the member to be jacketed. Necessary width upto 2 ft of wall may be dismantled as per instruction of consultant.

9. **Pre treatment:** the length of the member to be treated will be removed of plaster, cover and steel exposed uniformly. While removal of cover sufficient care is to be taken that core of the column is not disturbed. Exposed steel is to be cleaned, rust removed with wire brush and rusticides and the steel surface is to be evenly coated with polymer of approved make including any new steel that may required to be provided.

10. **Treatment**: Proper surface is to be prepared by removing all unevenness that has crept into due to cove removal using cement mortar 1:4. Steel reinforcement is to be fixed after proper binding, bending etc. as specified by the consultant. Proper form work / shuttering is to be provided all around the member so as to provide a RCC jacket. The jacket so provided will be 100mm thick over the theoretical size of the member treated. The jacket is to be formed using 1:1 1/2:3 concrete, cast in-situ, hand mixed. The entire length of the member is to be cast at one time and no horizontal construction joints will be allowed.

11. **Scaffolding**: Scaffolding shall be straight and erect. Under no circumstances will holes be allowed to be made in the walls to support them. Typing of scaffolding to the old pipes of the building may be disallowed. Temporary props between balconies or Chajjas to give lateral support to the scaffolding will be permitted where feasible. In general steel scaffolding will be preferred. Steel scaffolding and its bracings, connections etc shall be as per relevant IS. Lateral tie to the building shall be done preferably using M.S. Pipes and couplers. Where access inside the building is not available connection shall be made using anchor bolts of approved quality. Unless otherwise mentioned no separate payment shall be made for lateral ties / support / anchors.

12. **Removing and refixing of Grills**, whether sheds" the existing M.S. Grills and collapsible gates of all the flats should be removed, so as to cause minimum damage to the same. The removed grills should be stacked properly with due case and should be refixed with whatever necessary modifications after the entire work is over.

13. **Providing Ply protection to windows:** The existing Aluminium / Wooden / Sliding windows of all the flats should be covered carefully with minimum 6mm thick ply wood, so as to cause minimum damage to the windows. The plywood should be fixed properly with due care and should be fixed in such a fashion that the windows can be opened with ease. In case where the window is already damaged before fixing, the contractor should bring it to the notice of the concerned flat society, but in case the contractor men damage the windows then he will have to repair the same at his cost.

VARIOUS APPLICATION AND TREATMENTS TO BE FOLLOWED

1. **Waterproofing items**

   a. **Polymer modified Chemical coating**: this liquid coating is used for waterproofing of building roofs of all types basement, foundation, swimming pools and water retaining structures because it has excellent head resistance and cold temperature flexibility.

   b. **Method of Application:** Clean and remove dirt, loose particles and unsound substrate. Make surface smooth, even and free from local depressions with polymer modified mortar. Apply 2 coats of liquid chemical on cleaned and leveled surface as per manufacturer specifications.

   c. **Brickbat Koba method:** Remove existing waterproofing layer, wing wise using pneaumatic chiseler machine. The hammer will not be used directly on the slab; chisel is to be used only in the slanting manner to ensure that the chisel does not enter the slab section. Any damage to the slab will be made good using proper shuttering steel and concrete mix 1:1. After the slab is exposed, the same shall be first broomed cleaned and then water cleaned. Immediately on cleaning, cement slurry with standard waterproof compound based on latex properties is to be applied with care so as to fill all crevices, cracks and unevenness. Curing for 24 hours shall be carried out. Brickbats of varying sizes will be laid in 25mm to 30mm thick cement mortar ration 1:5 in all positions with an average thickness of 125mm in proper slope not less than 1” in 7 feet. This layer has to be cured for 2 days. After curing, a layer of 40mm of Indian patent stone 1:5 is to be laid complete with curing tasking square of 5 feet. Waterproofing compound of standard make should be added in both layers. China mosaic chips shall then be fixed on it later on. Plastering internally of damaged cover shall be done by M.S. jail and polymer cement concrete in ration 1:5. China mosaic shall be broken flat glazed tiles of mixed color of not less than 12 mm thickness and of approved size not more than 20mm in any direction. Before laying the same shall be thoroughly soaked in water for at least 2 hours and then allowed to dry for 15 minutes. China mosaic shall be laid to required slope a bedding of lime mortar 25mm thick and set in cement floating in approved pattern, care to be taken to fix mosaic in the cement float tapping to be required slope and press the floor hard so as not to leave any air gap between the mosaic floor and brick bat grading below. The joints should not exceed 5mm. Near the walls floorings shall curve upwards to the height of 15 cm, commonly known as watta above the finished surface so as to make a water tight joint.

2. **Chajjas / Balcony top waterproofing:** Breaking existing water-proofing treatment and coba to expose RCC slab by sharp chisel and light hammer only so as not to damage existing RCC slab. Etc. Lowering and throwing out debris. Clean surface of all particulars and dust washing the same. Subsequently, RCC slab should be inspected for hair crack loose surface which should be made good under consultant’s instruction. First at the junction of parapet wall and slab, a key of approx. 2” x 2” should be chipped at all length

where metal packing will be done on cement paste and where watta will be constructed. Applying cement slurry with waterproofing compound on cleaned slab surface filling uneven surface dents etc. Laying Brickbat koba CM 1:4 with approved water-proofing compound with necessary slope for easy flow of water. This portion should be thoroughly cured for 4/6 days and observe for leakage before IPS is done. Providing IPS flooring in 1:2:3 in 12.5 aggregates 25mm thickness with additional of waterproofing compound to required finish slope and finished with round watta on triangular brick bat koba at junction of parapet wall and slab. Finally, the top surface shall be covered with jointless waterproof plaster in CM 1:4 in 25mm thickness finished smooth trowel. Curing should be done continuously for 14 days with water remaining full in days prepared for the same.

3. **Column and Beam Structural repair by polymerization:** Break open the structural member to expose the reinforcement steel and dispose the debris arising from the same. Clean the exposed reinforcement steel thoroughly by removing rust / scaling by chiseling / tapping / with brushing. Provide and apply rust converter to the exposed steel and allow drying for 24 hours. Provide and apply protective coat of slurry of Polymer Emulsion cement ration 1:1.5 to the reinforcement steel. Build up damaged RCC member to its original shape in layers of ¾" each by polymer modified cementitious mortar in the ration of Polymer1: Cement 5: Quartz sand 15: Graded metal 5. Before every layer a bond coat of slurry of Polymer Emulsion: cement ration 1:1.5 to be applied to the entire section. Basic rate of polymer to be taken as Rs. 200/- per kg bag.

4. **Rust passivator:** The entire surface of the exposed reinforced concrete element should be thoroughly cleaned. The reinforcement rods must be thoroughly cleaned using a chisel, scrapper, wire brush and emery paper. The rust passivator is to be applied carefully on the exposed dry surfaces of the reinforcement rods with a brush or cloth. The passivator must be applied as per the manufacturer specifications. Allow air drying for 24 hours before any further treatment is done on this after cleaning. Measurement shall be taken of the entire chiseled area where reinforcement rods are exposed and rust passivator applied.

