PROPOSED AUDITORIUM FOR SVIAS

OF THE EASTERN UNIVERSITY

AT

BATTICALOA

BILL OF QUANTITIES

Estimate Division ,
Consultancy Services Unit
Department of Buildings ,
" Sethsiripaya "
Sri Jayawardenapura , Kotte ,
Battaramulla .

	Designation	Name	Signature
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GENERAL NOTES

Extent of work :-

The extent of work as provided for in this Bill of Quantities consists of :-

(a) Erection and completion of the

PROPOSED AUDITORIUM FOR SVIAS OF THE EASTERN UNIVERSITY AT BATTICALOA.

(b) Water supply

(c) Sewerage work

(d) Electrical Installation

(e) All other work as specified or shown in the drawings with respect to the above job.

Trade Names ;

Where trade names , brands and / or catalogue numbers are referred to sole preference to any material or equipment is not intended . Any other material or equipment may be used, provided that the characteristics of type, quality, appearance, finish, method of construction and / or performance is not less than specified and provided also that approval is first obtained.

Method of Measurement

This Bill of Quantities has been prepared generally in accordance with the principles of "Method of Measurement of Building Works(First Revision), Sri Lanka Standard 573:1999"

Measurements :

Tenderers are to note that, the measurements are taken absolutely nett. unless or otherwise stated.

Discrepancies :

Any discrepancy in Drawings, Specifications , Bill of Quantities or any other documents shall be brought to the notice of the employer before tendering.

Payments :

Payments shall be made on actual quantity of work carried out at the site as per contract. The quantities given in the Bill of Quantities are approximate.

The attention of the tenderer is drawn to the requirements of the contract, the specifications and any other particulars of the tender . It is the tenderer's responsibility to see that his prices include for complying with all the requirements of the conditions of contract and any other documents whether specifically referred to in the Bill of Quantities or not.

The following products have been declared by the Government as products for which the "SLS" mark is compulsory. Contractor must strictly comply with this requirement.

01). Cement Blocks	SLS 855
02). Ordinary Portland Cement	SLS 107
03). Masonry Cement	SLS 515
04). Blended Hydraulic Cement	SLS 1247
05). Portland Limestone Cement	SLS 1253
06). Plain Steel Bar Reinforcement	SLS 26
07). Ribbed Steel Bar Reinforcement	SLS 375
08). Mild Steel Wire for General Engineering purposes	SLS 139
09). Hot Rolled Steel Round Bars for Structural & General Engineering purposes	SLS 949 Part 1
10). Hot Rolled Steel Squre Bars for General Engineering Purposes	SLS 949 Part 2
11). Hot Rolled Steel Hexagonal Bars for Structural & General Engineering purposes	SLS 949 Part 3
12). Hot Rolled Steel Flats for Structural & General Engineering purposes	SLS 949 Part 5
13). Hot Rolled Structural Steel "U" Sections (Channel)	SLS 907 Part 3
14). Hot Rolled Structural Steel "L" Sections (Equal or Unequal Angles)	SLS 907 Part 4
15). Hot Rolled Structural Steel "T" Sections (tee's)	SLS 907 Part 5
16). U PVC Pipes for portable cold water	SLS 147
17). U PVC Pipe joints and fittings for portable cold water	SLS 695
18). Clay Roofing tiles (flat tiles)	SLS 2
19). Clay Ridge tiles	SLS 2
20). Electric bulbs	SLS 984
21). Household electric lamp holders	SLS 138
22). Household electric plugs & socket outlets	SLS948 & SLS734
23). Household electric switches	SLS 1000

This requirements shall also apply to building products declared by the Government as products for which "SLS" Mark is compulsory subsequent to 3rd of March 2012.

Timber :

Unless otherwise specified in the respective Trades / Sections , the timber for all trades shall be as specified in Carpentry and Joinery.

All timbers under exceptional Circumstances, any equivalent timber to the given Species may be used with the approval of the Engineer.

(Group-1): Door, Window and Fanlight Frames

Category A	Satin	Palu	Milla	Ketakala	Tulang
	Halmilla	Mee	Hulanhik	Wewarana	Valdel.
	Kohomba	Jak	Teak	Path kela	Kon
Category B	Microcoris	Grandis			

(Group-2): Door , Window and Fanlight Sashes , Cupboards, Counters and Shelving

Category A	Satin	Tulan	Halmilla	Sooriya mara	Kohomba
	Wewarana	Hulanhik			
Category B	Ginisapu				

(Group-3): Roof Framework

Category A	Madan	Milla	Palu	Wewarana	Tulang
	Mee	Micro	Kolon	Etathimbiri	Jak
	Dun	Velang			
Category B	Domba	Grandis	Saligna	Ginisapu	Alastonia
	Suriyamara				

(Group-4): Ceiling Framework and Partitions

Category A	Satin	Palu	Milla	Ketakala	Tulang
	Halmilla	Mee	Hulanhik	Wewarana	Valdel.
	Kohomba	Etathimbiri	Teak	Jak	Dun
	Velang				
Category B	Domba	Grandis	Cyprus	Saligna	Boron treated pinus

(Group-5): Valance Board and Valley Boarding

Category A	Kolon	Tulang	Val Del	Kohomba	Panakka
	Satin	Hulanhik	Wewarana	Jak	
	Sooriya mara				
Category B	Ginisapu	Grandis	Toona	Dawata	

(Group-6): Beadings :

Alstonia	Mahogany	Lunumidella

(Group-7): Special Timber

Category A	Teak	Ebony	Nedum
Category B	Jak	Satin	milla

(Group-8): Beeralu

Category A	Satin	Kolon	Mahogany	Sooriyamara
Category B	Saligna			

(Group-9): Skirting

Category A	Kolon	Teak	Panakka	Coconut
Category B	Saligna			

PRICING PREAMBLES

1. GENERAL

a. The Bidder shall read and be conversant with the full description of workmanship and materials as described in the Particular Specification and CIDA Specification for the respective items of work/ trades prior to the preparation of the Bid.

b. The Bidder shall refer to the relevant Clauses of Pricing Preamble when pricing composite item of works.

c. The rate for each item must be comprehensive and must include for complying in all respects with the requirements of the aforesaid specifications, these Pricing Preambles, cover all the obligations under the Contract, and all matters and things necessary for the proper construction, completion and maintenance of the Works. No claim for additional payment shall be allowed for any error or misunderstanding by the Contractor of the work involved.

d. The rate for each item shall also include for all the following -

i. Labour and all connected costs ;

ii. Materials and goods including all connected costs;

iii. Preparatory works and setting out of particular item ;

iv. Complying with regulations of the Municipal Council and/or any other relevant authority under which particular item of work is to be executed unless otherwise included in the Preliminaries ;

v. Fitting and fixing materials and goods in position, including hoisting to any height or lowering to any depth and all temporary works, equipment and small tools ;

vi. Plant and equipment unless otherwise included in Preliminaries ;

vii. Handling of materials and working in situation where there is very restricted working space or no working space ;

viii. Square cutting and Waste of materials ;

ix. Forming of ends, angles, miters and junctions between straight and raking or curved work;

x. Protecting and cleaning ;

xi. All other incidental works and necessary works which are not described in the B.O.Q. but described in the aforesaid specifications and or shown in the drawings for the proper completion of the relevant item of work ;

xii. Establishment charges and overheads(not included in preliminaries or anywhere in the Bill Of Quantities), and profits.

e. In addition to above, the rates for items of work in Substructure shall include for the works at depths extending below ground water table where applicable including excavation under water,removal and disposal of mud and sand and preparation of place to a condition suitable for proper execution of the works.

2. EXCAVATION AND EARTHWORK

a. All works under this section are measured net and no working space is allowed.

b. The Contractor shall be responsible for the design and execution of the excavation method which is subject to scrutiny by the Engineer. However, scrutiny by the Engineer shall not in any way relieve the contractor of his responsibilities and duty of care.

c. Existing ground levels shown in the Drawings have been taken at the surface of the ground, with no particular differentiation to indicate buried foundations, pavings etc.

d. The Contractor shall note that the rate for compacted earth fill and granular fill, stone, gravel and sand beds shall include for imported materials or materials from borrow areas.

e. Dewatering has been measured under the Items,
(i). Bill No.01 (Substructure), and
(ii). Priliminary Item Number (36), for furnishing of water pumps.

f. Rates for Excavation & Earthwork shall include for -

i. Accepting site as found and preparing to condition suitable for proper execution of the Works

ii. Excavating by whatever means are necessary including excavation done manually or by machine in any type of ground including ground with boulders (except rock) and excavation around existing RCC. bored piles and jet grout piles ;

iii. Trimming sides, keeping clean and consolidating bottom of basement, sumps, pits and trenches ;

iv. Backfilling and disposal of surplus excavated materials as specified and directed ;

Any necessary additional works required due to

a. Working space required by the Contractor ;
b. Earthworks supports ;
c. Formwork ;

vi. Any additional trimming or appropriate back- filling to provide specified or approved formations and profiles necessitated by the uneven excavation of the earth, unless otherwise measured separately ;

g. Rates for compacted earth fill, granular fill and gravel and sand beds shall include for finishing sub-grade to slopes and falls, depositing in layers, leveling, blinding, and machine or hand-packing to form vertical or battered or level faces, and for forming sinking where required under floor slabs or sub-floor layers.

h. Rates for approved damp-proof membrane shall include for laps, and straight, raking and circular cutting, and for notching around all obstructions.

3. CONCRETE WORK

a. Rates for concrete work shall include for -

i. Mixing as per specification, depositing, handling, hoisting and placing at any height or depth;

ii. In case of readymix concrete, transporting, admixtures, handling, pumping/hoisting and placing at any height or depth ;

iii. Packing and tamping around reinforcement, including vibrating ;

iv. Contractor's designed kickers, construction joints and sealents ;

v. Finishing to slopes and falls, and preparing surface ready for screeds or paving, where necessary, including cutting to sizes and temporary supports to form necessary grooves ;

vi. Curing ;

vii. Preparation of ground surface, grading to slope and falls, if any, and machine or hand packing to form vertical or battered or level surface and all necessary formwork to edges of blinding concrete in case of pile caps ground slab/ramps/beams.

FORMWORK

a. Formwork for similar concrete members are measured together irrespective of the height or depth and the shape or form.

b. Extra-over rate for a particular type of high quality formwork should be applied only for the areas of formwork which requires such high quality type formwork as specified.

c. Formwork shall be properly designed and strictly as described in the specifications for the particular type of concrete surface finish and it should be sufficiently strong and grout tight.

d. Faces of Jet grouting piles, masonry and concrete work which will be formed or used as formwork shall not be measured as formwork and no payment shall be made for same.

e. <u>Rate for formwork shall include for -</u>

i. Fabricating setting up and erection at any height or depth ;

ii. Strutting, supporting through lower floors and supporting at any level, including additional propping, strutting and supporting decks ;

iii. Coating with shuttering oil and or lining ;

iv. Easing, striking and removing ;

v. Cleaning, preparing for reuse ;

vi. Removal when no longer required ;

vii. Props, stays, struts, wedges, bolts, incidental items and materials such as nails, screws anchors hooks etc ;

viii. All overlaps and passing at angles ;

ix. Labour at intersections and narrow widths ;

Contd..

x. Rubbing down and making concrete surface good after removal of formwork ;

xi. All fillets, to form grooves, rebates and throats, splays or chamfers, raking and circular cutting, and cutting around all pipes, sleeves, conduits, ducting, metal sections and fittings;

xii. Providing samples as required by the Engineer of the different formed finishes specified.

REINFORCEMENT

a.i. Standard length of reinforcing bar for the purpose of measurement shall be 6.0 m.

ii. Payment for bar reinforcement shall be to be nearest 0.01 Metric Ton.

b. Rates for reinforcement shall include for -

i. Rolling margin ; (Variations not paied under BOQ quantities)

ii. Preparation of bar bending schedules ; (Counted only if not considered under Priliminary Item No. 21)

iii. Straightening as required and cleaning of bars ;

iv. Cutting, bending and binding ;

v. Hoisting and placing in position at any height or depth ;

vi. Binding wires, and cover blocks.

vii. Necessary spacers. (inevitable laps & chairs paid separately based on the bar schedules submitted in advance by the contractor and as per Engineer's approval)

viii. Aligning and supporting in position during concreting.

PRECAST CONCRETE WORKS

a. Rates for precast concrete works shall include for -

i. Moulds and for formwork with the required finish to all exposed surfaces in accordance with the specifications, hacking surfaces to form key for rendering etc, and hoisting to any height or depth including providing any lifting holes or other devices to the approval of the Engineer,building in, including bedding and jointing in mortar as required, and any necessary strutting and supporting.

ii. The requirements of the Pricing Preamble clauses which refer to Concrete Work,Reinforcement and Formwork.

iii. Loading, transporting to Site, unloading, handling and stacking.

iv. Hoisting and fixing in position at any height or depth.

4. MASONRY WORK

a. In the calculation of the volumes of brick wall which are not multiples of the size of standard bricks, the thickness of such walls shall be taken as the thickness of full bricks from which they can be cut. The same principle of calculation of volume shall be used for all brickwork of which the cross-sectional dimensions are not multiple of brick sizes.

b. Rates for brickwork/Block work shall include for -

i. Plumbing, angles,straight cutting,forming rebates,reveals and raking out joints for plastering;

ii. Splay cutting, rough cutting, fair cutting, forming chases or grooves for slabs, partitions,staircases, roofs and the like, bonding ends of walls, building in or cutting and pinning in and making goods on lintels, timber and steel works ;

iii. Building at any level or height of slabs or beams, additional labour in kerbs, isolated and attached piers, all cutting, bonding at angles and intersections, building into or against adjacent work, wedging and pinning up to soffits;

iv. Supplying and fixing metal clamps, Galvanized, steel boundary ties, and brick reinforcement etc;

v. Necessary cutting required in walls which are not multiples of brick size ;

vi. Preparing existing walls for raising and pinning new brickwork ;

vii. Bonding new walls to concrete faces and old walls where necessary, and materials to be used for such bonding.

b1. Rates for Damp Proof Course shall include for -

i. Necessary leveling screed and trimming top of rubble/block/brick plinth wall ;

ii. Fair edges, rounded edges, drips and arises, angle fillets ;

iii. Turning nibs of asphalt into grooves ;

iv. Cutting to line and jointing new to old asphalt.

c. **STONE WORK**
Generally

Stones are defined as consolidated aggregates of one or more minerals and includes all types of rock used in the construction industry.

c1 **Rubble work**

Rubble Stone masonry built of stones either irregular in shape as quarried or shaved and only hammer dressed and having comparatively thick joints.

Rates for Rubble Masonry shall include for -

i. All joggles, cramps, dowels, ties, templates ;

ii. Plumbing, angles, fair returns, setting, jointing, eaves filling, pointing and fixing in position, hoisting to any given height or depth ;

Contd.,

iii. Bonding ends of walls, rough cutting and fair cutting ;

iv. Leveling up in walling for Damp Proof Courses, sills, thresholds, string courses, copings and the like ;

v. Forming straight vertical joints next to dressings, panels, brickwork etc ;

vi. Forming openings and dressed margins ;

vii. Forming chases, throats, rebates, margin flutes, sinking, chamfered and rounded edges, and all labour connected therewith.

c.2 **Ashlar Stone masonry using dressed stone blocks of given dimensions having faces perpendicular to each other and laid in courses.**

Rates for stone work shall include for:-

i. Extra material for curved work
ii. All rough and fair cutting
iii. Dressing
iv. Forming rough and fair grooves, throats, mortices, chases, rebates, holes, stops and mitres.
v. Raking out joints for key
vi. Labours in eaves filling
vii. Dressed margins to rubble work
viii. Leveling uncoursed work
ix. Rough and fair square cutting
x. Centering
xi. Wedging up and pinning to concrete soffits and steel work
xii. Building in frames, flashing, damp proof courses including filling hollows of corner blocks with mortar
xiii. Building in ties, lugs, plates, lintels, pipe sleeves, inserts, switch boxes and the like. As the work proceeds.

c.3 **Stone Veneering work (Face rubble work)**

i. Stone lining upto 80mm along planes parallel to natural bed. The natural bed may be masonry of brickwork or rubbel work, concrete surface.
ii. Stones cut into slabs of required thickness.
iii. Dressed to very close tolerances.

5. WATER PROOFING

a. Rates for Water Proofing shall include for ;

i. For necessary leveling and trimming top of rubble/block/brick plinth wall ;

ii. Fair edges, rounded edges, drips and arises, angle fillets ;

iii. Forming internal and external angles, bonding bricks/blocks and the like ;

iv. Turning nibs of asphalt into grooves and asphalting around brackets ;

v. Cutting to line and jointing new to old asphalt ;

vi. Temporary screeds, ground and rules.

6. STRUCTURAL STEELWORK

a. Rate shall include for :

All shop fabrication work, including cutting, drilling, bolting, riveting, welding, grinding, delivering, unloading, hoisting, erecting and fixing.

7. METAL WORKS

a. Type and quality of steel to be used for metal work shall be as per drawings and relevant specification clause and or shall conform to latest British Standards.

b. Contractor to prepare shop drawings for approval of the Engineer.

c. Rates for Metal Work shall include for anchors, screws, dissimilar metals and providing thermal movement and the preamble clauses for Structural Steel Work where relevant and they shall apply equally to relevant items of this section.

Aluminium component

d. Fabrication & fixing of Aluminum components shall be carried out by experienced tradesman.The Contractor shall furnish particulars of Aluminium fabricator through the engineer for his approval.

The Contractor will be required to furnish a guarantee on material and workmanship for a period of 8 years from the date of handing over of Works in the form required by the employer, binding the Aluminum manufacturer and the Contractor jointly and severally

e. ***Rate for Aluminium doors, windows & partitions shall include for***

i. Glass and glazing

ii. All necessary ironmongery (For Doors; Door Locks, Door Handles and Door Closers shall be quorted as separate Items in the BOQ)

iii. Furnishing shop drawings (materials & workmenship should be accordance with the specifications given under the aluminium works)
Note: *This component shall ignore, if the contractor intends to quote it under Preliminaries Item No. 21*

iv. Furnishing guarantee's as required by the employer

v. Sampling and submission of test reports to the engineer as directed
Note: *This component shall ignore, if the contractor intends to quote it under Preliminaries Item No. 20*

8. ROOF COVERING AND ROOF PLUMBING

a. Rates for roof covering and roof plumbing shall include for :

i. Hoisting, placing and fixing in position ;

ii. Straight cutting, raking cutting, circular cutting, notching, and working around obstructions and waste ;

iii. Nails, screws and the like ;

iv. Drilling and making holes or opening and the like;

Contd.,

b. Rates for flashings shall include for the following in addition to the requirement of "a" above -

i. Bending and cutting to required shape and forming roll edges ;

ii. Angles, edges and ends ;

iii. Notching over roofing ribs or dressing into roof cover/concrete as the case may be ;

iv. Forming and dressing into or around walls at obstructions and the like ;

v. Stepping up ;

vi. Sealing with sealant materials.

9. CARPENTRY(Roof and ceiling frame)

a. Sizes of all timber given are finished sizes.

b. All timber shall be well seasoned and treated against insect and termite attack before fixing in position

c. Rates for carpentry shall include for -

i. Any type of cutting required, sawing, notching, drilling, trimming, framing, jointing, splayed edges and the like, hoisting and fixing in position with nails, spikes, plugs, screws, and gluing and priming to joints and ends ;

ii. Forming splayed edge, grooves, chamfers, scribed and rounded edge, beveling,molding and the like ;

iii. Plugging, wedging, nuts and washers with bolts,sprockets and pins and the like ;

iv. Nogging or solid bridging, cut between studs or joints for structural timber.

v. Rebating, singings, grooving, mortising ;

vi. Additional timber lengths required for carpentry jointing ;

vii. Protection and keeping clean for staining, polishing or painting where applicable ;

d. Rates for roof decking shall include for machine sanding, protecting and preparing in addition to the requirements c above.

e. Rates for walls and ceiling lining shall include for jointing and fixing to walls/ ceiling/ eaves etc. all cover and joint strips, in addition to the requirements c above.

f. Rates for timber paneling/wall lining shall include for cover moldings, sills, stiles and head moldings to openings as relevant.

10. JOINERY

a. Sizes of all timber given are finished sizes.

b. All timber shall be well seasoned and treated against insect and termite attack before fixing.

Contd.,

c. Timber used for joinery works shall be well seasoned well treated and in one species of special class timber recommended for the particular class of Joinery works as specified in the Specification.

d. Rates for Joinery shall include for -

i. Any type of cutting required, sawing, notching, drilling, trimming, planing, forming and jointing and the like, fixing in position complete with nails, spikes, plugs, screws and gluing and priming to joints and ends ;

ii. Forming splayed and tongued edges, rebates mortises, grooves, chamfers, scribed and rounded edges, beveling, moulding, margin and the like and rounded corners, sinkings ;

iii. Working to stated sizes, for all short lengths making mitres, joints and ends ;

iv. Necessary bolts, dowels metal clips, anchors, grips and fixing joinery ;

v. Glueing, dowelling, plugging, wedging pining and the like ;

vi. Punching heads and filling with approved filler if nails or pins are used for fixing ;

vii. Countersinking and filling heads with approved filler, if brass screws are used for fixing ;

viii. Painting rebates of frames before fixing glass ;

ix. Bedding in cement mortar filling and hanging to frame lining ;

x. Keeping clean for staining, polishing or painting;

xi. Painting, Laquering or Varnishing as specified.

e. Preambles for Glazing section and a, b and c under Painting and Decorating section shall equally apply to Joinery works.

f. Ironmongary

i. All cutting, fitting, sinking, boring, mortising ;

ii. Matching screws for ironmongery

iii. Removing during decoration, refixing after decoration, leaving oil and in proper working order on completion and supplying and labeling all keys and handing over to Employer.

11. WALL,FLOOR AND CEILING FINISHES

a.i. All works under this trade shall be measured in m^2 after deduction for voids,openings, doors and windows

ii. All other small quantities/panels/narrow widths/ arises/ reveals/ angles/ ends/short lengths including those of tiling work on door and window jambs and reveals are measured together with the respective tiling item and labour in such work shall be included in the rate for the main finishing item and they shall not be measured/paid separately.

Contd.,

b. Rates for wall, floor, ceiling finishings and wall floor screed and bedding shall include for -

i. All temporary rules, screeds, templates and supports, curing and cleaning off on completion and exact thickness required to finish ;

ii. Caulked joints and making good and cutting around bolts, pipes conduits,sleeves, ducting, fittings, sections, obstructions and the like ;

iii. Tamping and compacting ;

iv. Raking out joints of new brickwork/Block work or hacking concrete to form key, including brushing, cleaning off and dampening ;

v. Forming internal and external angles and arises ;

vi. Any extra thickness required to finish to true levels ;

vii. Any additional dubbing out required to plastered surfaces of brickwork and to the finished surface of concrete to obtain the requisite standard of finish ;

viii. Samples to be submitted for the approval of the Engineer.

c. Rates for tile slab or block finishing to floor and wall shall also include for the following in addition to the above -

i. Straight raking and circular cutting ;

ii. Dubbing out or packing to concrete surface to correct deviations within specified tolerance ;

iii. Laying or finishing to falls or cross falls ;

iv. Expansion joints at perimeter and between bays where required in case of floor tile paving;

v. Sand blasting, cleaning, waxing and appropriate floor finishings.

d. Rates for ceiling lining shall include for the following

i. Working to sides and soffits of attached or isolated beams and soffit of staircases where relevant;

ii. Additional forming required for lighting and air-conditioning grills ;

iii. Straight, raking and circular cutting ;

iv. Neoprene sealing for air tightness around hatches if any ;

v. Matching edges where cutting occurs and for filling the heads of fixings with approved filler where relevant ;

vi. Painted mild steel hanging rods.

12. GLAZING

a.i. Type of Glazing shall be as specified.

ii. Thickness of glazing shall be as per the design of the approved specialist contractor who will be engaged by the Contractor. However, the minimum thickness shall be 6mm unless otherwise stated.

Contd.,

b. Rates for Glazing shall include for -

i. Glazing, fixing, bedding priming and panel pins and other materials and labour for same and cutting to size ;

ii. Templates, straight cutting, circular cutting, grinding edges or special type of edges required and sand blasting ;

iii. Glazing beads, washlether or neoprene strip, glazing sealant, weather stripping, caulking joint silicone joint ;

iv. Replacing cracked or broken glass ;

v. Making holes where necessary ;

vi. Samples to be submitted for the approval of the Engineer.

13. PAINTING AND DECORATING

Note
Colour and the quality of all paint and other painting materials shall be approved by the Engineer prior to use.

a. Rates for painting shall include for -

i. Preparation of surfaces, cleaning down, smoothing, etc ;

ii. Submission of samples for the approval of the Engineer ;

iii. Protection of floors, walls and fittings etc ;

iv. Working to returns, painting in any colour, multi- colour works, cutting into line at junctions of different colours at angles or plain surfaces, painting in small quantities ;

v. Cleaning down upon completion

b. Rates for work to isolated general surfaces shall include for working on door frames, linings,window subframes (where of a differing material to the window), skirting, rails, architrave's, bars,posts, balusters and the like.

c. Rates for work to glazed general surfaces, glazed windows and the like (measured both sides,flat over glass, irrespective of size and panes) shall include for work to edges and glazing rebates, returns and moldings of frames, mullions, transoms, architaves and the like.

d. Rates for work to pipes and conduits (which shall include trunking, ducting and the like) shall include for all work on hangers, supports, brackets and the like.

14. PLUMBING

a. The rates for Plumbing shall include for :

i. Refer specifications for full description of materials and workmanship.

Contd.,

ii. Screws, nails, sockets, connectors, backnuts, nipples, and standard pipe fixing or supporting clips, saddles, brackets straps, screws, nails, solder rivets connectors, flanges pipe sleeves, brackets, made bend holder bats and the like.

iii. Short lengths, joints connections and couplers in running length.

iv. Sealing, fixing and support with holder bats or pipe clips cut and pinned built in wall or slabs.

v. Plugging screwing to walls or ceiling

vi. All laps, straight cutting and waste

vii. The fittings including bends, tees, collars, reducers elbows, valve sockets, junctions, caps and the like for pipe less than or equal 50mm dia pipe.

viii. Jointing compound, solvent cement and incidental materials and labour.

ix. Connecting pipes to sanitary fixtures and appliances.

x. Standard and special pipe fixing arrangement where necessary fittings, supporting clips,saddles,brackets, holder bats straps etc.

xi. All builders works such as chasing and forming holes through brick work/ blockwork/ foundations and concrete slabs beams columns floor slabs manholes and like and making good all damages.

xii. Testing and disaffection after completion.

b. Rates for sanitary fittings shall include for

i. Fittings such as taps, waste water outlet, flushing cistern, internal overflows and the like and supporting brackets, incidental materials for fixing.

ii. Assembling, jointing together, fixing components parts and jointing to pipes including necessary coupling and for leaving perfectly clean undamaged and in perfect working order as on completion.

c. Jointing and or connecting pipes to sanitary fittings.

Any special water supply and drainage fittings such as bends, tees, reducers etc. unless otherwise specified separately in the Bill of Quantities, shall be deemed to have been included in the relevant items and such items should accordingly be rated to include for such specials etc. and for any extra work involved and the satisfactory completion of such items.

Where pipes pass through walls or slabs these shall be wrapped with a layer of inert materials. For pipes exceeding 50 mm dia sleeve pipes shall be used for the full thickness of slabs, walls or beams through which the pipes pass.

DRAINAGE WORK

a. The provisions and the clauses of precedence trades shall equally apply to relevant item of this trade.

b. The rates for trench excavation for pipes shall include for depending and widening the trench as necessary to enable the barrels of pipes of rest on firm and to facilitate jointing.

Contd.,

c. The rates for rock excavation in trench excavations shall include for importing selected materials to replace any excavated rock which is unsuitable for back filling and for all additional rock excavation and appropriate filling beyond the maximum measurable in accordance with the specification.

d. The rates for concrete beds and surrounds to pipes shall include for flexible joints and any necessary formwork where required by the specification.

15. ELECTRICAL INSTALLATIONS

a. The execution of Electrical Installation shall every respect comply with the current Regulations of the Institute of Electrical Engineers, London, requirements of Ceylon Electricity Board and the area Authority.

b. The rates for equipment and control area, distribution boards, meters, switches, fuses, etc. shall include for connecting up, fixings and supports for the complete installation and for suitable mounting boards, frames, supports, housings and cabinets where required.

c. The rates for cables, tape, bus-bar trunking etc. (except where included in sub circuits or electrical points) and the like shall include for joints in the running length, all allowances for sagging snaking, for drawings through conduits,laying in trunking of surface fixing where retired with cable supports, clears, hangers, channels, insulators and the like.

d. i. The rates for cables and the like laid in benches shall include for drawing through conduits or ducts where required.

ii. The rates for cable terminations shall include for all connections point boxes, insulating and jointing materials, cable terminations glands, lock nuts, bushes and the like.

e.i. The rates for conduits trunking cable tray etc. (except where included in sub circuits of electrical points) and the like shall include for all short lengths, joints and couplers in the running length, and for all fixings and supports with approved saddles, crumpets, clips and the like cut and pinned, built-in or plugged and screwed to walls or ceilings including chasing brick work, block work, concrete slab beams walls columns and the like and make good.

ii. The rates for conduits and the like shall include for all bends, tees, socket and the like,cutting, screwing, threading, jointing and providing all conduit boxes, junction boxes and the like.

f. The rates for the installation of sub main circuits, lighting points switched points, socket outlets, fused spur outlets, isolators, etc. (other than those applicable to the distribution switch gear) shall include where applicable, for all conduit, trunking, cable tray, cabling, terminations, fixings and connections from the distribution
switched gear to and including the point (accessories measured separately) and shall be deemed to include for any item mentioned in the Electrical installation Specification but not shown on the drawings and vice-versa.

g. The rates for lighting fittings, fittings such as ceiling fans and extract fans, and for appliances such as air- conditioning units shall include for assembly, fixing and connection from the spur outlet or isolator to the fitting or appliance with all necessary additional wiring earthing and outlet roses and leaving perfectly clean and undamaged on completion.

h. The rates for fixing only fittings and appliances provided by the employer should include in addition to the foregoing for accepting delivery, storing and handling the fittings and providing any additional materials and internal wiring.

Contd.,

j. The rates for connections only to fittings and appliances such as pumps, water heaters, air conditioning units and extract fans shall include for connection from the isolator or spur outlet to the fitting or appliance (these being measured separately) , with all necessary additional wiring, earthing and outlet roses.

k. The rates for power outlets shall include for mounting boxes and frames.

l. The rates for power switched with remote outlets shall include for the additional outlet plates and boxes.

m. The rates for switched socket outlets shall include for 1 No fused plug top and 4 No fuse links.

n. The preceding preambles shall apply equally to auxiliary installations such as TV installations, telephone installations, and bell signal systems.

o. Painting of timber work and metal work.

p. If the items of electrical installation are measured as sub circuit point wiring or in electrical points, the rates for such items shall include for :

i. The preceding clauses of this trade where relevant.

ii. Preparation of asbuilt drawings to be submitted to Employer at the handing over/ practical completion.

iii. All items and accessories required for proper installation as per specification and regulation up to load point and labour connected therewith.

iv. All wiring, conduiting and cables and labour connected therewith if not measured separately.

v. Items specified in the specification but not shown in the drawings.

vi. Disconnecting and refixing of electrical fitting and appliances as required for the convenience of other trades.

vii. Painting of timber work metal work executed under this trade.

q. Rate to include submission of Megar Test report of the building Elactrical Installation from Charted Electrical Engineer

PRELIMINARIES

Note 1 :The Engineer/Consultant may modify or amended any item, or delete inappropriate item/s or add new item/s, depending the nature of the proposed work.

Note 2 :Mode of payment are as below

Mode Of Payment	Category
Reimbursement of actual cost on submission of the relevant document acceptable to the Engineer plus 5% of the actual cost of obtaining the Insurance Policies and Securities.	A
To be paid on signing of the formal Contract Agreement.	B
60% on completion of temporary buildings or structures. 30% in equal installments over the contract period and balance 10% on dismantling and removal on completion.	C
Paid on satisfactorily completion of the item.	D
In equal installments over the contract period.	E
Mode of payment to be mutually agreed between Contractor and the Employer at the commencement of contract in relation to the programme of work.	F
On the completion of works.	G

Note 3 : The above recommended percentages may be adjusted by the Employer/ Consultant to audit the particular project.