5. **Non Structural RCC repair using non-polymer Mortar:** A good base or foundation shall be prepared for successful application of mortar / concrete. All unsound / weak concrete material shall first be removed by the contractor up to the required depth as directed by engineer. Chipping shall continue until there are no offsets in the cavity that will cause an abrupt change in the thickness of repaired surface. No square shoulders shall be at the perimeter of the cavity all edges shall be tapered. The final cube surface shall be critically examined to make usre that it is sound and properly shaped. After it has ensured that the surface which mortar / concrete is to be bonded is sound, it shall be cleaned of all loose and foreign material by means of sand blasting or stiff wire brushing as instructed by engineer. All dust and loose particles resulting from such pre-treatments shall be removed oil free air blast. The contractor shall wet down the surface ensuring that they are saturated but free of surface water. Bonding slurry shall be prepared by mixing thoroughly 2 parts of cement to 1 part of water for a lump free flow. Cement shall be carried out in efficient concrete mixer. However the engineer may allow hand mixing

in case total weight of mix per batch is less than 50 kgs. In case of band mixing, the contractor shall mix 10% additional cement. The mixer shall be charged wit the required 4 qty of coarse aggregate, fine aggregates, cement and premixing shall be carried out for approximately 30 seconds. Repaired quantity of water shall then be added and further mixing shall be carried out for 1.5 minute to obtain working consistency. Care shall be taken to avoid excessive water. Rendering cement mortar shall be done after applying bonding slurry to the prepared surface while the bonding coat is still tacky. After application of mortar / concrete, the surface shall be closed using a wooden float and steel trowel giving it a smooth finish.

6. **Plain cement concrete:** Cement concrete in foundation and bedding shall be mix 1:3:6 consisting of 1 part of Portland cement, 3 parts sand and 6 parts of metal nos. 1, 2 and 3 in proportions. Hand mixing of concrete for PCC shall be allowed if quantity is less than 8 Cubic meter. The ground shall be thoroughly leveled and rammed before laying the concrete, if hand mixing is done. The material should be dry mixed before water of sufficient quantity to wet the concrete is added. It shall be deposited in position gently, in layers of not more than 30 cm thickness. No more than what can be used within 20 minutes shall be well rammed and vibrated till it creams to the surface and intersections are filled up.

7. **Curing of new concrete** shall be maintained damp for a period of 2 weeks minimum. Ne plaster shall be cured for atleast 3 times a day for a not less than 10 days. The 1st coat of plaster shall be cured for a period of not less than 3 days. If required the surface shall be maintained damp using a wet hessian cloth.

8. **Indian Patent stone flooring:** This shall consist of average 38mm thick flooring lay in cement concrete 1:2:3 (with 12 mm metal no 1. Chips only). It shall be mixed as for cement concrete and laid in alternate bays. After completion, it shall be finished with cement with lining borders etc as directed. The surface shall be kept wet for a period of 7 days.

9. **Concrete repair using SBR / Polymer latex:** Surface preparation of the area to be treated is very important. Mildly a bond coat of cement and SBR as per the concrete is saturated but the surface is free of water. Apply a bond coat of cement and SBR as per the manufacturer's specifications. While the bond coat is still wet, carefully apply and compact the desired SBR modified cementitious repair mortar as per the manufacturer's instruction in layer so as to reinstate the concrete element. The sand used in the mortar shall be washed clean and of the required fineness. On vertical surface coats shall be applied upto 25mm thickness provided slumping does not occur. On larger flat surface coats should not exceed 6mm in thickness though several coats may be applied in quick succession – each coat settings of before the next is applied. When slumping occurs, scratch the firm surface and allow to dry overnight and then repeat the process finish off the final coat. Mildly moisture cures for 24 hours and then allow to dry. Measurement shall be taken for actual area covered by the repair mortar. In case the thickness is more that that specified in the bill of quantities, additional such measurement will be taken if the additional thickness is applied with a gap of 24 hours.

10. **Micro-concreting jacketing for RCC column and beams** for restoration of damaged areas. It is a very high strength Mix design concrete, its factory made product. Comes in dry

11. **Powder in grey color more like cement constitutes**. Cement as a one component and others fine graded aggregate, additive in powder form and free flowing agent. Because of this characteristic, can be placed in less thickness and mix. Material can travel in narrow gape and having self leveling properties, so that it provide very smooth and uniform finish. Strength equivalent to 35M concrete can be achieved in only three days setting time. After overnight setting de shuttering is possible.

12. **Epoxy grouting**: The concrete surface to be grouted must be thoroughly cleaned, wiped, dried and dust free. The base and the curing agent are mixed in the specified properties and gently stirred. The mix is sprayed / poured after 10 -15 minutes. The grouted surface shall be allowed to air dry for 3 days. For vertical surfaces, the grout may be poured through muzzles / pipes exbedded in the concrete element.

13. **Epoxy compound for bonding**: The surface to be treated must be thoroughly cleaned of all dirt, oily residue, paint by scrubbing with wire brush, chipping and blowing air. Efflorescence and laitance if present should be removed by etching with 10% HCL acid for 10 minutes followed by rinsing with clean base and water. Wet surface must be completely dried. Cracks, joints etc must be cleaned and sealed with a compatible epoxy sealant. Mix the base and the curing agent in the specified proportions and stir as directed by the manufacturer. Apply the number of coats as specified on the pre treated surface within the open time leaving at least 2 hours time internal between 2 coats. The surface should be kept free from moisture and disturbance for the fill duration of curing of the layers applied. Long pot life adhesive having 6 hours tack free shall be used for proper end user usage.

14. **External Sandface Plaster** on brick masonry wall:

    a. Carefully breaking the damaged plaster preferably using an Electric breaker, chisel and hammer after properly covering the openings with 6mm ply and tying a screen of hessian cloth to ensure that the flying debris does not damage any property. The collected debris should be removed from site on a regular basis to avoid inconvenience to the members. Debris removal from site shall be included in the base price itself.

    b. Remove the existing tree growth, vegetative by uprooting them and carry out acid treatment to avoid any future growth.

    c. Treat the separation cracks between RCC members and brickwork, wherever directed by the consultant, by raking open the cracks in V groove and filling the cracks with 1:2 C:M using 3mm down sand with polymer per the manufacturer

specification. This mortar should be pressed firmly in the gap by manual hand pressure and then troweled firmly and scratched to receive the plaster.

d. Carry out proper surface preparation prior to starting the plaster work, by soaking the brick walls completely with water so that the walls are ready to receive the mortar.

e. Check out the plumb level of the walls by making proper level markings on the walls. In case the wall is highly off plum, then ensure that proper plum is maintained by operating a leveling dash coat of plaster wherever directed by the consultant only.

f. Provide and apply first coat of Cement Sand Plaster ration 1:4 with addition of polymer compound as per specifications. Mixing should be strictly carried out in ½ bag mortar mixer and the mixed mortar should be unloaded in a plaster tray. This cat should be firmly pressed in uniform plain and in proper plum and to be roughened to receive second coat of plaster. After the 1st coat is cured thrice for 7 days, a 2nd coat of Cement sand plaster in C.M. 1:4 with addition of polymer compound @ 2% by weight of cement should be applied on the existing first coat. The surface is to be firmly sponge floated to remove the excess moisture and to bring the sand to the surface. The surface is to be firmly sponge floated to remove the excess moisture and to bring the sand to the surface. The finished surface should have an uniform texture. The finished surface should be properly cured thrice for 7 days to avoid occurrence of cracks.

15. External Sandface Plaster on cement concrete blocks / RCC walls.

a. Erect safe and strong double bamboo scaffolding so as not to make any holes in the existing structure. Carefully break the damaged plaster preferably using electric breaker, chisel and hammer after properly covering the openings with 6mm ply and tying a screen of hessian cloth to ensure that the flying debris does not damage any property. The collected debris should be removed from site on a regular basis to avoid inconvenience to the members. Remove the existing tree growth uprooting it upto the root and carry out acid treatment to avoid any future growth.

b. Carry out proper surface preparation prior to starting the plaster work, by carrying out a very thin spray coat of 1:3 C.M. using 3mm down sand with polymer. This spray coat is done as an alternative to the conventional cement slurry that is used for bonding of the plaster mortar to the concrete block / RC walls. This coat should be carried out at least 2 days in advance to the work of plastering and cured properly. This wall should then be dampened by soaking the wall completely with water, at every 4 hours interval, so that the wall is ready to receive the mortar.

c. Check out the plumbing level of the walls by making proper level markings on the walls. In case the wall is higher out of plumb, then ensure that proper plumb is

maintained by operating a leveling dash coat of plaster, wherever directed by the consultant only.

d. Provide and apply 1st coat of Cement Sand Plaster ratio of 1:4 with addition of polymer compound as per manufacturer specifications. Mixing should be strictly carried out in ½ bag mortar mixer and the mixed mortar should be unloaded in a plaster tray. This coat should be firmly pressed in uniform plain and in proper plumb and to be roughened to receive 2nd coat of plaster. After the 1st coat is cured thrice for 7 days, a 2nd coat of Cement Sand Plaster in C.M. 1:4 with addition of Polymer compound @ 2% by weight of cement should be applied on the existing 1st coat. The surface is to be firmly sponge floated to remove the excess moisture and to bring the sand to the surface. The finished surface should have an uniform texture. The finished surface should be properly cured thrice for 7 days to avoid occurrence of cracks.

16. **Separation joint:** Rake the joint between RCC member and brick work / clock work in a proper V groove remove all the loose mortar. Fill the joint properly with 1:2 C:M. containing polymer @ 4% of the cement content. This mortar should be pressed firmly in the gap by manual hand pressure. Embed metal no 1 and 2 properly in the mortar and then trowel the same firmly and scratch to receive the plaster. Cure this mortar properly.

17. **Dash coat:** This coat can be applied to max of 1.5" thickness in 1:3 C.M. with polymer, embedding small brick pieces in it so as to bring the uneven surface in level. Cure the dash coat at least thrice for minimum 5 days.

18. **Finish plaster to the internal staircase area and internal structural members flats.**: erect scaffolding as instructed earlier. Carefully break the damaged plaster using chisel and hammer. The collected debris should be removed from the site on a regular basis and daily cleaning is to be carried out to avoid inconvenience to the members. Mixing of mortar should be strictly carried out in plaster trays to avoid damage to the flooring. Treat the separation cracks between RCC members and brickwork by opening the cracks in V groove and filling the cracks with 1:2 C.M. using 3mm down sand, with Polymer @ 4% of the cement content. Provide and apply single coat of Cement Sand Plaster ration 1:4 with addition of polymer compound @ 2% by weight of cement. This coat should be firmly pressed in uniform plain and in proper plumb and finished with smooth finish, using white putty approved by consultant.

19. **Application of 2 coats of white cement to freshly plastered surface**: Apply 1st coat of white cement to the freshly plastered surface, with proper curing for 3 days. Apply 2nd coat of white cement at the direction perpendicular to the 1st coat. Cure the same properly for 3 days. Depending on the requirement and application, polymer can be added as additive @ 1kg per bag of 50 kg cement bag.

20. **Crack repair:** Open up all the visible cracks in the plaster in a V groove fashion using an electric cutter machine. Fill up the cracks with a paste of very fine sand mixed with

cement and polymer @ 10% of the cement. Alternatively these cracks may be used with ready mix crack filling compound made by known manufacturers approved by consultant.. finish the same so as to ensure that the filled crack matches the level of the plaster.

21. Painting works:

a. **White wash:** The surface is to be thoroughly cleaned before the white wash is applied. Ordinary fat lime of good quality shall be slaked with an excess water for at least 2 days. This shall than be strained through a cloth and 2 kg of clean gum added for every Cu Mtr of lime.

b. **Color wash:** Necessary and approved color shall be added to the white wash. Only wash sufficient for the days work shall be prepared. Stir well to ensure neatly uniform pigmentation with lest brush marks.

c. **Washable Acrylic**: The surface to be treated shall be thoroughly cleaned of all dirt and loose particles, etc. Inequalities and holes shall be filled with gypsum which should be allowed to dry before distemper is applied. Distemper of approved make shall be applied by a broad stiff brush in 2 coats over a coat of primer. The 1st coat shall be of a lighter tint. Water bound and oil bound distemper shall conform to the requirements of IS: 427 and IS:428 respectively.

d. **Cement Paint:** Cement paint of approved quality and color to be applied as specified by the manufacturers in 2/3 coats externally on the building. The base surface shall be brushed cleaned and wetter the application of cement paint. Each coat of paint shall be cured as specified by the manufacturer.

e. **Plastic emulsions:** All uneven surfaces shall be good by use of putty of appropriate quality after the surface has been thoroughly cleaned all dust, dirt and sand papered. 1 coat of primer and 2 coats of emulsion paint shall be applied. Workmanship shall conform to the requirements of IS:2395 standards.

f. **Finishing layers:** they shall be applied as per manufacturer's specifications and approval by consultant.

g. **Silicone Eater repellent:** The surface for coating covered under this specifications broadly consist of vertical external walls, balcony paddies, areas outside box windows, parapet both sides with top, tank tops, lift room tops, headroom tops, as directed by Consultant. Solvent based material is recommended unless otherwise specified. Only spray application will be allowed to ensure deeper penetration.