Serial No	Description	Mode of payment category	Unit	Amount
	Insurance and Securities			
1	Allow for providing a Performance Security	A	Provisional sum	190,000.00
2	Allow for providing an Advanced Payment Security	A	Provisional sum	740,000.00
3	Provisional sum for insurance of Works, Machinery & Equipment, Plant, Materials, third party persons & property and Employer's personnel & property at site as per the Contract	A	Provisional sum	480,000.00
4	(a) Provisional sum for insurance against accidents and injury to Contractor's personnel as per the contract	A	Provisional sum	170,000.00
	(b) Provisional sum for Insurance cover for inquires and damages to Engineer's personnel	A	Provisional sum	170,000.00
	Total Carried Forward			**1,750,000.00**

	Brought forward			**1,750,000.00**
	Engineer's Facilities			
5	Allow lump sum for constructing, maintaining dismantling and removal on completion of the Works, a temporary building for Engineer's requirements, including necessary furniture and fittings, furnishing, sanitary facilities and other facilities such as (a) Minimum size of the office space not less than 20 m^2 (b) Furniture such as 3 No. tables & 6 No.chairs for staff (c) 1 No.computer table with 1 No. chair and laptop computer including internet facility (specification sheet should be attached) (d) Allow sum for providing safety facility for the Engineer and his staff during construction. (Safety helmets, Boots and other facilities)	C	Item	
6	Allow lump sum for providing telephone and facsimile facilities, electricity and water services for the engineer's site office for their use in connection with the Works	D	Item	
7	Allow lump sum for maintenance, rental, consumption charges etc. for telephone and facsimile facilities , electricity and water services for the engineer's site office for their use in connection with the Works	E	Item	
	Contractor's facilities			
8	Allow lump sum for constructing, maintaining dismantling and removal on completion of the Works, a temporary site office of adequate size including staff rest room and toilets and other facilities for the contractor's site management staff in accordance with the plans prepared by the contractor and concurred by the Engineer.	C	Item	
9	Allow lump sum for constructing, maintaining dismantling and removal on completion of the Works, buildings to be used as workshops and stores for perishable materials. Buildings shall be constructed in accordance with the drawings prepared by the Contractor and concurred by the Engineer. The lump sum shall also include for altering, modifying or dismantling and re-erecting within the site all temporary buildings / structures if required.	C	Item	
	Total Carried Forward			

	Brought forward			
10	Allow lump sum for constructing, maintaining dismantling and removal on completion of the Works, temporary buildings in accordance with the plans prepared by the Contractor and concurred by the Engineer to accommodate the following: 1.Workers' rest room, canteen facilities, kitchen 2.Toilet and wash areas 3.Sick / First-Aid room 4.Accomodation for Contractor's staff and workmen including sanitary facilities on site, if applicable Facilities to workmen shall conform to the latest public health and industrial regulations	C	Item	
11	Allow lump sum for providing accommodation including sanitary facilities and transport for Contractors staff and workmen off site	E	Item	
12	Allow lump sum for providing telephone and facsimile facilities, electricity and water services for the Contractor's site office for their use in connection with the Works	D	Item	
13	Allow lump sum for maintenance, rental, consumption charges ect. for telephone and facsimile facilities, electricity and water services for the Contractor's site office for their use in connection with the Works	E	Item	
14	Allow lump sum for Contractor's transport facilities at site	E	Item	
	Construction management and supervision			
15	Allow lump sum for employing suitably qualified and experienced technical personnel on full time basis for Construction Management Services at the site	E	Item	

Category	Qualification	Month Salary (Rs)
Engineer (Full time)	B.Sc Civil (5 Year exp.)	75,000.00
Technical Officers (Full time)	NDT Civil or Equivalent (7 year exp.)	40,000.00

	Total Carried Forward			

	Brought forward			
16	Allow lump sum for employing supervisory staff not listed under item 15 above, on full time basis. Listed below are the particulars of staff to be engaged	E	Item	

Category	Qualification	Salary (Rs)
Chartered Engineer (Visiting)	Charter in Civil Engineering	2,000.00 per hour, 10 hours per week
Technical Officer (Electrical)	NDT Electrical or Equivalent (5 year exp.)	1500.00 per day

	Setting Out			
17	Allow lump sum for employing a licensed land surveyor to define the building site work etc. , check levels and carry out such other survey as may be necessary to establish accurately the placing of forms and pouring of concrete and all other setting out in both vertical and horizontal plane.	F	Item	
18	Allow lump sum for setting out of Works in accordance with drawings and other written information given by the Engineer.	F	Item	
	Quality, Standards and Progress			
19	Allow lump sum for provision of progress reports including photographic records and other schedules included in the CIDA publication - Guidelines for Effective Construction Management. (CIDA/CM/01), relevant to contract administration as directed by the Engineer	E	Item	
20	Allow lump sum for all cost in connection with preparing samples for testing,making arrangements for testing of Materials, Goods etc. as stipulated in the specification, obtaining test reports and submitting the same to the Engineer	E	Item	
21	Allow lump sum for provision of shop drawings ,bar schedules etc. for Engineer's approval	E	Item	
22	Allow lump sum for provision of 2 sets of (hard copies and soft copies) as - built drawings of all services , for Engineers approval	D	Item	
	Total Carried Forward			

	Brought forward			
	Health Safety and Environment			
23	Allow lump sum for engaging the service of an adequately trained person to attend to first-aid medical duties including a provision of a first aid box and regular supply of medicine, linen etc	E	Item	Deleted
24	Allow lump sum for providing and maintaining a first-aid box and regular supply of medicine ,linen etc.	E	Item	
25	Allow lump sum for the following services throughout the period of construction for the Engineer's office, Contractor's site office and worker's rest room and other facilities;	E	Item	
	a. Employing workmen to clean and maintaining all areas to be in good hygienic conditions including toilets, wash areas, kitchen etc.			
	b. Supplying adequate drinking water, water for washing purposes, soap, detergent, etc. throughout the period of construction.			
26	Allow lump sum for providing all necessary safety measures to workmen at site confirming to the latest industrial safety regulations and as directed by the Engineer.	E	Item	
27	Allow lump sum for making adequate provisions against air and noise pollution of surrounding areas. Hoarding and dust screens shall be provided to control dust escaping to surrounding areas.	E	Item	
28	Allow lump sum for maintaining the site in a clean and orderly manner at all times and during the entire contract period.	E	Item	
	The Contractor shall take due care to prevent water stagnation, eliminate mosquito breeding places at the site and this is to be ensured through internal monitoring mechanisum.			
29	Allow lump sum for demobilization , removal of all rubbish & debris and clearing up site on completion , leaving all in good order and handing over.	G	Item	
	Security and Protection			
30	Allow lump sum for employing an adequate number of security personnel and security systems on full time basis throughout the period of construction, and providing for necessary security lighting and a warning system	E	Item	
	Total Carried Forward			

	Brought forward			
31	Allow lump sum for providing and maintaining necessary fencing, hoarding and gates for safeguarding the Works, Materials and plant as directed by the Engineer	E	Item	
32	Allow lump sum for protection of public and private services at site. The Contractor shall take due care to protect, water supply and drainage systems, telephone and overhead / buried electrical cables etc. whose locations are identified and made available to the bidder at the time of bidding , unless earmarked for demolition, during the execution of the Works. The contractor is to make good any damage due to any cause within his control at his own expenses or pay any cost and charges in connection therewith.	E	Item	
	Services and Facilities			
33	Allow lump sum for supply of water for the Works and paying all charges and other expenses in connection with the supply from water mains or any other alternative method of water supply, storage and reticulation.	E	Item	
34	Allow lump sum for supplying temporary electricity for the Works including connection, distribution system for the works , internal arrangements and all payments to the authorities for consumption.	E	Item	
35	Allow lump sum for providing hoisting equipment and other plant for the use of the Works on site(dry hire)	F	Item	
36	Allow lump sum for providing small machinery and equipment for the use of the Works at site. (a). Hammer drill. (b). Jack hammer. (c). Compressor. (d). water pump with necessary accessories for working order (e). Welding Plant.	F	Item	
37	Allow lump sum for erecting and maintaining scaffolding and/or self climbing platforms. Such scaffolding etc. shall be removed on completion and all Works disturbed shall be made good	F	Item	
	Total Carried Forward			

	Brought forward			
	Miscellaneous			
38	Allow lump sum for stamp duty in accordance with the prevailing regulations of the Government	B	Item	
39	Allow lump sum for providing & maintaining a name board to the specifications and/or as directed by the Engineer	C	Item	
40	Allow lump sum for excavation for trial pits/trial trenches as specified or as directed by the Engineer as for locating services etc. and reinstating the ground and making good disturbed work to the satisfaction of the Engineer	F	Item	
	SUB TOTAL (1)		Rs:	
	Less Provisional Sums		Rs:	1,750,000.00
	TOTAL CARRIED TO SUMMARY ON PAGE S 08 -275		Rs.	

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO A1 - SUBSTRUCTURE '(AUDITORIUM)				
	B - SITE CLEARING, EXCAVATION & EARTH WORK				
	Site Clearing				
1.B.1	Clearing site including removal of roots and growth of every description, removing top soil upto a depth of 150mm extended upto 3.0m beyond the outer walls of the proposed building and carting away the waste material from the site where directed & levelling. (Approx. 2950.00 m^2)	1.00	Item		
	Excavation & Earth work				
	Excavation commencing from existing ground level, not exceeding 1.00 m deep in any materials except rock requiring blasting, part return fill in ram and surplus disposed as directed.				
1.B.2	For column footings	145.00	m^3		
1.B.3	For combined footings	317.00	m^3		
1.B.4	For staircase 'A' footing	3.00	m^3		
1.B.5	For staircase footing at entrance porch	6.00	m^3		
1.B.6	For staircase footing at Electrical room	0.80	m^3		
1.B.7	For retaining wall trenches	118.00	m^3		
1.B.8	For wall trenches	53.00	m^3		
1.B.9	For curb wall trenches	25.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Excavation commencing from existing ground level, exceeding 1.0 m but not exceeding 2.0m deep in any material except rock requiring blasting, part return fill in ram and surplus disposed as directed.				
1.B.10	For column footings	12.00	m^3		
1.B.11	For combined footings	26.00	m^3		
1.B.12	For staircase footing at entrance porch	1.50	m^3		
1.B.13	For retaining wall trenches	16.00	m^3		
	Filling under floors				
1.B.14	Filling under floors including levelling, watering & compacting (well rammed and consolidated) in 150mm layers with imported, selected earth.	304.00	m^3		
	Earthwork Supports				
	Earthwork supports (Planking & Strutting) total depth of excavation not exceeding 1.0m and distance between vertical sides (opposing faces) not exceeding 2.0m, (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.15	For staircase 'A' footing	10.00	m^2		
1.B.16	For staircase footing at entrance porch	17.00	m^2		
1.B.17	For staircase footing at Electrical room	4.00	m^2		
1.B.18	For retaining wall trenches	302.00	m^2		
1.B.19	For wall trenches	190.00	m^2		
1.B.20	For curb wall trenches	111.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Earthwork supports (Planking & Strutting) total depth of excavation not exceeding 2.0m and distance between vertical sides (opposing faces) not exceeding 2.0m, (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.21	For column footings	182.00	m^2		
1.B.22	For combined footings	64.00	m^2		
	Earthwork supports, (Planking & Strutting) total depth of excavation not exceeding 2.0m and distance between vertical sides (opposing faces) exceeding 2.0m not exceeding 4.0m (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.23	For column footings	127.00	m^2		
1.B.24	For combined footings	222.00	m^2		
	Earthwork supports, (Planking & Strutting) total depth of excavation not exceeding 2.0m and distance between vertical sides (opposing faces) exceeding 4.0m not exceeding 6.0m (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.25	For combined footings	41.00	m^2		
	Earthwork supports, (Planking & Strutting) total depth of excavation not exceeding 2.0m and distance between vertical sides (opposing faces) exceeding 6.0m not exceeding 8.0m (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.26	For combined footings	52.00	m^2		
1.B.27	For staircase footing at entrance porch	2.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Earthwork supports, (Planking & Strutting) total depth of excavation not exceeding 2.0m and distance between vertical sides (opposing faces) exceeding 8.0m not exceeding 10.0m (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.28	For combined footings	6.00	m^2		
	Dewatering				
1.B.29	Allow for dewatering, in the manner approved by the engineer to keep all excavation dry until all works in substructure are completed. furnishing of water pumps are considered under Preliminary Item Number *(36)*. (payment will be made only for the actually execution,on the order of the engineer)	1.00	Item		
	Anti Termite Treatment				
1.B.30	Allow for anti termite treatment for barrier and colony elimination at preconstruction stage. The service provider should hold a valid license for termite treatment issued from Department of Agriculture. Rate to include for a complete treatment with 1.Treatment before placing the foundation. 2. Treatment after placing floor concrete 3. Treatment along the periphery of the building. The service provider should give minimum 10 years warranty against termite treatment. the service provider should submit the list of Termiticide intended to use for Engineer's approval. the following minimum requirements to be maintained. 1.Application rate 5l/m2 2.Termiticide Concentration : 12.5ml/L 3. Termite pump pressure rate : 250 psi	800.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08- 39				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	C - CONCRETE WORK				
	Mass / Lean Concrete				
	Mass / Lean, screed concrete in foundations, work inclusive of, pouring, ramming and leveling in pits or trenches.				
	75mm thick lean concrete Grade 'C - 15 ' in the following ;				
1.C.1	For column footings	146.00	m^2		
1.C.2	For combined footings	317.00	m^2		
1.C.3	For staircase 'A' footing	2.60	m^2		
1.C.4	For staircase footing at entrance porch	5.50	m^2		
1.C.5	For staircase footing at Electrical room	0.80	m^2		
1.C.6	Under plinth beam	71.00	m^2		
	Mass Concrete Grade 'C - 15 ' in the following.				
1.C.7	150mm thick under wall foundations	87.00	m^2		
1.C.8	150mm thick under curb wall foundations	6.50	m^2		
1.C.9	250mm thick under retaining wall foundations	118.00	m^2		
	Mass Concrete Mass Concrete Grade 'C - 20 ' in the following.				
1.C.10	75 mm thick ground floor concrete with one layer of guage 1000 polythene membrane under ground floor concrete.	264.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reinforced Concrete				
	Reinforced cement concrete Grade ' C - 20 ' in the following				
1.C.11	100mm thick ground resting floor concrete 1:2:4 (20mm) with one layer of guage 1000 polythene membrane.	198.00	m^2		
	Reinforced cement concrete Grade 'C - 25 ' in the following				
1.C.12	For column footings	47.00	m^3		
1.C.13	For column shafts	6.00	m^3		
1.C.14	For combined footings	108.00	m^3		
1.C.15	For combined footing beams	31.00	m^3		
1.C.16	For staircase 'A' footing	0.60	m^3		
1.C.17	For staircase footing at entrance porch	1.30	m^3		
1.C.18	For staircase footing at Electrical room	0.20	m^3		
1.C.19	For staircase 'A' shaft	0.60	m^3		
1.C.20	For staircase shaft at entrance porch	1.50	m^3		
1.C.21	For staircase shaft at Electrical room	0.20	m^3		
1.C.22	For plinth beams	34.00	m^3		
	Expansion joint				
1.C.23	25mm thick expansion joints in ground floor, the 1st , 3/4 of depth filled with bituminous fill & final top 1/4 of depth filled with mastic compound. (bitumen sealing compound) (Approx. length 195.00 m)	1.00	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Formwork				
	Note : Refer pricing preambles				
	Formwork is measured as the net contact surface measurement between concrete and formwork. Form work for columns and beams is given as a girth measurement.				
	Refer section 5.2 in specification for full description of materials and workmen ship. Formwork shall provide a finish to concrete surface to receive plaster as per section 5.4.8.11 in Specification.				
	Formwork as described to				
1.C.24	Vertical sides of column shafts	110.00	m^2		
1.C.25	Vertical sides of plinth beams	205.00	m^2		
1.C.26	Vertical sides of column footings <300mm high	168.00	m		
1.C.27	Vertical sides of column footings	42.00	m^2		
1.C.28	Vertical sides of combined footings <300mm high	181.00	m		
1.C.29	Vertical sides of combined footings	67.00	m^2		
1.C.30	Vertical sides of combined footing beams	178.00	m^2		
1.C.31	Vertical sides of staircase 'A' footings <300mm high	10.00	m		
1.C.32	Vertical sides of staircase footings at entrance porch <300mm high	16.00	m		
1.C.33	Vertical sides of staircase footings at electrical room <300mm high	4.00	m		
1.C.34	Vertical sides of staircase 'A' shaft	6.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
1.C.35	Vertical sides of staircase shaft at entrance porch	15.00	m^2		
1.C.36	Vertical sides of staircase shaft at electrical room	2.00	m^2		
	Reinforcement				
	Refer pricing Preambles				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers (Inevitable laps and chairs included in BOQ Quantities) fy = 460 N/mm2				
	In column footings				
1.C.37	12mm dia.	1.95	MT		
1.C.38	10mm dia.	0.28	MT		
	In combined footings				
1.C.39	12mm dia.	3.78	MT		
1.C.40	10mm dia.	0.43	MT		
	In column shafts				
1.C.41	25mm dia.	1.31	MT		
1.C.42	20mm dia.	0.95	MT		
1.C.43	16mm dia.	0.40	MT		
1.C.44	12mm dia.	0.14	MT		
1.C.45	10mm dia stirrups	0.29	MT		
	In combined footing beams				
1.C.46	25mm dia.	5.12	MT		
1.C.47	20mm dia.	0.71	MT		
1.C.48	16 mm dia.	0.85	MT		
1.C.49	10mm dia stirrups	2.48	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In staircase 'A' footing and shaft				
1.C.50	10mm dia	0.07	MT		
	In staircase footing and shaft at entrance porch				
1.C.51	10mm dia	0.14	MT		
	In staircase footing and shaft at electrical room				
1.C.52	10mm dia	0.02	MT		
	In plinth beam				
1.C.53	16 mm dia.	1.47	MT		
1.C.54	12mm dia.	0.81	MT		
1.C.55	10mm dia stirrups	0.35	MT		
	In ground resting floor slab				
1.C.56	10mm dia.	1.00	MT		
	Mild Steel Rod Reinforcement (fy=250N/mm2)				
1.C.57	6mm dia as links in column shaft	0.22	MT		
1.C.58	6mm dia as links in plinth beam	0.52	MT		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08- 39				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	D - MASONRY WORK				
	Note: Rubble shall be free from soft rock and shall be sharp and angular shape. No vandully large for small stone shall be used in the rubble masonry work.The rubble shall be obtained from and approved quarry by the Engineer.				
	Random rubble masonry in cement and sand 1:5 in wall foundation.				
1.D.1	350mm thick	20.00	m^3		
1.D.2	300mm thick	14.00	m^3		
	Random rubble masonry in cement and sand 1:5 in curb wall foundation.				
1.D.3	300mm thick	12.50	m^3		
	Random rubble masonry in cement and sand 1:5 in retaining wall foundation.				
1.D.4	600mm thick	73.00	m^3		
1.D.5	450mm thick	58.00	m^3		
	Damp proof course				
	12mm thick horizontal damp proof course in cement and sand 1:2 mix and minimum of two application of hot tar blinded with sand				
1.D.6	350 mm wide	31.00	m^2		
1.D.7	300 mm wide	39.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08- 39				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	E- MISCELLANEOUS WORK				
1.E.1	110mm dia. Perforated P.V.C. pipe parallel to retaining wall,coverd with geo textile cloth graded 25mm metal fill.	164.00	m		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08- 39				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT

BILL NO A1 - SUB STRUCTURE (AUDITORIUM)

COLLECTION

B - EXCAVATION AND EARTH WORK	(From Page 31)	Rs.	
C - CONCRETE WORK	(From Page 36)	Rs.	
D - MASONRY WORK	(From Page 37)	Rs.	
E - MISCELLANEOUS WORK	(From Page 38)	Rs.	

TOTAL CARRIED TO SUMMARY ON PAGE S 08 - 247 Rs.