h. **Chemical Waterproof coating:** Single component acrylic based coating like Newcoat / Raincoat of Dr. Fixit, or Damproof of Asian paints is suggested by brush or roller with water addition as per manufacturer's specifications. Approved

shade and make shall be taken in writing from clients as per consultant's recommendation. Joint warranty of 05 years shall be provided in specified format for no seepages from walls and area attended. Base of paint must be 100% acrylic formulation containing strene butadiene rubber will not be allowed for on external surfaces. Minimum crack bridging capacity expected is upto 1mm.

i. **Acrylic Paint:** Film thickness of 60 micron in case of 100% acrylic paint shall be achieved in 2 coats with a coat of primer by brush with water addition as per manufacturer's specifications. Approved shade and make shall be taken in writing from client as per consultant's recommendations. Joint Warranty for 5 years shall be provided in specified format for anti-fungal, anti-bacterial properties with no peel off, cracking or debonding as per manufacturer's format only subject to consultants approval. Base of paint must be 100% acrylic. Formulations containing styrene butadiene rubber will not be allowed for use on external surfaces.

j. **Semi –Acrylic Paint**: Fill thickness of +40 micron in case of semi-acrylic paint shall be achieved in 2 coats with a coat of primer by brush or roller with water addition as per manufacturers specifications. Approved shade and make shall be taken in writing from client as per consultants recommendations. Joint warranty for 3 years shall be provided in specified format for no seepages from walls and area attended. Base of paint must be water based acrylic. Formulations contain styrene butadiene rubber will not be allowed for use on external surfaces.

k. **Painting for wooden windows**, / M.S. grills with oil Paint (Synthetic enamel): Remove the existing loose and flaking paint by wire brushing and scrappers. Apply one coat of primer and touch up putty in case of wooden windows and apply a coat of red oxide primer to the M.S. grills. Apply 2 coats of synthetic enamel of approved shade and make in case of wooden windows and apply 2 coats of Oil paint of approved shade on the M.S. Grills.

22. **Wooden work doors**: Wood used shall be of uniform texture straight, grained, free from knots, boreholes, decays and other defects. All material shall be approved by Engineer before primed. All work to be carried as per drawing provided. These shall have approved fittings such as brass best quality hinges, brass tower bolts and latch arrangements, aldrops, etc as in drawing. All door frames should be permanently embedded in concrete. For window frames there shall be 2 hold fasts on each side as required and approved by consultant.

23. Reinforcement:

a.	Mild steel bars	:IS432 – 1966
b.	Hot rolled deformed	:IS1139 – 1966
c.	Cold Twisted steel bars & high yield strength deformed	:IS 1786 0 1979

The reinforcement bars shall be without any flaws, defects, loose rust, seals, mill, oil paint, grease or any other coating that would reduce the bond in concrete. Test as per latest I.S. id required by the Consultant / Engineer shall be carried out and cost of such, test shall be borne by the contractor.

Stacking: bars shall be stacked off the ground so that they do not get covered in mud and also in such a way, it is easy for the bar bender to find the various sizes and lengths he required.

Cutting and Bending: The bars received at site, shall be de-coiled, straightened properly and cut to various lengths as approved. Proper bends to specified dimensions shall be made without injuring the material. All bars with link or sharp bends shall not be used. Bars shall be bent cold by approved means producing a gradual and even motion.

Fixing: The fabricated bars shall be rigidly fixed in the correct location as per drawing taking adequate precautions to place the tension bars. Bars in two layers by means of chairs, pins, placed suitably in the members. The bars shall be tightly tied up at all intersections with 18 / 20 gauge soft drawn annealed binding wire ties shall not protrude beyond the concrete surfaces. Suitable P.V.C. blocks shall be used to maintain the specified amount of concrete cover.

Splicing: For transfer of stresses from one bar to other the splicing shall be done by lapping the bars to the extend as given in the standard structural drawing. Such laps, lengths vary for various mixes of concrete and diameters of bars. Splices may also consist of a straight lap with hook at both ends of bars, in which case, the lap length shall be shorter than for the straight ends. Splicing of bars shall be staggered so as to avoid all laps coming in one line. Alternatively, welding of bars may be permitted by the consultant wherever situation arises, in which cases the welding shall be done by experienced welder by electric arc welding and all rules and regulations, procedures shall be observed strictly.

Pre-tender conditions and Bill of Quantities

1. The contractor is presumed to have visited the site before preparing his tender and to have examined for himself the condition under which the work will be priced and all other factors affecting the execution of the work and the cost thereof.

2. The quantities of work and material in the BOQ are not to be considered as limiting or extending the scope of work to be done and materials to be supplied by the contractor. The quantities in the BOQ are an estimate of the amount of work by the work will be measured on complete and the contractor will be paid on the actual measurement of work approved by the Consultant.

3. All items shall be measured net in accordance with instructions of the Consultant and no allowance has been made for wastage, unless otherwise specified measurements shall be as per relevant Indian Standards.

4. The price or rate in figures is to be entered against the item in the BOQ, whether quantities are stated or not. Item against which no price is entered will be considered as covered by other prices or rates in the bill.

5. The prices and rates inserted are to be fully inclusive value of the works described under the various items, including all cost and expenses which may be required for the completion of the described work together with all cost and obligations set forth or implied in the condition of contract and specifications.

6. Contractor awarded with work, if found unsuitable during the course of any project stage, will be replaced by appointment of other Contractor. The extra cost charged by other contractor shall be borne by the previous contractor.

7. Some finishing items may be quantity wise completely altered and same shall not affect any rates quoted.

8. Providing and fixing shall mean that the contractor has to provide such material not being procured and borne by the society, but which are required for the items and if no material need be provided by the contractor, the rate shall be only for fixing of the component covered in the item.

9. The bill of quantities shall be read in conjunction with conditions of contract

10. All the rates mentioned shall be inclusive of providing and fixing to finishing the same as directed by Consultant. No conditional item rate shall be provided, except where the material supply is clearly mentioned as “To be provided by Client”.

RECOMMENDED APPROVED BRANDS

MATERIAL	BRANDS
SAND	Bagged Pozzolona / Silpoz / Good River sand Gujrath
CEMENT	Birla, ACC, Ambuja
Acrylic Polymer	Huntsman / Dr. Beck / Sunanda / Krishna / Fr. Fixit
Rust Remover	Sunanda / Krishna
Rust Passivator	Sunanda / Krishna
Concrete Admixture	Sunanda / Krishna / Dr. Fixit
Waterproofing compound	Sunanda / Krishna / Dr. Fixit
Plumbing sealant	Pidilite make
Crack fillers	Dr. Fixit / ICI Dulux make
External waterproof coating	Cement coat / Structure Guard / Sherwin Williams
Texture for Exterior	ICI Dulux make / Walltex / Sherwin Williams / STP
Semi-acrylic paint	Sherwin Williams / Jotun / Akzonobel
100% External Acrylic paint	Sherwin Williams / Jotun / Akzonobel
Premium Acrylic paint	Sherwin Williams / Jotun / Akzonobel
Elastomeric Coating	Sherwin Williams / Dr. Fixit / ICI Dulux make
Enamel paint	Akzonobel / Berger
Premix Mortar	Super Mix or similar of good quality
Micro concrete	Super Mix / BASF / Dr. Fixit / STP
Fibres	Fiber mesh - Polypropylene
APP Membrane	Bitunil / Dr. Fixit / STP

COMMERCIAL OFFER - BILL OF QUANTITIES

Sr. No.	Description	Units	Qty	Rate	Amount
	PART-A PREPARATORY WORK				
1	**BAMBOO SCAFFOLDING**				
	Providing and erecting double / single bamboo scaffolding to reach any place of work on external / internal façade of building & dismantling the same after completion of the work. At any given time, the scaffolding shall be in good and safe condition. No additional charges will be paid for rectification of same, though needed.				
a	Erect scaffolding for Civil repairs. Keep them erected during monsoon for 4 months. Post monsoon, restrengthen the scaffolding or rectify the same as per safety norms, carry the Civil repair touchups, if any and Painting works. (Approx. 11 months)	SFT	98000		
	OR				
b	Erect scaffolding area wise for Civil repairs only (4 months). Remove them before monsoon. Post monsoon, area wise, re-erect for Civil repair touchups and Painting works (4 months).	SFT	196000		NOT TO TOTAL
2	**BREAKING OF PLASTER**	SFT	14000		
	Removing of existing loose / damaged plaster from wall, column, beam slab, chajjas, cleaning and preparing the surface as directed including the joints of masonary junctions, wherever necessary as in the form of major cracked.				
3	**BARDAAN / NET / JALI**	SFT	95000		
a	Covering at the erected scaffolding where the breaking of loose plaster or structural repair is being done to painting works				
	OR				
b	Removal of old Bardaan and reusing the same for Phase II while re-erecting the bamboo again post monsoon	SFT	190000		NOT TO TOTAL
4	**BREAKING OF CONCRETE**	SFT	5000		
	Removing of existing loose / damaged concrete from column, beam and slab, cleaning and preparing the surface as directed				
5	**WINDOW COVERING**	SFT	500		

	Providing and laying 6mm Ply protection to window to prevent from dust and falling loose debris at the time of executing of Civil repair				
6	**REMOVING AND REFIXING OF M.S. GRILLS**	SFT	1000		
	Carefully removing existing M.S.Grill during repair and refixing the same after completion of all work including all tools, tackles, nails, lowering the grill, marking with tags, stacking cleaning complete as directed by Engineer.				
7	**REMOVING AND REFIXING ALUMINIUM WEATHER SHED**	SFT	QRO		
	Carefully removing existing weather shed during repair and refixing the same after completion of all work including all tools, tackles, nails, lowering the grill, marking with tags, stacking cleaning complete as directed by Engineer.				
8	**NYLON SAFETY NET**	SFT	1200		
	Providing and fixing the nylon safety net to prevent debris falling on ground at compound gateway for free and safe movement of passerbys.				
9	**PROVIDING TEMPORARY PLATFORM**	SFT	QRO		
	Providing, erecting and dismantling temporary platform made up of plywood, G.I sheets, bamboos, supporting with props to safeguard or protect the entire area while work in progress with all necessary arrangements complete or as instructed by the consultant				
10	**FLOOR PROTECTION**	SFT	6000		
	Providing and Laying Tarpauline or Plastic sheets are the perifery of the building while working to avoid the floor from being damaged.				
10	**CARTING AWAY DEBRIS FROM SITE**	Nos	12		
	Removal of debris, spalls outside the building compound upto the municipal dump with all lead and lift complete as directed by the Consultant.				
			(A)	**SUB-TOTAL**	

	PART-B CIVIL STRUCTURAL REPAIR JOB				
Sr. No.	**Description**	**Units**	**Qty**	**Rate**	**Amount**
1	**POLYMER CEMENT MORTAR REPAIR**				
	Exposing, Cleaning exposed RCC elements, columns, beams and slabs surface using water jet, wire brush, removing rust scales from old reinforcement rod, applying rust remover of approved make (Fosroc, Sunanada, Krishna, Sika or similar) and washing the same after 24 hours. Applying approved rust passivator on exposed reinforcement as per manufacturers specifications the nproviding a polymer bonding layer using latex on fair finish RCC and PMM area 1:1.5 by volume over prepared concrete surfaces with protege chemical (Fosroc, Sunanada, Krishna, Sika). After couple of hours, apply bond coat on concrete surface and providing PCM mortar of 1:5:15 with ahand pack morar up to 25mm thick and rough the surface, curing etc complete.				
a	External Structure	SFT	800		
b	Common and Stilt Structure	SFT	100		
c	Internal Flats	SFT	800		
2	**ADDITIONAL THICKNESS of POLYMER**	SFT	QRO		
	Additional thickness of polymer on extensive damaged perotion of column, beam and slab to maintain levelingof existing level				
3	**SHEAR CONNECTOR**	Nos.	QRO		
	Providing and laying shear connector of 10mm dia upto 200mm length, bend to shape with anticorrosive treatment as directed by Engineer.				
4	**GROUTING NIPPLE**	Nos.	QRO		
	Providing and fixing PVC perforated nozzle of 10 -12 mm dia by drilling the holes in concrete to a depth of 100mm (Plugging the holes by cement polymer) and injecting cement slurry grouts through the nozzles using grout pump. (Fosroc, Sunanada, Krishan or similar)				
5	**STRUCTURAL REPAIRS TO BEAMS COLUMN CEILING AND SLAB**	CFT	350		

	Breaking open the loose and damaged concrete member to expose reinforcement steel and dispose of debris. Cleaning of exposed steel by removing rust scales with wire brush. Provide rust passivator and then apply anti rust bonding agent. Build up damaged RCC layer in 25mm thickness by Polymer modified ready mix mortar. Measured in cubic feet against material conciliation on regular clearance from Consulting engineer.				
6	**REINFORCEMENT STEEL**	KGS	QRO		
	Providing and fixing HYDS bars including cutting, bending, tie using binding wire in position completed for all dia for main / aucillary rebars, if needed then welding work also to be done as directed by Consultant				
7	**DEMOLITION OF BRICK WORK**	SFT	QRO		
	Demolish the existing brick wall wherever column beam to be jacketed				
8	**NEW BRICK WORK**		QRO		
	Providing and erecting thick brick masonary wall with the mortar of 1:4 in line and level as directed by Engineer				
a	9.0" thickness	SFT			
b	4.0" thickness	SFT			
9	**JACKETING**	SFT	QRO		
	Providing and fixing Centering and Form work for badly damaged RCC elements for strengthening to use M 25 grade concrete				
10	**MICRO CONCRETING**	KGS	QRO		
	Micro concreting for strengthening of column and beams. Shuttering shall be extra as applicable.				
11	**EPOXY RESIN GROUT**	LTR	QRO		
	Low viscous, highly penetrable epoxy resin grouting for strengthening and filler to honey comb structure.				
12	**M.S. PROPS**	Nos.	QRO		