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO A2 - SUPERSTRUCTURE '(AUDITORIUM)				
	C - CONCRETE WORK				
	Note :Refer Pricing Preambles				
	Mass Concrete				
	50mm thk. mass Concrete Grade 'C-15' in the following.				
2.C.1	At basement floor toilet area	17.00	m^2		
2.C.2	At ground floor toilet area	8.50	m^2		
	75mm thk. mass Concrete Grade 'C-15' in the following.				
2.C.3	At basement floor toilet area	57.00	m^2		
	125mm thk. mass Concrete Grade 'C-15' in the following.				
2.C.4	At ground floor toilet area	26.00	m^2		
	200mm thk. mass Concrete Grade 'C-15' in the following.				
2.C.5	At basement floor toilet area	11.00	m^2		
	100mm thick mass Concrete Grade 'C-20' in the following.				
2.C.6	Ramp laid to slope at ground floor	63.00	m^2		
	Reinforced Concrete				
	Reinforced cement concrete Grade 'C-25' in the following ;				
	In Columns				
2.C.7	From plinth to ground floor level	13.00	m^3		
2.C.8	From ground floor level to first floor level	18.00	m^3		
2.C.9	From first floor level to lower roof / roof slab level	16.00	m^3		
2.C.10	From lower roof / roof slab level to upper roof level	22.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In Isolated columns				
2.C.11	From plinth to ground floor level	1.20	m^3		
2.C.12	From ground floor level to first floor level	4.00	m^3		
2.C.13	From first floor level to lower roof / roof slab level	4.00	m^3		
	In floating columns				
2.C.14	From ground floor level to first floor level	0.35	m^3		
2.C.15	From first floor level to +12.0m slab level	1.40	m^3		
	In landing beams at staircase				
	In staircase 'A'				
2.C.16	Between basement floor level to ground floor level	0.70	m^3		
2.C.17	Between ground floor level to first floor level	0.70	m^3		
	In staircase at electrical room				
2.C.18	Between +1.05M level to +2.25M level	0.20	m^3		
	In steps and waist of staircase				
	In staircase 'A'				
2.C.19	Between basement floor level to ground floor level	4.00	m^3		
2.C.20	Between ground floor level to first floor level	3.80	m^3		
2.C.21	At first floor level	2.80	m^3		
	In stairway at entrance porch				
2.C.22	Between +1.05m level to +3.45m level	11.00	m^3		
	In stairway at first floor balcony				
2.C.23	Between +4.95m level to +6.3m level	4.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In stairway at stage backside				
2.C.24	Between +1.05m level to +2.25m level	1.00	m^3		
	In stairway at electrical room				
2.C.25	Between +1.05M level to +2.25M level	1.00	m^3		
	In Tiers				
2.C.26	Ground floor (between +1.05M level to +3.45M level)	83.00	m^3		
2.C.27	First floor (between +6.30M level to +9.35M level)	42.00	m^3		
	In 125mm thick landing slab at staircase 'A'				
2.C.28	Between basement floor level to ground floor level	5.00	m^2		
2.C.29	Between ground floor level to first floor level	5.00	m^2		
	In 125mm thick landing slab at stairway at entrance porch				
2.C.30	Between +1.05m level to +3.45m level	6.80	m^2		
	In 150mm thick landing slab at stairway at entrance porch				
2.C.31	Between +1.05m level to +2.25m level	2.00	m^2		
	In roof beams				
2.C.32	At upper roof level (on stage)	2.50	m^3		
2.C.33	At upper roof (+13.75M) level	8.50	m^3		
2.C.34	At lower roof (+8.55M) level	6.00	m^3		
2.C.35	At lower roof (+9.80M) level	6.20	m^3		
	In sloping beams				
2.C.36	At ground floor slab (+1.05m) level	14.00	m^3		
2.C.37	At first floor slab level	5.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Note:				
	Grade 25 ready mix concrete use for slab and beams. Rate to include for readymix pump.				
	In 125mm thick suspended slab				
2.C.38	At ground floor slab (+1.05m) level	46.00	m^2		
2.C.39	At ground floor slab (+2.25m) level	155.50	m^2		
2.C.40	At ground floor slab (+3.0m) level	112.00	m^2		
2.C.41	At first floor slab level	397.00	m^2		
2.C.42	At roof slab (+7.55m) level	26.00	m^2		
2.C.43	At roof slab (+9.30m) level	155.50	m^2		
2.C.44	At +12.0m slab level	7.00	m^2		
	In 140mm thick suspended slab				
2.C.45	At ground floor slab (+2.25m) level	52.50	m^2		
2.C.46	At first floor slab level	49.00	m^2		
2.C.47	At +10.2m level	36.00	m^2		
	In 150mm thick suspended slab				
2.C.48	At ground floor slab (+1.05m) level	37.50	m^2		
2.C.49	At ground floor slab (+3.0m) level	23.50	m^2		
2.C.50	At first floor slab level	52.50	m^2		
2.C.51	At cooling tower floor slab (+14.05m) level	55.00	m^2		
	In 165mm thick suspended slab				
2.C.52	At ground floor slab (+2.25m) level	26.00	m^2		
2.C.53	At first floor slab level	57.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In 175mm thick suspended slab				
2.C.54	At ground floor slab (+2.25m) level	26.00	m^2		
2.C.55	At roof slab (+7.55m) level	57.00	m^2		
	In 190mm thick suspended slab				
2.C.56	At space for AHU slab (+7.55m) level	56.00	m^2		
	In beams				
2.C.57	At ground floor slab (+1.05m) level	48.00	m^3		
2.C.58	At ground floor slab (+2.25m) level	45.00	m^3		
2.C.59	At first floor slab level	98.00	m^3		
2.C.60	At roof slab (+9.30m) level	18.00	m^3		
2.C.61	At +10.2m level	6.50	m^3		
2.C.62	At +11.7m level	3.40	m^3		
2.C.63	At +12.0m slab level	3.20	m^3		
2.C.64	At +13.45m level	6.50	m^3		
2.C.65	At cooling tower floor slab(+14.05m) level	12.00	m^3		
2.C.66	At +16.2m level	3.40	m^3		
2.C.67	At +17.0m level	1.50	m^3		
2.C.68	At +19.75m level	8.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Form work				
	Refer Pricing Preamble				
	Refer section 5.2 in specification for full description of materials and workmanship.				
	Form work shall provide a finish to concrete surface to receive plaster as per section 5.3.8.11 in Specification. Form work for columns and beams is given as a girth measurement.				
	Form work as described to ;				
	Vertical sides of column shafts				
2.C.69	From plinth to ground floor level	165.00	m^2		
2.C.70	From ground floor level to first floor level	227.00	m^2		
2.C.71	From first floor level to lower roof / roof slab level	204.00	m^2		
2.C.72	From lower roof / roof slab level to upper roof level	281.00	m^2		
	Vertical sides of isolated column shafts				
2.C.73	From plinth to ground floor level	16.00	m^2		
2.C.74	From ground floor level to first floor level	50.00	m^2		
2.C.75	From first floor level to lower roof / roof slab level	51.00	m^2		
	Vertical sides of floating column shafts				
2.C.76	From ground floor level to first floor level	5.50	m^2		
2.C.77	From first floor level to +12.0m slab level	22.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of beams				
2.C.78	At ground floor slab (+1.05m) level	402.00	m^2		
2.C.79	At ground floor slab (+2.25m) level	410.00	m^2		
2.C.80	At first floor slab level	893.00	m^2		
2.C.81	At roof slab (+9.30m) level	169.00	m^2		
2.C.82	At +10.2m level	66.00	m^2		
2.C.83	At +11.7m level	26.00	m^2		
2.C.84	At +12.0m slab level	36.00	m^2		
2.C.85	At +13.45m level	65.00	m^2		
2.C.86	At cooling tower floor slab(+14.05m) level	91.00	m^2		
2.C.87	At +16.2m level	26.00	m^2		
2.C.88	At +17.0m level	14.00	m^2		
2.C.89	At +19.75m level	67.00	m^2		
	Sides and soffit of roof beams				
2.C.90	At upper roof level (on stage)	26.00	m^2		
2.C.91	At upper roof (+13.75M) level	85.00	m^2		
2.C.92	At lower roof (+8.55M) level	63.00	m^2		
2.C.93	At lower roof (+9.80M) level	65.00	m^2		
	Sides and soffit of sloping beams				
2.C.94	At ground floor slab (+1.05m) level	129.00	m^2		
2.C.95	At first floor slab level	35.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of landing beams at staircase				
	In staircase 'A'				
2.C.96	Between basement floor level to ground floor level	7.00	m^2		
2.C.97	Between ground floor level to first floor level	7.00	m^2		
	In staircase at electrical room				
2.C.98	Between +1.05M level to +2.25M level	2.00	m^2		
	Sides of steps and waist of staircase				
	In staircase 'A'				
2.C.99	Between basement floor level to ground floor level	5.00	m^2		
2.C.100	Between ground floor level to first floor level	7.00	m^2		
2.C.101	At first floor level	4.00	m^2		
	In stairway at entrance porch				
2.C.102	Between +1.05m level to +3.45m level	2.00	m^2		
	In stairway at first floor balcony				
2.C.103	Between +4.95m level to +6.3m level	3.00	m^2		
	In stairway at stage backside				
2.C.104	Between +1.05m level to +2.25m level	2.00	m^2		
	In stairway at electrical room				
2.C.105	Between +1.05M level to +2.25M level	2.00	m^2		
	In Tiers				
2.C.106	Ground floor (between +1.05M level to +3.45M level)	6.00	m^2		
2.C.107	First floor (between +6.30M level to +9.35M level)	4.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sloping soffit of staircase				
	In staircase 'A'				
2.C.108	Between basement floor level to ground floor level	16.00	m^2		
2.C.109	Between ground floor level to first floor level	15.00	m^2		
2.C.110	At first floor level	11.00	m^2		
	In stairway at entrance porch				
2.C.111	Between +1.05m level to +3.45m level	39.00	m^2		
	In stairway at first floor balcony				
2.C.112	Between +4.95m level to +6.3m level	15.00	m^2		
	In stairway at stage backside				
2.C.113	Between +1.05m level to +2.25m level	4.00	m^2		
	In stairway at electrical room				
2.C.114	Between +1.05M level to +2.25M level	5.00	m^2		
	In Tiers				
2.C.115	Ground floor (between +1.05M level to +3.45M level)	324.00	m^2		
2.C.116	First floor (between +6.30M level to +9.35M level)	170.00	m^2		
	150mm high risers of staircase				
	In staircase 'A'				
2.C.117	Between basement floor level to ground floor level	52.00	m		
2.C.118	Between ground floor level to first floor level	45.00	m		
2.C.119	At first floor level	31.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In stairway at entrance porch				
2.C.120	Between +1.05m level to +3.45m level	106.00	m		
	In stairway at first floor balcony				
2.C.121	Between +4.95m level to +6.3m level	49.00	m		
	In stairway at stage backside				
2.C.122	Between +1.05m level to +2.25m level	12.00	m		
	In stairway at electrical room				
2.C.123	Between +1.05M level to +2.25M level	14.00	m		
	In Tiers				
2.C.124	Ground floor (between +1.05M level to +3.45M level)	320.00	m		
2.C.125	First floor (between +6.30M level to +9.35M level)	170.00	m		
	Soffit of suspended slab				
2.C.126	At ground floor slab (+1.05m) level	83.50	m^2		
2.C.127	At ground floor slab (+2.25m) level	260.00	m^2		
2.C.128	At ground floor slab (+3.0m) level	135.50	m^2		
2.C.129	At first floor slab level	555.50	m^2		
2.C.130	At roof slab (+7.55m) level	83.00	m^2		
2.C.131	At space for AHU slab (+7.55m) level	56.00	m^2		
2.C.132	At roof slab (+9.30m) level	155.50	m^2		
2.C.133	At +10.2m slab level	36.00	m^2		
2.C.134	At +12.0m slab level	7.00	m^2		
2.C.135	At cooling tower floor slab(+14.05m) level	55.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of landing slab at staircase 'A'				
2.C.136	Between basement floor level to ground floor level	12.00	m^2		
2.C.137	Between ground floor level to first floor level	12.00	m^2		
	Sides and soffit of landing slab at stairway at entrance porch				
2.C.138	Between +1.05m level to +3.45m level	7.00	m^2		
	Sides and soffit of landing slab at stairway at electrical room				
2.C.139	Between +1.05m level to +2.25m level	3.00	m^2		
	Reinforcement				
	Note: Refer Pricing Preambles				
	No allowance have been made for rolling margin in taking off quantities.				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers (inevitable laps & chairs paid separately based on the bar schedules submitted in advance by the contractor and as per Engineer's approval) fy = 460 N/mm2				
	25 mm dia. in Columns.				
2.C.140	From plinth to ground floor level	1.24	MT		
2.C.141	From ground floor level to first floor level	1.97	MT		
2.C.142	From first floor level to lower roof / roof slab level	0.93	MT		
	20 mm dia. in Columns.				
2.C.143	From plinth to ground floor level	1.03	MT		
2.C.144	From ground floor level to first floor level	2.11	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.C.145	From first floor level to lower roof / roof slab level	2.39	MT		
2.C.146	From lower roof / roof slab level to upper roof level	3.82	MT		
	16 mm dia. in Columns.				
2.C.147	From plinth to ground floor level	0.42	MT		
2.C.148	From ground floor level to first floor level	0.78	MT		
2.C.149	From first floor level to lower roof / roof slab level	0.78	MT		
2.C.150	From lower roof / roof slab level to upper roof level	0.84	MT		
	12 mm dia. in Columns				
2.C.151	From plinth to ground floor level	0.11	MT		
	10 mm dia. stirrups in Columns				
2.C.152	From plinth to ground floor level	0.41	MT		
2.C.153	From ground floor level to first floor level	0.51	MT		
2.C.154	From first floor level to lower roof / roof slab level	0.09	MT		
	16 mm dia. in Floating Columns.				
2.C.155	From ground floor level to first floor level	0.02	MT		
2.C.156	From first floor level to +12.0m slab level	0.04	MT		
	12 mm dia. in Floating Columns.				
2.C.157	From ground floor level to first floor level	0.01	MT		
2.C.158	From first floor level to +12.0m slab level	0.08	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	25mm dia in beams				
2.C.159	At ground floor slab (+1.05m) level	0.12	MT		
2.C.160	At first floor slab level	2.56	MT		
2.C.161	At +10.2m level	0.13	MT		
2.C.162	At +11.7m level	0.38	MT		
2.C.163	At cooling tower floor slab(+14.05m) level	0.85	MT		
2.C.164	At +16.2m level	0.38	MT		
	20mm dia in beams				
2.C.165	At ground floor slab (+1.05m) level	2.78	MT		
2.C.166	At ground floor slab (+2.25m) level	3.49	MT		
2.C.167	At first floor slab level	5.37	MT		
2.C.168	At roof slab (+9.30m) level	0.68	MT		
2.C.169	At +10.2m level	0.20	MT		
2.C.170	At +11.7m level	0.05	MT		
2.C.171	At +12.0m slab level	0.11	MT		
2.C.172	At +13.45m level	0.55	MT		
2.C.173	At cooling tower floor slab(+14.05m) level	0.39	MT		
2.C.174	At +16.2m level	0.05	MT		
2.C.175	At +17.0m level	0.05	MT		
2.C.176	At +19.75m level	0.59	MT		
	16 mm dia. in beams				
2.C.177	At ground floor slab (+1.05m) level	0.81	MT		
2.C.178	At ground floor slab (+2.25m) level	0.53	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.C.179	At first floor slab level	1.02	MT		
2.C.180	At roof slab (+9.30m) level	0.42	MT		
2.C.181	At +10.2m level	0.02	MT		
2.C.182	At +11.7m level	0.05	MT		
2.C.183	At +12.0m slab level	0.07	MT		
2.C.184	At cooling tower floor slab(+14.05m) level	0.29	MT		
2.C.185	At +16.2m level	0.05	MT		
2.C.186	At +17.0m level	0.03	MT		
2.C.187	At +19.75m level	0.07	MT		
	12 mm dia. in beams				
2.C.188	At ground floor slab (+1.05m) level	0.10	MT		
2.C.189	At ground floor slab (+2.25m) level	0.12	MT		
2.C.190	At first floor slab level	0.15	MT		
2.C.191	At roof slab (+9.30m) level	0.05	MT		
2.C.192	At +12.0m slab level	0.05	MT		
	10mm dia stirrups in beams				
2.C.193	At ground floor slab (+1.05m) level	1.01	MT		
2.C.194	At ground floor slab (+2.25m) level	1.14	MT		
2.C.195	At first floor slab level	2.29	MT		
2.C.196	At roof slab (+9.30m) level	0.48	MT		
2.C.197	At +10.2m level	0.14	MT		
2.C.198	At +11.7m level	0.06	MT		
2.C.199	At +12.0m slab level	0.06	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.C.200	At +13.45m level	0.16	MT		
2.C.201	At cooling tower floor slab(+14.05m) level	0.23	MT		
2.C.202	At +16.2m level	0.06	MT		
2.C.203	At +17.0m level	0.04	MT		
2.C.204	At +19.75m level	0.16	MT		
	20mm dia. in roof beam				
2.C.205	At upper roof (+13.75m) level	0.72	MT		
	16mm dia. in roof beam				
2.C.206	At upper roof level (on stage)	0.08	MT		
2.C.207	At lower roof (+8.55M) level	0.21	MT		
2.C.208	At lower roof (+9.80M) level	0.22	MT		
	12mm dia. in roof beam				
2.C.209	At upper roof level (on stage)	0.04	MT		
2.C.210	At lower roof (+8.55M) level	0.11	MT		
2.C.211	At lower roof (+9.80M) level	0.12	MT		
	10mm dia.stirrups in roof beam				
2.C.212	At upper roof level (on stage)	0.07	MT		
2.C.213	At upper roof (+13.75m) level	0.20	MT		
2.C.214	At lower roof (+8.55M) level	0.16	MT		
2.C.215	At lower roof (+9.80M) level	0.17	MT		
	25mm dia. In sloping beam				
2.C.216	At first floor slab level	0.72	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	20mm dia. In sloping beam				
2.C.217	At ground floor slab (+1.05m) level	0.60	MT		
2.C.218	At first floor slab level	0.05	MT		
	16mm dia. In sloping beam				
2.C.219	At ground floor slab (+1.05m) level	0.33	MT		
2.C.220	At first floor slab level	0.11	MT		
	10mm dia.stirrups in sloping beam				
2.C.221	At ground floor slab (+1.05m) level	0.31	MT		
2.C.222	At first floor slab level	0.08	MT		
	20mm dia in landing beam in staircase				
	In staircase 'A'				
2.C.223	Between basement floor level to ground floor level	0.04	MT		
2.C.224	Between ground floor level to first floor level	0.04	MT		
	16mm dia in landing beam in staircase				
	In staircase 'A'				
2.C.225	Between basement floor level to ground floor level	0.02	MT		
2.C.226	Between ground floor level to first floor level	0.02	MT		
	In staircase at electrical room				
2.C.227	Between +1.05m level to +2.25m level	0.02	MT		
	12mm dia in landing beam in staircase				
	In staircase at electrical room				
2.C.228	Between +1.05m level to +2.25m level	0.01	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	10mm dia stirrups in landing beam				
	In staircase 'A'				
2.C.229	Between basement floor level to ground floor level	0.02	MT		
2.C.230	Between ground floor level to first floor level	0.02	MT		
	In staircase at electrical room				
2.C.231	Between +1.05m level to +2.25m level	0.02	MT		
	12mm dia in landing & steps in staircase				
	In staircase 'A'				
2.C.232	Between basement floor level to ground floor level	0.26	MT		
2.C.233	Between ground floor level to first floor level	0.21	MT		
2.C.234	At first floor level	0.18	MT		
	In stairway at entrance porch				
2.C.235	Between +1.05m level to +3.45m level	0.85	MT		
	In stairway at first floor balcony				
2.C.236	Between +4.95m level to +6.3m level	0.16	MT		
	In stairway at stage backside				
2.C.237	Between +1.05m level to +2.25m level	0.14	MT		
	In Tiers				
2.C.238	Ground floor (between +1.05M level to +3.45M level)	3.23	MT		
2.C.239	First floor (between +6.30M level to +9.35M level)	1.68	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	10mm dia in landing & steps in staircase				
	In staircase 'A'				
2.C.240	Between basement floor level to ground floor level	0.11	MT		
2.C.241	Between ground floor level to first floor level	0.26	MT		
2.C.242	At first floor level	0.05	MT		
	In stairway at entrance porch				
2.C.243	Between +1.05m level to +3.45m level	0.22	MT		
	In stairway at first floor balcony				
2.C.244	Between +4.95m level to +6.3m level	0.07	MT		
	In stairway at stage backside				
2.C.245	Between +1.05m level to +2.25m level	0.03	MT		
	In staircase at electrical room				
2.C.246	Between +1.05m level to +2.25m level	0.12	MT		
	In Tiers				
2.C.247	Ground floor (between +1.05M level to +3.45M level)	0.68	MT		
2.C.248	First floor (between +6.30M level to +9.35M level)	0.37	MT		
	10mm dia in suspended floor slab				
2.C.249	At ground floor slab (+1.05m) level	0.85	MT		
2.C.250	At ground floor slab (+2.25m) level	2.60	MT		
2.C.251	At ground floor slab (+3.0m) level	2.70	MT		
2.C.252	At first floor slab level	5.50	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.C.253	At space for AHU & roof slab (+7.55m) level	1.70	MT		
2.C.254	At roof slab (+9.30m) level	1.61	MT		
2.C.255	At +10.2m slab level	0.30	MT		
2.C.256	At +12.0m slab level	0.09	MT		
2.C.257	At cooling tower floor slab(+14.05m) level	0.96	MT		
	Mild Steel (fy = 250N/mm^2) rod reinforcement as follows				
	6mm dia. links in column shafts				
2.C.258	From plinth to ground floor level	0.31	MT		
2.C.259	From ground floor level to first floor level	0.46	MT		
2.C.260	From first floor level to lower roof / roof slab level	0.53	MT		
2.C.261	From lower roof / roof slab level to upper roof level	0.67	MT		
	6mm dia. links in floating column shafts				
2.C.262	From ground floor level to first floor level	0.01	MT		
2.C.263	From first floor level to +12.0m slab level	0.05	MT		
	6mm dia. links in beams				
2.C.264	At ground floor slab (+1.05m) level	0.01	MT		
2.C.265	At ground floor slab (+2.25m) level	0.01	MT		
2.C.266	At first floor slab level	0.03	MT		
2.C.267	At roof slab (+9.30m) level	0.01	MT		
2.C.268	At +10.2m level	0.01	MT		
2.C.269	At +12.0m slab level	0.02	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.C.270	Allow inevitable laps and chairs for all types of reinforcement bars as per the Engineers instructions.	0.10	MT		
	Note: The following items are measured including reinforcement & formwork.				
	225x150 mm high lintol beams including 02 nos. 10 mm dia T/S bars and 6mm dia mild steel stirrups @ 100c/c with necessary formwork and concreting in Grade 25				
2.C.271	At basement floor lintol level	31.00	m		
2.C.272	At ground floor lintol level	76.00	m		
2.C.273	At first floor lintol level	47.00	m		
2.C.274	At +9.35M level to above	8.50	m		
	112.5x150 mm high lintol beams including 02 nos. 10 mm dia T/S bars and 6mm dia mild steel stirrups @ 100c/c with necessary formwork and concreting in Grade 25				
2.C.275	At basement floor lintol level	14.00	m		
	225x150 mm high sill beams including 02 nos. 10 mm dia T/S bars and 6mm dia mild steel stirrups @ 100c/c with necessary formwork and concreting in Grade 25				
2.C.276	At basement floor lintol level	22.00	m		
2.C.277	At ground floor lintol level	30.00	m		
2.C.278	At first floor lintol level	35.00	m		
2.C.279	At +9.35M level to above	8.50	m		
	75mm thick R.C.C. vanity top (C 25) including necessary reinforcements and formwork, complete with 20mm thk. granite finish with bull nose edge.				
2.C.280	At basement floor	6.00	m^2		
2.C.281	At ground floor	5.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	75mm thick RCC weather shades including necessary concreting, form work & reinforcement.				
2.C.282	At ground floor	22.00	m^2		
2.C.283	At first floor	25.00	m^2		
	125mm thick R.C.C Facia (C 25) including 01 nos 10mm dia T/S bars @ 250 c/c with necessary concreting, form work complete with plastering & painting.				
2.C.284	At ground floor	121.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	D - MASONRY				
	Refer Pricing Preambles				
	Brick Work				
	Brick work with standard bricks (Size 215x102.5x65 mm without motar) in cement and sand 1:5 motar.				
	One brick thick (225mm) walls				
2.D.1	From basement floor level to ground floor level	338.00	m^2		
2.D.2	From ground floor level to first floor level	1100.00	m^2		
2.D.3	From first floor level to +9.35M level	1017.00	m^2		
2.D.4	From +9.35M level to above	1298.00	m^2		
	1500mm high one brick thick (225mm) walls				
2.D.5	From ground floor level to first floor level	22.00	m^2		
	900mm high one brick thick (225mm) walls				
2.D.6	From first floor level to above	19.00	m^2		
	Half brick thick (112.5mm) walls				
2.D.7	From basement floor level to ground level	90.00	m^2		
	750mm high half brick thick (112.5mm) walls				
2.D.8	From first floor level to above	95.00	m^2		
	900mm high half brick thick (112.5mm) walls				
2.D.9	From first floor level to above	61.00	m^2		
	900mm high one brick thick (600mm) walls				
2.D.10	From first floor level to above	7.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Rubble steps				
2.D.11	1800mm long (approx) Rubble steps at both sides of entrance porch consisting of 5 No. tread 300mm wide and 6 No. risers 150mm high.	1.00	Item		
2.D.12	2000mm long (approx) Rubble steps at path way , consisting of 5 No. tread 300mm wide and 6 No. risers 150mm high.	1.00	Item		
2.D.13	1300mm long (approx) Rubble steps at ramp up , consisting of 2 No. tread 300mm wide and 3 No. risers 150mm high.	1.00	Item		
	Brick step				
2.D.14	1200mm long (Approx.) " L " shaped brick steps at timber stage in ground floor, consisting of 7 No. tread 300mm wide and 8 No. risers 150mm high complete with 12mm thick cement and sand 1:2 rendering finished smooth with neat cement floating.	1.00	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	E - WATER PROOFING Water proofing system, shall consist of two (2) coats of water proofing concrete slurry coats. Surface preparation, mixing, application and curing shall be strictly in accordance with the manufacture's instructions. The Contractor may use any system of water proofing concrete by crystallization, with the prior approval of the Engineer. Rate shall include for chipping, removing and cleaning all loose materials on the surfaces to be water proof. Rate shall include for seailing around gullies, pipe protrusions with non shrink high strength cementation grout Master flow 98 or equivalent Rate shall include for forming 1:3 cement and sand 25 x 25mm angle fillets at all right angled edges and mixing, laying of plastering (1:5) up to 300mm in toilet area and 1500mm high from finished floor level in shower area Supplying and laying of Glass fiber reinforcement strip, Glascote 60 or equivalent to vertical/ horizontal intersections as per manufacture instruction & working order. Water proofing to be used approved product such as" Barallastic "or equivalent Water proofing to walls of toilets up to a height of 300mm including 5 years warranty with all materials.				
2.E.1	In basement floor	34.00	m^2		
2.E.2	In ground floor	10.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Water proofing to toilet floor including 5 years warranty with all materials.				
2.E.3	At ground floor slab level (toilet area)	35.00	m^2		
	Water proofing to top of concrete slab, using water proof membrane as per the specifications given in the drawings and BOQ				
2.E.4	At +7.55m roof slab level	71.00	m^2		
2.E.5	At +9.30m roof slab level	177.00	m^2		
2.E.6	At +12.0m slab level	10.00	m^2		
2.E.7	At +14.05m slab level (space for cooling tower)	58.00	m^2		
	Water proofing to weather shade				
2.E.8	At ground floor	22.00	m^2		
2.E.9	At first floor	25.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	F- STRUCTURAL STEEL WORK Refer Pricing Preambles Note. All steel used in the work shall comply with relevant British Standards and to the Specifications. The Contractor shall submit the specification for the steel which proposed to use and obtain prior approval from the Engineer before commencement of odering steel and fabrication. Before any steel work is started, the contractor shall submit and obtain prior aprroval for shop drawings from Engineer. No welding shall be done until approval of the prepared surface has been obtained. All welding shall be carried out under the supervision of qualified person. **<u>Trusses</u>** Structural Steel should be Grade 43 (Yield Strength 250 N/mm^2 and Ultimate tensile Strength 430 N/mm^2) in compliance with BS 4360. Minimum elongation should be 22% . **<u>Purlins</u>** Steel purlins 'Z' or 'C' Sections should be cold rolled from high strength galvanized (Zinc Coated) steel of minimum yield strength of 440 Mpa (Accordance with the standard of JISC 3302 SGC 440). Minimum average coating mass 290 g/m2 . Base metal thickness 1.6mm, 2.0mm and 2.4mm according to selected section. ***Total Carried Forward***				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Rate shall include for preparation and applying two coats of enamel paint (paint approved by engineer) after treating with two coat of anticorrosive paint to all exposed faces of trusses, Roof frames and steel members where necessary as instructed by Engineer.				
2.F.1	Structural steel roof Web truss type T1 - 24350 mm center to center of supports and eaves extended up to 1000 mm, fabricated, hoisted and fixed at a height of 12750 mm above ground level. 2 /90 x 90 x6 top and bottom chords placed on beams. One end fixed to beam (Fixed end) with 300 x 300 x10mm thick Ms plate & 300 x 300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt & free end fixed with 300 X300 x10mm thick Ms plate & 300 X300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt , including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail Drg. (Approx weight of each truss 1.66 MT)	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.F.2	Structural steel roof Web truss type T2 - 24000 mm center to center of supports and eaves extended up to 1000 mm, fabricated, hoisted and fixed at a height of 12750 mm above ground level. 2 /90 x 90 x6 top and bottom chords placed on columns. One end fixed to column (Fixed end) with 300 x 300 x10mm thick Ms plate & 300 x 300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt & free end fixed with 300 X300 x10mm thick Ms plate & 300 X300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt , including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail Drg. (Approx weight of each truss 1.66 MT)	1.00	Nr		
2.F.3	Structural steel roof Web truss type T3 - 22444 mm center to center of supports and eaves extended up to 1000 mm, fabricated, hoisted and fixed at a height of 12750 mm above ground level. 2 /90 x 90 x6 top and bottom chords placed on columns. One end fixed to column (Fixed end) with 300 x 300 x10mm thick Ms plate & 300 x 300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt & free end fixed with 300 X300 x10mm thick Ms plate & 300 X300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt , including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail Drg. (Approx weight of each truss 1.5 MT)	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.F.4	Structural steel roof Web truss type T4 - 20700 mm center to center of supports and eaves extended up to 1000 mm, fabricated, hoisted and fixed at a height of 12750 mm above ground level. 2 /90 x 90 x6 top and bottom chords placed on columns. One end fixed to column (Fixed end) with 300 x 300 x10mm thick Ms plate & 300 x 300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt & free end fixed with 300 X300 x10mm thick Ms plate & 300 X300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt , including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail Drg. (Approx weight of each truss 1.21 MT)	1.00	Nr		
2.F.5	Structural steel roof Web truss type T5 - 19575 mm center to center of supports and eaves extended up to 1000 mm, fabricated, hoisted and fixed at a height of 12750 mm above ground level. 2 /90 x 90 x6 top and bottom chords placed on columns. One end fixed to column (Fixed end) with 300 x 300 x10mm thick Ms plate & 300 x 300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt & free end fixed with 300 X300 x10mm thick Ms plate & 300 X300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt , including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail Drg. (Approx weight of each truss 1.2 MT)	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.F.6	Structural steel roof Web truss type T6 - 18500 mm center to center of supports and eaves extended up to 1000 mm, fabricated, hoisted and fixed at a height of 12750 mm above ground level. 2 /90 x 90 x6 top and bottom chords placed on columns. One end fixed to column (Fixed end) with 300 x 300 x10mm thick Ms plate & 300 x 300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt & free end fixed with 300 X300 x10mm thick Ms plate & 300 X300 x10mm thick sole plate with 4 nos of 20mm dia 375mm long rag bolt , including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail Drg. (Approx weight of each truss 1.24 MT)	1.00	Nr		
2.F.7	Structural steel roof truss type T7 and T8-3000mm long fabricated, hoisted and fixed at a height of 7500 mm above ground level ,one end of eave extended up to 1025mm and the other end of truss placed on R.C.C. roof beam and fixed with rag bolts including all gusset plates, rag bolts, nuts, washers ect.all as per detail Drg. (Approx weight of each truss 0.11 MT)	4.00	Nr		
2.F.8	Structural steel roof truss type T9, 4000mm long fabricated, hoisted and fixed at a height of 7500 mm above ground level ,one end of eave extended up to 1025mm and the other end of truss placed on R.C.C. roof beam and fixed with rag bolts including all gusset plates, rag bolts, nuts, washers ect.all as per detail Drg. (Approx weight of each truss 0.12 MT)	2.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.F.9	Structural steel roof truss type T10, 5000mm long fabricated, hoisted and fixed at a height of 7500 mm above ground level ,one end of eave extended up to 1025mm and the other end of truss placed on R.C.C. roof beam and fixed with rag bolts including all gusset plates, rag bolts, nuts, washers ect.all as per detail Drg. (Approx weight of each truss 0.14 MT)	2.00	Nr		
2.F.10	Structural steel roof truss type T11, 5700mm long fabricated, hoisted and fixed at a height of 7500 mm above ground level ,one end of eave extended up to 1025mm and the other end of truss placed on R.C.C. roof beam and fixed with rag bolts including all gusset plates, rag bolts, nuts, washers ect.all as per detail Drg. (Approx weight of each truss 0.14 MT)	2.00	Nr		
2.F.11	Structural steel roof truss type T12, 24375mm long fabricated, hoisted and fixed at a height of 22100 mm above ground level ,one end of eave extended up to 1000mm and the other end of truss placed on R.C.C. roof beam and fixed with rag bolts including all gusset plates, rag bolts, nuts, washers ect.all as per detail Drg. (Approx weight of each truss 0.87 MT)	2.00	Nr		
2.F.12	Structural steel lip channel 150 x 65 x 14 (2.0mm thick) and 4.53 kg/m fixed as per detail drawing. Rate to include for 80 x 80 x 8 cleats and rag bolts. (Approx weight of lip channel 6.95 MT)	1233.00	m		
2.F.13	Structural steel I beams 600x300 (137Kg/m) fixed at 19.75m level as per detail drawings & Engineers approval. (Total weight of beams 16.08MT. approx)	118.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Cat Walk				
2.F.14	Fabricating & fixing Cat Walk to the T5 & T6 roof web trusses, consisting of 2/90x90x6 bottom chord of trusses bolted to top end of 250x125x29.6 kg/m I beam, 300x125x10 mm thk. bent to shape plate bolted to top end of 250x125x29.6 kg/m I beam & 150x100x21.1 kg/m I beam. Another 275x125x10 mm thk. bent to shape plate bolted to middle end & bottom end of 250x125x29.6 kg/m I beams & 150x100x21.1 kg/m I beam. 100x100x10 mm angle iron welded to two parallel bottom end of 250x125x29.6 kg/m I beams at 1000 c/c distance and 6mm thk. chequered plate welded to angle iron. 48mm dia. GI pipe welded horizontally between middle & top end of I beam including all , gusset plates , cleats , rivets , nuts, washers ect.all as per detail drawing no.2019-04-001ST01 and Enginners approval. (Approx length of cat walk 19.58m)	1.00	Item		
2.F.15	Fabricating & fixing steel staircase consisting of rectangular steel hollow section upto +19.3m level. staircase hanged & supported from 200x150x30.6 kg/m I beam section & 4mm thk. bent to shape chequered plate welded to I beam including all , gusset plates , cleats , rivets , nuts, washers ect. all as per drawing no. 2019-04-001ST35 & 2019-04-001ST36 and Enginners approval. (Approx length of steel staircase 45.0m)	1.00	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	G - METAL WORK Refer Pricing Preambles **Aluminium Panels** <u>Material</u> All Aluminium sections shall be fully treated extruded Aluminium alloy sections in accordance with BS 1470,1471, 1473, 1474 or latest relevant EN standard All Aluminium sections to be locally manufactured ("Alumex" or similar products of equivalent technical parameters) All Aluminium sections shall present clear, straight and sharply defined lines. They shall be free from defects impairing strength, appearance and durability. <u>Finish</u> All members shall be finished **either** by (a) Anodizing or (b) Powder coating (What ever specified in Aluminium Items) <u>Anodizing</u> -Exposed surface of all members shall be anodized using two steps. Anodizing process to an anodic thickness of not less than 10-15 microns and shall be free of any defects. <u>Powder coating</u> - Powder coating shall be carried out using polyester coating with proper and appropriate pre- treatment to a thickness of not less than 60-80 microns, measured on all significant surfaces. <u>Screws and Hardware Items</u> Concealed screws, nuts, bolts, rivets and other fastening devices shall be of Aluminium, non-magnetic stainless steel or other approved corrosive resistant materials. If visible, they shall blend with the finish of the framing Aluminium sections. ***Total Carried Forward***				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Hardware items such as Hinges, Handles, Catches, fixtures etc., shall be minimum of grade 304 stainless steel.				
	Glass Glazing shall be minimum of 6mm thick clear float glass unless otherwise stated. Glass shall be secured at all edges with compression gaskets and glazing beads. When fixing glass, all glazing sealant shall be carefully applied and cleaned off properly.				
	Workmanship The fabrication and installation of all Aluminium work must be carried out by specialist tradesmen.				
	All dimensions shown on the drawings and the shop drawings must be verified by actual site measurement before fabrication and installation. Any cutting to enlarge the size of openings and approved practical method to fill the excess void behind frames required after installation shall be executed by the Contractor at his own expense.				
	All Aluminium members shall be factory fabricated to the best standard of workmanship under experienced factory supervision and control.				
	Materials, method of fabrication, assembly, installation, fastenings, supports, braces, operating parts and the like shall be in accordance with the approved shop drawings.				
	All joints in frames at corners, junctions and intersections shall be mechanically jointed and be such that when assembled they are as strong and rigid as adjoining sections. Due care must be taken to ensure that all joints are water tight and leak-proof. Joint lines should not be visible.				
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Provisions must be made for expansion and contraction in horizontal and vertical members which are exposed to the weather or environments. Any distortion of members or any glass cracked or broken as a result of inadequate provisions must be rectified by the Contractor at his own expenses. All works shall be securely installed and anchored in position, set plumb, square and level in accurate alignment with other work, all in accordance with the approved shop drawings to the Engineer's satisfaction.(The allowable tolerance in terms of specified dimensions shall be plus/minus 1.5mm.) <u>Submissions</u> The Contractor shall submit shop drawings showing the following information where appropriate to the item ; layout (Sectional plan and elevation) of complete assembly - full size sections of members - methods of assembly - methods of glazing - methods of installation, including fixings caulking, flashing - provisions for vertical and horizontal expansion - junctions and trim to adjoining surfaces - fittings and accessories The Contractor shall submit certificates from the Aluminium manufacture and/or an approved testing laboratory which attest that the coating thickness offered is as specified. <u>Doors & Windows</u> Frame and /or sash sections shall be of extruded EN-AW 6063-T_5 Aluminium Alloy having a normal thickness of 1.5mm (Accepted commercial tolerance of tolerance of ± 0.15mm shall apply) ***Total Carried Forward***				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				

Aluminium Louvers

Fixed louvers shall be of the weather proof type, suitable for overcoming water carried-over by wind and the fixed louvers shall have free areas of not less than 50%

The Contractor shall provide a guarantee in respect of the weatherproof properties of the fixed louvers.

All powder coatings shall match the windows. Panels shall be so constructed as to be completely weather proof at junctions with adjoin structures .

Louver members shall be 1.2mm thick & Y type.

Partitions

The frames shall be properly machined no permit easy assembly and to form weather-tight joints when caulked.
Partition members shall be 76mm in depth and the thickness of 1.2mm.

Following dimensions are applied for the frame members of each assembly units

Assembly Unit	Minimum member depth(mm)	Minimum member thickness (mm)
Door	100	1.5
Sliding door/ Window	80	1.5
Cesement Window, Fanlight	70	1.5
Fixed glass window	100	1.5

Rates shall include for all necessary hinges, screws, rubber beadings, skelton bolts, Aluminium louvers, pinhead stickers. (Locks,Handles,Door closers paid separately for doors or sliding doors)

Total Carried Forward

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Locks- (Union or equivalent) Mortise lock - Without handle- 4350/= (excluding VAT) With powder coated handle (Black/ White) 6000/= (excluding VAT) **Hinges**-(Union or equivalent) 102 x76 x 2mm 2000/= per pair 102 x76 x 3mm 2850/= per pair (excluding VAT) **Handle**-Grade 304 stainless steel 2900/= per pair(excluding VAT) **Door closer** 60kg-80kg [Yale -7000/= (excluding VAT)] 60kg-80kg [Union-7100/=(excluding VAT)] Refer drawing No.2019-04-001AR23, 2019-04-001AR24 <u>Doors, Windows & Fanlights</u> Supplying, Fabricating and Fixing Double sashed fully composite paneled Aluminium door type **D9**, 1200 x 2100mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash consist of 4mm thick both side same colour aluminium composite panel as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 2.52 m2)				
2.G.1	At basement	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, Fabricating and Fixing Single sashed glazed and composite paneled Aluminium door type **D10**, 900 x 3000mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash. Bottom panel consist of 4mm thick aluminium composite panel (both side same colour) and middle panel with 6 mm thick clear glass. 6 mm thick 900 x900 mm clear glass fixed to top . All as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 2.7 m^2)				
2.G.2	At ground floor	1.00	Nr.		
	Supplying, Fabricating and Fixing Single sashed fully Aluminium composite paneled door type **D11**, 900 x 2100mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash. Top and bottom panels consist of 4mm thick both side same colour aluminium composite panel . All as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 1.89 m^2)				
2.G.3	At ground floor	4.00	Nr.		
2.G.4	At first floor	4.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, Fabricating and Fixing Single sashed fully Aluminium composite paneled door type **D13**, 850 x 2100mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash. Top and bottom panels consist of 4mm thick both side same colour aluminium composite panel . All as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 1.78 m^2)				
2.G.5	At basement	6.00	Nr.		
2.G.6	At ground floor	3.00	Nr.		
	Supplying, Fabricating and Fixing Single sashed fully Aluminium composite paneled door type **D14**, 850 x 1950mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash. Top and bottom panels consist of 4mm thick both side same colour aluminium composite panel . All as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 1.65 m^2)				
2.G.7	At basement	5.00	Nr.		
2.G.8	At ground floor	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, Fabricating and Fixing Single sashed fully Aluminium composite paneled door type **D15**, 1000 x 2100mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash. Top and bottom panels consist of 4mm thick both side same colour aluminium composite panel . All as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 2.1 m^2)				
2.G.9	At basement	1.00	Nr.		
	Supplying, Fabricating and Fixing Single sashed fully Aluminium composite paneled door type **D16**, 750 x 2100mm high overall with 1.6mm thick & 45.0mmx100mm (deep) matt finished Powder coated aluminium frame and matt finished Powder coated aluminium sash. Top and bottom panels consist of 4mm thick both side same colour aluminium composite panel . All as per detail drawing and Engineers approval. Rate to include for suitable rubber beading and necessary accessories. (Door closers, handles, door locks paid separately effective area of each door 1.57 m^2)				
2.G.10	At basement	1.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, fabricating and fixing Aluminium framed glazed sliding window type **W1**, 6000 x 1800 mm high overall with 1.5mm thick 80mm matt finished powder coated aluminium frame and matt finished powder coated aluminium sashes. 03 nos of 6 mm thick glazed sliding panels and 01 no of 6 mm thick fixed glass panel fixed to both sides of the 1200 x 1800mm fixed glass middle panel . All complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each window approx 10.8 m^2)				
2.G.11	At basement	1.00	Nr.		
	Supplying, fabricating and fixing Aluminium framed glazed sliding window type **W2**, 3000 x 1500 mm high overall with 1.5mm thick 80mm matt finished powder coated aluminium frame and matt finished powder coated aluminium sashes. 6 mm thick fixed glass fixed to middle panels and 02 nos of 6 mm thick glazed sliding panels fixed to both sides. All complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each window approx 4.5 m^2)				
2.G.12	In ground floor	3.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, fabricating and fixing Aluminium framed glazed sliding window type **W3, W5, W6** 2400 x 1500 mm high overall with 1.5mm thick 80mm matt finished powder coated aluminium frame and matt finished powder coated aluminium sashes . 1200 X 1500 mm middle panel consist of 6 mm thick fixed glass. 6 mm thick glazed sliding panels fixed to both sides. All complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each window approx 3.6 m^2)				
2.G.13	In basement floor	2.00	Nr.		
2.G.14	In ground floor	4.00	Nr.		
2.G.15	In first floor	4.00	Nr.		
	Supplying, fabricating and fixing Aluminium framed glazed sliding window type **W4**, 3000 x 1500 mm high overall with 1.5mm thick 80mm matt finished powder coated aluminium frame and matt finished powder coated aluminium sashes. 6 mm thick fixed glass fixed to middle panels and 02 nos of 6 mm thick glazed sliding panels fixed to both sides. All complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each window approx 4.5 m^2)				
2.G.16	In first floor	5.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, fabricating and fixing Aluminium framed glazed sliding window type **W7** ,1350 x 1500 mm high overall with 1.5mm thick 80mm matt finished powder coated aluminium frame and matt finished powder coated aluminium sashes. 02 nos of 6mm thick glazed sliding panel fixed to sash. All complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each window approx 2.02 m^2)				
2.G.17	At basement	2.00	Nr.		
	Supplying, fabricating and fixing Aluminium framed glazed folding sliding window type **SW** ,6000 x 1500 mm high overall with 1.5mm thick 80mm matt finished powder coated aluminium frame and matt finished powder coated aluminium sashes . Equal size 10 nos of panels consist of 6 mm thick clear glass. All complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each window approx 9.0m^2)				
2.G.18	In ground floor	1.00	Nr.		
	Supplying, fabricating and fixing Fanlight type **F1**, 600 x 1050mm high overall with 1.5mm thick 70mm matt finished powder coated aluminium framed top hung fully glazed fanlight sash with 6mm thick clear glass pan, including 450mm high 6mm thick fixed glass on top, all complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each fanlight approx 0.63 m^2)				
2.G.19	At basement	3.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, fabricating and fixing Fanlight type **F2**, 600 x 1500mm high overall with 1.5mm thick 70mm matt finished powder coated aluminium framed top hung fully glazed fanlight sash with 6mm thick clear glass pan, including 900mm high 6mm thick fixed glass on top, all complete as per detail drawing and Engineer's approval. (Rates to include necessary accessories. effective area of each fanlight approx 0.90 m^2)				
2.G.20	In ground floor	1.00	Nr.		
	Single Sash Sliding door				
	Supplying, Fabricating and Fixing single sashed glazed and Aluminium composite panel Sliding door type **SD**, 900 x 2100 mm high overall with 1.5mm thick 80mm, approved color matt finished Powder coated aluminium frame and matt finished powder coated Aluminium sash sliding door with 6.00mm thick clear glass pan as top panel and Aluminium composite panel (both side same colour) to bottom panel with suitable rubber beadings and necessary accessories as per detail drawing No.2019-04-001AR23 and Engineers approval. (Door handles, door locks paid separately & each door 1.89 m^2)				
2.G.21	In ground floor	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Door Locks				
2.G.22	Supplying & Fixing lock (Union or equivalent) for Aluminium Casement single sash door with necessary accessories to working order.	27.00	Nr.		
2.G.23	Supplying & Fixing lock (Union or equivalent) for Aluminium Casement double sash door with necessary accessories to working order.	2.00	Nr.		
2.G.24	Supplying & Fixing lock (Union or equivalent) for Aluminium Sliding door with necessary accessaries to working order.	2.00	Nr.		
	Door Closers				
2.G.25	Supplying & Fixing door closer for Aluminium Casement door with necessary accessories to working order.	31.00	Nr.		
	Door Handles				
2.G.26	Supplying & Fixing matt finish stainless Steel door handles for Aluminium door with necessary accessaries to working order.	31.00	Pairs		
2.G.27	Supplying & Fixing matt finish stainless Steel door handles for Aluminium sliding door with necessary accessaries to working order.	2.00	Pairs		
	<u>Steel Duct door</u>				
	Supplying, Fabricating and Fixing Single sash steel Duct door type **TD**, 600 X1800 mm high overall with steel panel, All complete as per drawing No 2019-04-001AR23 and Engineers approval. Rate to include for suitable rubber beading and necessary accessories.(effective area of each door 1.08m^2)				
2.G.28	In first floor	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Steel Gate				
	Supplying,Fabricating and Fixing twin sash Steel Gate type **SG**, overall 3000 X3000 mm high consisting of 50 X 50 mm box iron frame. Each sash consist of 25 X25 box bars welded horizontally at 200 mm intervals. All as per detail drawing no 2019-04-001AR24 and Engineer's approval. (Rates to include necessary accessories.effective area of the gate 9.0 m^2) Rate shall include for two coats of anti corrosive paints and two coats of enamel paint.				
2.G.29	In ground floor	1.00	Nr.		
	Aluminium Louvers				
	Supplying, fabricating and fixing Aluminium Louver type window **LW** , 1200 x 2400 mm high overall with matt finished powder coated 1.2mm thick aluminium frame and aluminium louvers including 900mm high fixed louver on top,all complete as per drawing No.2019-04-001AR24 and Engineers approval. (each louver approx 2.88 m^2)				
2.G.30	At first floor	2.00	Nr.		
	Supplying, fabricating and fixing Aluminium fixed Louver type **FL1**, 1200 x 2400 mm high overall with matt finished Powder coated 1.2mm thick aluminium frame and aluminium louvers, all complete as per drawing No.2019-04-001AR24 and Engineers approval. (each louver approx 2.88 m^2)				
2.G.31	At +9.35M level to above	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying, fabricating and fixing Aluminium fixed Louver type **FL2**, 1950 x 2400 mm high overall with matt finished powder coated 1.2mm thick aluminium frame and aluminium louvers, all complete as per drawing No.2019-04-001AR24 and Engineers approval. (each louver approx 4.68 m^2)				
2.G.32	At +9.35M level to above	2.00	Nr.		
	Stainless Steel Balustrade and Handrail				
	Fabricating and Fixing of 18mm dia Stainless Steel curved balusters (matt finished), one end welded to 50mm x 50mm x 6mm M.S plate with 75mm x75mm pocket filled with concrete embeded 75mm deep in to brick wall and other end welded to 50mm dia, Stainless Steel (matt finished) pipe handrail. all complete as per detail Drawing No. 2019-04-001AR15 and Engineer's approval.				
2.G.33	Between +1.05m level to +3.45m level (Stairway at entrance porch)	11.00	m		
2.G.34	Between +1.05m level to +2.25m level (stairway at stage backside)	5.00	m		
2.G.35	Between +1.05m level to +2.25m level (stairway at timber stage)	10.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Box iron Balustrade and Handrail				
	Fabricating and Fixing of 900mm high box iron balustrade, consisting of 32 x 32mm box iron balusters at 650mm centers. Bottom end of baluster welded to 6mm thick 50 x 50mm flat iron plate and fixed to steps by anchor bolt and top end to be welded to 50x50mm box iron handrail. 02 no of 25x25mm box iron welded to balusters parellel to box iron handrail. All complete as per detail drawing No 2019-04-001 AR016 and Engineer's approval. Rate to include for prepare and apply one coat of "H" primer and two further coats of matt finish enamel paint.				
2.G.36	Between +1.0m level to +2.25m level (stairway to electrical power room)	9.00	m		
	G.I. Pipe Balustrade and Handrail				
	Fabricating and Fixing of 18mm dia G.I. hollow section pipe curved balusters, one end fixed to 50mm dia, G.I. hollow pipe handrail other end 75mm x75mm pocket filled with concrete embedded 75mm deep in to brick wall. All complete as per detail Drawings No 2019-04-001 AR27 and Engineer's approval. Rate to include for prepare and apply two coats of anticorrosive, two coats of " H " primer crosswise & spray painted black matt finish paint.				
2.G.37	At ground floor level (Ramp area)	61.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Fabricating and Fixing of 18mm dia G.I. hollow section pipe curved balusters, one end fixed to 50mm dia, G.I. hollow pipe handrail & other end fixed to1000mm high balustrade consisting of 50mm G.I.hollow balusters at 1000mm center to center, covered with G.I.capping of top end of baluster, 6mm thick 125 x 75mm M.S.flat iron welded to bottom end of baluster and embedded to concrete curb.. All complete as per detail Drawings No 2019-04-001 AR28 and Engineer's approval. Rate to include for prepare and apply two coats of anticorrosive, two coats of " H " primer crosswise & spray painted black matt finish paint.				
2.G.38	At ground floor level (Ramp area)	4.50	m		
	Fabricating and Fixing of 850mm high timber balustrade consisting of 75x75mm timber balusters covered with 25mm wide 6mm thk.flat iron at 600mm centers. 6mm flat iron box welded to 38x12mm flat iron at bottom end of balusters, 6mm thk. 50x50mm flat iron welded to 12mm thk. flat iron embeded 75mm deep in to concrete floor and top end welded to 50mm wide 12mm black colour matt finished steel plate to 75x50mm teak timber handrail with 25mm wide 6mm thk. flat iron channel. 04 no of 18mm dia.black colour matt finished M.S rods welded to balusters at equal space parallel to hand rail. all complete as per detail Drawing No.2019-04-001AR15 and Engineer's approval. (Timber handrail and balustrades measured seperately.) Rate including preparation of surface and application of one under coat of "H" primer and two further coats of enamel paint.				
2.G.39	Between basement floor to ground floor (Staircase 'A')	24.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.G.40	Between ground floor to first floor (Staircase 'A')	24.00	m		
2.G.41	At first floor level (Staircase 'A')	16.00	m		
2.G.42	Between +4.95m level to +6.3m level (stairway at first floor balcony) Fabricating and Fixing of 825mm high G.I. balustrade consisting of 32mm dia G.I balusters at 900mm centers. 6mm thick 100 x50mm M.S. plate welded to bottom end of baluster and fixed to step by using 02 nos Nut & Bolts and top end welded to 50mm dia G.I handrail. 2Nos. of 25 mm dia.G.I tubes intermediate members welded to balusters at equal space parallel to hand rail. all complete as per detail Drawing No.2019-04-001AR16 and Engineer's approval.	6.00	m		
2.G.43	Between +6.3m level to +19.3m level (steel staircase) **G.I. Ring Ladder**	45.00	m		
2.G.44	Fabricating and Fixing Heavy duty G.I. ring ladder consisting of 37.5mm dia.G.I. lugs at 200mm intervals and both end of 4.8m approx.high 50mm dia.G.I.Tube bars fixed & braced to floor slab, all complete as per detail Drawing and Engineer's approval.Rate to include for prepare and apply two coats of anticorrosive, two coats of " H " primer crosswise & spray painted black matt finish paint. (for 01 No)	1.00	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.G.45	Fabricating and Fixing Heavy duty G.I. ring ladder consisting of 37.5mm dia.G.I. lugs at 200mm intervals and both end of 3.4m approx.high 50mm dia.G.I.Tube bars fixed & braced to floor slab, all complete as per detail Drawing and Engineer's approval.Rate to include for prepare and apply two coats of anticorrosive, two coats of " H " primer crosswise & spray painted black matt finish paint. (For 01 No)	1.00	Item		
2.G.46	Fabricating and Fixing Heavy duty G.I. ring ladder consisting of 37.5mm dia.G.I. lugs at 200mm intervals and both end of 2.2m approx.high 50mm dia.G.I.Tube bars fixed & braced to floor slab, all complete as per detail Drawing and Engineer's approval.Rate to include for prepare and apply two coats of anticorrosive, two coats of " H " primer crosswise & spray painted black matt finish paint. (For 02 Nos)	1.00	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	H - CARPENTRY & JOINERY ***Note :*** Refer Pricing preambles **<u>Carpentry</u>** Timber used for roof and ceiling framing and other structural work shall conform to the requirements stipulated in Chapter 8.0 wood work (CIDA specification SCA/4 Vol.1) And the timber Species for roof & ceiling framing shall be (category A) of respective group as listed under General notes. Maximum deviation in size specified shall not exceed the tolerances for dimension stated in S.L.S. 263 (1974) Clause - 3. Timber beams, Purling, wall plate, in contact with concrete or masonry Work shall be properly treated with a bituminous wood preservative. <u>Timber stage</u> Timber stage consisting of 32mm thk. plywood board on a solid timber framework with necessary water resistant coating and 75 x 175mm timber members at 600 c/c placed on 225x450mm beam support as per Drg. No.2019-04-001AR27 and engineer's approval.				
2.H.1	At ground floor +2.25M level <u>Timber Hand rail</u> Supply and fixing teak hand rail (class 01) 75 x 50mm(finished size) fixed to top runner of 75x75mm timber balustrade finished with water based paint as per detail drawing No. 2019 - 04 -001AR15 and Engineer's approval.	156.00	m^2		
2.H.2	Between basement floor to ground floor (Staircase 'A') ***Total Carried Forward***	24.00	m		

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.H.3	Between ground floor to first floor (Staircase 'A')	24.00	m		
2.H.4	At first floor level (Staircase 'A')	16.00	m		
2.H.5	Between +4.95m level to +6.3m level (stairway at first floor balcony)	6.00	m		
	Timber Partition Supply & fixing 600mm height timber partition (class 01) finished with necessary water resisting coating as per detail drawing and Engineer's approval.				
2.H.6	At ground floor (+0.9M level)	5.50	m^2		
	Joinery The timber Species for door frame and sashes shall be (category A) of respective group as listed under General notes and ironmongery as per CIDA specification of building works Volume I Chapter 10.				
	Doors & windows **Note:- For doors.** Water base coating for Interior wood work including Base coats Self priming and top coats (Seyerlack or equivalent) after finishing surface as per manufacture's specifications. Water base coating for Exterior wood work including Stains, Base coats and Top coats (Seyerlack or equivalent) after finishing surface as per manufactures specification. Refer drawing No 2019-04-001AR20, 2019-04-001AR21				
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Door type **D1**, 1800mm wide x 3000mm high overall with 125 x 100 mm Hard Wood timber framed each one 900 X 2100 mm twin sashed door consisting of 6 mm thick tempered glass panel including 6 mm thick 900mm high tempered glass panel on top , all complete as per detail drawing and Engineer's approval. (effective area of each door approx. 5.4m^2)				
2.H.7	In ground floor	2.00	Nr.		
	Door type **D2**, 1500mm wide x 1800mm high overall with 125 x 75 mm Hard Wood timber framed each one 750 X 1800 mm twin sashed door consisting of 6 mm thick clear glass .All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 2.70m^2)				
2.H.8	In Basement	2.00	Nr.		
	Door type **D3**, 1800mm wide x 2400mm high overall with 125 x 75 mm Hard Wood timber framed each one 900 X 2400 mm twin sashed Acoustically treated door consisting of timber panel . 25 mm thick elevated timber frame as per drawing .All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 4.32m^2)				
2.H.9	In ground floor	4.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Door type **D4**, 1200mm wide x 2400mm high overall with 125 x 75 mm Hard Wood timber framed each one 600 X 2400 mm twin sashed Acoustically treated door consisting of timber panel .All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 2.88m^2)				
2.H.10	In ground floor	2.00	Nr.		
2.H.11	In first floor	4.00	Nr.		
	Door type **D5**, 1350mm wide x 2100mm high overall with 125 x 75 mm Hard Wood timber framed each one 675 X 2100 mm twin sashed door consisting of timber panesl at bottom and 6 mm thick clear glass panels on top .All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 2.83m^2)				
2.H.12	In ground floor	2.00	Nr.		
2.H.13	In first floor	2.00	Nr.		
	Door type **D6**, 2600mm wide x 3000mm high overall with 125 x 100 mm Hard Wood timber framed each one 1300 X 3000 mm twin sashed Acoustically treated timber flushed panel door. All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 7.8m^2)				
2.H.14	In ground floor	1.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Door type **D7**, 1500mm wide x 3000mm high overall with 125 x 75 mm Hard Wood timber framed each one 750 X 2100 mm twin sashed Acoustically treated door consisting of timber panels. 1500 X 900mm timber panel on top of the door. All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 4.5m^2)				
2.H.15	In ground floor	1.00	Nr.		
	Door type **D8**, 900mm wide x 2100mm high overall with 125 x 75 mm Hard Wood timber framed single sash Acoustically treated door consisting of timber panesl .All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 1.89m^2)				
2.H.16	In ground floor	2.00	Nr.		
	Fixed Glass type **FG1**, 1687.5mm wide x 3000mm high overall with 125 x 100 mm with hard wood timber frame. Top,middle and bottom panels consisting of 6mm thick Tempered glass . All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 5.06m^2)				
2.H.17	In ground floor	2.00	Nr.		
	Fixed Glass type **FG2**, 862.5 mm wide x 3000mm high overall with 125 x 100 mm hard wood timber frame. Top,middle and bottom panels consisting of 6mm thick Tempered glass . All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 2.58m^2)				
2.H.18	In ground floor	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Fixed Glass type **FG3**, 1200 mm wide x 3000mm high overall with 125 x 100 mm hard wood timber frame. Top,middle and bottom panels consisting of 6mm thick Tempered glass . All complete as per detail drawing and Engineer's approval. (effective area of each door approx. 3.6 m^2)				
2.H.19	In ground floor	1.00	Nr.		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	J - ROOF COVERING AND ROOF PLUMBING				
	Note- 1 Refer Pricing Preambles Roof timber to be Group-3, Category A				
	Note- 2 Zink Aluminium roof sheet gauge 0.47,Hi-tensile Grade 550 colour (Rhino Supermet or Equivalent)				
	Note-3 Refer frame work under Trade 'F'				
	Zink aluminium roofing sheets with 8mm thick double side reflective thermal insulation layer and Mcfoil 50mm thk. 1mx1m sound control panel sheet with triple layers foam,one side perforated with class one fire retardant material both side laminated with Al. foil or equivalent, laid on steel frame work, fixed as per manufacture's specification. (Steel purlins measured separately)				
2.J.1	At lower roof (+8.55M level)	233.00	m^2		
2.J.2	At lower roof (+13.75M level)	740.00	m^2		
2.J.3	At upper roof level (above stage)	288.00	m^2		
	Zink aluminium sheet gauge 0.47mm thick, Hi-tensile Grade 550 colour ridge and hip covering fixed to roofing sheets with necessary hooks, bolts nuts, etc. all complete as per Drawing and Engineers approval. (457 mm girth)				
2.J.4	At lower roof (+13.75M level)	30.00	m		
2.J.5	At upper roof level (above stage)	12.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Roof Plumbing				
	Note: All 0.47 mm thick zinc / Aluminium high tensile (grade 550) down pipes and fittings shall comply with the latest BSS for Zinc / Aluminium gutters down pipes and fittings				
	Supplying and fixing 0.47 mm thick zinc / Aluminium high tensile (grade 550) 140X140mm squar eaves gutter with brackets and specials fixed complete as per manufacture's specification.				
2.J.6	At lower roof (+8.55m) level	55.00	m		
2.J.7	At lower roof (+13.55m) level	60.00	m		
2.J.8	At upper roof level (above stage)	23.00	m		
	Supplying and fixing 0.47 mm thick zinc / Aluminium high tensile (grade 550) 140 x 140mm square down pipe with brackets fixed complete as per manufacture's specification.				
2.J.9	At upper roof level	103.00	m		
2.J.10	At lower roof (between +8.55m to +13.75m) level	40.00	m		
2.J.11	At roof slab (+8.4m) level	84.00	m		
2.J.12	At lower roof (+8.55m) level	60.00	m		
2.J.13	At roof slab (+7.1m) level	29.00	m		
	Supplying and fixing 300mm high zinc aluminium gauge 0.47mm thick, Hi-tensile Grade 550 colour valance board with brackets fixed complete as per manufacture's specification.				
2.J.14	At lower roof (+8.55M level)	55.00	m		
2.J.15	At lower roof (+13.75M level)	59.00	m		
2.J.16	At upper floor level (above stage)	23.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Extra over Zn/Al down pipes and gutters for the following				
2.J.17	Center running head	12.00	Nr.		
2.J.18	Gutter end cap	12.00	Nr.		
2.J.19	Shoes	30.00	Nr.		
2.J.20	Down pipe elbow	60.00	Nr.		
2.J.21	Down pipe joiner	30.00	Nr.		
2.J.22	Gutter joiner	23.00	Nr.		
	Flashing				
2.J.23	Supplying and fixing 0.47 mm thick zinc / Aluminium high tensile (grade 550) 450mm wide at roof and the wall one edge dressed over the roof to width not less than 300mm, the other edge turned in to a height of not less than 150mm tucked up along , and top edge tucking well and groove filled with silicon.	59.00	m		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	K - PLUMBING				
	Note 1 :- Refer Pricing Preambles				
	Sanitary fittings and fixtures				
	Note 2 :- Unless otherwise stated all sanitary fittings and fixtures shall be of (Rocell Bathware or equivalent) Imported Manufacture, such as American standard, or alternate makes. Prior written approval to be granted by the engineer for quality & performance of fittings. (Specification & samples to be produced by the contractor, whenever requested)				
	Note 3 :- All wash basins, Sinks and Urinals to be provided with bottle traps, accordance with BS 3943.				
	Supply & fixing Vanity type Wash basin 550 x 400mm overall size white vitreors china (Brands as specified under Note 2 above). 32mm dia. rubber plug with chromium plated chain. Rate to include for fixing basin to wall, water supply and waste water connections respectively. All complete to working order. (Pillar tap & bottle trap measured separetely.)(Range of prime cost is Rs. 25000 - 35000 excluding VAT)				
2.K.1	In basement floor	14.00	Nr.		
2.K.2	In ground floor	7.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and fixing Closed coupled (Brands as specified under Note 2 above) low level closet suite white vitreous china comprising closet with "P" or "S" trap as directed and double plastic seat cover and ,4.5 / 6 litre capacity dual flush type, white vitreous china low level cistern. Rate to include for fixing closet to floor with necessary screws, fixing cistern with water supply and outlet connection, all complete to working order.(Range of prime cost is Rs. 55000 - 60000 excluding VAT)				
2.K.3	In basement floor	6.00	Nr.		
2.K.4	In ground floor	5.00	Nr.		
	Supply and fixing Ceramic squatting pan with foot rest overall white vitreous china with ' P' or ' S ' trap as directed, 9 litre capacity white vitreous china high level cistern with supporting brackets screwed to tapered buried in wall, P.V.C. flush pipe, water supply and outlet connection all complete to working order. (Range of prime cost is Rs. 5000 - 7000 excluding VAT)				
2.K.5	In basement floor	5.00	Nr.		
	Supplying and fixing wall Urinal with brackets (Brands as specified under Note 2 above). Rate to include for fixing urinal to wall with necessary screws, fixing urinal flush valve with water supply and outlet connection, all complete to working order. (Range of prime cost is Rs. 45000 - 50000 excluding VAT)				
2.K.6	In basement floor	10.00	Nr.		
2.K.7	In ground floor	4.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying & fixing 640mmx 550 mm overall size white vitreous china wall hung wash basin. Rate to include fixing kit with necessary plugs, all complete to working order (Roca or equivalent) as approved by Engineer (range of Prime cost is Rs.23000-28000 excluding VAT)				
2.K.8	In basement floor (Disabler's toilet)	1.00	Nr		
	Supplying & fixing vitreous china close coupled water closet suite (white) with horizontal outlet and wash down 6/3L capacity dual flushing type cistern with bottom inlet,seat with front open ring and cover with stainless steel hinges.Rate to include for fixing kit with necessary screws , fixing cistern with water supply and outlet connection , all complete to working order (Roca or equivalent) as approved by Engineer (range of Prime cost is Rs.65000-70000 excluding VAT)				
2.K.9	In basement floor (Disabler's toilet)	1.00	Nr		
	Supplying & fixing chromium plated basin tap with long handle for disabler's wash basin.(Roca or equivalent) as approved by Engineer.(range of Prime cost is Rs.15000-16000 excluding VAT)				
2.K.10	In basement floor (Disabler's toilet)	1.00	Nr		
	Supplying & fixing concealed waste fitting with buit - in trap and over flow for wash basin.(Roca or equivalent) as approved by Engineer (range of Prime cost is Rs.15500-17500 excluding VAT)				
2.K.11	In basement floor (Disabler's toilet)	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying & fixing Stainless steel drop down rail 25mm dia 750mm long including stainless steel brackets fixed to wall at 750 mm high above finished floor level. All complete as per detail drawing and Engineer's approval. (range of Prime cost is Rs.19000-26000 excluding VAT)				
2.K.12	In basement floor (Disabler's toilet)	1.00	Nr		
	Supplying & fixing Stainless steel wall mounted grab bar 25mm dia 600mm long including stainless steel brackets fixed to wall at 750mm high above finished floor level. All complete as per detail drawing and Engineer's approval. (range of Prime cost is Rs.15000-20000 excluding VAT)				
2.K.13	In basement floor (Disabler's toilet)	1.00	Nr		
	Supply and fixing Mirror shall be superior quality plate glass mirror size 600 x 750mm free from ripples & all blemishes & well finished edges. All complete & fix as per manufactures specifications.(minimum thickness of glass is 6mm). (Range of prime cost is Rs. 5500 -6000 excluding VAT)				
2.K.14	In basement floor	1.00	Nr.		
	Supply and fixing Mirror shall be superior quality plate glass mirror size 4850 x 750mm free from ripples & all blemishes & well finished edges. All complete & fix as per manufactures specifications.(minimum thickness of glass is 6mm). (Range of prime cost is Rs. 16000 -17000 excluding VAT)				
2.K.15	In basement floor	2.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and fixing Mirror shall be superior quality plate glass mirror size 2760 x 750mm free from ripples & all blemishes & well finished edges. All complete & fix as per manufactures specifications.(minimum thickness of glass is 6mm). (Range of prime cost is Rs. 12000 - 13000 excluding VAT)				
2.K.16	In ground floor	1.00	Nr.		
	Supply and fixing Mirror shall be superior quality plate glass mirror size 4500 x 750mm free from ripples & all blemishes & well finished edges. All complete & fix as per manufactures specifications.(minimum thickness of glass is 6mm). (Range of prime cost is Rs. 15500 - 16000 excluding VAT)				
2.K.17	In ground floor	1.00	Nr.		
	Supply & fixing 20mm dia. Stainless steel bidet spray tap with flexible coupling at 600mm above finished floor level. (Brands as specified under Note.2 above) (Range of prime cost is Rs. 4000 - 5000 excluding VAT)				
2.K.18	In basement floor	12.00	Nr.		
2.K.19	In ground floor	5.00	Nr.		
	Supplying and fixing stainless steel soap tray fixed to wall with stainless steel screws at 825mm above finished floor level .(Brands as specified under Note 2 above) (Range of prime cost is Rs. 2500 - 3500 excluding VAT)				
2.K.20	In basement floor	9.00	Nr.		
2.K.21	In ground floor	5.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying & fixing 20mm dia Stainless steel bib tap at 450mm above finished floor level.(Pegler or equivalent) (Range of prime cost is Rs. 4000 - 5000 excluding VAT)				
2.K.22	In basement floor	5.00	Nr.		
	Supplying and fixing push button valve (Brands as specified under Note.2 above) (Range of prime cost is Rs. 5000 - 6000 excluding VAT)				
2.K.23	In basement floor	10.00	Nr.		
2.K.24	In ground floor	4.00	Nr.		
	Supplying and fixing Chromium plated toilet paper holder fixed to wall with fibre plugs at 600mm above finished floor level. (Brands as specified under Note.2 above) (Range of prime cost is Rs. 3500 - 4000 excluding VAT)				
2.K.25	In basement floor	7.00	Nr.		
2.K.26	In ground floor	5.00	Nr.		
	Supplying & fixing 20mm dia.chromium plated angle valve (Brands as specified under Note.2 above) (Range of prime cost is Rs. 1800 - 2200 excluding VAT)				
2.K.27	In basement floor	39.00	Nr.		
2.K.28	In ground floor	16.00	Nr.		
	Supplying & fixing 32mm dia.stainless steel bottle trap (Brands as specified under Note.2 above)(range of Prime cost is Rs.3500-4100 excluding VAT)				
2.K.29	In basement floor	15.00	Nr.		
2.K.30	In ground floor	7.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying & fixing 12mm dia. chromium plated pillar tap for wash basins.(Brands as specified under Note.2 above) (Range of prime cost is Rs. 3500 - 4500 excluding VAT)				
2.K.31	In basement floor	14.00	Nr.		
2.K.32	In ground floor	7.00	Nr.		
	Sanitary Plumbing				
	Water Supply Pipes				
	Note All water supply pipe work shall be in PVC type PN_T11 to SLS 147:1993 and PVC fittings to SLS 659:1993				
	All pipe work with less than 600mm of ground cover and all pipe work under roadways with less than 900mm of ground cover are to be encased in concrete				
	Piping under 50mm dia. include for all necessary elbows, bends, tees, junctions, inspection openings and similar fixtures.				
2.K.33	63mm dia water supply incoming pipe from proposed water tower to laid under ground to serve ground floor toilet as directed.	88.00	m		
2.K.34	50mm dia water supply line laid under ground to serve ground floor toilet as directed.	62.00	m		
2.K.35	40mm dia water supply line laid under ground as directed.	20.00	m		
2.K.36	40mm dia water supply pipe chased to wall or buried in floor screed as directed.	26.00	m		
2.K.37	40mm dia. water supply distribution pipe rises from below, fixed to wall as directed.	9.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.K.38	32mm dia distribution pipe chased to wall or buried in floor screed as directed.	22.00	m		
2.K.39	25mm dia distribution pipe chased to wall or buried in floor screed as directed.	20.00	m		
2.K.40	20mm dia distribution pipe as connection to sanitary fittings chased to wall or buried in floor screed as directed.	46.00	m		
	Extra over for above UPVC pipes in the following;				
2.K.41	63mm dia bend	4.00	Nr.		
2.K.42	63 x 63 x 50mm dia.unequal tee	1.00	Nr.		
2.K.43	50mm dia Gate valve (Pegler or equivalent)	2.00	Nr.		
2.K.44	40mm dia Isolation valve (Pegler or equivalent)	5.00	Nr.		
2.K.45	32mm dia Isolation valve (Pegler or equivalent)	2.00	Nr.		
2.K.46	25mm dia Isolation valve (Pegler or equivalent)	2.00	Nr.		
	Waste water pipes				
	Note: All underground drainage pipe work shall be in UPVC (Class 4.0) to BS 4660				
2.K.47	110mm dia. waste water pipe extended from trapped gully to the nearest manhole with average invert depth not exceeding 900mm including excavation and back filling , bedding on a layer of cement concrete 1:4:8(38mm) 100mm thick and 100mm wide on each side of the pipe and subsequently encasing with the same concrete after inspection of the pipe.	21.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.K.48	63mm dia. waste water pipe buried in floor screed or chased to wall or laid as directed by the Engineer	64.00	m		
2.K.49	63mm dia vertical waste stack carried 450mm above roof level fixed to wall with rawl plugs, clips and screws as directed.	18.00	m		
2.K.50	63mm dia vertical vent pipe carried 450mm above roof level fixed to wall with rawl plugs, clips and screws as directed.	35.00	m		
2.K.51	63mm dia pvc cowl on top of vent pipes.	2.00	Nr.		
	Extra over UPVC pipes for the following;				
2.K.52	63mm dia bend	12.00	Nr.		
2.K.53	63mm dia tee	17.00	Nr.		
2.K.54	63mm dia tee with cleaning eye	2.00	Nr.		
	Soil and vent pipes				
	Note ;All above ground soil & waste pipe work shall be in PVC (Class 4.0) to BS 4514 and BS 5255				
2.K.55	110mm dia. soil pipe extended from closets and upper floor stacks to the nearest manhole with average invert depth not exceeding 900mm including excavation and back filling , bedding on a layer of cement concrete 1:4:8(38mm) 100mm thick and 100mm wide on each side of the pipe and subsequently encasing with the same concrete after inspection of the pipe.	118.00	m		
2.K.56	110mm dia. soil pipe buried in floor screed or chased to wall or laid as directed by the Engineer.	7.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.K.57	63mm dia. soil waste water pipe buried in floor screed or laid as directed by Engineer.	37.00	m		
2.K.58	63mm dia vertical vent pipe carried 450mm above roof level fixed to wall with rawl plugs, clips and screws as directed.	17.00	m		
2.K.59	63mm dia. soil waste water stack carried 450mm above roof level as vent fixed to wall with rawl plugs, clips and screws as directed.	10.00	m		
2.K.60	110mm dia vertical soil stack carried 450mm above roof level as vent fixed to wall with rawl plugs, clips and screws as directed.	18.00	m		
2.K.61	63mm dia pvc cowl on top of vent pipes.	4.00	Nr.		
2.K.62	110mm dia pvc cowl on top of vent pipes.	2.00	Nr.		
	Extra over UPVC pipes for the following;				
2.K.63	63mm dia bend	21.00	Nr.		
2.K.64	63mm dia tee	8.00	Nr.		
2.K.65	110mm dia tee	3.00	Nr.		
2.K.66	63mm dia tee with clearning eye	1.00	Nr.		
2.K.67	110mm dia bend with clearning eye	2.00	Nr.		
2.K.68	110mm dia tee with clearning eye	2.00	Nr.		
	Accessories				
	Supply & installation of Sub-guages (water meter) for water management and supervision with necessary accessories fixed complete.				
2.K.69	In basement floor	1.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Trapped floor gully to be UPVC (150X150X118) with P.V.C removable grating. Trapped floor gully to be connected to waste water line with solvent cement & unconnected opening to be sealed with end caps with solvent cements.				
2.K.70	In basement floor	13.00	Nr.		
2.K.71	In ground floor	9.00	Nr.		
	Trapped gully with cement concrete 1:2:4 (20mm) based and precast R.C.C cover on top as per Drawing No W.S.S 1852.00 and Engineers approved.				
2.K.72	In basement floor	6.00	Nr.		
	Sealed Trapped floor gully to be UPVC (150X150X118). Trapped floor gully to be connected to waste water line with solvent cement & unconnected opening to be sealed with end caps with solvent cements.				
	In basement floor	3.00	Nr.		
2.K.73	In ground floor	3.00	Nr.		
	Storm water disposal				
2.K.74	110mm dia. PVC down pipe drop and connected to 140x140 Zn/Al down pipe at roof slab(+7.1m) & (+8.4m) level as per detail drawing no.2019 - 04 -001WSS08.	14.00	m		
2.K.75	Strom water catch pit 150 x 150 x 150 mm deep internally, built in 75mm thick cement concrete 1:2:4 (20mm) sides and bottom including 12mm thick cement and sand 1:2 rendering finished smooth with neat cement floating to all exposed faces and cast iron grating on top,complete with inlet and outlet connections.	14.00	Nr.		
	Extra over UPVC pipes for the following;				
2.K.76	110mm dia bend	14.00	Nr.		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	L - WALL, FLOOR AND CEILING FINISHES				
	Note-Refer Pricing Preambles				
	Rates for plaster work shall include for reinforcing joints between different types of construction material (eg. Block work/ Brick work and Concrete work) with 150mm wide galvanized hexagonal wire mesh as directed by the Engineer.				
	Plinth plaster				
2.L.1	15mm thick plaster in cement and sand in 1:3 finished smooth with coloured cement floating to plinth including forming arises	138.00	m^2		
	Wall finishes				
	Plaster 15mm thick in cement and sand (1:5) finished semi-rough including forming arises (Externally.)				
	On brick wall & attached columns				
2.L.2	From basement floor level to ground floor level	161.00	m^2		
2.L.3	From ground floor level to first floor level	664.00	m^2		
2.L.4	From first floor level to +9.35M level	1594.00	m^2		
2.L.5	From +9.35M level to above	1436.00	m^2		
	Reveals not exceeding 150mm wide				
2.L.6	From basement floor level to ground floor level	84.00	m		
2.L.7	From ground floor level to first floor level	162.00	m		
2.L.8	From first floor level to +9.35M level	107.00	m		
2.L.9	From +9.35M level to above	32.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Finishes on Concrete surfaces				
	Plaster 12mm thick in cement and sand 1:3 finished semi-rough including forming arises (Externally)				
	Vertical sides of isolated column shafts				
2.L.10	From plinth to ground floor level	16.00	m^2		
2.L.11	From ground floor level to first floor level	45.00	m^2		
2.L.12	From first floor level to lower roof / roof slab level	51.00	m^2		
	Vertical sides of floating column shafts				
2.L.13	From ground floor level to first floor level	3.50	m^2		
	Sides and soffit of weathershade				
2.L.14	At ground floor lintol level	48.00	m^2		
2.L.15	At first floor lintol level	54.00	m^2		
	Soffit of roof slab				
2.L.16	At roof slab (+7.55m) level	83.00	m^2		
2.L.17	At roof slab (+9.3m) level	156.00	m^2		
	Finishes on Internal walls				
	Plaster 15mm thick in cement and sand (1:5) finished smooth with skim coat including forming arises (Internally.)				
	On brick wall & attached columns				
2.L.18	From basement floor level to ground floor level	602.00	m^2		
2.L.19	From ground floor level to first floor level	948.00	m^2		
2.L.20	From first floor level to +9.35M level	850.00	m^2		
2.L.21	From +9.35M level to above	1219.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reveals not exceeding 150mm wide				
2.L.22	From basement floor level to ground floor level	202.00	m		
2.L.23	From ground floor level to first floor level	347.00	m		
2.L.24	From first floor level to +9.35M level	180.00	m		
2.L.25	From +9.35M level to above	32.00	m		
	Finishes on Concrete surfaces				
	Plaster 12mm thick in cement and sand (1:3) finished smooth with skim coat including forming arises (Internally.)				
	Soffit of suspended floor slab				
2.L.26	At ground floor slab (+1.05m) level	83.00	m^2		
2.L.27	At ground floor slab (+2.25m) level	260.00	m^2		
2.L.28	At ground floor slab (+3.0m) level	135.00	m^2		
2.L.29	At first floor slab level	555.00	m^2		
2.L.30	At space for AHU slab (+7.55m) level	56.00	m^2		
2.L.31	At +10.2m slab level	36.00	m^2		
2.L.32	At +12.0m slab level	7.00	m^2		
2.L.33	At cooling tower floor slab(+14.05m) level	55.00	m^2		
	Vertical sides of isolated column shafts				
2.L.34	From ground floor level to first floor level	5.00	m^2		
	Vertical sides of floating column shafts				
2.L.35	From ground floor level to first floor level	2.50	m^2		
2.L.36	From first floor level to +12.0m slab level	9.50	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of beams				
2.L.37	At ground floor slab (+1.05m) level	402.00	m^2		
2.L.38	At ground floor slab (+2.25m) level	410.00	m^2		
2.L.39	At first floor slab level	893.00	m^2		
2.L.40	At roof slab (+9.30m) level	169.00	m^2		
2.L.41	At +10.2m level	66.00	m^2		
2.L.42	At +11.7m level	26.00	m^2		
2.L.43	At +12.0m slab level	36.00	m^2		
2.L.44	At +13.45m level	65.00	m^2		
2.L.45	At cooling tower floor slab(+14.05m) level	91.00	m^2		
2.L.46	At +16.2m level	26.00	m^2		
2.L.47	At +17.0m level	14.00	m^2		
2.L.48	At +19.75m level	67.00	m^2		
	Sides and soffit of roof beams				
2.L.49	At upper roof level (on stage)	26.00	m^2		
2.L.50	At upper roof (+13.75M) level	85.00	m^2		
2.L.51	At lower roof (+8.55M) level	63.00	m^2		
2.L.52	At lower roof (+9.80M) level	65.00	m^2		
	Sides and soffit of sloping beams				
2.L.53	At ground floor slab (+1.05m) level	129.00	m^2		
2.L.54	At first floor slab level	35.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of landing beams at staircase				
	In staircase 'A'				
2.L.55	Between basement floor level to ground floor level	7.00	m^2		
2.L.56	Between ground floor level to first floor level	7.00	m^2		
	In staircase at electrical room				
2.L.57	Between +1.05M level to +2.25M level	2.00	m^2		
	Sides of steps and waist of staircase				
	In staircase 'A'				
2.L.58	Between basement floor level to ground floor level	5.00	m^2		
2.L.59	Between ground floor level to first floor level	7.00	m^2		
2.L.60	At first floor level	4.00	m^2		
	In stairway at entrance porch				
2.L.61	Between +1.05m level to +3.45m level	2.00	m^2		
	In stairway at first floor balcony				
2.L.62	Between +4.95m level to +6.3m level	3.00	m^2		
	In stairway at stage backside				
2.L.63	Between +1.05m level to +2.25m level	2.00	m^2		
	In stairway at electrical room				
2.L.64	Between +1.05M level to +2.25M level	2.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sloping soffit of staircase				
	In staircase 'A'				
2.L.65	Between basement floor level to ground floor level	16.00	m^2		
2.L.66	Between ground floor level to first floor level	15.00	m^2		
2.L.67	At first floor level	11.00	m^2		
	In stairway at entrance porch				
2.L.68	Between +1.05m level to +3.45m level	39.00	m^2		
	In stairway at first floor balcony				
2.L.69	Between +4.95m level to +6.3m level	15.00	m^2		
	In stairway at stage backside				
2.L.70	Between +1.05m level to +2.25m level	4.00	m^2		
	In stairway at electrical room				
2.L.71	Between +1.05M level to +2.25M level	5.00	m^2		
	Sides and soffit of landing slab at staircase				
	In staircase 'A'				
2.L.72	Between basement floor level to ground floor level	12.00	m^2		
2.L.73	Between ground floor level to first floor level	12.00	m^2		
	In stairway at entrance porch				
2.L.74	Between +1.05m level to +3.45m level	7.00	m^2		
	Sides and soffit of landing slab at stairway at electrical room				
2.L.75	Between +1.05m level to +2.25m level	3.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Cut & polished concrete floor for 1/16" surface cut depth to achieve a fine aggregate finish with light aggrerate exposure and to a 1500 grit sheen level with high reflectivity.				
2.L.76	In ground floor	433.00	m^2		
2.L.77	In first floor	405.00	m^2		
	Wall tiles				
	Supply and laying 300 x 600mm vitreous ceramic glazed wall tiles lining up to a height of 2100 mm from finished floor level of approved colour set in 10mm thick cement and sand (1:3) screed backing and joints pointed with tile grout to match the colour of tiles in toilets (Prime cost 450 - 500 Rs. per tile without VAT)				
2.L.78	In basement floor	169.00	m^2		
2.L.79	In ground floor	48.00	m^2		
	Supply and laying 1250 x 625mm suspended magnesite bonded 25mm thk. wood wool board acousetic wall with G.I channel frame fixed to wall with HRD 10mmx80mm s/s anchor and steel wire mesh fixed to frame with 50mm thk. 48 Kg/m3 glass wool panel finish with auto spray paint supported with optimised grid system as for the manufacturers details and deatil drawings.				
2.L.80	At ground floor	238.00	m^2		
2.L.81	At first floor	430.00	m^2		
2.L.82	At +9.35M level above	170.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Floor Finishes				
	Cement Rendering on Floors				
	Cut & polished cement rendering & smooth colored floating coat rendering 20mm thick, 1:3 cement & sand and floating coat, using colored finished smooth. (color to be specified by the Architect)				
2.L.83	In ground floor	194.00	m^2		
2.L.84	In first floor	52.00	m^2		
	Smooth cement rendering 1:3 cement sand floating coat with mason trowel.				
2.L.85	In +14.05m level (space for cooling towers)	58.00	m^2		
	Cut & polished concrete floor for 1/16" surface cut depth to achieve a fine aggregate finish with light aggrerate exposure and to a 1500 grit sheen level with high reflectivity.				
2.L.86	In ground floor	433.00	m^2		
2.L.87	In first floor	405.00	m^2		
	Cut & polished concrete floor for 1/8" surface cut depth to achieve medium aggregate exposure and to a 400 grit sheen level with low reflectivity.				
2.L.88	In +7.55m level (space for AHU)	44.00	m^2		
	Floor Tiles				
	Note 1: *Refer pricing Preambles*				
	Note 2: Paving of tiles should be on 10mm thick cement and sand (1:3) rough cement rendering, and the joints pointed with tile grout to match the colour of tiles in all floor area.				
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and laying 600 x 600mm vitreous porcelain homogenous semi glazed, floor tiles paving in approved colour and design laying as specified above (Refer Note 2)(Prime cost 1200 - 1400 Rs. per tile without VAT) Rocell or equivalent.				
2.L.89	In basement floor	90.00	m^2		
	Supply and laying 600 x 600mm vitreous porcelain homogenous rough floor tiles paving in approved colour and design laying as specified above (Refer Note 2)(Prime cost 1200 - 1400 Rs. per tile without Vat) Rocell or equivalent.				
2.L.90	In basement floor (toilet area)	90.00	m^2		
2.L.91	In ground floor (toilet area)	35.00	m^2		
	Supply and laying 300 x 600mm vitreous porcelain homogenous rustic floor tiles paving in approved colour and design laying as specified above (Refer Note 2)(Prime cost 550 - 650 Rs. per tile without Vat) Rocell or equivalent.				
2.L.92	In ground floor	68.00	m^2		
	Supply and laying 600 x 1200mm vitreous porcelain fullbody glazed tiles paving in approved colour and design laying as specified above (Refer Note 2)(Prime cost 3800 - 3950 Rs. per tile without Vat) Rocell or equivalent.				
2.L.93	In ground floor	108.00	m^2		
	Supply and laying 300 x 300mm vitreous porcelain fullbody surface embossed tiles paving in approved colour and design laying as specified above (Refer Note 2)(Prime cost 200 - 250 Rs. per tile without Vat) Rocell or equivalent.				
2.L.94	In ground floor	32.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and laying 600 x 600mm vitreous porcelain matt tiles paving in approved colour and design laying as specified above (Refer Note 2) (Prime cost 1200 - 1400 Rs. per tile without VAT) Rocell or equivalent.				
2.L.95	In ground floor	43.00	m^2		
	Supply and laying 300 x 600mm vitreous porcelain rough tiles paving in approved colour and design laying as specified above (Refer Note 2) (Prime cost 550 - 600 Rs. per tile without Vat) Rocell or equivalent.				
2.L.96	In basement floor	47.00	m^2		
2.L.97	In ground floor	86.00	m^2		
2.L.98	In first floor	204.00	m^2		
	300mm wide treads in staircase				
	In staircase 'A'				
2.L.99	Between basement floor level to ground floor level	66.00	m		
2.L.100	Between ground floor level to first floor level	40.00	m		
2.L.101	At first floor level	28.00	m		
	In stairway at entrance porch				
2.L.102	Between +1.05m level to +3.45m level	92.00	m		
	In stairway at first floor balcony				
2.L.103	Between +4.95m level to +6.3m level	44.00	m		
	In stairway at stage backside				
2.L.104	Between +1.05m level to +2.25m level	11.00	m		
	In stairway at electrical room				
2.L.105	Between +1.05m level to +2.25m level	12.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	600mm wide treads in staircase				
	In stairway at entrance porch				
2.L.106	Between +1.05m level to +3.45m level	7.00	m		
	150mm high risers in staircase				
	In staircase 'A'				
2.L.107	Between basement floor level to ground floor level	74.00	m		
2.L.108	Between ground floor level to first floor level	45.00	m		
2.L.109	At first floor level	31.00	m		
	In stairway at entrance porch				
2.L.110	Between +1.05m level to +3.45m level	106.00	m		
	In stairway at first floor balcony				
2.L.111	Between +4.95m level to +6.3m level	49.00	m		
	In stairway at stage backside				
2.L.112	Between +1.05m level to +2.25m level	12.00	m		
	In stairway at electrical room				
2.L.113	Between +1.05m level to +2.25m level	14.00	m		
	Landing slab at Staircase				
	In staircase 'A'				
2.L.114	Between basement floor level to ground floor level	5.00	m^2		
2.L.115	Between ground floor level to first floor level	5.00	m^2		
	In stairway at entrance porch				
2.L.116	Between +1.05m level to +3.45m level	7.00	m^2		
	In stairway at electrical room				
2.L.117	Between +1.05m level to +2.25m level	2.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Tile skirting				
	Supply and laying 600 x 100mm vitreous porcelain homogenous semi glazed, tile skirting laid on and including 6mm thick cement and sand (1:3) rough cement rendering and the joints pointed with tile grout to match the colour of tiles.(Prime cost 1200 - 1400 Rs. per tile without VAT) Rocell or equivalent.				
2.L.118	In basement floor	40.00	m		
	Supply and laying 600 x 100mm vitreous porcelain fullbody glazed, tile skirting laid on and including 6mm thick cement and sand (1:3) rough cement rendering and the joints pointed with tile grout to match the colour of tiles.(Prime cost 1350 - 1550 Rs. per tile without VAT) Rocell or equivalent.				
2.L.119	In ground floor	40.00	m		
	Supply and laying 600 x 100mm vitreous porcelain matt, tile skirting laid on and including 6mm thick cement and sand (1:3) rough cement rendering and the joints pointed with tile grout to match the colour of tiles.(Prime cost 1200 - 1400 Rs. per tile without VAT) Rocell or equivalent.				
2.L.120	In ground floor	39.00	m		
	Supply and laying 300 x 100mm vitreous porcelain rough, tile skirting laid on and including 6mm thick cement and sand (1:3) rough cement rendering and the joints pointed with tile grout to match the colour of tiles.(Prime cost 1350 - 1550 Rs. per tile without VAT) Rocell or equivalent.				
2.L.121	In first floor	26.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and laying 300 x 100mm vitreous porcelain rough step tiles skirting laid on and including 6mm thick cement and sand (1:3) screed backing and the joints pointed with tile grout to match the colour of tiles. (Prime cost Rs.550 - 600 per tile without taxes) Rocell or equivalent.				
	In staircase 'A'				
2.L.122	Between basement floor level to ground floor level	58.00	m		
2.L.123	Between ground floor level to first floor level	40.00	m		
2.L.124	At first floor level	19.00	m		
	In stairway at entrance porch				
2.L.125	Between +1.05m level to +3.45m level	18.00	m		
	In stairway at first floor balcony				
2.L.126	Between +4.95m level to +6.3m level	18.00	m		
	In stairway at stage backside				
2.L.127	Between +1.05m level to +2.25m level	11.00	m		
	In stairway at electrical room				
2.L.128	Between +1.05m level to +2.25m level	8.00	m		
	Cement Skirting				
	20mm thick 100mm high skirting in cement and sand 1:2 laid in one operation with floor rendering finished smooth with sunk bead at a junction of skirting and plaster above and the angle between floor and the skirting to be rounded off to a radius of 25mm.				
2.L.129	In ground floor	63.00	m		
2.L.130	In first floor	88.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	<u>Interlocking</u> Supply and laying 100 x 200mm ,80mm 15N/mm2 compressive strength, concrete paving blocks (complying with SLS 1425 2011) with curb edge (125x250x900), laid on quarry dust or sand bed with 6mm thick soil base (98% compaction) as per drawing & Engineers approval. (Colours & pattern to be specified by the Architect)				
2.L.131	At ground floor (Ramp area) Supply and laying 110 x 220mm ,100mm 50N/mm2 compressive strength, concrete paving blocks (complying with SLS 1425 2011) with curb edge(125x250x900), laid on quarry dust or sand bed with 4mm thick soil base (95% compaction) as per drawing & Engineers approval. (Colours & pattern to be specified by the Architect)	38.00	m^2		
2.L.132	At ground floor (Ramp area) **<u>Floor Carpet</u>** Supply and laying loop pile carpet with consultant approved colour with proper under lay on earlier laid smooth cement rendering .	147.00	m^2		
2.L.133	In ground floor	187.00	m^2		
2.L.134	In first floor	52.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Ceiling finishes				
	Mineral fiber board ceiling				
	Supplying & fixing 600x1200mm suspended Mineral Fiber Board flat ceiling (not less than 15mm thk.) fixed to G.I frame workwith necessary accessories & necessasry thicknessses, all complete as per drawing No. 2019-04-001AR14 & manufacturer's specification and Engineers approval.				
2.L.135	In ceiling at stage	97.00	m^2		
	Supplying & fixing 600x1200mm suspended Mineral Fiber Board slope ceiling (not less than 15mm thk.) fixed to G.I frame workwith necessary accessories & necessasry thicknessses, all complete as per drawing No. 2019-04-001AR14 & manufacturer's specification and Engineers approval.				
2.L.136	In ceiling at stage	160.00	m^2		
	Cement fiber board ceiling				
	Supplying & fixing suspended 600x600mm Cement fiber board flat ceiling, hang to steel frame with hot dip galvanized "T" bars of 14mmx38mm and wall angles of 19mmx24mm hang with adjustable butterfly clip, 4mm GI hanging rods, bolts and all other accessories as per detail Drawing No.2019-04-001AR14 and Engineer's approval.				
2.L.137	At basement floor	88.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Gypsem board ceiling Supply and installation of 12mm thick Gypsum board curved ceiling suspended to rock wool ceiling fixed to 50x25mm G.I "C" frame work. Rate to include all necessary accessories and paint. All complete as per detail Drg. No 2019-04-001-AR14 Engineers' approvel.				
2.L.138	At first floor level (+13.75M level)	127.00	m^2		
	Acoustic mineral wool ceiling Supply and installation of 19mm thick Acoustic mineral wool ceiling (AMF THERMATEX) or equivlant suspended to rock wool ceiling fixed to 50x25mm G.I "C" frame work. Rate to include all necessary accessories. All complete as per detail Drg. No 2019-04-001-AR14 and recommended by acoustic consultant.				
2.L.139	At first floor level (+13.75M level)	544.00	m^2		
	Rock wool ceiling Supply and installation of 50mm thick 48kg M3 rock wool ceiling or equivlant fixed to 50x25mm G.I "C" frame work and hanging rods. Rate to include all necessary accessories. All complete as per detail Drg. No 2019-04-001-AR14 and recommended by acoustic consultant.				
2.L.140	At first floor level (+13.75M level)	604.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Eave Ceiling				
	Supplying & fixing suspended 600x600mm Cement fiber board sloped ceiling, hang to steel frame with hot dip galvanized "T" bars of 14mmx38mm and wall angles of 19mmx24mm hang with adjustable butterfly clip, 4mm GI hanging rods, bolts and all other accessories as per detail Drawing No.2019-04-001AR14 and Engineer's approval.				
2.L.141	At stage	23.00	m^2		
2.L.142	At first floor level (+8.55M level)	55.00	m^2		
2.L.143	At first floor level (+13.75M level)	60.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	M - ELECTRICAL INSTALLATION Refer Drawing No: 2019-04-001EL01, 2019-04-001EL02, 2019-04-001EL03, 2019-04-001EL04 Refer Pricing Preambles Electrical items are to be of the following makes: (a) Electrical switches and socket outlets : Krypton, Legrand, Clipsal, Kevilton, Orange or equivalent (b) Distribution boards:Consumer unit flush mount type or as specified (c) Fans: K.D.K., National-Japanese origins (d) Exhaust Fans: K.D.K., National-Japanese origins (e) Switch Gear - MCCB'S Schnieder ,ABB, Siemens, Hager, LS Brand or approved equivalent [f] RCCB , MCB'S Schnieder, Siemens, Hager, ETN Brand or approved equivalent [g] LED/ Tube Fittings : The light should be good quality, Philips or equivalent. Minimum efficacy at scotopic condition should be above 100 lumen/w. correlate colour temperature (CCT) should be above 4000k, (cool white). colour rendering index (CRI) should be above 80. rated life time should be above 50,000 hrs. [h] Energy saving Bulbs CFL bulbs should be 5 stars. ***Total Carried Forward***				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	[i] Distribution sub panels: Shall be in surface mount plastic enclosure or metal enclosure fabricated with zinc coated sheet metal of gauge not less than 1.8mm total enclosed, with hinged door with protective cover plate for terminals. Finished with powder coating of approval colour and components as specified in the BOQ [j] Cable : ACL , Kelani or equivalent. Wiring type in concealed conduit, floor conduit, metal or PVC trunking All panel boards and consumer units should have wire numbering and a laminated circuit diagram should be pasted on the inside surface of the door. All types of fittings, materials, painting and finishes shall be approved by the Electrical Engineer prior to installation. **Wiring of light points** Wiring of a light point includes supply of required cables, conduits, ceiling rose, junction boxes, flush switch & all other required materials . Wiring of a light point , from respective Consumer unit using 2 x 1mm^2 , CU / PVC/ PVC cable + 2.5mm^2 Cu/PVC Earth cable drawn through securely fixed concealed PVC conduit , Controlled by a 10A flush switch .				
2.M.1	At basement floor	51.00	Nr		
2.M.2	At ground floor	176.00	Nr		
2.M.3	At first floor	129.00	Nr		
2.M.4	At +19.3m level	3.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Ceiling fan Point Wiring Wiring (including supply of all material, earth wire,fan hook,regulator & switch) of the ceiling fans using 2 x 1mm^2 Cu/PVC/PVC + 2.5 mm^2 earth wire drawn through securely fixed consealed PVC conduits.				
2.M.5	At basement floor	6.00	Nr		
2.M.6	At ground floor	3.00	Nr		
	Hand drier Point Wiring Wiring (including supply of all material, earth wire & switch) of the Hand driers using 2x 2.5mm^2, Cu/PVC/PVC + 2.5 mm^2 earth wire drawn through securely fixed consealed PVC conduits including 13A socket outlet close to the Hand driers.				
2.M.7	At ground floor	2.00	Nr		
	Wiring of 13A Socket outlets flush mounted. Wiring (including supply of all material required) of 13A socket outlets flush mounted using 2.5 mm^2 Cu/PVC/PVC, 2C cable & 2.5 mm^2 earth cable drawn through securely fixed consealed PVC conduit.				
2.M.8	At basement floor	9.00	Nr		
2.M.9	At ground floor	54.00	Nr		
	Wiring of 20A, 2P Isolator with Enclosure for A/C. Wiring (including supply of all material required) of 20A, 2P Isolator with Enclosure for A/C using 2.5 mm^2 Cu/PVC/PVC, 2C cable & 2.5 mm^2 earth cable drawn through securely fixed consealed PVC conduit.				
2.M.10	At basement floor	5.00	Nr		
2.M.11	At ground floor	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Luminaire's and fixtures Supply & install of following light fittings. Light fittings shall be of high quality & shall be subject to the approval of the Electrical Engineer prior to the installation.				
	Supply & installation of wall mounted dimmer light. (B3)				
2.M.12	At ground floor	2.00	Nr		
	Supply & installation of ceiling lamp surface mounted type 15W CFL C/W opal white glass.(C1)				
2.M.13	At ground floor	10.00	Nr		
2.M.14	At First floor	20.00	Nr		
	Supply & installation of ceiling lamp surface mounted weather proof type C/W 200mm dia. opal white glass.(C2)				
2.M.15	At basement floor	13.00	Nr		
	Supply & installation of Square type (300x300mm) surface mounted 12W LED panel light fitting.(C4)				
2.M.16	At Basement floor	4.00	Nr		
2.M.17	At ground floor	10.00	Nr		
2.M.18	At First floor	4.00	Nr		
	Supply & installation of Square type (300x300mm) surface mounted light fitting weather proof type C/W 7W CFL bulb.(C5)				
2.M.19	At Basement floor	12.00	Nr		
2.M.20	At ground floor	20.00	Nr		
	Supply & installation of decorative pendant type 12W LED light. (P)				
2.M.21	At ground floor	23.00	Nr		
2.M.22	At first floor	16.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply & installation of chandelier lamp. (CH_2)				
2.M.23	At Basement floor	2.00	Nr		
	Supply & installation of mirror strip lamp 600mm C/W LED bulb. (F3)				
2.M.24	At ground floor	2.00	Nr		
	Fluorescent lamp fitting 1200mm single, C/W prismatic diffuser and electronic ballast (F8)				
2.M.25	At ground floor	5.00	Nr		
2.M.26	At First floor	8.00	Nr		
	Fluorescent lamp fitting 1200mm double, complete with prismatic diffuser and electronic ballast (F9)				
2.M.27	At First floor	3.00	Nr		
2.M.28	At 19.3M level	3.00	Nr		
	Supply & installation of nitch lamp. (N)				
2.M.29	At ground floor	6.00	Nr		
	Supply & installation of ceiling fan 1400mm dia controlled by 5 speed fan regulator & 10A switch (F)				
2.M.30	At Basement floor	6.00	Nr		
2.M.31	At ground floor	3.00	Nr		
	Supply & installation of updown light. (UDL)				
2.M.32	At ground floor	10.00	Nr		
	Supply & installation of spot light outdoor. (SP2)				
2.M.33	At Basement floor	2.00	Nr		
2.M.34	At ground floor	19.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply & installation of surface mounted cylindrical down light luminare use with 33W LED 3000 lumen. (D1)				
2.M.35	At Basement floor	8.00	Nr		
2.M.36	At First floor	54.00	Nr		
	Supply & installation of surface mounted cylindrical down light luminare use with 14W LED 1100 lumen. (D2)				
2.M.37	At ground floor	9.00	Nr		
2.M.38	At First floor	14.00	Nr		
	Supply & installation of Hi-Bay 200W lamp fitting C/W metal helide lamp or mercury vapour. (HB)				
2.M.39	At First floor	12.00	Nr		
	Supply & installation of T8 LED fitting 600mmx600mm recessed type polished aluminium parabolic lured mirror reflector C/W 2x9W tube. (LE1)				
2.M.40	At ground floor	2.00	Nr		
	Supply & installation of goose neck lamp 15W LED. (GN)				
2.M.41	At ground floor	3.00	Nr		
	Supply & installation of step lamp. (ST)				
2.M.42	At ground floor	45.00	Nr		
2.M.43	At First floor	18.00	Nr		
	Supply & installation of hand drier. (HD)				
2.M.44	At ground floor	2.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	<u>In Ground floor</u>				
	Main Panel				
2.M.45	**Supplying and installation of floor standing (MSB-Panel) , Enclosure made electro Zinc coated sheet steel with thickness not less than 1.5 mm - 2.00 mm and powder coated in Ivory grey textured finish , should meet IP 54 Protection level. Internal wiring , should be comply with BS 7671:2008. Following items should as follows;** Surge arrestor (type 1+2) (U_p =900V, I_{imp} = 25kA with 1No HRC fuse set 3 Nos. indicator lamps with 1No fuse set 3 Nos. 400A 4P MCCB (35kA) 1 No. 400A 4P ATS 1 No. Ammeter with C/Ts (400/5A) and selector switch 1 No. Voltmeter with fuse and selector switch 1 No. Shunt relay for protection("ABB" or equivalent) 1 No. Earth leakage relay(" ABB" or Equivalent) 1 No. Core Balance Transformer 1 No. 600A 4P Bus bar with earth bar(' Roche Malaysia or Equivalent) 2 Nos.250A 4P MCCB 1 No.40A 4P MCB 4 Nos.30A 4P MCB (Rate to include Labeling of All parts ,pasting wiring diagram of the pannel)	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In Basement Floor				
2.M.46	**Sub Panel-1** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 40A 4P MCB 1 No. 60A 4P Bus bar with earth bar(' Roche Malaysia or Equivalent) 1 No. 25A 3P MCB 3 Nos. 20A 3P MCB 3 Nos. 40A 4P RCD (30 mA sensitive)) 3 Nos. 25A 2P MCB 3Nos. 40A 2P RCD (30 mA sensitive)) 1 No. 20A 1P MCB 9 Nos. 6A 1P MCB	1.00	Nr		
	In Ground Floor				
2.M.47	**Sub Panel-2** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 3P MCB 1 No. 30A 2P MCB 1 No. 40A 2P RCD (30 mA sensitive)) 1 No. 20A 1P MCB 7 Nos. 6A 1P MCB	1.00	Nr		
2.M.48	**DB-2** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 2P MCB 1No. 40A 2P RCD (30 mA sensitive)) 2 Nos. 20A 1P MCB 1 No. 16A 1P MCB 2 Nos. 10A 1P MCB 3 Nos. 6A 1P MCB	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.M.49	**DB-3** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 3P MCB 1 No. 40A 2P RCD (30 mA sensitive)) 2 Nos. 20A 1P MCB 6 Nos. 6A 1P MCB	1.00	Nr		
2.M.50	**Sub Panel-3** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 3P MCB 1 No. 30A 2P MCB 1 No. 40A 2P RCD (30 mA sensitive)) 2 Nos. 20A 1P MCB 1 No. 10A 1P MCB 3 Nos. 6A 1P MCB	1.00	Nr		
2.M.51	**DB-6** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 2P MCB 1No. 40A 2P RCD (30 mA sensitive)) 2 Nos. 20A 1P MCB 1 No. 10A 1P MCB 3 Nos. 6A 1P MCB	1.00	Nr		
2.M.52	**DB-7** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 2P MCB 1 No. 40A 2P RCD (30 mA sensitive)) 2 Nos. 20A 1P MCB 1 No. 10A 1P MCB 3 Nos. 6A 1P MCB	1.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.M.53	**Sub Panel- 4** in recessed type wall mounted metal enclosure as specified complete with following switch gears to be supplied and installed to working order. 1 No. 30A 3P MCB 3 Nos. 30A 2P MCB 3 Nos. 40A 2P RCD (30 mA sensitive) 1 No. 10A 1P MCB 17 Nos. 6A 1P MCB	1.00	Nr		
	Supply and installation of wiring cables & earth cables in PVC Conduit.				
2.M.54	4Cx240mm^2 Cu/XLPE/SWA/UG Cable	Provisional Sum		**300,000.00**	**300,000.00**
2.M.55	120mm^2 Cu/PVC Earth cable.	10.00	m		
2.M.56	Supply , installation testing & commissioning of 250 kVA prime rated silent type generator type 3 phase diesel generator.Should be provided European brand	1.00	Item		
2.M.57	Supply & installation of 20mm dia. Cu rod as earth electrode & earth cable should be fixed with proper nut & bolts.	1.00	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	<u>Lightning Protection System</u>				
	Note : Lightning protection system to be according to the BS 6651:1999				
	Supply and installation of complete lightning protection system for the building complex.				
	Rate include for all required joints,clamps, bonds and fixing accessories.				
2.M.59	Air termination network comprising 25mm wide 3mm thick bare copper roof tape.	525.00	m		
2.M.60	Finial type arrestor with 2 nos sharp points made out of hard copper or proper bronze with required connection accessories.Rod shall be not inch. Diameter 20mm and height is 2000mm of the arrestor.	2.00	Nr		
2.M.61	Finial type arrestor with 2 nos sharp points made out of hard copper or proper bronze with required connection accessories.Rod shall be not inch. Diameter 20mm and height is 3000mm of the arrestor.	5.00	Nr		
2.M.62	Finial type arrestor with 2 nos sharp points made out of hard copper or proper bronze with required connection accessories.Rod shall be not inch. Diameter 20mm and height is 4000mm of the arrestor.	2.00	Nr		
2.M.63	Supply and install 20mm dia. X 2400mm Cu Earth Rod. (Resistance should less than 10 Ω) forming 900mm x 900mm concrete earth pit.	12.00	Nr		
2.M.64	Test joints (for earth resistance measurement of earth electrodes)	12.00	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
2.M.65	Supply and installation of 38mm PVC pressure pipe (Type 1000) to hide the copper tape in required location.	36.00	m		
	Inspection & Testing				
2.M.66	Testing the installation & rectify any defect & submit a certificate by a chartered Electrical Engineer.	1.00	Item		
	Drawings				
2.M.67	Provide three sets of "As Build Drawings" (A3 size) to cover all the systems under electrical works binded as a book.	1.00	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	N- PAINTING				
	Refer Pricing Preambles				
	External				
2.N.1	Prepare and apply two coats of approved colour weather shield paint to plinth. (paint approved by Engineer)	138.00	m^2		
	Prepare and apply one coat of wall primer and two coats of approved colour weather shield paint. (paint approved by Engineer)				
	On brick walls ,columns				
2.N.2	From basement floor level to ground floor level	174.00	m^2		
2.N.3	From ground floor level to first floor level	689.00	m^2		
2.N.4	From first floor level to +9.35M level	1610.00	m^2		
2.N.5	From +9.35M level to above	1440.00	m^2		
	Vertical sides of isolated column shafts				
2.N.6	From plinth to ground floor level	16.00	m^2		
2.N.7	From ground floor level to first floor level	45.00	m^2		
2.N.8	From first floor level to lower roof / roof slab level	51.00	m^2		
	Vertical sides of floating column shafts				
2.N.9	From ground floor level to first floor level	3.50	m^2		
	Sides and soffit of weather shades				
2.N.10	At ground floor	48.00	m^2		
2.N.11	At first floor	54.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Internal **Prepare and apply one coat wall primer and two coats of approved colour emulsion paint. (paint approved by Engineer)**				
	On brick walls, attached columns etc.				
2.N.12	From basement floor level to ground floor level	632.00	m^2		
2.N.13	From ground floor level to first floor level	1000.00	m^2		
2.N.14	From first floor level to +9.35M level	877.00	m^2		
2.N.15	From +9.35M level to above	1223.00	m^2		
	Soffit of suspended floor slab				
2.N.16	At ground floor slab (+1.05m) level	83.00	m^2		
2.N.17	At ground floor slab (+2.25m) level	260.00	m^2		
2.N.18	At ground floor slab (+3.0m) level	135.00	m^2		
2.N.19	At first floor slab level	555.00	m^2		
2.N.20	At space for AHU slab (+7.55m) level	56.00	m^2		
2.N.21	At +10.2m slab level	36.00	m^2		
2.N.22	At +12.0m slab level	7.00	m^2		
2.N.23	At cooling tower floor slab(+14.05m) level	55.00	m^2		
	Vertical sides of floating column shafts				
2.N.24	From ground floor level to first floor level	2.50	m^2		
2.N.25	From first floor level to +12.0m slab level	9.50	m^2		
	Vertical sides of isolated column shafts				
2.N.26	From ground floor level to first floor level	5.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of beams				
2.N.27	At ground floor slab (+1.05m) level	402.00	m^2		
2.N.28	At ground floor slab (+2.25m) level	410.00	m^2		
2.N.29	At first floor slab level	893.00	m^2		
2.N.30	At roof slab (+9.30m) level	169.00	m^2		
2.N.31	At +10.2m level	66.00	m^2		
2.N.32	At +11.7m level	26.00	m^2		
2.N.33	At +12.0m slab level	36.00	m^2		
2.N.34	At +13.45m level	65.00	m^2		
2.N.35	At cooling tower floor slab(+14.05m) level	91.00	m^2		
2.N.36	At +16.2m level	26.00	m^2		
2.N.37	At +17.0m level	14.00	m^2		
2.N.38	At +19.75m level	67.00	m^2		
	Sides and soffit of roof beams				
2.N.39	At upper roof level (on stage)	26.00	m^2		
2.N.40	At upper roof (+13.75M) level	85.00	m^2		
2.N.41	At lower roof (+8.55M) level	63.00	m^2		
2.N.42	At lower roof (+9.80M) level	65.00	m^2		
	Sides and soffit of sloping beams				
2.N.43	At ground floor slab (+1.05m) level	129.00	m^2		
2.N.44	At first floor slab level	35.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sides and soffit of landing beams at staircase				
	In staircase 'A'				
2.N.45	Between basement floor level to ground floor level	7.00	m^2		
2.N.46	Between ground floor level to first floor level	7.00	m^2		
	In staircase at electrical room				
2.N.47	Between +1.05M level to +2.25M level	2.00	m^2		
	Sides of steps and waist of staircase				
	In staircase 'A'				
2.N.48	Between basement floor level to ground floor level	5.00	m^2		
2.N.49	Between ground floor level to first floor level	7.00	m^2		
2.N.50	At first floor level	4.00	m^2		
	In stairway at entrance porch				
2.N.51	Between +1.05m level to +3.45m level	2.00	m^2		
	In stairway at first floor balcony				
2.N.52	Between +4.95m level to +6.3m level	3.00	m^2		
	In stairway at stage backside				
2.N.53	Between +1.05m level to +2.25m level	2.00	m^2		
	In stairway at electrical room				
2.N.54	Between +1.05M level to +2.25M level	2.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Sloping soffit of staircase				
	In staircase 'A'				
2.N.55	Between basement floor level to ground floor level	16.00	m^2		
2.N.56	Between ground floor level to first floor level	15.00	m^2		
2.N.57	At first floor level	11.00	m^2		
	In stairway at entrance porch				
2.N.58	Between +1.05m level to +3.45m level	39.00	m^2		
	In stairway at first floor balcony				
2.N.59	Between +4.95m level to +6.3m level	15.00	m^2		
	In stairway at stage backside				
2.N.60	Between +1.05m level to +2.25m level	4.00	m^2		
	In stairway at electrical room				
2.N.61	Between +1.05M level to +2.25M level	5.00	m^2		
	Sides and soffit of landing slab at staircase				
	In staircase 'A'				
2.N.62	Between basement floor level to ground floor level	12.00	m^2		
2.N.63	Between ground floor level to first floor level	12.00	m^2		
	In stairway at entrance porch				
2.N.64	Between +1.05m level to +3.45m level	7.00	m^2		
	Sides and soffit of landing slab at stairway at electrical room				
2.N.65	Between +1.05m level to +2.25m level	3.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Prepare and apply one coat wall primer and two coats of approved colour textured paint in pelmet. (paint approved by Engineer)				
2.N.66	At first floor level	18.00	m^2		
	Prepare and apply one coat wall primer and two coats of approved colour matt finish paint (without patches) in cyclorama. (paint approved by Engineer)				
2.N.67	Between +2.25m level to +9.3m level	90.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	P- MISCELLANEOUS WORK				
	Besco Partition				
	High pressure laminated pannel 12mm tk. Typical toilet partition would consist of one seperating panel 2100mm in height with two stainless steel adjustable legs, 125mm in height total partition height from floor set off gravity hinges partition would be set into existing walls with natural Aluminium extrusion frame. All complete as per detail drawing No.2019-04-001AR02 and Engineer's approval.				
2.P.1	At ground floor	21.00	m^2		
	High pressure laminated pannel urinal separator				
	Supplying and fixing High pressure laminated pannel 12mm thick urinal separator would consist of one seperating panel 1200mm in height with brackets. Rate to include for fixing urinal separator to wall with necessary screws. All complete as per detail drawing no.2019 - 04 - 001AR02 and Engineer's approval.				
2.P.2	At basement floor	9.00	Nr		
2.P.3	At ground floor	4.00	Nr		
	Dura board Partition				
	Supplying fabricating and installing Durra single wall partition system up to 2100mm height, consist of Durra standard board fixed with G.I and aluminium channels. Rate to include all necessary accessories and painting works. All complete as per detail drawings, manufacturer's specification and Engineers approval.				
2.P.4	In ground floor	28.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying fabricating and installing Durra single wall partition system up to slab beam level, consist of Durra standard board fixed with G.I and aluminium channels. Rate to include all necessary accessories and painting works. All complete as per detail drawings, manufacturer's specification and Engineers approval.				
2.P.5	In ground floor	14.00	m^2		
	<u>High pressure laminated pannel Doors</u>				
	High pressure laminated board door (Besco or equivalent), **D12**, 850 x 1950mm high consist of high pressure laminated board (Besco or equi.) inclusive Nylon door knob with occupancy indicator. All complete as per detail drawing No.2019-04-001AR23 and Engineer's approval. (effective area of each door approx 1.65m²)				
2.P.6	At ground floor	5.00	Nr.		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 148				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT

BILL NO A2 - SUPERSTRUCTURE (AUDITORIUM)

COLLECTION

C - CONCRETE WORK	(From Page 60)	Rs.
D - MASONRY WORK	(From Page 62)	Rs.
E - WATER PROOFING	(From Page 64)	Rs.
F - STRUCTURAL STEEL WORK	(From Page 71)	Rs.
G - METAL WORK	(From Page 90)	Rs.
H - CARPENTRY & JOINERY	(From Page 96)	Rs.
J - ROOF AND ROOF PLUMBING	(From Page 99)	Rs.
K - PLUMBING	(From Page 110)	Rs.
L - WALL, CEILING AND FLOOR FINISHES	(From Page 127)	Rs.
M - ELECTRICAL INSTALLATIONS	(From Page 139)	Rs.
N - PAINTING	(From Page 145)	Rs.
P - MISCELLANEOUS WORK	(From Page 147)	Rs.

TOTAL CARRIED TO SUMMARY ON PAGE S 08 - 247 Rs.

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO A3 - EXTERNAL WORK (AUDITORIUM)				
	All External work to be executed according to the available drawings and as per Engineer's approval.				
	Q- EXTERNAL DRAINAGE				
3.Q.1	110mm dia. Soil pipe between manholes and extended up to the septic tank and soakage pit laid to necessary falls with average invert depth not exceeding 900mm including excavation and back filling , bedding on a layer of cement concrete 1:4:8(38mm) 100mm thick and 100mm wide on each side of the pipe and subsequently encasing with the same concrete after inspection of the pipe	45.00	m		
	Manhole type- MH4 & MH6 - 475 x 625mm internally (Quantity for 02 Nos)				
	Excavation & Earth work				
3.Q.2	Excavation for manhole pit, commencing from existing ground level, not exceeding 1.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	1.20	m^3		
3.Q.3	Excavation for manhole pit, commencing from existing ground level, exceeding 1.0 M but not exceeding 2.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	0.18	m^3		
	Concrete work				
3.Q.4	75mm thick lean concrete grade ' C - 15 ' aggregate under manhole base slab.	1.20	m^2		
	Reinforced cement concrete Grade 'C - 25' in the following				
3.Q.5	150mm thick base slab	1.20	m^2		
3.Q.6	100mm thick side walls	4.70	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Formwork				
	Formwork is measured as the net contact surface measurement between concrete and formwork. Formwork for columns and beams is given as a girth measurement.				
3.Q.7	150mm high sides of base slab	6.00	m^2		
3.Q.8	Sides of walls	33.00	m^2		
	Reinforcements				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers f_y = 460/mm^2				
3.Q.9	10mm dia. In base slab and side walls	0.08	MT		
3.Q.10	Forming channels and benching in cement concrete 1:2:4 (20mm) with 12mm thick cement rendering 1:1	1.00	Item		
3.Q.11	Supplying and fixing Cast Iron manhole cover and frame. Frame to be bedded in 12mm to 25mm thick cement mortar.(Thickness of man hole cover should be 25-40 mm and refer type drawings for cast iron man hole frame size)	1.00	Item		
3.Q.12	150mm wide cement concrete surround in 1:2:4 (20mm) mix.	1.00	Item		
	Finishes				
3.Q.13	12mm thick in cement and sand 1:2 plastering to inner side of walls.	4.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Manhole type MH2,MH7 & MH8 , - 475 x 750mm internally (Quantity for 03 Nos)				
	Excavation & Earth work				
3.Q.14	Excavation for manhole pit, commencing from existing ground level, not exceeding 1.0 m deep in any material except rock requiring blasting, back filling and disposal of surplus earth as directed.	2.10	m^3		
3.Q.15	Excavation for manhole pit, commencing from existing ground level, exceeding 1.0 m but not exceeding 2.0 m deep in any material except rock requiring blasting, back filling and disposal of surplus earth as directed.	0.30	m^3		
	Concrete work				
3.Q.16	75mm thick lean concrete grade ' C - 15 ' aggregate under manhole base slab.	2.10	m^2		
	Reinforced cement concrete Grade 'C - 25 ' in the following.				
3.Q.17	150mm thick base slab	2.10	m^2		
3.Q.18	100mm thick side walls	7.80	m^2		
3.Q.19	100mm thick cover slab	0.60	m^2		
	Formwork				
	Formwork is measured as the net contact surface measurement between concrete and formwork. Form work for columns and beams is given as a girth measurement.				
3.Q.20	150mm high sides of base slab	10.50	m		
3.Q.21	Sides of walls	16.50	m^2		
3.Q.22	Soffit of cover slab	0.30	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reinforcements				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers f_y = 460/mm^2				
3.Q.23	10mm dia. In base slab, side wall and cover slab	0.09	MT		
3.Q.24	Forming channels and benching in cement concrete 1:2:4 (20mm) with 12mm thick cement rendering 1:1	1.00	Item		
3.Q.25	Supplying and fixing Cast Iron manhole cover and frame. Frame to be bedded in 12mm to 25mm thick cement mortar.(Thickness of man hole cover should be 25-40 mm and refer type drawings for cast iron man hole frame size)	1.00	Item		
3.Q.26	150mm wide cement concrete surround in 1:2:4 (20mm) mix.	1.00	Item		
	Finishes				
3.Q.27	12mm thick in cement and sand 1:2 plastering to inner side of walls.	6.90	m^2		
	Manhole type MH1,MH3 & MH5 - 475 x 1050mm internally (Quantity for 03 Nos)				
	Excavation & Earth work				
3.Q.28	Excavation for manhole pit, commencing from existing ground level, not exceeding 1.0 m deep in any material except rock requiring blasting, back filling and disposal of surplus earth as directed.	2.70	m^3		
3.Q.29	Excavation for manhole pit, commencing from existing ground level, exceeding 1.0 m but not exceeding 2.0 m deep in any material except rock requiring blasting, back filling and disposal of surplus earth as directed.	0.45	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Concrete work				
3.Q.30	75mm thick lean concrete grade 'C - 15' aggregate under manhole base slab.	2.70	m^2		
	Reinforced cement concrete Grade 'C - 25 ' in the following				
3.Q.31	150mm thick base slab	2.70	m^2		
3.Q.32	100mm thick side walls	10.50	m^2		
3.Q.33	100mm thick cover slab	0.60	m^2		
	Formwork				
	Formwork is measured as the net contact surface measurement between concrete and formwork. Form work for columns and beams is given as a girth measurement.				
3.Q.34	150mm high sides of base slab	12.00	m		
3.Q.35	Sides of walls	21.00	m^2		
3.Q.36	Soffit of cover slab	0.60	m^2		
	Reinforcements Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers f_y = 460/mm2				
3.Q.37	10mm dia. In base slab, side wall and cover slab	0.15	MT		
3.Q.38	Forming channels and benching in cement concrete 1:2:4 (20mm) with 12mm thick cement rendering 1:1	1.00	Item		
3.Q.39	Supplying and fixing Cast Iron manhole cover and frame. Frame to be bedded in 12mm to 25mm thick cement mortar.(Thickness of man hole cover should be 25-40 mm and refer type drawings for cast iron man hole frame size)	1.00	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
3.Q.40	150mm wide cement concrete surround in 1:2:4 (20mm) mix.	1.00	Item		
	Finishes				
3.Q.41	12mm thick in cement and sand 1:2 plastering to inner side of walls.	9.00	m^2		
	Waste water disposal				
3.Q.42	110mm dia. Waste water pipe from manholes, extended up to the soakage pit laid to necessary falls with average invert depth not exceeding 900mm including excavation and back filling, bedding on a layer of cement concrete 1:4:8(38mm) 100mm thick and 100mm wide on each side of the pipe and subsequently encasing with the same concrete after inspection of the pipe.	58.00	m		
	Waste Water Manhole type WWMH1 WWMH2, WWMH3, WWMH4, WWMH5 & WWMH6- 475x 625mm internally (Quantity for 6 Nos)				
	Excavation & Earth work				
3.Q.43	Excavation for manhole pit, commencing from existing ground level, not exceeding 1.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	3.60	m^3		
3.Q.44	Excavation for manhole pit, commencing from existing ground level, exceeding 1.0 M but not exceeding 2.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	0.54	m^3		
	Concrete work				
3.Q.45	75mm thick lean concrete grade ' C- 15' aggregate under manhole base slab.	3.60	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reinforced cement concrete Grade 'C - 25' in the following				
3.Q.46	150mm thick base slab	3.60	m^2		
3.Q.47	100mm thick side walls	14.10	m^2		
	Formwork Formwork is measured as the net contact surface measurement between concrete and formwork. Form work for columns and beams is given as a girth measurement.				
3.Q.48	150mm high sides of base slab	18.00	m^2		
3.Q.49	Sides of walls	99.00	m^2		
	Reinforcements Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers f_y = 460/mm2				
3.Q.50	10mm dia. In base slab and side walls	0.24	MT		
3.Q.51	Forming channels and benching in cement concrete 1:2:4 (20mm) with 12mm thick cement rendering 1:1	1.00	Item		
3.Q.52	Supplying and fixing Cast Iron manhole cover and frame. Frame to be bedded in 12mm to 25mm thick cement mortar.(Thickness of man hole cover should be 25-40 mm and refer type drawings for cast iron man hole frame size)	1.00	Item		
3.Q.53	150mm wide cement concrete surround in 1:2:4 (20mm) mix.	1.00	Item		
	Finishes				
3.Q.54	12mm thick in cement and sand 1:2 plastering to inner side of walls.	12.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Storm water disposal				
3.Q.55	160mm dia. PVC pipe type PN_T7 led to the down pipes to the rain water gullies / storm water manholes laid to necessary falls with average invert depth not exceeding 900mm including excavation and back filling, bedding on a layer of cement concrete 1:4:8(38mm) 100mm thick and 110mm wide on each side of the pipe and subsequently encasing with the same concrete after inspection of the pipe.	81.00	m		
3.Q.56	225mm dia. PVC pipe type PN_T7 from storm water manholes to manholes and extended up to the road drain laid to necessary falls with average invert depth not exceeding 900mm including excavation and back filling, bedding on a layer of cement concrete 1:4:8(38mm) 100mm thick and 110mm wide on each side of the pipe and subsequently encasing with the same concrete after inspection of the pipe.	125.00	m		
	R C C storm water manholes				
3.Q.57	Storm Water Manhole SWMH - 450 x 450mm internally as per drawing with invert depth not exceeding 900mm including excavation and back filling, 75mm thick R.C.C. grade 20 foundation including necessary reinforcement forming channels and benching in cement and sand 1:6 and 75mm thick concrete walls and cement sand 1:2 rendering not less than 12mm to internal walls, channels and benching, 75mm thick R.C.C. Grade 20 removable cover slab, inlet and outlet connections all complete to approval.	25.00	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	R C C Rain Water Gully				
3.Q.58	Rain Water Gully RWG - 300 x 300mm internally as per drawing with depth not exceeding 500mm including excavation and back filling, 100mm thick R.C.C. grade 20 foundation including necessary reinforcement and 100mm thick concrete walls and cement sand 1:2 rendering not less than 12mm to internal walls, heavy duty C.I grating cover, inlet and outlet connections all complete to approval.	28.00	Nr.		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	R - R C C SOAKAGE PIT (1.2m internal dia.) (Quantity for 02 Nos)				
	Refer drawing No. WSS-TP-SP03 and 2015-TP-ST36				
3.R.1	Allow for clearing site of all growth roots and cutting top soil up to 3.0m beyond outer walls of proposed soakage pit and carting away the waste materil from the site where directed(Approx. 48.50m^2)	1.00	Item		
	<u>Excavation & Earth wotk</u>				
3.R.2	Excavation for soakage pit,commencing from existing ground level, not exceeding 1.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	5.44	m^3		
3.R.3	Excavation for soakage pit,commencing from existing ground level, exceeding 1.0 M but not exceeding 2.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	5.44	m^3		
3.R.4	Excavation for soakage pit,commencing from existing ground level, exceeding 2.0 M but not exceeding 3.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	5.44	m^3		
3.R.5	Excavation for soakage pit,commencing from existing ground level, exceeding 3.0 M but not exceeding 4.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	5.44	m^3		
	<u>Concrete work</u>				
3.R.6	75mm thick lean concrete 'C - 15 ' under soakage pit base.	5.44	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
3.R.7	Cement concrete 1:2:4(20mm) pad 300 x 225 x 150 mm to rest the beam.	4.00	Nr.		
	Reinforced cement concrete Grade 'C - 25 ' in the following				
3.R.8	150 x 225mm beam to support the cover slab	0.12	m^3		
3.R.9	225mm thick base slab	1.40	m^3		
3.R.10	250mm thick concrete side walls including 32mm dia. Type PN_T11 UPVC pipes every 200mm intervals as per drawing	38.00	m^2		
3.R.11	150mm thick cover slab cast in 2 sections with openable area and complete with lifting handles.	2.90	m^2		
	Formwork Formwork is measured as the net contact surface measurement between concrete and formwork. Form work for columns and beams is given as a girth measurement.				
3.R.12	Sides and soffit of beam	1.80	m^2		
3.R.13	250mm high to sides of base slab	11.70	m		
3.R.14	Verticall sides of concrete walls	75.64	m^2		
3.R.15	Soffit of cover slab	2.90	m^2		
3.R.16	150mm high to sides of cover slab	18.22	m		
	Reinforcements Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers $f_y = 460/mm^2$				
3.R.17	16mm dia. In beams	0.02	MT		
3.R.18	12mm dia. In base slab	0.14	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
3.R.19	12mm dia. In walls	0.80	MT		
3.R.20	12mm dia. In cover slab	0.02	MT		
3.R.21	10mm dia. In cover slab	0.06	MT		
	Mild Steel (fy = 250N/mm^2) rod reinforcement as follows 6mm dia. stirrups in beams				
3.R.22	6mm dia. In beams	0.02	MT		
	Finishes				
3.R.23	12mm to25mm thick in cement and sand 1:2 motar to bedded Cast frame .	10.68	m		
3.R.24	Supplying and fixing 110mm dia. UPVC.pipe with tee to outlet and inlet of the soakage pit.	4.00	Nr.		
3.R.25	Supplying and packing 12mm to 75mm crushed metal around outlet pipe to a length of 0.5m from soakage pit.	0.60	m^3		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	S - R C C SOAKAGE PIT (2.0m internal dia.) (Quantity for 02 Nos)				
	Refer drawing No. WSS-TP-SP01 and 2015-TP-ST36				
3.S.1	Allow for clearing site of all growth roots and cutting top soil up to 3.0m beyond outer walls of proposed soakage pit and carting away the waste materil from the site where directed(Approx. 56.75m^2)	1.00	Item		
	<u>Excavation & Earth wotk</u>				
3.S.2	Excavation for soakage pit,commencing from existing ground level, not exceeding 1.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	11.00	m^3		
3.S.3	Excavation for soakage pit,commencing from existing ground level, exceeding 1.0 M but not exceeding 2.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	11.00	m^3		
3.S.4	Excavation for soakage pit,commencing from existing ground level, exceeding 2.0 M but not exceeding 3.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	11.00	m^3		
3.S.5	Excavation for soakage pit,commencing from existing ground level, exceeding 3.0 M but not exceeding 4.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	11.00	m^3		
3.S.6	Excavation for soakage pit,commencing from existing ground level, exceeding 4.0 M but not exceeding 5.0 M deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	1.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Concrete work				
3.S.7	75mm thick lean concrete 'C - 15 ' under soakage pit base.	11.00	m^2		
3.S.8	Cement concrete 1:2:4(20mm) pad 300 x 225 x 150 mm to rest the beam.	4.00	Nr		
	Reinforced cement concrete Grade 'C - 25 ' in the following				
3.S.9	150 x 225mm beam to support the cover slab	0.18	m^3		
3.S.10	225mm thick base slab	2.80	m^3		
3.S.11	250mm thick concrete side walls including 32mm dia. Type PN_T11 UPVC pipes every 200mm intervals as per drawing	60.00	m^2		
3.S.12	150mm thick cover slab cast in 2 sections with openable area and complete with lifting handles.	6.00	m^2		
	Formwork Formwork is measured as the net contact surface measurement between concrete and formwork. Form work for columns and beams is given as a girth measurement.				
3.S.13	Sides and soffit of beam	2.80	m^2		
3.S.14	250mm high to sides of base slab	17.00	m		
3.S.15	Verticall sides of concrete walls	120.00	m^2		
3.S.16	Soffit of cover slab	6.00	m^2		
3.S.17	150mm high to sides of cover slab	32.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reinforcements Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers f_y = 460/mm^2				
3.S.18	16mm dia. In beams	0.04	MT		
3.S.19	12mm dia. In base slab	0.14	MT		
3.S.20	12mm dia. In walls	1.26	MT		
3.S.21	12mm dia. In cover slab	0.02	MT		
3.S.22	10mm dia. In cover slab	0.10	MT		
	Mild Steel (fy = 250N/mm^2) rod reinforcement as follows 6mm dia. stirrups in beams				
3.S.23	6mm dia. In beams	0.02	MT		
	Finishes				
3.S.24	12mm to25mm thick in cement and sand 1:2 motar to bedded Cast frame .	16.00	m		
3.S.25	Supplying and fixing 110mm dia. UPVC.pipe with tee to outlet and inlet of the soakage pit.	4.00	Nr.		
3.S.26	Supplying and packing 12mm to 75mm crushed metal around outlet pipe to a length of 0.5m from soakage pit.	0.80	m^3		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	T- R C C SEPTIC TANK FOR 50 PERSONS (Quantity for 02 Nos)				
	Refer drawing No 2013-TP-ST19				
3.T.1	Clearing site including removal of roots and growth of every description,removing topsoil upto a depth of 150mm extended upto 3.0m beyond the outer walls of the proposed septic tank and carting away the waste material from the site where directed.(Approx. 72.00m^2)	1.00	Item		
	<u>Excavation & Earth work</u>				
3.T.2	Excavation for septic tank commencing from existing ground level, not exceeding 1.0 M deep in any material except rock requiring blasting, part return fill in ram and surplus disposed as directed.	10.70	m^3		
3.T.3	Excavation for septic tank commencing from existing ground level, exceeding 1.0 M but not exceeding 2.0M deep in any material except rock requiring blasting, part return fill in ram and surplus disposed as directed.	10.70	m^3		
3.T.4	Excavation for septic tank commencing from existing ground level, exceeding 2.0 M but not exceeding 3.0M deep in any material except rock requiring blasting, part return fill in ram and surplus disposed as directed.	4.30	m^3		
	<u>Earthwork Supports</u>				
3.T.5	Earthwork supports (Planking & Strutting) total depth excavation not exceeding 1.0m and distance between vertical sides (opposing faces) not exceeding 2.0m, (Payment will be made only for actually executed Quantites on the order of the Engineer)	13.80	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
3.T.6	Earthwork supports, (Planking & Strutting) total of depth excavation exceeding 1.0m but not exceeding 2.0m and distance between vertical sides (opposing faces) not exceeding 2.0m (Payment will be made only for actually executed Quantites on the order of the Engineer)	13.80	m^2		
3.T.7	Earthwork supports, (Planking & Strutting) total of depth excavation exceeding 2.0m but not exceeding 3.0m and distance between vertical sides (opposing faces) not exceeding 2.0m (Payment will be made only for actually executed Quantites on the order of the Engineer)	5.52	m^2		
3.T.8	Earthwork supports, (Planking & Strutting) total depth of excavation not exceeding 1.0m and distance between vertical sides (opposing faces) exceeding 2.0m not exceeding 4.0m (Payment will be made only for actually executed Quantities on the order of the Engineer)	6.40	m^2		
3.T.9	Earthwork supports, (Planking & Strutting) total of depth excavation exceeding 1.0m but not exceeding 2.0m and distance between vertical sides (opposing faces) exceeding 2.0m not exceeding 4.0m (Payment will be made only for actually executed Quanties on the order of the Engineer)	6.40	m^2		
3.T.10	Earthwork supports, (Planking & Strutting) total of depth excavation exceeding 2.0m but not exceeding 3.0m and distance between vertical sides (opposing faces) exceeding 2.0m not exceeding 4.0m (Payment will be made only for actually executed Quanties on the order of the Engineer)	2.50	m^2		
	<u>Concrete work</u>				
3.T.11	75mm thick lean concrete 1:3:6 (40mm) aggregate under septic tank base slab	10.70	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reinforced cement concrete Grade 'C - 25 ' in the following				
3.T.12	200mm thick base slab	10.70	m^2		
3.T.13	200mm thick concrete side walls	39.70	m^2		
3.T.14	Concrete cover slab support	0.15	m^3		
3.T.15	150mm thick concrete cover slab	5.46	m^2		
3.T.16	150mm thick concrete removable cover slab (02 Nos.) complete with lifting handles.	3.40	m^2		
	Formwork Formwork is measured as the net contact surface measurement between concrete and formwork				
3.T.17	200mm high sides of base slab	20.00	m		
3.T.18	Vertical sides of concrete walls	82.90	m^2		
3.T.19	150mm high sides of concrete cover slab support	39.20	m		
3.T.20	Soffit of cover slab	5.50	m^2		
3.T.21	150mm high sides of cover slab	13.60	m		
3.T.22	Soffit of concrete removable cover slab	4.00	m^2		
3.T.23	150mm high sides of concrete removable cover slab (02 Nos.)	16.00	m		
	Reinforcements				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers f_y = 460/mm^2				
3.T.24	10mm dia. In base slab	0.16	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
3.T.25	10mm dia. In side walls	0.88	MT		
3.T.26	10mm dia. In cover slab support	0.02	MT		
3.T.27	10mm dia. In cover slab	0.08	MT		
3.T.28	10mm dia. In removable cover slab.(02 Nos.)	0.04	MT		
	Finishes				
3.T.29	Cement and sand 1:2 rendering 20 mm thick to internal faces of the septic tank finished smooth	43.56	m^2		
3.T.30	Cover slab cast in 3 sections and joints to be filled with a mixture of bitumen and sand.	1.00	Item		
3.T.31	Supplying and fixing 110mm dia. UPVC.pipe with tee to outlet and inlet of the septic tank.	4.00	Nr.		
	Water proofing				
3.T.32	Applying 2 coats of shell coat No. 5 or equivalent approved water proofing to internal faces of septic tank	43.56	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	U - INLET & OUTLET CHAMBERS (02 Nos.)				
	Refer drawing No WSS -TP-ST04				
3.U.1	Construction of underground R C C Septic tank (50 persons) inlet & outlet chamber with cover slab including necessary reinforcement and formwork and inlet & outlet connections all complete to Engineer's approval.	**Provisional sum**			**400,000.00**
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				**400,000.00**

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	V - VALVE CHAMBER PIT				
	Refer drawing No WSS 1173.00				
	Excavation				
3.V.1	Excavation for manhole pit, commencing from existing ground level, not exceeding 1.0 m deep in any material except rock requiring blasting, backfilling and disposal of surplus earth as directed.	0.70	m^3		
3.V.2	Timbering (for loose soil) where necessary.	2.00	m^2		
3.V.3	100mm thick concrete1:2:4 (20mm) base slab reinforced with No.8 B.R.C. fabric or equivalent.	0.81	m^2		
3.V.4	Cement concrete pad 1:2:4 (20 mm) 112.5 x 112.5mm in section over walls of valve chamber pit formed to shape as shown in drawing with forming groove to place the precast cover slab. Rate to include for form work.	3.60	m		
3.V.5	1:2:4(20 mm) cement concrete in precast cover slabs 75 mm thick. Rate to include for form work, No.8 B.R.C. fabric or equivalent. 12mm dia MS lifting handles & bitumen sand filling in air gap between cover slab and concrete pad.	0.70	m^2		
	Formwork				
3.V.6	Formwork to floor slab <300mm	3.70	m		
3.V.7	Formwork to concrete pad <300mm	15.00	m		
3.V.8	Formwork to cover slab <300mm	3.50	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Brickwork				
3.V.9	112.5 mm brickwork in 1:5 cement mortar in chambers.	2.50	m^2		
	Finishes				
3.V.10	12mm thick cement and sand 1:3 plastering to internal walls of chambers floated smooth .	3.20	m^2		
3.V.11	Cement plastering 1:3 to floor and pad finished as directed. Thickness 12 mm Plaster to be extended to cover a 75 mm width of external brick work.	0.45	m^2		
	Accessories				
3.V.12	Locking device as type plan No.W.S.S.156.20	1.00	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	W - LANDSCAPING				
	Planting trees (Root Boll type)				
	Procuring and planting specified nursery grown/root ball trees (3m minimum high plant) , supporting its with a sturdy stake. The spacing, location and other details as per the drawings and specification; rate to include for plant cost, transport, pit and soil preparation, planting, Labour disposing the surplus earth.				
3.W.1	"Kohomba " tree	19.00	Nr		
	Tree trough				
3.W.2	Tree trough 1800mm long, 1800mm wide,900mm high over all consisting of concrete beam right around,225mm thick brick supports, 75mm thick concrete & cut & polished cement render finish top of tree trough including necessary excavation back filling, foundation of the same material complete with cement and sand I:2 rendering to all internal exposed faces.as per drawing No. 2019 - 04 - 001AR28 and Engineers approval.	17.00	Nr.		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 172				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT

BILL NO A3 - EXTERNAL WORK (AUDITORIUM)

COLLECTION

Q - EXTERNAL DRAINAGE	(From Page 157)	Rs.	
R - R C C SOAKAGE PIT (1.2m internal dia.) (Quantity for 02 Nos)	(From Page 160)	Rs.	
S - R C C SOAKAGE PIT (2.0m internal dia.) (Quantity for 02 Nos)	(From Page 163)	Rs.	
T - R C C SEPTIC TANK FOR 50 PERSONS (Quantity for 02 Nos)	(From Page 167)	Rs.	
U - INLET & OUTLET CHAMBERS (02 Nos.)	(From Page 168)	Rs.	**400,000.00**
V - VALVE CHAMBER PIT	(From Page 170)	Rs.	
W - LANDSCAPING	(From Page 171)	Rs.	