	Relieving RCC elements viz. Column, beam, slab, balconies of their superimposed load partially / fully by providing adjustible props of atleast 2" diameter and of required height including wooden plant, runners 4" x 4" at top and bottom and bracing for uniform distribution of load and maintaining the same in position till required as directed by Engineer.				
13	**SHUTTERING**	SFT	QRO		
	Providing and fixing shuttering for micro-concreting and jacketing				
14	**RCC CHAJJA RECASTING**	SFT	QRO		
	Repair badly damaged RCC chajja with providing new reinforcement and concreting as directed by Engg.				
15	**SEALING HONEY COMBED CONCRETE**	Bag	20		
	Grouting V groove Honey combed Concrete and gaps at Junctions				
			(B)	**SUB-TOTAL**	

	PART- C CIVIL PLASTERING JOB				
Sr. No.	**Description**	**Units**	**Qty**	**Rate**	**Amount**
1	**EXTERNAL PLASTER**	SFT	5000		
	Providing and applying double coat sand faced plaster in ratio 1:3 with average thickness of 12 to 15 mm thick for first coat and ratio of 1:4 with thickness of 8 to 10 mm thick for second coat including preparing edges / drip mould with providing waterproofing admixture doses as directed by Consultant.				
2	**INTERNAL PLASTER**	SFT	150		
	Providing and applying single coat sand faced plaster in ratio 1:3 with average thickness of 12 to 15 mm thickness with providing waterproofing admixture doses as directed by Consultant.				
3	**PVC CHIKEN MESH**	SFT	QRO		
	Chiken mesh / PVC Jali for seperation joint of RCC to brick masonary with Polymer modified mortar PMM, with coarse aggregates pressed firmly as directed by Engineer.				
4	**BRICK DASH COAT**	SFT	QRO		
	Providing and applying 1:4 coment sand mortar dash coat plaster on brick wall masonary in case of extensive damaged plaster.				
5	**RCC DASH COAT**	SFT	QRO		
	Providing and applying 1:4 cement sand mortar dash coaton RCC wall in case of extensive damaged area				
6	**READY MIX PLASTER**	CFT	850		
	Breaking open the loose and damaged Plaster member to expose concrete surface and dispose of debris. Cleaning of exposed surface, removing powder, scales with wire brush. Provide Bond coat. Build up damaged layer in 25mm thickness or as required by Ready mix plaster mortar. Measured in cubic feet against material conciliation on regular clearance from Consulting engineer.				
7	**WATTA ABOVE ALL TYPES OF SHADES**	RFT	220		

	Apply one coat of polymer bond coat then provide 1:4 cement sand mortar on shade and finish the same with proper curing as directed by Engineer				
8	**SEPERATION JOINT**	RFT	600		
	Seperation crack between RCC and masonary work repair with open groove and cleaning with running water and apply polymer bond coat in groove and fill the same with cement sand mortar and then fixing metal stone in zig-zag method.				
9	**BOND COATING SYSTEM**	KGS	200		
	Provide a layer of Bond coating with a mixture of 1:1 ratio of Cement and Polymer before PMM or Plastering to the old exposed surface.				
10	**PRIMER AS WHITE WASH OVER NEWLY PLASTERED SURFACE**	SFT	16000		
	Scraping the new plastered surface with wire brush, and cleaning with water after curing has been carried. Applying 2 coats of Snowcem white cement paint as per OEM specifications or as directed by Consultant				
			(C)	**SUB-TOTAL**	

	PART-D WATERPROOFING JOB				
Sr. No.	**Description**	**Units**	**Qty**	**Rate**	**Amount**
1	**GROUTING NIPPLE**	Nos.	QRO		
	Providing and fixing PVC perforated nozzle of 10 -12 mm dia by drilling the holes in concrete to a depth of 100mm (Pluging the holes by cement:polymer) and injecting cement slurry grouts with 10% polymer at terrace slab, Staircase top, Lift tops etc (Fosroz, Sunanda, Krishna, Sika)				
2	**CHAJJA TOP WATERPROOFING**	SFT	QRO		
	Breaking existing waterproofing layer upto the slab, cleaning the same and applying waterproofing chemical coatings (Fosroc, Sunanda, Krishna, Sika or similar) laying light weight concrete waterproof admixture and then laying IPS over it.				
3	**BALCONY TOP WATERPROOFING**	SFT	QRO		
	Breaking existing waterproofing layer upto the slab, cleaning the same and applying waterproofing chemical coatings (Fosroc, Sunanda, Krishna, Sika or similar) laying light weight concrete waterproof admixture and then laying IPS with china chips over it.				
4	**TERRACE WATERPROOFING**	SFT	QRO		
4.1	Chemical coating: Surface preparation for chemical waterproof coating. Cleaning with water jet machine the entire slab of terrace and nearby locations including parapet wall. Providing primer one coat and three coats Chemical coating as per manufacturers specifications and as directed by Engineer.				
5	**ENTRANCE CANOPY TOP WATERPROOFING**	SFT	QRO		
	Chemical coating: Surface preparation for chemical waterproof coating. Cleaning with water jet machine the entire slab of terrace and nearby locations including parapet wall. Providing primer one coat and three coats Chemical coating as per manufacturers specifications and as directed by Engineer.				

6	**LIFT TOPS, PUMP ROOM, HEAD ROOM, SECURITY CABIN TOP WATERPROOFING**	SFT	200		
	Chemical coating: Surface preparation for chemical waterproof coating. Cleaning with water jet machine the entire slab of terrace and nearby locations including parapet wall. Providing primer one coat and three coats Chemical coating as per manufacturers specifications and as directed by Engineer.				
7	**INTERNAL W.C., BATHROOMS, KITCHEN WATERPROOFING**	Nos.	QRO		
	Removing of exisiting waterproofing upto the slab level, clean the slab and apply waterproof chemical coating on naked slab with chemical compound (Fosroc, Sunanda, Krishna, Sika or similar) then laying brickbat Koba waterproofing treatment for the area with average 115mm thick brickbat koba laid in cement mortar 1:4 to prepared slab with 150mm effective watta and a top layer in I.P.S. with waterproofing compound finished including W.C. comod and Nahni trap curing, testing. (Tiles and fittings shall be provided by client)				
			(D)	**SUB-TOTAL**	