TOTAL CARRIED TO SUMMARY ON PAGE S 08 - 247

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO A4 - MISCELLANEOUS WORK (AUDITORIUM)				
	X - AIR CONDITIONING AND MECHANICAL VENTILATION SYSTEM				
	General Notes				
	The Tenderer is requested to refer the Bill of Quantities, General Note, Drawing, Specification, Conditions of contract, Special Conditions of contract and other relevant documents prior to pricing of items in this trade.	Note			
	Rates shall include for supply, installation, commissioning and maintaining during the defect liability period of the following items for mechanical ventilation and Air-conditioning system according to drawings and specifications and all complete to working order.	Note			
	Rates for all plants and equipments shall include for: a) Importation, clearing, transportation to site and installation at given position and necessary insurance. b) Electrical connection, piping connection to equipment, sound insulation, hardware fixing and other material require for trouble free operation of the plant. c) All three way valves, flow switches thermostat, controls etc… unless otherwise measured separately. d) Testing and commissioning of total Air conditioning and mechanical ventilation system unless otherwise measured separately. e) All other items which are not specifically described in the Bill of Quantities but necessary for satisfactory completion to necessary for satisfactory completion to working order.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	The Tenderer shall submit the following informations on the items/ equipments/ fittings quoted for together with the Tender.				
	a. Make b. Model No. c. Technical data d. Country of manufacture e. Delivery period f. Lead time for manufacturing g. Port of shipping h. CIF value of each item in foreign currency j. Schedule of equipments and materials (Fill the annexed technical schedule)				
	k. Optional items and their additional cost (additional cost to be submitted separately)				
	l. Details of all special features m. Schedule of rates for after sales service				
	n. Format of after sales agreement	Note			
	All equipments and accessories shall be strictly as per specification, drawings.	Note			
	The Tenderer shall provide all dimensions,technical information of all builders work in advance.	Note			
	The Warranty period for all equipments shall be a period of 2 years from the date of commissioning.	Note			
	The rates shall include for comprehensive maintenance during defects liability period.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	AIR CONDITIONING SYSTEM				
	COOLING TOWERS (CT-01 & CT-02)				
4.X.1	Supply and Installation of Approved quality Super low noice, Cross flow Square Modular type cooling tower with minimum heat rejection capacity suitable for chillers selected, need to be selected by contractor, condenser water entering temperature of 37ºC, Condenser water leaving temperature of 32ºC, Approch 4C and Range 5C, Drift loss not more than 0.01% and minimum condenser water flow rate of 24.7 l/s, ambient wet bulb temperature 28ºC and power supply of 400v/50Hz/3 phase. Tower shall be complete with all metal parts in Stainless steel SS306 or HDG, and all complete as shown in drawings and specifications to the working order to the approval of the Engineer. Rate shall include for transport and placing the cooling towers to the required position in required method (using a crane or heavy mechines etc,.as necessary) and connecting the service lines (supply and return Condenser water pipes, electrical cable from control panel to cooling tower motor, etc.) as necessary.	1	Nr		
4.X.2	Supply and installation of approved quality Variable Speed Driver (VSD) with harmonic fillter, and sensing devices, control cabling, for energy efficient operation for above Coling tower motor to comply with specifications.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	<u>WATER COOLED SCREW CHILLERS (CH-01 & CH-02)</u>				
4.X.3	Supply and Installation of Approved quality water cooled semi hermetic screw chiller with minimum cooling capacity 100 RT, continuous capacity control, 2 pass shell & tube condenser & cooler with copper tubes, chilled water inlet flow rate 19 liter/sec, chilled water inlet temperature 12°C, chilled water outlet temperature 7°C, condenser water inlet flow rate 24.7 liter/sec, condenser water inlet temperature 32°C, condenser water outlet temperature 37°C, refrigerant CFC free R134a / R407c, minimum IPLY at AHRI condition 0.59 kW / RT or above, Variable Speed Driver (VSD) for compressor, Variable Speed Driver (VSD) with harmonic filters for THD less than 5%, and power supply 400v/50hz/3 phase. Automatic tube cleaning and brushing system to be provided as per manufacturers recommended arrangement. All complete as shown in drawings and specifications to the working order to the approval of the Engineer. Rate shall include for transport and placing the chiller to the required position in required method (using a crane or heavy machines etc.)				
	and connecting the service lines (supply and return Chilled water pipes, electrical and control cable from chiller control panel to chiller, etc.) as necessary.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	CHILLED WATER COMPRESSION TANK				
4.X.4	Supply and Installation of Approved quality 100 Litres capacity Chilled water compression tank complete with all necessary associated items required for proper functioning of the system as per Specification. Rate shall includ with tank insulattion, insulated by 25mm nitryl rubber complete with & Aluminum cladding (Gauge 26) as per specification to the working order to the approval of the Engineer.	1	Nr		
	CHEMICAL DOSING UNIT				
4.X.5	Supply and Installation of Approved quality Chemical dosing plant for Condenser water system circuit, flow rate 24.7 lit/sec for 24 hrs operation at whole year C/W Chemical dosing pump , for controllers dosing pump including timer switch and tanks and any other related a accessories for proper automatic operation. Rate shall include for connecting the service lines (supply and return water pipes, electrical connection, etc.) as necessary. as per specification to the working order to the approval of the Engineer.	1	Item		
4.X.6	Supply and Installation of Approved quality Chemical dosing plant for chilled water system circuit, flow rate 19.0 lit/sec for 24 hrs operation at whole year C/W Chemical dosing pump , for controllers dosing pump including timer switch and tanks and any other related a accessories for proper automatic operation. Rate shall include for connecting the service lines (supply and return water pipes, electrical connection, etc.) as necessary. as per specification to the working order to the approval of the Engineer.	1	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	PUMPS				
	Condenser Water Pumps (CWP-01 and CWP-02)				
4.X.7	Supply and Installation of Mas Daff ,DP or equivalent quality Condenser water pumps horizontal end suction with anti vibration provisions having a minimum water flow rate of 24.7 ltr/sec with a total head not less than 25 m, Closed coupled, bronze impeller, SS shaft and power supply 400v/50Hz/3 phase TEFC motor RPM not more than 1,450 RPM mounted on skid complete with starters, pressure and flow sensors, cut off devices etc., all complete as shown in drawings and specifications to the working order to the approval of the Engineer. Rate shall include with electrical and ontrol cable from chiller control panel to pump motor connection, etc. as necessary.	1	Nr		
	Chilled Water Pumps (CHWP-01 and CHWP-02)				
4.X.8	Supply and Installation of Mass Daff, DP or equivalent quality Chilled water pumps horizontal end suction with anti vibration provisions having a minimum water flow rate of 19 ltr/sec with a total head not less than 25 m, Closed coupled, bronze impeller, SS shaft and power supply 400v/50Hz/3 phase motor RPM not more than 1,450 RPM mounted on skid complete with starters, pressure and flow sensors, cut off devices etc., all complete as shown in drawings and specifications to the working order to the approval of the Engineer. Rate shall include with electrical cable from control panel to pump motor connection, etc. as necessary.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.9	Supply and installation of approved quality Variable Speed Driver (VSD) with harmonic filter and sensing devices , control cabling, for energy efficient operation for above chilled water pumps to comply with specifications.	1	Nr		
	MAKEUP WATER TANK				
4.X.10	Supply and installation of 5000 litters capacity Polyethylene or equivelent cooling tower makeup water tank complete with washer out connection, over flow outlet, connecting pipes to the cooling tower makeup connnections and other fixing accessories as per specification and drawing.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	ELECTRICAL AND CONTROL SYSTEM (ACMV MAIN PANEL)				
4.X.11	Supply and installation of approved quality Control panel (fabricated out of electro-zinc coated sheet steel with polyester powder coating in selected finish & colour and the standard construction shall include removable hinged doors key locks, gland plates, cover plates & replaceable neoprene foam gaskets to comply with form 2B, IP54 rating, for complete operation of Cooling towers, Chillers, Condenser and chilled water Pumps, VSDs and other associated equipment including **Chiller Plant Manager**, for operation and fault indication of all electrical items belonging to the installation to be controlled including all equipment, internal wiring, indicators, switch gears, controllers, bus bars, inter connecting copper bus bars, earthing bus bars, panel board earthing with fully enclosed metal clad panel, thermostatic & pressure sensors, gauges, etc.. required for the satisfactory operation and conforming to the applicable regulations, latest standards and to the Engineer approval. Details of above to be furnished with the Tender.				
	The contractor shall carryout all electrical connection to the mechanical ventilation equipments, control panels and any interconnected wiring to the control panel to the equipments etc., beyond the terminated point provided by the electrical contractor. (Cable from from ACMV panel to Cooling towers is measured Separately)	1.00	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	AIR HANDLING UNIT				
	AHU-AUDI -01 & 02				
4.X.12	Supply and installation of Approved quality horizontal/ vertical floor mounted type Air handling unit with minimum total cooling capacity 148 kW, sensible cooling capacity 85 kW, air flow rate 6450 lit/sec, chilled water flow rate 7.2 lit/sec, fresh air flow rate 1000 lit/sec, chilled water inlet temperature 7°C, chilled water outlet temperature 12°C, cooling coil - 6-8 Rows/25 FPI (copper coil with aluminium fins), minimum ESP 500pa, off coil condition 13°C, 90%RH, fresh air condition 32°C DB/ 28°C WB, double skin body, 50mm PU insulation, adjustable pulley, VFD for AHU fan motor with harmonic filter, , cleanable and washable filter type G3, face velocity at inlet filter not more than 2.5 m/s, fan motor power supply of 400V/3Ph/50Hz, noise level less than 55DB (sound attenuators for suction and discharge sides to maintain 25-30DB NC inside the auditorium hall), All complete as shown in drawings and specifications to the working order to the approval of the Engineer. Rate shall include for transport and placing the AHU to the required position in required method.				
	(using a crane or heavy machines etc,.as necessary) and connecting the service lines (supply and return Chilled water pipes, electrical cable from control panel to AHU, etc.) as necessary.	2	Nr		
4.X.13	Local control panel and DDC panel for above AHU-AUDI -01 as per specification and drawings	1	Nr		
4.X.14	Local control panel and DDC panel for above AHU-AUDI -02 as per specification and drawings	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	AHU-STAGE -01				
4.X.15	Supply and installation of Approved quality floor mounted type Air handling unit with minimum total cooling capacity 64 kW, sensible cooling capacity 48 kW, air flow rate 4200 liter/sec, chilled water flow rate 3.1 lit/sec, fresh air flow rate 135 liter/sec, chilled water inlet temperature 7°C, chilled water outlet temperature 12°C, cooling coil - 6-8 Rows/25 FPI (copper coil with aluminium fins), minimum ESP 400pa, off coil condition 13°C, 90%RH, fresh air condition 32°C DB/ 28°C WB, double skin body, 50mm PU insulation, adjustable pulley, VFD for AHU fan motor with harmonic filter, cleanable and washable filter type G3, face velocity at inlet filter not more than 2.5 m/s, fan motor power supply of 400V/3Ph/50Hz, noise level less than 55DB (sound attenuators for suction and discharge sides to maintain 25-30DB NC inside the auditorium hall), All complete as shown in drawings and specifications to the working order to the approval of the Engineer.				
	Rate shall include for transport and placing the AHU to the required position in required method (using a crane or heavy machines etc,.as necessary) and connecting the service lines (supply and return Chilled water pipes, electrical cable from control panel to AHU, etc.) as necessary.	1	Nr		
4.X.16	Local control panel and DDC panel for above AHU-STAGE-01 as per specification and drawings	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	FAN COIL UNITS				
	FCU-01, FCU-02 & FCU-03				
4.X.17	Supply and installation of Approved quality ceiling cassette type chilled water Fan coil unit with minimum total cooling capacity 24,000 BTU/Hr, chilled water flow rate 0.34 ltr/sec, chilled water inlet temperature 7°C, chilled water outlet temperature 12°C, primary filter with 30% efficient, face velocity at inlet filter not more than 2.5 m/sec, electrical supply 230v/50hz/1phase and All complete as shown in drawings and specifications to the working order to the approval of the Engineer. Rate shall include for transport and placing the FCU to the required position in required method and connecting the service lines (supply and return Chilled water pipes, electrical cable from power outlet to FCU, etc.) as necessary.	3	Nr		
	VALVE AND FITTINGS				
	All valves and fittings should be PN 10 Pressure rated Gunmetal, Brass or cast iron as per specifications.	Note			
	When ever connecting valves or equipment to the system all connecting accessories such as treaded unions, flanges, nuts and bolts, washers, gaskets etc, to be priced under such valves or equipment.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Valve and fittings for Cooling towers				
4.X.18	Supply and installation of approved quality 25mm diameter Ball float valve complete as per specification and drawings.	1	Nr		
4.X.19	Supply and installation of approved quality 25mm diameter Gate valve complete as per specification and drawings.	1	Nr		
4.X.20	Supply and installation of approved quality 40mm diameter Ball cock valve complete as per specification and drawings.	1	Nr		
4.X.21	Supply and installation of approved quality 32mm diameter Ball cock valve complete as per specification and drawings.	1	Nr		
4.X.22	Supply and installation of approved quality 150mm diameter Flexible compuling complete as per specification and drawings.	2	Nr		
4.X.23	Supply and installation of approved quality 150mm diameter Butterfly valve complete as per specification and drawings.	2	Nr		
4.X.24	Supply and installation of approved quality Self Sealing test point for thermo meter complete as per specification and drawings.	2	Nr		
4.X.25	Supply and installation of approved quality 80mm diameter Motorized valve with control wiring complete as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Valve and fittings for Condenser water pumps				
4.X.26	Supply and installation of approved quality 150mm diameter Butterfly valve complete as per specification and drawings.	2	Nr		
4.X.27	Supply and installation of approved quality 150mm diameter Non return valve complete as per specification and drawings.	1	Nr		
4.X.28	Supply and installation of approved quality 150mm diameter Y- Strainer complete as per specification and drawings.	1	Nr		
4.X.29	Supply and installation of approved quality 100mm dial size Pressure gauge with U-siphon and ball cock complete as per specification and drawings.	2	Nr		
4.X.30	Supply and installation of approved quality 150mm diameter Flexible compuling complete as per specification and drawings.	2	Nr		
4.X.31	Supply and installation of approved quality Self Sealing test point for thermo meter complete as per specification and drawings.	2	Nr		
4.X.32	Supply and installation of approved quality 25mm diameter Air purge valve complete as per specification and drawings.	1	Nr		
4.X.33	Supply and installation of approved quality 25mm diameter ball cock with hose connecter complete as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Valve and fittings for Chilled water pumps				
4.X.34	Supply and installation of approved quality 125mm diameter Butterfly valve complete as per specification and drawings.	2	Nr		
4.X.35	Supply and installation of approved quality 125mm diameter Non return valve complete as per specification and drawings.	1	Nr		
4.X.36	Supply and installation of approved quality 125mm diameter Y- Strainer complete as per specification and drawings.	1	Nr		
4.X.37	Supply and installation of approved quality 100mm dial size Pressure gauge with U-siphon and ball cock complete as per specification and drawings.	2	Nr		
4.X.38	Supply and installation of approved quality 125mm diameter Flexible compuling complete as per specification and drawings.	2	Nr		
4.X.39	Supply and installation of approved quality Self Sealing test point for thermo meter complete as per specification and drawings.	2	Nr		
4.X.40	Supply and installation of approved quality 25mm diameter Air purge valve complete as per specification and drawings.	1	Nr		
4.X.41	Supply and installation of approved quality 25mm diameter ball cock with hose connecter complete as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	<u>Valve and fittings for Water cooled screw chillers</u>				
4.X.42	Supply and installation of approved quality 125mm diameter Butterfly valve complete as per specification and drawings.	2	Nr		
4.X.43	Supply and installation of approved quality 150mm diameter Butterfly valve complete as per specification and drawings.	2	Nr		
4.X.44	Supply and installation of approved quality 125mm diameter Fixed orifice double regulating valve complete as per specification and drawings.	1	Nr		
4.X.45	Supply and installation of approved quality 150mm diameter Fixed orifice double regulating valve complete as per specification and drawings.	1	Nr		
4.X.46	Supply and installation of approved quality 125mm diameter Motorized valve complete as per specification and drawings.	1	Nr		
4.X.47	Supply and installation of approved quality 150mm diameter Motorized valve complete as per specification and drawings.	1	Nr		
4.X.48	Supply and installation of approved quality 100mm dial size Pressure gauge with U-siphon and ball cock complete as per specification and drawings.	4	Nr		
4.X.49	Supply and installation of approved quality 125mm diameter Flexible compuling complete as per specification and drawings.	2	Nr		
4.X.50	Supply and installation of approved quality 150mm diameter Flexible compuling complete as per specification and drawings.	2	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.51	Supply and installation of approved quality Temperatures sensor complete as per specification and drawings.	4	Nr		
4.X.52	Supply and installation of approved quality Flow sensor complete as per specification and drawings.	2	Nr		
4.X.53	Supply and installation of approved quality 25mm diameter Air purge valve complete as per specification and drawings.	2	Nr		
4.X.54	Supply and installation of approved quality 25mm diameter ball cock with hose connecter complete as per specification and drawings.	2	Nr		
4.X.55	Supply and installation of approved quality Thermo meter complete as per specification and drawings.	4	Nr		
	Valve and fittings for Air handling units				
4.X.56	Supply and installation of approved quality 65mm diameter Gate valve complete as per specification and drawings.	2	Nr		
4.X.57	Supply and installation of approved quality 100mm diameter Gate valve complete as per specification and drawings.	4	Nr		
4.X.58	Supply and installation of approved quality 65mm diameter Fixed orifice double regulating valve complete as per specification and drawings.	1	Nr		
4.X.59	Supply and installation of approved quality 100mm diameter Fixed orifice double regulating valve complete as per specification and drawings.	2	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.60	Supply and installation of approved quality 65mm diameter Modulating motorized 2 way valve complete as per specification and drawings.	1	Nr		
4.X.61	Supply and installation of approved quality 100mm diameter Modulating motorized 2 way valve complete as per specification and drawings.	2	Nr		
4.X.62	Supply and installation of approved quality 100mm dial size Pressure gauge with U-siphon and ball cock complete as per specification and drawings.	6	Nr		
4.X.63	Supply and installation of approved quality 65mm diameter Flexible compuling complete as per specification and drawings.	2	Nr		
4.X.64	Supply and installation of approved quality 100mm diameter Flexible compuling complete as per specification and drawings.	4	Nr		
4.X.65	Supply and installation of approved quality Self Sealing test point for thermo meter complete as per specification and drawings.	6	Nr		
4.X.66	Supply and installation of approved quality 65mm diameter Y- Strainer complete as per specification and drawings.	1	Nr		
4.X.67	Supply and installation of approved quality 100mm diameter Y- Strainer complete as per specification and drawings.	2	Nr		
4.X.68	Supply and installation of approved quality 25mm diameter Air purge valve complete as per specification and drawings.	3	Nr		
4.X.69	Supply and installation of approved quality 25mm diameter ball cock with hose connecter complete as per specification and drawings.	3	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Valve and fittings for Fan Coil Units				
4.X.70	Supply and installation of approved quality 25mm diameter Gate valve complete as per specification and drawings.	6	Nr		
4.X.71	Supply and installation of approved quality 25mm diameter Fixed orifice double regulating valve complete as per specification and drawings.	3	Nr		
4.X.72	Supply and installation of approved quality 25mm diameter Modulating automatic pressure independent flow control valve complete as per specification and drawings.	3	Nr		
4.X.73	Supply and installation of approved quality 100mm dial size Pressure gauge with U-siphon and ball cock complete as per specification and drawings.	6	Nr		
4.X.74	Supply and installation of approved quality 25mm diameter Flexible compuling complete as per specification and drawings.	6	Nr		
4.X.75	Supply and installation of approved quality Self Sealing test point for thermo meter complete as per specification and drawings.	6	Nr		
4.X.76	Supply and installation of approved quality 25mm diameter Y- Strainer complete as per specification and drawings.	3	Nr		
4.X.77	Supply and installation of approved quality 15mm diameter Air purge valve complete as per specification and drawings.	3	Nr		
4.X.78	Supply and installation of approved quality 15mm diameter ball cock with hose connecter complete as per specification and drawings.	3	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Valve and fittings for Chilled water expansion tank				
4.X.79	Supply and installation of approved quality 50mm diameter Gate valve complete as per specification and drawings.	2	Nr		
4.X.80	Supply and installation of approved quality 50mm diameter Safety valve complete as per specification and drawings.	1	Nr		
	Valve and fittings for Riser				
4.X.81	Supply and installation of approved quality 80mm diameter Motorized valve with Differential pressure transducer complete as per specification and drawings.	1	Nr		
4.X.82	Supply and installation of approved quality 80mm diameter Motorized valve with control wiring complete as per specification and drawings.	1	Nr		
4.X.83	Supply and installation of approved quality 40mm diameter Modulating automatic pressure independent flow control valve complete as per specification and drawings.	1	Nr		
4.X.84	Supply and installation of approved quality 125mm diameter Modulating automatic pressure independent flow control valve complete as per specification and drawings.	1	Nr		
4.X.85	Supply and installation of approved quality 50mm diameter double regulating valve complete as per specification and drawings.	1	Nr		
4.X.86	Supply and installation of approved quality 125mm diameter double regulating valve complete as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.87	Supply and installation of approved quality 50mm diameter Gate valve complete as per specification and drawings.	2	Nr		
4.X.88	Supply and installation of approved quality 80mm diameter Gate valve complete as per specification and drawings.	1	Nr		
4.X.89	Supply and installation of approved quality 125mm diameter Gate valve complete as per specification and drawings.	2	Nr		
4.X.90	Supply and installation of approved quality Flange compatible to 50mm diameter uPVC pipe and 50mm diameter Schedule 40 GI pipe complete as per specification and drawings.	2	Nr		
4.X.91	Supply and installation of approved quality 32mm diameter ball cock with hose connecter complete as per specification and drawings.	2	Nr		
	Cable				
	Rate shall include for necessary chasings, trenching, cables, cable trays, fittings and clips, cutting holes and chases in brick work/ block work/ concrete work complete with all necessary accessories such as sockets, connections, cable glands and boxes hardware clips, soldering and jointing materials etc., for proper installing and laying of cables.	Note			
	Rates for all cables shall include for all waste, fixing looping cable supports etc., necessary for completion.	Note			
	Rate for all cables shall include for all conduiting/ tray/ ladder/ trunking (if not measured separately in BOQ), termination both end and other necessary accessories.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Contractor shall maintain correct bending radius according to the size of the cables.	Note			
	Contractor shall provide methods statements and details of supporting fixing & final terminal arrangement of cable, conduits, cable trunking etc. prior to commitments of such activities.	Note			
	All cables shall be ACL or equivalent.	Note			
	900mm depth (width can varies) armoured cables laid on 100 mm thick sand layer and after laid the cables sand filling 350mm thick and 450mm thick earth filling. Including cable tile and identification tape as per standard.	Note			
	All under ground cables directly buried in ground to be properly laid in ground trenches and covered with cable tiles. Rate for underground cables shall include for all necessary excavation, sand layers, cable tiles, warning strips and back filling with approved quality earth properly compacted.	Note			
	Contractor shall provide proper cable identification system for the cables laid inside the common cable trench in every 2m interval to identify the cables connected to the particular building or load center.	Note			
4.X.92	Supply and laying of Suitable size CU/ XLPE/ SWA/ PVC cable in a GI conduit from cooling tower 01 motor to ACMV panel complete as per specification and drawings.	89.00	m		
4.X.93	Supply and laying of Suitable size CU/ XLPE/ SWA/ PVC cable in a GI conduit from cooling tower 02 motor to ACMV panel complete as per specification and drawings.	89.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	PIPE WORK				
	Rates for pipes shall include for pipe supports fixed to soffits , walls or clipping to walls as required and for pipe fittings such as bends, tees, Y junctions, reducers, inspection, openings, stop ends, etc., as necessary for total completion of work with Engineer satisfaction.	Note			
	The Condenser, Chilled water and condensate pipes positions shown in the drawings are for design intent only.	Note			
	Contractor shall verify at site their exact positions and piping to be done accordingly based on the designs in the drawings.	Note			
	All condensate pipes shall be Type 600 uPVC and rates for uPVC pipes for drain shall include for cost of connecting them to the nearest floor gullies/ drains through suitable "U" traps.	Note			
	All condenser water pipe shall be schedule 40 seemless HDG (hot dipped galvenized finish min coating thickness of 80 microns), pipes and fittings.	Note			
	All chilled water pipes inside the building from chillers to AHU's shall be schedule 40 seemless HDG finish, pipes and fittings with insulated closed cell nitrile rubber formed or equlent and therminal conductivity not more than 0.034 w/mk or better.	Note			
	All chilled water pipes outside the building and ACMV room from chillers to AHU's shall be schedule 40 seemless HDGI finish, pipes and fittings with insulated closed cell nitrile rubber formed or equlent and therminal conductivity not more than 0.034 w/mk or better and claded with 0.6mm thick aluminium sheet.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	All chilled water pipes inside the building to FCUS after the AHU's shall be Type 1000 uPVC pipes and fittings with insulated closed cell nitrile rubber formed or equlent and therminal conductivity not more than 0.034 w/mk or better.	Note			
	All chilled water pipes inside the building to FCUS after the AHU's shall be Type 1000 uPVC pipes and fittings with insulated closed cell nitrile rubber formed or equlent and therminal conductivity not more than 0.034 w/mk or better and claded with 0.6mm thick aluminium sheet.	Note			
	All pipe size shown in the Drawings and BOQ is nominal diameter and internal diameter and recommended insulation thickness shall be as given pipe schedule table.	Note			
	All vertical and horizontal pipes shall be clipped and fixed to the structure with suitable pipe supports brackets and clips.	Note			
	Samples of all fittings shall be submitted for approval when requested at no extra cost to the Employer.	Note			
	Expansion joints and other necessary items are shown on the drawings or not, shall be include in the pipe rates. Expansion joint shall be proved for those pipe work passing though any movable joint or building or structural joint.	Note			
	Coordination of installation with the other trades.	Note			
	All pipes work shall include Anti vibration mounts, connecting flanges, vans, splitters, supports, access panels, firebarriers, flexible connections wall/floor sleeves etc	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	All condensate pipes shall be type 600 uPVC with nitrile rubble insulation thickness not less than 19mm.	Note			
	All Condenser water and chilled water pipes to be tested to 1.5 the operating pressure before put into operation.	Note			
	Make up water pipes (for cooling towers)				
4.X.94	Supply and installation of 32mm diameter type 1000 uPVC pipe complete as per specification and drawings.	25.00	m		
	Over flow and Drain Pipes (for cooling towers)				
4.X.95	Supply and installation of 50mm diameter Type 600 uPVC pipe to be laid to the nearest drain complete as per specification and drawings.	35.00	m		
	CONDENSER WATER SUPPLY PIPES (Horizontal & Vertical)				
	Pipe from Cooling towers to Cooling towers suplly pipe header				
4.X.96	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	6.00	m		
	Suplly pipe header for Cooling towers				
4.X.97	Supply and installation of approved quality 200mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	2.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe from Cooling tower supply header to Cooling tower level riser location				
4.X.98	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	10.00	m		
	Pipe Clipped Verticaly along the duct wall from Cooling tower level to Basement Ceiling level				
4.X.99	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	13.00	m		
	Pipe Hang on slab at Basement Ceiling level				
4.X.100	Supply and installation of approved quality 150mm diameter schedule 40 seemless GI Condenser water supply pipe complete as per specification and drawings.	45.00	m		
	Pipe from Auditorium building to Chiller room building (Under Ground)				
4.X.101	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI under ground Condenser water supply pipe. Rate shall include for all necessary excavation, compaction, backfilling and disposal of all surplus excavated material away from the site and leveling bottom, complete as per specification and drawings.	8.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Clipped Verticaly along the wall from Ground level to Chiller room building roof slab level				
4.X.102	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	6.00	m		
	Pipe Hang on Chiller room building roof slab				
4.X.103	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	6.00	m		
	Pipe to Condenser water pump Suction manifold from Chiller room building roof slab level				
4.X.104	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	5.00	m		
	Condenser water Suction manifold for Condenser water Pumps				
4.X.105	Supply and installation of approved quality 200mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	2.00	m		
	Pipe from Suction manifold to condenser water Pumps				
4.X.106	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	3.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe from Condenser water pumps to Condenser water Discharge manifold				
4.X.107	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	3.00	m		
	Condenser water Discharge manifold for Condenser water Pumps				
4.X.108	Supply and installation of approved quality 200mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	2.00	m		
	Pipe from Condenser water pumps Suction manifold to Chillers				
4.X.109	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water supply pipe complete as per specification and drawings.	10.00	m		
	CONDENSER WATER RETURN PIPES (Horizontal & Vertical)				
	Pipe from Chillers to Chillers return manifold				
4.X.110	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	10.00	m		
	Condenser water Return manifold for Chillers				
4.X.111	Supply and installation of approved quality 200mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	3.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe from Condenser water Chillers Return manifold to Chiller room building roof slab level				
4.X.112	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	5.00	m		
	Pipe Hang on Chiller room building roof slab				
4.X.113	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	6.00	m		
	Pipe Clipped Verticaly along the wall from Chiller room building roof slab level to Ground level				
4.X.114	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	6.00	m		
	Pipe from Chiller room building to Auditorium building (Under Ground)				
4.X.115	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI under ground Condenser water return pipe. Rate shall include for all necessary excavation, compaction, backfilling and disposal of all surplus excavated material away from the site and leveling bottom, complete as per specification and drawings.	8.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Hang on slab at Basement Ceiling level				
4.X.116	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	45.00	m		
	Pipe Clipped Verticaly along the duct wall from Basement Ceiling level to Cooling tower level				
4.X.117	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	13.00	m		
	Pipe from Cooling tower level riser location to Cooling tower supply header				
4.X.118	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	10.00	m		
	Return pipe header for Cooling towers				
4.X.119	Supply and installation of approved quality 200mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	2.00	m		
	Pipe from Cooling towers return pipe header to Cooling towers				
4.X.120	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Condenser water return pipe complete as per specification and drawings.	6.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Condenser water bypass pipe				
4.X.121	Supply and installation of approved quality 80mm diameter schedule 40 seemless HDGI Condenser water bypass pipe complete as per specification and drawings.	3.00	m		
	CHILLED WATER SUPPLY PIPES (Horizontal & Vertical)				
	Chilled water Pipe insulation All chilled water and condensate drain pipes shall be insulated with elastomeric closed cell thermal insulation. Properties of the insulation material shall be as follows: 1. Thermal conductivity shall not exceed 0.034 w/m2k at 240C as per ASTM C518 standard, 2. Material density shall be 60 – 70 kg/m3 with Micro cell structure. 3. Material shall comply with Class 0 requirements as per BS 476 Part 6 & 7., 4. Smoke density and Toxicity shall be in accordance with ISO 5659-2 IMO resolution MSC 61(67), 1996; Annex 1, part 5 5. Water Vapor permeability shall be 0.00 perms-inch as per ASTM E 96 and the Moisture resistance factor (μ) shall be ≥ 7300 as per BS EN 12086, 6. Material shall be antifungal (as per ASTM G21), Antimicrobial (As per ISO 22196) VOC level shall be LESS than 6 μg / m2 / hr (as per ASTM D 5116) , Contractor shall obtain approval for material / thicknesses of insulation material prior to commencement of the work.	note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe from Chillers to Chillers supply manifold				
4.X.122	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Chilled water Supply manifold for Chillers				
4.X.123	Supply and installation of approved quality 150mm diameter schedule 40 seemless HdGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	3.00	m		
	Pipe from Chilled water Supply manifold to Chiller room building roof slab level				
4.X.124	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	5.00	m		
	Pipe Hang on Chiller room building roof slab				
4.X.125	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Clipped Verticaly along the wall from Chiller room building roof slab level to Ground level				
4.X.126	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Pipe from Chiller room building to Auditorium building (Under Ground)				
4.X.127	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.038 w/mk or better complete as per specification and drawings.	8.00	m		
	Pipe Hang on slab at Basement Ceiling level				
4.X.128	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	45.00	m		
	Pipe Clipped Verticaly along the duct wall from Basement Ceiling level to Ground floor Ceiling level				