	PART- E PLUMBING JOB				
Sr. No.	**Description**	**Units**	**Qty**	**Rate**	**Amount**
1	**REMOVAL OF OLD DAMAGED G.I PIPES**	RFT	1300		
	Removal of all G.I. pipes safety at the ground floor. Stacking at locations as informed by the Engineer. On confirmation for replacement, carefully remove and stack the material.				
2	**REMOVAL OF OLD DAMAGED C.I. PIPES**	RFT	350		
	Identification of damaged C.I. pipes and informing the Engineer for further activity. On confirmation for replacement, carefully remove and stack the material.				
3	**TEMPORARY LINE FOR G.I. PIPES**	RFT	1300		
	Providing temporary lines against the removal of damaged GI lines.				
4	**TEMPORARY LINE FOR C.I. PIPES**	RFT	400		
	Providing temporary lines against the removal of damaged line.				
5	**PROVIDING AND FIXING NEW PVC PIPES**				
a	6" dia	RFT	QRO		
b	4" dia Rainwater	RFT	QRO		
c	4" dia W.C. drain line	RFT	150		
d	3" dia Bathroom and Kitchen line	RFT	100		
e	3" dia vent line	RFT	QRO		
6	**PROVIDING AND FIXING NEW UPVC PIPES**				
a	2" dia	RFT	QRO		
b	1.1/2" dia	RFT	QRO		
c	1.1/4" dia	RFT	QRO		
d	1" dia	RFT	500		
e	3/4" dia	RFT	600		
f	1/2" dia	RFT	200		
7	**LOOP LINE REPLACEMENT WITH NEW UPVC PIPE (Schedule 80 Guage)**				
a	2" dia	RFT	QRO		
b	1.1/2" dia	RFT	QRO		
c	1.1/4" dia	RFT	QRO		
d	1" dia	RFT	QRO		
e	3/4" dia	RFT	QRO		
f	1/2" dia	RFT	QRO		
8	**CLAMPING ALL TYPES OF PIPES**				

	Providing and fixing clamps for all types of pipes	Nos.	120		
9	**G.I. VERTICAL PIPE REPLACEMENT**				
a	2" dia	RFT	QRO		
b	1.1/2" dia	RFT	QRO		
c	1.1/4" dia	RFT	QRO		
d	1" dia	RFT	QRO		
e	3/4" dia	RFT	QRO		
f	1/2" dia	RFT	QRO		
10	**C.I VERTICAL PIPE REPLACEMENT**				
a	5" dia	RFT	QRO		
b	4" dia Rainwater	RFT	QRO		
c	4" dia W.C. drain line	RFT	QRO		
d	3" dia Bathroom and Kitchen line	RFT	QRO		
e	3" dia vent line	RFT	QRO		
7	**LOOP LINE REMOVING AND REFIXING**				
a	2" dia	RFT	QRO		
b	1.1/2" dia	RFT	QRO		
c	1.1/4" dia	RFT	QRO		
d	1" dia	RFT	QRO		
8	**UPVC, PVC, G.I., C.I. PIPE WALL PIECES OF ALL DIA**	Nos.	15		
	Making gabda at the segment of pipe inserted in the wall with light hammer. Releasing the surface around the pipe. Removing the segment. Replacing new segment with appropriate similar type material. Atmost precaution to be taken for anyleakage with leak arrester. Application of Polymer bond coat at the gabda area. Keeping it open for 2 hours under observation. After confirmation by Engineer, close the same with Polymer modified mortar PMM to level finish.				
9	**G.I. SPACERS**	Nos.	140		
	Provide and fix G.I spacers to keep 2" gap between wall and pipes for water supply and exerna drain lines of loop and downtake pipes.				
10	**BALL VALVES (ISI APPROVED)**				
a	Ball Valve 65mm	Nos.	QRO		
b	Ball valve 50mm	Nos.	QRO		
c	Ball valuve 40mm	Nos.	QRO		
d	Ball valve 32mm	Nos.	QRO		
e	Ball valve 25mm	Nos.	QRO		
f	Ball valve 20mm	Nos.	QRO		

g	Ball valve 15mm	Nos.	QRO		
11	**NEW GATE VALVE (ISI BRAND)**				
a	2" dia	Nos.	QRO		
b	1.1/2" dia	Nos.	QRO		
c	1.1/4" dia	Nos.	QRO		
d	1" dia	Nos.	QRO		
e	3/4" dia	Nos.	QRO		
f	1/2" dia	Nos.	QRO		
12	**CHANGING OF SEGMENTS WALL PIECES FOR ALL DIA PIPES**	Nos.	15		
	Connector of one side Brass fit MT, FT to be provided with proper checking and on approval of Consultant.				
			(E)	**SUB-TOTAL**	

	PART - F PAINTING JOB				
Sr. No.	**Description**	**Units**	**Qty**	**Rate**	**Amount**
1	**EXTERNAL WALL PAINTING**				
	Cleaning the entire surface with running water. Identify hairline cracks. Open them with grinder in 'V' groove. Clean the same with running water and applying crack fillers of approved make. Then providing and applying 1 coat of primer and 2 coats of approved shade color paint. Application as per manufacturers specifications.				
1.1	100% Acrylic Paint (Nerolac, ICI) 7 YRS Warranty	SFT	120000		
	OR				
1.2	Elastomeric Paint (ICI, Nerolac, Sherwin Williams) 10 YRS warranty	SFT	120000		NOT TO TOTAL
2	**EXTERNAL WALL CRACK FILLING WORKS**	RFT	20000		
	Cutting the cracks in V groove. Cleaning the surface with water jet. Providing Crack fillers to line and level of external surface as per OEM recommendations				
3	**EXTERNAL TEXTURE COATING**	SFT	20000		
	Cleaning the entire surface with running water. Identify hairline cracks. Open them with grinder in 'V' groove. Clean the same with running water and applying crack fillers of approved make.Providing one primer waterproofing coat, then providing and applying 2 - 2.5mm Texture coating as per approved design and shade. Application as per manufacturers specifications.				
4	**STAIRCASE, SOCIETY OFFICE, WATCHMAN CABIN PAINTING**	SFT	18000		
	Cleaning the entire surface with running water. Identify hairline cracks. Open them with grinder in 'V' groove. Clean the same with running water and applying crack fillers of approved make. Then providing and applying 1 coat of primer and 2 coats of Oil based distemper OBD (Nerolac, ICI), approved shade color paint. Application as per manufacturers specifications.				
5	**STILT AREAS PAINTING IN DISTEMPER**	SFT	41500		

	Cleaning the entire surface with running water. Identify hairline cracks. Open them with grinder in 'V' groove. Clean the same with running water and applying crack fillers of approved make. Then providing and applying 1 coat of primer and 2 coats of Oil based distemper OBD (Nerolac, ICI), approved shade color paint. Application as per manufacturers specifications.				
6	**COMPOUND WALL, PUMP ROOM PAINTING**	SFT	3000		
	Thoroughly cleaning of surface with water and antifungal treatment. Providing and applying 2 coats of semi-acrylic paint on surface as per manufacturers specifications. (ICI, Nerolac)				
7	**M.S. GRILL PAINTING**	SFT	42000		
	Scraping old colour on M.S. grill and clear the same. Applying one coat of Red oxide and 2 coats of Oil paint (Asian, Apcolite)				
8	**LIFT SHAFT PAINTING**	SFT	QRO		
	Scraping and cleaning old paint. Apply 2 coats of Lime wash in Lift well and Lift room inside				
			(F)	**SUB-TOTAL**	

SUMMARY INCLUDING ALL PARTS				
1	**PART A - PREPARATORY JOB**			
2	**PART B - CIVIL STRUCTURAL REPAIR JOB**			
3	**PART C - CIVIL PLASTERING JOB**			
4	**PART D - WATERPROOFING JOB**			
5	**PART E - PLUMBING JOB**			
6	**PART F - PAINTING JOB**			
			BASIC TOTAL	
		Taxes as applicable		
		CGST		
		SGST		
		Others		
			GRAND TOTAL	
	In words:- Rupees			Company Seal
				Signatory

CSR Consultant and Associates Mumbai 400 067

PL Note:-

THE EXTRA PLUMBING SCOPE OF TOTAL REPLACEMENT OF PIPES IS GIVEN IN NEXT PAGE. THIS PART – (G) IS NOT TO BE ADDED TO TOTAL ABOVE.

PI Note: This part of plumbing decision to be taken by Society later. Not necessary to be part of the scope of work of this Tender, though the rates are being called herewith.

	PART- G EXTRA PLUMBING JOB				
Sr. No.	**Description**	**Units**	**Qty**	**Rate**	**Amount**
1	**REMOVAL OF OLD DAMAGED G.I PIPES**	RFT	6450		
	Removal of all G.I. pipes safety at the ground floor. Stacking at locations as informed by the Engineer. On confirmation for replacement, carefully remove and stack the material.				
2	**REMOVAL OF OLD DAMAGED C.I. PIPES**	RFT	6600		
	Identification of damaged C.I. pipes and informing the Engineer for further activity. On confirmation for replacement, carefully remove and stack the material.				
3	**TEMPORARY LINE FOR G.I. PIPES**	RFT	QRO		
	Providing temporary lines against the removal of damaged GI lines.				
4	**TEMPORARY LINE FOR C.I. PIPES**	RFT	6700		
	Providing temporary lines against the removal of damaged line.				
5	**PROVIDING AND FIXING NEW PVC PIPES**				
a	6" dia	RFT	1200		
b	4" dia Rainwater	RFT	QRO		
c	4" dia W.C. drain line	RFT	1400		
d	3" dia Bathroom and Kitchen line	RFT	4000		
e	3" dia vent line	RFT	QRO		
6	**PROVIDING AND FIXING NEW UPVC PIPES**				
a	2" dia	RFT	QRO		
b	1.1/2" dia	RFT	QRO		
c	1.1/4" dia	RFT	QRO		
d	1" dia	RFT	QRO		
e	3/4" dia	RFT	QRO		
f	1/2" dia	RFT	QRO		
7	**LOOP LINE REPLACEMENT WITH NEW UPVC PIPE (Schedule 80 Guage)**				
a	3" dia	RFT	1100		
b	2" dia	RFT	600		
c	1.1/2" dia	RFT	450		
d	1.1/4" dia	RFT	QRO		

e	1" dia	RFT	2600		
f	3/4" dia	RFT	1000		
g	1/2" dia	RFT	700		
8	**CLAMPING ALL TYPES OF PIPES**				
	Providing and fixing clamps for all types of pipes	Nos.	1500		
9	**G.I. VERTICAL PIPE REPLACEMENT**				
a	2" dia	RFT	QRO		
b	1.1/2" dia	RFT	QRO		
c	1.1/4" dia	RFT	QRO		
d	1" dia	RFT	QRO		
e	3/4" dia	RFT	QRO		
f	1/2" dia	RFT	QRO		
10	**C.I VERTICAL PIPE REPLACEMENT**				
a	5" dia	RFT	QRO		
b	4" dia Rainwater	RFT	QRO		
c	4" dia W.C. drain line	RFT	QRO		
d	3" dia Bathroom and Kitchen line	RFT	QRO		
e	3" dia vent line	RFT	QRO		
7	**LOOP LINE REMOVING AND REFIXING**				
a	2" dia	RFT			
b	1.1/2" dia	RFT			
c	1.1/4" dia	RFT			
d	1" dia	RFT			
8	**UPVC, PVC, G.I., C.I. PIPE WALL PIECES OF ALL DIA**	Nos.	450		
	Making gabda at the segment of pipe inserted in the wall with light hammer. Releasing the surface around the pipe. Removing the segment. Replacing new segment with appropriate similar type material. Atmost precaution to be taken for any leakage with leak arrester. Application of Polymer bond coat at the gabda area. Keeping it open for 2 hours under observation. After confirmation by Engineer, close the same with Polymer modified mortar PMM to level finish.				
9	**G.I. SPACERS**	Nos.	1000		
	Provide and fix G.I spacers to keep 2" gap between wall and pipes for water supply and exerna drain lines of loop and downtake pipes.				
10	**BALL VALVES (ISI APPROVED)**				
a	Ball Valve 65mm	Nos.	QRO		
b	Ball valve 50mm	Nos.	QRO		

c	Ball valuve 40mm	Nos.	QRO		
d	Ball valve 32mm	Nos.	QRO		
e	Ball valve 25mm	Nos.	QRO		
f	Ball valve 20mm	Nos.	QRO		
g	Ball valve 15mm	Nos.	QRO		
11	**NEW GATE VALVE (ISI BRAND)**				
a	2" dia	Nos.	QRO		
b	1.1/2" dia	Nos.	QRO		
c	1.1/4" dia	Nos.	QRO		
d	1" dia	Nos.	QRO		
e	3/4" dia	Nos.	QRO		
f	1/2" dia	Nos.	QRO		
12	**CHANGING OF SEGMENTS WALL PIECES FOR ALL DIA PIPES**	Nos.	450		
	Providing and Connecting one side Brass fit MT, FT to be provided with proper checking and on approval of Consultant.				
13	**AC PIPING**	RFT	1400		
	1" dia PVC line for AC water with Tee at every floor extended by 1/4" dia PVC pipe.				
14	**PVC BALL VALVES EVERY TOILET / BATHROOM OUTSIDE**	Nos.	450		
15	**LOOP LINE PVC BALL VALVE 3" and 2"**	Nos.	100		
			(G)	**SUB-TOTAL**	

CSR CONSULTANT & ASSOCIATES
" No. 1 Project Management Consultant"
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Branch Off:- 501, A- wing, City Mall, Sector 19, Vashi Navi Mumbai- 705.
Tel: 9323547766
csrbuildingrepair@gmail.com

RECEIPT VOUCHER

To, Dated: _____

_____

Cell / Contact Nos. _____

We thank you for your cash payment of Rs. _3000/-_ (Rupees Three Thousand only) towards the tender document purchase of M/s Evershine Grandeur Co-op Hsg. Soc. Ltd at Malad (West), Mumbai.

We look forward for your active participation.

For any queries, please feel free to connect us.

All the best. Thanking you.

CSR Consultant and Associates Mumbai 400 067

With regards,

For CSR Consultant and Associates

Signature of Recipient. Company seal