4.X.129	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Clipped Verticaly along the duct wall from Ground floor Ceiling level to First floor Ceiling level				
4.X.130	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	5.00	m		
	Pipe Hang on slab at First floor Ceiling level				
4.X.131	Supply and installation of approved quality 65mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	4.00	m		
4.X.132	Supply and installation of approved quality 100mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	8.00	m		
4.X.133	Supply and installation of approved quality 125mm diameter schedule 40 seemless GI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	5.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe from First floor Ceiling level to AHU-AUDI -01 & 02, AHU-STAGE -01				
4.X.134	Supply and installation of approved quality 65mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	4.00	m		
4.X.135	Supply and installation of approved quality 100mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	8.00	m		
	Pipe Hang on slab at Ground floor Ceiling level				
4.X.136	Supply and installation of approved quality 50mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	2.00	m		
4.X.137	Supply and installation of approved quality 32mm diameter Type 1000 uPVC Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	7.00	m		
4.X.138	Supply and installation of approved quality 40mm diameter Type 1000 uPVC Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.139	Supply and installation of approved quality 50mm diameter Type 1000 uPVC Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings. Pipe from Ground floor Ceiling level to FCU 01, 02 & 03	6.00	m		
4.X.140	Supply and installation of approved quality 32mm diameter Type 1000 uPVC Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings. **CHILLED WATER RETURN PIPES (Horizontal & Vertical)** Pipe from AHU-AUDI -01 & 02, AHU-STAGE -01 to First floor Ceiling level	2.00	m		
4.X.141	Supply and installation of approved quality 65mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	4.00	m		
4.X.142	Supply and installation of approved quality 100mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	8.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Hang on slab at First floor Ceiling level				
4.X.143	Supply and installation of approved quality 65mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	4.00	m		
4.X.144	Supply and installation of approved quality 100mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	8.00	m		
4.X.145	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings. Pipe from FCU 01, 02 & 03 to Ground floor Ceiling level	5.00	m		
4.X.146	Supply and installation of approved quality 32mm diameter Type 1000 uPVC Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	2.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Hang on slab at Ground floor Ceiling level				
4.X.147	Supply and installation of approved quality 50mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	2.00	m		
4.X.148	Supply and installation of approved quality 32mm diameter Type 1000 uPVC Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	7.00	m		
4.X.149	Supply and installation of approved quality 40mm diameter Type 1000 uPVC Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
4.X.150	Supply and installation of approved quality 50mm diameter Type 1000 uPVC Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Pipe Clipped Verticaly along the duct wall from First floor Ceiling level to Ground floor Ceiling level				
4.X.151	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	5.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Clipped Verticaly along the duct wall from Ground floor Ceiling level to Basement Ceiling level				
4.X.152	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Pipe Hang on slab at Basement Ceiling level				
4.X.153	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	45.00	m		
	Pipe from Auditorium building to Chiller room building (Under Ground)				
4.X.154	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	8.00	m		
	Pipe Clipped Verticaly along the wall from Ground level to Chiller room building roof slab level				
4.X.155	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe Hang on Chiller room building roof slab				
4.X.156	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Pipe from Chiller room building roof slab level to Chilled water pumps Suction manifold				
4.X.157	Supply and installation of approved quality 125m diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	5.00	m		
	Chilled water pumps Suction manifold for Chilled water Pumps				
4.X.158	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	2.00	m		
	Pipe from Chilled water Suction manifold to Chilled water Pumps				
4.X.159	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.038 w/mk or better complete as per specification and drawings.	3.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Pipe from Chilled water Suction manifold to Chilled water compression tank				
4.X.160	Supply and installation of approved quality 50mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	6.00	m		
	Pipe from Chilled water pumps to Chilled water Discharge manifold				
4.X.161	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	3.00	m		
	Chilled water Discharge manifold for Chilled water Pumps				
4.X.162	Supply and installation of approved quality 150mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.038 w/mk or better complete as per specification and drawings.	2.00	m		
	Pipe from Chilled water pumps Discharge manifold to Chillers				
4.X.163	Supply and installation of approved quality 125mm diameter schedule 40 seemless HDGI Chilled water return pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.034 w/mk or better complete as per specification and drawings.	4.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Chilled water bypass pipe				
4.X.164	Supply and installation of approved quality 80mm diameter schedule 40 seemless HDGI Chilled water supply pipe with insulated closed cell nitrile rubber formed or equlent therminal conductivity not more than 0.038 w/mk or better complete as per specification and drawings.	6.00	m		
	CONDENSATE DRAIN PIPES (Horizontal & Vertical)				
	Ground floor				
4.X.165	Supply and installation of approved quality 25mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	7.00	m		
4.X.166	Supply and installation of approved quality 32mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	8.00	m		
	First floor				
4.X.167	Supply and installation of approved quality 25mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	6.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.168	Supply and installation of approved quality 32mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	8.00	m		
4.X.169	Supply and installation of approved quality 40mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	11.00	m		
	SUPPLY, RETURN AND FRESH AIR DUCT WORK				
	All air conditioning and ventilation ducts to be fabricated with GI sheetswith the gauge of 22 and fabrication and installation should fully confirm to ASHRAE or SMACNA standards.	Note			
	All mounting brackets to be of hot dip galvanized finish with minimum coating thickness of 50 microns.	Note			
	Rate for ducts shall include for duct access doors to be provided where fire dampers are fitted for easy maintenance.	Note			
	Rate shall include for all required duct supports, brackets, hangers, rods, any supports required between roof purling etc. to be incleded under this scope of work.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Rate for duct work shall include bends, tees, flexible connection, sound attenuators, anti vibration mounts, air sealent, connecting flanges, turning vakes, VAV splitters, supports, access pannels, fire barriers, flexible connections wall/ floor sleeves etc, Rate shall include for all required duct supports, brackets, hangers, rods any supports between roof purlins etc., to be included under this scope of work.	Note			
	Glass Wool duct insulation. All air conditioning supply and return air ducts shall be fully insulated with fibre glass insulation comply with following requirements. This is applicable for all sections under air conditioning supply and return ducts measured in the boq. Flexible Glass Wool Blanket, Manufactured from naturally occurring and/or recycled raw materials Bonded using a bio-based technology with a thermosetting resin with ECOSE, meeting requirements of ASTM C 795, free from formaldehyde, phenols, acrylics and with no artificial colors, bleach or dyes added, shall be tested / certified to meet all requirements of EUCEB as Non – Carcinogenic. Certified by Eurofins for indoor air quality version 5.3a (2015) according to DIN 18200. UL Classified , k value: (ASTM C 518), 0.042 at 24°C (0.29 at 75°F) mean temperature. Minimum Service Temperature - Faced: 120°C (250°F); un-faced: 175°C (350°F). Vapor Retarder Jacket: FSK shall be conforming to ASTM C 1136 Type II.				
	Density of wool shall be not less than 32kg/m3 with a thickness of 50mm in all areas that do not have internal acoustic insulation. Areas that have internal acoustic insulation shall be with a minimum thickness of 25mm.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Glass Wool Acoustic Duct Liner Semi rigid glass wool, with a density not less than 48 kg/m3 and a minimum thickness of 50mm. Manufactured, from naturally occurring and/or recycled raw materials Bonded using a bio-based technology with a thermosetting resin with ECOSE, meeting requirements of ASTM C 795, free from formaldehyde, phenols, acrylics and with no artificial colors, bleach or dyes added. , shall be tested / certified to meet all requirements of EUCEB as Non – Carcinogenic. Certified by Eurofins for indoor air quality version 5.3a (2015) according to DIN 18200 UL Classified, complying with ASTM C 1071 Type II and NFPA 90A & 90B, k value: ASTM C 518, 0.035 at 24°C (0.24 at 75°F) mean temperature. Noise Reduction Coefficient (NRC): ASTM C 423 Type A Mounting, 0.65 or higher for 1″ product and 0.95 or higher for 2” product. Shall have a minimum Air Velocity:1450 mpm. Facing shall be with a woven fabric of glass fiber. Fabrication and application of acoustic insulation to be as per the manufactures specification.	Note			
	Fresh air duct				
	Basement Floor				
4.X.170	Supply and installation of Fresh air 100mm x 150mm size GI duct, complete as per specification and drawings.	6.00	m		
4.X.171	Supply and installation of Fresh air 150mm x 150mm size GI duct, complete as per specification and drawings.	13.00	m		
	Ground Floor				
	Return air duct				
4.X.172	Supply and installation of Return air 600mm x 2000mm size GI duct, complete as per specification and drawings.	10.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply air duct				
4.X.173	Supply and installation of Supply air 250mm x 200mm size GI duct, complete as per specification and drawings.	12.00	m		
4.X.174	Supply and installation of Supply air 300mm x 300mm size GI duct, complete as per specification and drawings.	30.50	m		
4.X.175	Supply and installation of Supply air 350mm x 300mm size GI duct, complete as per specification and drawings.	36.00	m		
4.X.176	Supply and installation of Supply air 500mm x 300mm size GI duct, complete as per specification and drawings.	20.00	m		
4.X.177	Supply and installation of Supply air 650mm x 300mm size GI duct, complete as per specification and drawings.	26.00	m		
4.X.178	Supply and installation of Supply air 650mm x 400mm size GI duct, complete as per specification and drawings.	10.00	m		
4.X.179	Supply and installation of Supply air 700mm x 300mm size GI duct, complete as per specification and drawings.	11.00	m		
4.X.180	Supply and installation of Supply air 700mm x 600mm size GI duct, complete as per specification and drawings.	9.00	m		
4.X.181	Supply and installation of Supply air 750mm x 500mm size GI duct, complete as per specification and drawings.	8.00	m		
4.X.182	Supply and installation of Supply air 800mm x 450mm size GI duct, complete as per specification and drawings.	4.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.183	Supply and installation of Supply air 1000mm x 450mm size GI duct, complete as per specification and drawings.	4.00	m		
4.X.184	Supply and installation of Supply air 1000mm x 500mm size GI duct, complete as per specification and drawings.	10.00	m		
4.X.185	Supply and installation of Supply air 1000mm x 600mm size GI duct, complete as per specification and drawings.	7.00	m		
4.X.186	Supply and installation of Supply air 1400mm x 600mm size GI duct, complete as per specification and drawings.	79.00	m		
	Exhaust air duct				
4.X.187	Supply and installation of exhaust air 450mm x 450mm size GI duct, complete as per specification and drawings.	20.00	m		
	Fresh air duct				
4.X.188	Supply and installation of fresh air 250mm x 200mm size GI duct, complete as per specification and drawings.	9.00	m		
4.X.189	Supply and installation of fresh air 700mm x 300mm size GI duct, complete as per specification and drawings.	22.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	DIFFUSERS, LOUVERS AND GRILLS				
	All Diffusers connections should be rigid, plenum boxes, that included the item of diffusers rate.	Note			
	The size of grills specified herein shall be the neck sizes and shall comply with all the drawings and specifications and shall be complete to working order.	Note			
	All grilles and diffusers etc., specified herein shall be of approved quality powder coated Aluminum finish and shall be to Engineer's approval.	Note			
	Samples of grills shall be submitted for approval when requested at no extra cost to the client.	Note			
	All mounting brackets to be of hot dip galvanized finish.	Note			
	Basement Floor				
4.X.190	Supply and Installation of Approved quality 450mm x 300mm neck size fresh air intake louver with insects screen and fresh air filter, complete as per specification and drawings.	1	Nr		
	Ground Floor				
4.X.191	Supply and installation of approved quality neck size 2500mm x 150mm return air linear bar grill (bar pitch 12.5mm) with volume control damper, complete as per specification and drawings.	14	Nr		
4.X.192	Supply and installation of approved quality neck size 5000mm x 150mm return air linear bar grill (bar pitch 12.5mm) with volume control damper, complete as per specification and drawings.	7	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.193	Supply and installation of approved quality neck size 14000mm x 200mm return air linear bar grill (bar pitch 12.5mm) with volume control damper, complete as per specification and drawings.	1	Nr		
	First Floor				
4.X.194	Supply and installation of approved quality neck size 400mm diameter x face size 450mm diameter supply air jet diffuser with volume control damper. Rate shall include for necessary connection to the supply air duct, complete as per specification and drawings.	12	Nr		
4.X.195	Supply and installation of approved quality neck size 2500mm x 150mm supply air linear bar grill (bar pitch 6mm) with volume control damper. Rate shall include for necessary connection to the supply air duct, complete as per specification and drawings.	26	Nr		
4.X.196	Supply and installation of approved quality neck size 1000mm x 150mm supply air linear bar grill (bar pitch 6mm) with volume control damper. Rate shall include for necessary connection to the supply air duct, complete as per specification and drawings.	8	Nr		
4.X.197	Supply and Installation of Approved quality 1000mm x 1000mm neck size exhaust air wall louver with insects screen, complete as per specification and drawings.	2	Nr		
4.X.198	Supply and Installation of Approved quality 600mm x 2000mm neck size return air wall louver with insects screen, complete as per specification and drawings.	2	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.199	Supply and Installation of Approved quality 1000mm x 1000mm neck size fresh air wall louver with insects screen, complete as per specification and drawings.	2	Nr		
4.X.200	Supply and Installation of Approved quality 400mm x 350mm neck size fresh air wall louver with insects screen, complete as per specification and drawings.	2	Nr		
	DAMPERS				
	Basement Floor				
4.X.201	Supply and Installation of Approved quality 100mm x 150mm volume control damper for fresh air duct, complete as per specification and drawings.	4	Nr		
	First Floor				
4.X.202	Supply and Installation of Approved quality 250mm x 200mm volume control damper for supply air duct, complete as per specification and drawings.	8	Nr		
4.X.203	Supply and Installation of Approved quality 250mm x 200mm volume control damper for fresh air duct, complete as per specification and drawings.	1	Nr		
4.X.204	Supply and Installation of Approved quality 300mm x 300mm volume control damper for supply air duct, complete as per specification and drawings.	6	Nr		
4.X.205	Supply and Installation of Approved quality 450mm x 450mm volume control damper for exhaust air duct, complete as per specification and drawings.	2	Nr		
4.X.206	Supply and Installation of Approved quality 500mm x 200mm volume control damper for supply air duct, complete as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.207	Supply and Installation of Approved quality 600mm x 2000mm volume control damper for return air duct, complete as per specification and drawings.	2	Nr		
4.X.208	Supply and Installation of Approved quality 650mm x 300mm volume control damper for supply air duct, complete as per specification and drawings.	12	Nr		
4.X.209	Supply and Installation of Approved quality 700mm x 300mm volume control damper for fresh air duct, complete as per specification and drawings.	2	Nr		
4.X.210	Supply and Installation of Approved quality 750mm x 500mm volume control damper for supply air duct, complete as per specification and drawings.	2	Nr		
4.X.211	Supply and Installation of Approved quality 1400mm x 450mm volume control damper for supply air duct, complete as per specification and drawings.	1	Nr		
4.X.212	Supply and Installation of Approved quality 1400mm x 600mm volume control damper for supply air duct, complete as per specification and drawings.	2	Nr		
4.X.213	Supply and Installation of Approved quality 1400mm x 450mm fire damper for supply air duct, complete as per specification and drawings.	1	Nr		
4.X.214	Supply and Installation of Approved quality 1400mm x 600mm fire damper for supply air duct, complete as per specification and drawings.	2	Nr		
4.X.215	Supply and Installation of Approved quality 1400mm x 450mm sound attenuator for supply air duct, complete as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.216	Supply and Installation of Approved quality 1400mm x 600mm sound attenuator for supply air duct, complete as per specification and drawings.	2	Nr		
4.X.217	Supply and Installation of Approved quality 600mm x 2000mm sound attenuator for supply air duct, complete as per specification and drawings.	2	Nr		
4.X.218	Supply and installation of approved quality 250mm x 200mm motorized pressure relief damper complete with sensor. Rate shall include with all necessary power and control cabling connecting to the fan motor with all necessary wiring accessories and components as per specification and drawings.	1	Nr		
4.X.219	Supply and installation of approved quality 700mm x 300mm motorized pressure relief damper complete with sensor. Rate shall include with all necessary power and control cabling connecting to the fan motor with all necessary wiring accessories and components as per specification and drawings.	2	Nr		
	FRESH AIR FAN				
4.X.220	Supply and Installation of Approved quality 120 L/s capacity @ 100 pa in line duct mounted type Fresh air fan with fan starter, Rate shall include with all necessary fittings, connection duct pieces, supporting brackets, vibration isolators and other necessary hardware items, flexible “canvas” connection for suction and discharge parts, fan starters, and all necessary power and control cabling connecting to the fan motor with all necessary wiring accessories and components as per specification and drawings.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	EXHAUST AIR FAN				
	First Floor				
4.X.221	Supply and Installation of Approved quality 1000 L/s capacity @ 100 pa in line duct mounted type Exhaust air fan with fan starter, Rate shall include with all necessary fittings, connection duct pieces, supporting brackets, vibration isolators and other necessary hardware items, flexible “canvas” connection for suction and discharge parts, fan starters, and all necessary power and control cabling connecting to the fan motor with all necessary wiring accessories and components as per specification and drawings.	2	Nr		
	SPLIT AIR CONDITIONING SYSTEM				
	Basement Floor				
	Ceiling Cassette type split Air Conditioning Units				
4.X.222	Supply and installation of Approved quality ceiling cassette type Split Air Conditioning unit with minimum cooling capacity of 18,000 btu/hr unit complete with outdoor unit, fixing accessories for outdoor and indoor units and complete with, connecting accessories for insulated refrigerant pipes and condensate drain pipe. (Refrigerant pipes and Drain pipes measured separately) as per specification and drawings.	4	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Insulated refrigerant Pipes (approx. length in between indoor and outdoor units.) ,				
4.X.223	Supply and fixing Insulated refrigerant supply and return pipes (As per manufacturers recommended sizes, detail and system) with all relevent and necessary accessories, for ceiling cassette type split air conditioning unit pipes shall be Compatible for 18000 btu/hr.	52.00	m		
	Drain Pipes (approx. length in between indoor unit and nearest gully.)				
4.X.224	Supply and installation of approved quality 25mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	20.00	m		
4.X.225	Supply and installation of approved quality 32mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	32.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Ground Floor				
	Wall Mounted type split Air Conditioning Units				
4.X.226	Supply and installation of Approved quality wall mounted Split Air Conditioning unit with minimum cooling capacity of 12,000 btu/hr unit complete with outdoor unit, fixing accessories for outdoor and indoor units and complete with, connecting accessories for insulated refrigerant pipes and condensate drain pipe. (Refrigerant pipes and Drain pipes measured separately) as per specification and drawings.	1	Nr		
4.X.227	Supply and installation of Approved quality wall mounted Split Air Conditioning unit with minimum cooling capacity of 18,000 btu/hr unit complete with outdoor unit, fixing accessories for outdoor and indoor units and complete with, connecting accessories for insulated refrigerant pipes and condensate drain pipe. (Refrigerant pipes and Drain pipes measured separately) as per specification and drawings.	2	Nr		
4.X.228	Supply and installation of Approved quality wall mounted Split Air Conditioning unit with minimum cooling capacity of 24,000 btu/hr unit complete with outdoor unit, fixing accessories for outdoor and indoor units and complete with, connecting accessories for insulated refrigerant pipes and condensate drain pipe. (Refrigerant pipes and Drain pipes measured separately) as per specification and drawings.	2	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Insulated refrigerant Pipes (approx. length in between indoor and outdoor units.) ,				
4.X.229	Supply and fixing Insulated refrigerant supply and retrn pipes (As per manufacturers recommended sizes, detail and system) with all relevent and necessary accessories, for wall mounted type split air conditioning unit pipes shall be Compatible for 12000 btu/hr.	21.00	m		
4.X.230	Supply and fixing Insulated refrigerant supply and return pipes (As per manufacturers recommended sizes, detail and system) with all relevent and necessary accessories, for wall mounted type split air conditioning unit pipes shall be Compatible for 18000 btu/hr.	18.00	m		
4.X.231	Supply and fixing Insulated refrigerant supply and retrn pipes (As per manufacturers recommended sizes, detail and system) with all relevent and necessary accessories, for wall mounted type split air conditioning unit pipes shall be Compatible for 24000 btu/hr.	20.00	m		
	Drain Pipes (approx. length in between indoor unit and nearest gully.)				
4.X.232	Supply and installation of approved quality 25mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	53.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	First Floor				
	Wall Mounted type split Air Conditioning Units				
4.X.233	Supply and installation of Approved quality wall mounted Split Air Conditioning unit with minimum cooling capacity of 24,000 btu/hr unit complete with outdoor unit, fixing accessories for outdoor and indoor units and complete with, connecting accessories for insulated refrigerant pipes and condensate drain pipe. (Refrigerant pipes and Drain pipes measured separately) as per specification and drawings.	4	Nr		
	Insulated refrigerant Pipes (approx. length in between indoor and outdoor units.) ,				
4.X.234	Supply and fixing Insulated refrigerant supply and retrn pipes (As per manufacturers recommended sizes, detail and system) with all relevent and necessary accessories, for wall mounted type split air conditioning unit pipes shall be Compatible for 24000 btu/hr.	32.00	m		
	Drain Pipes (approx. length in between indoor unit and nearest gully.)				
4.X.235	Supply and installation of approved quality 25mm diameter Type 600 uPVC condensate drain line with nitrile rubble insulation thickness not less than 19mm from all AHU's which shall be embedded in walls or ceiling to drain line or nearest toilet floor gully complete as per specification and drawings.	42.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	MECHANICAL VENTILATION SYSTEAM				
	All air conditioning and ventilation ducts to be fabricated with GI sheetswith the gauge of 22 and fabrication and installation should fully confirm to ASHRAE or SMACNA standards.	Note			
	Rate for duct work shall include bends, tees, flexible connection, sound attenuvators, anti vibration mounts, air sealent, connecting flanges, turning vakes, VAV splitters, supports, access pannels, fire barriers, flexible connections wall/ floor sleeves etc.	Note			
	All mounting brackets to be of hot dip galvanized finish.	Note			
	Rate for ducts shall include for duct access doors to be provided where fire dampers are fitted for easy maintenance.	Note			
	Rate shall include for all required duct supports, brackets, hangers, rods, any supports required between roof purling etc. to be incleded under this scope of work.	Note			
	EXHAUST AIR DUCT				
	Basement Floor				
4.X.236	Supply and installation of exhaust air 150mm x 100mm size GI duct, complete as per specification and drawings.	13.00	m		
4.X.237	Supply and installation of exhaust air 150mm x 150mm size GI duct, complete as per specification and drawings.	8.00	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.238	Supply and installation of exhaust air 250mm x 150mm size GI duct, complete as per specification and drawings.	6.00	m		
4.X.239	Supply and installation of exhaust air 300mm x 150mm size GI duct, complete as per specification and drawings.	2.50	m		
4.X.240	Supply and installation of exhaust air 300mm x 200mm size GI duct, complete as per specification and drawings.	6.00	m		
4.X.241	Supply and installation of exhaust air 400mm x 200mm size GI duct, complete as per specification and drawings.	4.50	m		
4.X.242	Supply and installation of exhaust air 500mm x 200mm size GI duct, complete as per specification and drawings.	3.50	m		
	DIFFUSERS, LOUVERS AND GRILLS				
	All Diffusers connections should be rigid, plenum boxes, that included the item of diffusers rate.	Note			
	The size of grills specified herein shall be the neck sizes and shall comply with all the drawings and specifications and shall be complete to working order.	Note			
	All grilles and diffusers etc., specified herein shall be of approved quality powder coated Aluminum finish and shall be to Engineer's approval.	Note			
	Samples of grills shall be submitted for approval when requested at no extra cost to the client.	Note			
	All mounting brackets to be of hot dip galvanized finish.	Note			
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Basement Floor				
4.X.243	Supply and installation of Approved quality 200mm x 200mm neck sizee and face size 300mm x 300mm Exhaust air diffuser with volume control dampher. Rate shall include for necessary connection to the exhaust air duct, complete as per specification and drawings.	28	Nr		
4.X.244	Supply and Installation of Approved quality 300mm x 300mm neck size exhaust air wall louver with insects screen, complete as per specification and drawings.	1	Nr		
4.X.245	Supply and Installation of Approved quality 750mm x 600mm neck size exhaust air wall louver with insects screen, complete as per specification and drawings.	2	Nr		
	EXHAUST AIR FAN				
	Basement Floor				
4.X.246	Supply and Installation of Approved quality 60 L/s capacity @ 150 pa in line duct mounted type toilet exhaust air fan with fan starter, Rate shall include with all necessary fittings, connection duct pieces, supporting brackets, vibration isolators and other necessary hardware items, flexible “canvas” connection for suction and discharge parts, fan starters, and all necessary power and control cabling connecting to the fan motor with all necessary wiring accessories and components as per specification and drawings. Fan is operated by separate switch or light switch of disable toilet.	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.X.247	Supply and Installation of Approved quality 390 L/s capacity @ 250 pa in line duct mounted type toilet exhaust air fan with fan starter, Rate shall include with local control panel for exhaust air fan and all necessary fittings, connection duct pieces, supporting brackets, vibration isolators and other necessary hardware items, flexible “canvas” connection for suction and discharge parts, fan starters, and all necessary power and control cabling connecting to the fan motor with all necessary wiring accessories and components as per specification and drawings.	2	Nr		
	Ground Floor				
4.X.248	Supply and Installation of Approved quality 150 L/s @ 25 pa wall mount type toilet exhaust fan complete with back draught shutter, complete as per specification and drawings.	2	Nr		
	Builders Work				
4.X.249	Allow for provide all necessary builders work in connections with including followings: (a) Making opening in floor slabs (b) Plinths.(For cooling towers,chillers,pumps etc.,) (c) Masonry work in relation for fixing. (e) Mounts for fixing fans (e) Any other builders work etc., (f) All tenderers shall provide a schedule of builders work along with the tender.	1	Item		
	Testing and Commissioning				
4.X.250	Allow for testing and commissioning of the system to the entire satisfaction of the Consultant and submission of commissioning report in triplicate.	1	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Shop Drawing				
4.X.251	Allow for submission of 3 sets of shop drawings prior to the commencement of work for the approval of the Consultant.	1	Item		
	As Built Drawings				
4.X.252	Allow for submission of 3 sets of As Built drawings at the commissioning of the system for the approval of the Consultant.	1	Item		
	Any other items.				
4.X.253	Allow for any other items not specifically measured above in this Bill of Quantities but shown /stated in the drawings and/or specifications for the satisfactory completion of the system. The tenderer is requested to specify all the items quoted under this item with related cost, quoted under this item.	1	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 239				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Y - FIRE DETECTION AND PROTECTION SYSTEM				
	Supply and installation of **2kg CO_2 Fire Extinguishers** fully charged complete with hot dip galvanized metal brackets, Nuts and bolts, labeling and fixing other required accessories to proper working order.				
4.Y.1	In basement floor	1	Nr.		
4.Y.2	In ground floor	5	Nr.		
4.Y.3	In first floor	2	Nr.		
	Supply and installation of approved quality, 9 liter **Water/ CO_2 Fire Extinguishers** fully charged complete with with hot dip galvanized metal brackets, Nuts and bolts, labeling and fixing other required accessories to proper working order.				
4.Y.4	In basement floor	1	Nr.		
4.Y.5	In ground floor	5	Nr.		
4.Y.6	In first floor	2	Nr.		
4.Y.7	Supply and installation of approved quality (UL/FM/LPCB) 2 nos of centrifugal end suction **PUMPS** (60 l/min,50m) and pump control panel for proper working order. Installation include ,stop valves,non return valves(brass),foot valve for suction line,pressure switch,pressure gauge,pump starter mounted in a dust and moisture proof cabinet.	2	Nr		
4.Y.8	Supply and installation of **PUMP CONTROLLER PANEL** with indicators (both mains) breakers ,contactors, overloads,timers,relays and should have equipped with class 02(SPD) surge protection device	1	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.Y.9	Supplying and laying approved quality,suitable size fire rated power and control cables from pump control pannel to fire pump with G.I conduits and all necessary accessories to proper working order	1	Item		
4.Y.10	Supply and installation of **PIPES GI** heavy duty 25mm pipes with required bends and other required fittings and fixtures for risers.	80.00	m		
4.Y.11	Supply and installation of **PIPES GI** heavy duty 50mm pipes with required bends and other required fittings and fixtures for risers.	26.00	m		
4.Y.12	Supply and installation of under ground **PIPES GI** heavy duty 50mm pipes with required bends and other required fittings and fixtures for risers. Supply and Installation of approved quality Swing Arm type **FIRE HOSE REELS** 19mm diameter 30m long.(BS 5274) Coupled with Jet Spray Nozzle, nozzles shall be made with HDPE or Brass,(Hose shall be non-kinking reinforced rubber hose and terminating with shutoff nozzle, (Nozzle both Shut, spray & Jet) each hose reel connection from the riser shall be provided with ball cock Valve	80.00	m		
4.Y.13	In basement floor	1	Nr.		
4.Y.14	In ground floor	2	Nr.		
4.Y.15	In first floor	1	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and installation of approved quality **FIRE CABINET** fabricated from 16 gauge MS sheet of fully welded construction with hinged double front door with locking arrangement and partially glazed with 4mm thick glass, stove enameled fire red finish to installed hose reel and fire extinguishers with all necessary accessories.				
4.Y.16	In basement floor	1	Nr.		
4.Y.17	In ground floor	2	Nr.		
4.Y.18	In first floor	1	Nr.		
4.Y.19	Supply and Installation of approved quality (UL/LPCB approved, NFPA 72/EN 54 complied) **CONVENTIONAL AUTOMATIC FIRE ALARM CONTROL PANEL** with 4 loop at place specified in drawings complete with battery backup, all control modules, monitoring modules and all other necessary equipment to proper working order.	1	Nr		
	Supply and Installation of approved quality **PHOTOELECTRIC SMOKE DETECTORS (Conventional type)** (UL/LPCB approved, NFPA 72/EN 54 complied) with required fittings and fixtures to proper working order				
4.Y.20	In basement floor	2	Nr.		
4.Y.21	In ground floor	28	Nr.		
4.Y.22	In first floor	21	Nr.		
4.Y.23	In first floor ceiling level	9	Nr.		
	Supply and Installation of approved quality **PHOTOELECTRIC BEAM DETECTORS (Conventional type)** (UL/LPCB approved, NFPA 72/EN 54 complied) with required fittings and fixtures to proper working order				
4.Y.24	In first floor	2	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supply and Installation of approved quality Break Glass type **MANUAL CALL POINT (Conventional type)** at 1200 mm level with testing key and required fittings and fixtures to proper working order				
4.Y.25	In basement floor	2	Nr.		
4.Y.26	In ground floor	8	Nr.		
4.Y.27	In first floor	2	Nr.		
	Supply and Installation of approved quality **SOUND BUZZER WITH STROBE LIGHT** at 2100 mm level with required fittings and fixtures to proper working order				
4.Y.28	In basement floor	1	Nr.		
4.Y.29	In ground floor	3	Nr.		
4.Y.30	In first floor	2	Nr.		
4.Y.31	Supply and installation of **TWO WAY BREACHING INLET** (BS 5041) with required fittings and fixtures. Body shall be made of bronze or cast iron with 100mm diameter flanged outlet. 65mm diameter inlet with instantaneous male couplings, integral spring loaded non return valve,25mm drain valve with cap & chain and enclosure for the breeching inlet shall be constructed with 1.5mm thick G.I sheet and enclosure shall be mounted 900mm above finished floor level.Rate shall include all necessary fitting and fixtures to proper working order	1	Nr		
	Supply and installation of **EXIT SIGN BOARD** (Battery operated) self-illuminated type double side Exit sign board with required fittings and fixtures.				
4.Y.32	In basement floor	2	Nr.		
4.Y.33	In ground floor	9	Nr.		
4.Y.34	In first floor	2	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
4.Y.35	Supply and laying of approved Quality 2C x 1.5 mm^2 fire rated cable to (BS6387) laid in GI conduits painted with anticorrosive paint for looping ring of fire detection system required for connecting them to the Fire alarm control panel to proper working order. Rate shall include for all conduits and necessary all other accessories.	1	Item		
4.Y.36	Supply and laying of approved Quality 3C x 2.5 mm^2 fire rated cable to (BS6387) laid in GI conduits painted with anticorrosive paint for fire Alarm system required for connecting them to the Fire alarm control panel to proper working order. Rate shall include for all conduits and necessary all other accessories.	1	Item		
4.Y.37	Allow for submission of three sets of shop drawings for approval prior to ordering of materials and commence of installation work for the approval of the Engineer.	1	Item		
4.Y.38	Allow for submission of three sets of as built drawings at commissioning of the system for approval of the engineer	1	Item		
4.Y.39	Allow for submission of three sets of as maintenance manuals and other technical literature for approval of the engineer	1	Item		
4.Y.40	Allow for testing and commissioning of the total fire system to the satisfaction of the engineer and local fire authority and submission of commissioning report. Obtaining necessary approval from local fire authority before the installation and after the installation	1	Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 239				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT

BILL NO A4 - MISCELLANEOUS WORK (AUDITORIUM)

COLLECTION

X - AIR CONDITIONING AND MECHANICAL VENTILATION SYSTEM (From Page 233) Rs.

Y - FIRE DETECTION AND PROTECTION SYSTEM (From Page 238) Rs.

TOTAL CARRIED TO SUMMARY ON PAGE S 08 - 247

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO A5- LIGHTING, SOUNDS, COMMUNICATION, CURTAINS SYSTEM (AUDITORIUM)				
	Z - LIGHTING SYSTEM				
5.Z.1	Supply & installation of 200W LED profile light.(Prime cost 175,000 - 195,000Rs. without VAT)	3	Nr		
5.Z.2	Supply & installation of 200W LED spot light.(Prime cost 185,000 - 205,000Rs. without VAT)	10	Nr		
5.Z.3	Supply & installation of 36x3W RGB LED par light.(Prime cost 60,000 - 70,000Rs. without VAT)	18	Nr		
5.Z.4	Supply & installation of 7R 230W Beam Moving Head (Prime cost 295,000 - 315,000Rs. without VAT)	6	Nr		
5.Z.5	Supply & installation of 24x8W LED wall washer waterproof (Prime cost 95,000 - 105,000Rs. without VAT)	8	Nr		
5.Z.6	Supply & installation of colourful light CL-DMX Q2 Mini (Prime cost 600,000 - 650,000Rs. without VAT)	1	Nr		
5.Z.7	Supply & installation of colourful light CL-DMX-TT Tiger Touch (Prime cost 1,250,000 - 1,310,000Rs. without VAT)	1	Nr		
5.Z.8	Supply & installation of 50" FOG light bar 4D(Prime cost 425,000 - 460,000Rs. without VAT)	1	Nr		
5.Z.9	Supply & installation of 40" Cyclorama 2D light bar(Prime cost 700,000 - 750,000Rs. without VAT)	1	Nr		
5.Z.10	Supply & installation of 25" Left & Right 2D light bar (Prime cost 175,000 - 185,000Rs. without VAT)	2	Nr		
5.Z.11	Supply & installation of power panel (Prime cost 200,000 - 215,000Rs. without VAT)	1	Nr		
5.Z.12	Supply & installation of Installation charges with all other required accessories for proper functioning of the system (Prime cost 1,425,000 - 1,500,000Rs. without VAT)	1	Nr		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 246				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Za - SOUND SYSTEM				
5.Za.1	Supply & installation of 12 in. Two-way line array loudspeaker system(Prime cost 550,000 - 590,000Rs. without VAT)	8	Nr		
5.Za.2	Supply & installation of 18 in. High power flying subwoofer (Prime cost 330,000 - 350,000Rs. without VAT)	4	Nr		
5.Za.3	Supply & installation of Array Frame (Prime cost 220,000 - 240,000Rs. without VAT)	2	Nr		
5.Za.4	Supply & installation of Two-channel, 1200W @ 4Ω power amplifier (Prime cost 265,000 - 290,000Rs. without VAT)	2	Nr		
5.Za.5	Supply & installation of Two-channel, 2100W @ 4Ω power amplifier(Prime cost 500,000 - 530,000Rs. without VAT)	1	Nr		
5.Za.6	Supply & installation of complete loudspeaker management sysytem (Prime cost 90,000 - 100,000Rs. without VAT)	1	Nr		
5.Za.7	Supply & installation of 40-input digital mixing console (Prime cost 550,000 - 600,000Rs. without VAT)	1	Nr		
5.Za.8	Supply & installation of Two way multipurpose self powered sound reinforcement (Prime cost 100,000 - 110,000Rs. without VAT)	4	Nr		
5.Za.9	Supply & installation of Blue ray DVD player (Prime cost 26,000 - 30,000Rs. without VAT)	1	Nr		
5.Za.10	Supply & installation of wireless handheld microphone system (Prime cost 90,000 - 100,000Rs. without VAT)	3	Nr		
5.Za.11	Supply & installation of wireless clip-on microphone (Prime cost 90,000 - 100,000Rs. without VAT)	1	Nr		
5.Za.12	Supply & installation of 12" Gooseneck microphone for podium with universal microphone stand base for head table (Prime cost 16,000 - 18,000Rs. without VAT)	2	Nr		
5.Za.13	Supply & installation of 12" Gooseneck microphone for head table with universal microphone stand base for head table (Prime cost 16,000 - 18,000Rs. without VAT)	2	Nr		
5.Za.14	Supply & installation of Audiophile Bi-Amped 6" studio monitor with advanced waveguide technology (Prime cost 35,000 - 40,000Rs. without VAT)	2	Nr		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
5.Za.15	Supply & installation of Dynamic Cardioid microphone (Prime cost 35,000 - 40,000Rs. without VAT)	5	Nr		
5.Za.16	Supply & installation of Floor mic stand (Prime cost 6,000 - 7,000Rs. without VAT)	5	Nr		
5.Za.17	Supply & installation of 24 channel snake cable (Prime cost 2,500 - 3,000Rs. without VAT)	120	Nr		
5.Za.18	Supply & installation of 24 channel snake box (Prime cost 25,000 - 30,000Rs. without VAT)	2	Nr		
5.Za.19	Supply & installation of 31U system rack (Prime cost 70,000 - 80,000Rs. without VAT)	1	Nr		
5.Za.20	Supply & installation of fixed tray (Prime cost 4,500 - 5,000Rs. without VAT)	1	Nr		
5.Za.21	Supply & installation of Installation charges with all other required accessories for proper functioning of the system (Prime cost 750,000 - 800,000Rs. without VAT)	1	Nr		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 246				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Zb - COMMUNICATION SYSTEM				
5.Zb.1	Rack mounted intercom power supply unit (communication system should be critical one. European brands)		Item		
5.Zb.2	Belt Packs (communication system should be critical one. European brands)	12	Nr		
5.Zb.3	Single-Muff headset c/w multi-position microphone arm (communication system should be critical one. European brands)	14	Nr		
5.Zb.4	Splittrer Box(communication system should be critical one. European brands)	2	Nr		
5.Zb.5	Installation, Testing, Commissioning and Training		Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 246				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Zc - CURTAINS				
5.Zc.1	**Main Curtain** - To supply and install one (01) No. Main Curtain fabricated of Thick Velvet Material (sample to be submitted), in two halves each measuring approximately 24 feet wide after 100 percent normal pleating and approximately 25 feet in height complete with fully stretched lining,reinforced top border and heavy duty brass hooks at 10 inch centers.This curtain to run on a Motorized Curtain Track.		Item		
5.Zc.2	**Pelmet Curtain – plane design as other border curtains.** To supply and install a Pelmet Curtain fabricated with the same Thick Velvet Material and Colour as the Main Curtain measuring approximately 42 feet in length after 100 percent normal pleating and approximately 6 feet in height, complete with fully stretched lining and reinforced top border.		Item		
5.Zc.3	**Side Leg Curtains - 06 Nos**. To supply and install Six (6) Nos. Side Leg Curtains made of Black Twill material (sample to be submitted), each measuring approximately 14, 16 and 16 feet in width after 100 percent normal pleating and approximately 23 feet in height complete with top common hem with Islets at 10 inch centers.		Item		
5.Zc.4	**Border Curtains – 03 Nos.** To supply and install Three (03) Nos. Border Curtains made of Black Twill material (sample to be submitted), each measuring approximately 45 feet in length after 100 percent normal pleating and approximately 7 feet in height, top reinforced hem and tying TAPES		Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
5.Zc.5	**Mid Curtain -** To supply and install one (01) No. Mid Curtain fabricated of Black Material (sample to be submitted), in two halves each measuring approximately 25 feet wide after 100 percent normal pleating and approximately 23 feet in height complete with reinforced top border and tying tapes at 10 inch centers. This curtain will be tied to a fly bar.		Item		
5.Zc.6	**Back Drop Curtain** - To supply and install one (01) No. Back Drop Curtain fabricated of Black Material (sample to be submitted), in two halves each measuring approximately 23 feet wide after 100 percent normal pleating and approximately 23 feet in height complete with 'reinforced top border and Islets at 10 inch centers. This curtain will run on a Motorized Curtain Track.		Item		
5.Zc.7	**Motorized Curtain Tracks and Winding Mechanism - 02** for Main Curtain and Back Drop Curtain. To have 3 speed operation, STOP, START, FORWARD, REVERSE Buttons and to be controlled from Stage. Ability to operate manually 'if there is power failure.		Item		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 246				
	Zd - Furniture				
1.Zd.1	Supplying and Fixing Auditorium Seat 580mm(W)*730mm(L)*990mm(H)with including Mould foam,wooden rest cover,seat,back and side pannel covered with high quality fabric with Enginneering Approval(sample to be submitted)	750	Nr		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 246				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT

BILL NO A5- LIGHTING, SOUNDS, COMMUNICATION, CURTAINS ,FURNITUTRE SYSTEM (AUDITORIUM)

COLLECTION

Z - LIGHTING SYSTEM	(From Page 240) Rs.	
Za - SOUND SYSTEM	(From Page 242) Rs.	
Zb - COMMUNICATION SYSTEM	(From Page 243) Rs.	
Zc - CURTAINS	(From Page 245) Rs.	
Zd-FURNITUTRE	(From Page 245) Rs.	

TOTAL CARRIED TO SUMMARY ON PAGE S 08 - 247

SUMMARY (AUDITORIUM)

ITEM		AMOUNT
BILL NO : A1 - SUBSTRUCTURE (S08-39)	Rs:	
BILL NO : A 2 - SUPERSTRUCTURE (S08-148)	Rs:	
BILL NO : A3 - EXTERNAL WORKS (S08-172)	Rs:	
BILL NO : A4 - MISCELLANEOUS WORK (S08-239)	Rs:	
BILL NO : A5 -LIGHTING, SOUNDS, COMMUNICATION, CURTAINS ,FURNITUTRE SYSTEM (S08-246)	Rs:	
SUB TOTAL (1)	Rs:	
Less Provisional Sums	Rs:	**700,000.00**
TOTAL CARRIED TO GRAND SUMMARY ON PAGES 08 - 275	Rs:	

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO B1 - SUBSTRUCTURE (CHILLER ROOM)				
	B - SITE CLEARING, EXCAVATION & EARTH WORK				
	Site Clearing				
1.B.1	Clearing site including removal of roots and growth of every description, removing top soil upto a depth of 150mm extended upto 3.0m beyond the outer walls of the proposed building and carting away the waste material from the site where directed & levelling. (Approx. 90.00 m^2)	1	Item		
	Excavation & Earth work				
	Excavation commencing from existing ground level, not exceeding 1.00 m deep in any materials except rock requiring blasting, part return fill in ram and surplus disposed as directed.				
1.B.2	For column footings	10.50	m^3		
1.B.3	For wall trenches	18.00	m^3		
1.B.4	For staircase footing	0.60	m^3		
	Excavation commencing from existing ground level, exceeding 1.0 m but not exceeding 2.0m deep in any material except rock requiring blasting, part return fill in ram and surplus disposed as directed.				
1.B.5	For column footings	1.00	m^3		
1.B.6	For staircase footing	0.03	m^3		
	Filling under floors				
1.B.7	Filling under floors including levelling, watering & compacting (well rammed and consolidated) in 150mm layers with imported, selected earth.	23.50	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Earthwork Supports				
	Earthwork supports (Planking & Strutting) total depth of excavation not exceeding 1.0m and distance between vertical sides (opposing faces) not exceeding 2.0m, (Payment will be made only for actually executed Quantites on the order of the Engineer)				
1.B.8	For wall trenches	58.00	m^2		
	Earthwork supports, (Planking & Strutting) total depth of excavation not exceeding 2.0m and distance between vertical sides (opposing faces) not exceeding 2.0m, (Payment will be made only for actually executed Quanties on the order of the Engineer)				
1.B.9	For column footings	36.00	m^2		
1.B.10	For staircase footing	1.60	m^2		
	<u>Dewatering</u>				
1.B.11	Allow for dewatering, in the manner approved by the engineer to keep all excavation dry until all works in substructure are completed. furnishing of water pumps are considered under Preliminary Item Number *(36)* . (payment will be made only for the actually execution,on the order of the engineer)	1.00	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Anti Termite Treatment				
1.B.12	Allow for anti termite treatment for barrier and colony elemination at preconstruction stage. The service provider should hold a valid license for termite treatment issued from Department of Agriculture. Rate to include for a complete treatment with 1.Treatment before placing the foundation. 2. Treatment after placing floor concrete 3. Treatment along the periphery of the building. The service provider should give minimum 10 years warranty against termite treatment. the service provider should submit the list of Termiticide intended to use for Engineer's approval. the following minimum requirements to be maintained. 1.Application rate 5l/m^2 2.Termiticide Concentration : 12.5ml/L 3. Termite pump pressure rate : 250 psi	65.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 255				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	C - CONCRETE WORK				
	Mass / Lean Concrete				
	Mass / Lean, screed concrete in foundations, work inclusive of, pouring, ramming and leveling in pits or trenches.				
	75mm thick lean concrete grade C-15 in the following ;				
1.C.1	For column footings	11.00	m^2		
1.C.2	Under staircase footings	0.60	m^2		
	Mass Concrete grade C-15 in the following.				
1.C.3	150mm thick under wall foundations	19.50	m^2		
	Mass Concrete grade C-20 in the following.				
1.C.4	75mm thick ground floor concrete with one layer of guage 1000 polythene membrane under ground floor concrete.	65.00	m^2		
	Reinforced Concrete				
	Reinforced cement concrete Grade 'C - 25 ' in the following				
1.C.5	In column footings	2.80	m^3		
1.C.6	In column shafts	0.50	m^3		
1.C.7	In staircase footing	0.20	m^3		
1.C.8	In staircase shaft	0.50	m^3		
1.C.9	In plinth beams	5.00	m^3		
	Expansion joint				
1.C.10	25mm thick expansion joints in ground floor, the 1st , 3/4 of depth filled with bituminous fill & final top 1/4 of depth filled with mastic compound. (bitumen sealing compound) (Approx. length 32m)	1	Item		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Formwork				
	Note : Refer pricing preambles				
	Formwork is measured as the net contact surface measurement between concrete and formwork Form work for columns and beams is given as a girth measurement.				
	Refer section 5.2 in specification for full description of materials and workmen ship. Formwork shall provide a finish to concrete surface to receive plaster as per section 5.4.8.11 in Specification.				
	Formwork as described to				
1.C.11	Vertical sides of column shafts	6.00	m^2		
1.C.12	Vertical sides of plinth beams	28.00	m^2		
1.C.13	Vertical sides of staircase shaft	1.20	m^2		
1.C.14	Vertical sides of column footings <300mm high	33.00	m		
1.C.15	Vertical sides of staircase footings <300mm high	3.00	m		
	Reinforcement				
	Refer pricing Preambles				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers (Inevitable laps and chairs included in BOQ Quantities) fy = 460 N/mm2				
	In column footings				
1.C.16	10mm dia.	0.09	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	In column shafts				
1.C.17	25mm dia.	0.11	MT		
1.C.18	20mm dia.	0.06	MT		
1.C.19	10mm dia.stirrups	0.02	MT		
	In staircase footing and shaft				
1.C.20	10mm dia	0.01	MT		
	In plinth beam				
1.C.21	16mm dia.	0.23	MT		
1.C.22	12mm dia.	0.07	MT		
1.C.23	10mm dia.stirrups	0.11	MT		
	Mild Steel Rod Reinforcement (fy=250N/mm2)				
1.C.24	6mm dia as links in column shaft.	0.01	MT		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 255				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	D - MASONRY WORK				
	Note: Rubble shall be free from soft rock and shall be sharp and angular shape. No vandully large for small stone shall be used in the rubble masonry work.The rubble shall be obtained from and approved quarry by the Engineer.				
	Random rubble masonry in cement and sand 1:5 in wall foundation.				
1.D.1	350mm thick	8.50	m^3		
	Damp proof course 12mm thick horizontal damp proof course in cement and sand 1:2 mix and minimum of two application of hot tar blinded with sand				
1.D.2	350mm wide	11.50	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE S 08 - 255				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO B1 - SUB STRUCTURE (CHILLER ROOM)				
	COLLECTION				
	B - EXCAVATION AND EARTH WORK	(From Page 250)	Rs.		
	C - CONCRETE WORK	(From Page 253)	Rs.		
	D - MASONRY WORK	(From Page 254)	Rs.		
	TOTAL CARRIED TO SUMMARY ON PAGE S 08 -274				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	BILL NO B2 - SUPERSTRUCTURE				
	C - CONCRETE WORK				
	Note :Refer Pricing Preambles				
	Mass Concrete				
	100mm thk.Mass Concrete grade (C-15) in the following.				
2.C.1	Ramp laid to slope at ground floor	3.00	m^2		
	Reinforced Concrete				
	Reinforced cement concrete Grade 'C-25' in the following ;				
	In Columns				
2.C.2	From ground floor level to roof slab level	1.40	m^3		
	In landing beams at staircase				
2.C.3	Between ground floor and roof slab level	0.07	m^3		
	In steps and waist of staircase				
2.C.4	Between ground floor and roof slab level	1.10	m^3		
	In 150mm thick landing slab at staircase				
2.C.5	Between ground floor and roof slab level	0.90	m^2		
	Note:				
	Grade 25 ready mix concrete use for slab and beams. Rate to include for readymix pump.				
	In 140mm thick suspended slab				
2.C.6	At roof slab level	64.00	m^2		
	In Beams				
2.C.7	At roof slab level	6.00	m^3		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Form work				
	Refer Pricing Preamble				
	Refer section 5.2 in specification for full description of materials and workmenship.				
	Form work shall provide a finish to concrete surface to receive plaster as per section 5.3.8.11 in Specification. Form work for columns and beams is given as a girth measurement.				
	Form work as described to ;				
	Vertical sides of column shafts				
2.C.8	From ground floor level to roof slab level	22.00	m^2		
	Soffit of suspended slab				
2.C.9	At roof slab level	64.00	m^2		
	Sides and soffit of beams				
2.C.10	At roof slab level	57.00	m^2		
	Sides and soffit of landing beams at staircase				
2.C.11	Between ground floor and roof slab level	0.80	m^2		
	Sides of steps and waist of staircase				
2.C.12	Between ground floor and roof slab level	1.50	m^2		
	Sloping soffit of staircase				
2.C.13	Between ground floor and roof slab level	3.60	m^2		
	150mm high to risers of staircase				
2.C.14	Between ground floor and roof slab level	11.50	m		
	Soffit of landing slab in staircase				
2.C.15	Between ground floor and roof slab level	0.90	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Reinforcement				
	Note: Refer Pricing Preambles				
	No allowance have been made for rolling margin in taking off quantities.				
	Tor steel rod reinforcement including bends, hooks, tying wire, distance blocks and ordinary spacers (inevitable laps & chairs paid separately based on the bar schedules submitted in advance by the contractor and as per Engineer's approval) fy = 460 N/mm2				
	25mm dia. in Columns				
2.C.16	From ground floor level to roof slab level	0.23	MT		
	25mm dia. in Columns				
2.C.17	From ground floor level to roof slab level	0.13	MT		
	10mm dia.stirrups in Columns				
2.C.18	From ground floor level to roof slab level	0.01	MT		
	10mm dia in suspended floor slab				
2.C.19	At roof slab level	2.73	MT		
	25mm dia in beams				
2.C.20	At roof slab level	0.18	MT		
	20mm dia in beams				
2.C.21	At roof slab level	0.12	MT		
	16 mm dia. in beams				
2.C.22	At roof slab level	0.05	MT		
	12mm dia In beams				
2.C.23	At roof slab level	0.06	MT		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	10mm dia stirrups in beams				
2.C.24	At first floor level	0.15	MT		
	16mm dia in landing beam in staircase				
2.C.25	From ground floor level to roof slab level	0.01	MT		
	12mm dia in landing beam in staircase				
2.C.26	From ground floor level to roof slab level	0.01	MT		
	10mm dia stirrups in landing beam in staircase				
2.C.27	From ground floor level to roof slab level	0.01	MT		
	12mm dia in waist and landing of staircase				
2.C.28	From ground floor level to roof slab level	0.07	MT		
	Mild Steel (fy = 250N/mm2) rod reinforcement as follows				
	6mm dia. links in column shafts				
2.C.29	From ground floor level to roof slab level	0.01	MT		
2.C.30	Allow inevitable laps and chairs for all types of reinforcement bars as per the Engineers instructions.	0.01	MT		
	Note: The following items are measured including reinforcement & formwork.				
	225x150 mm high lintol beams including 02 nos. 10 mm dia T/S bars and 6mm dia mild steel stirrups @ 100c/c with necessary formwork and concreting in Grade 25				
2.C.31	At first floor lintol level	16.00	m		
	225x150 mm high sill beams including 02 nos. 10 mm dia T/S bars and 6mm dia mild steel stirrups @ 100c/c with necessary formwork and concreting in Grade 25				
2.C.32	At ground floor sill level	13.50	m		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	D - MASONRY				
	Refer Pricing Preambles				
	Brick Work				
	Brick work with standard bricks (Size 215x102.5x65 mm without motar) in cement and sand 1:5 motar.				
	One brick thick (225mm) walls				
2.D.1	From ground floor level to roof slab level	82.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	E - WATER PROOFING Water proofing system, shall consist of two (2) coats of water proofing concrete slurry coats. Surface preparation, mixing, application and curing shall be strictly in accordance with the manufacture's instructions. The Contractor may use any system of water proofing concrete by crystallization, with the prior approval of the Engineer. Rate shall include for chipping, removing and cleaning all loose materials on the surfaces to be water proof. Rate shall include for seailing around gullies, pipe protrusions with non shrink high strength cementation grout Master flow 98 or equivalent Rate shall include for forming 1:3 cement and sand 25 x 25mm angle fillets at all right angled edges and mixing, laying of plastering (1:5) up to 300mm in toilet area and 1500mm high from finished floor level in shower area Supplying and laying of Glass fibre reinforcement strip, Glascote 60 or equivalent to vertical/ horizontal intersections as per manufacture instruction & working order. Water proofing to be used approved product such as" Barallastic "or equivalent <u>Water proofing to top of concrete slab</u>				
2.E.1	At roof slab	65.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	F- METAL WORK Refer Pricing Preambles **Aluminium Panels** Material All Aluminium sections shall be fully treated extruded Aluminium alloy sections in accordance with BS 1470,1471, 1473, 1474 or latest relevant EN standard All Aluminium sections to be locally manufactured ("Alumex" or similar products of equivalent technical parameters) All Aluminium sections shall present clear, straight and sharply defined lines. They shall be free from defects impairing strength, appearance and durability. Finish All members shall be finished either by (a) Anodizing or (b) Powder coating (What ever specified in Aluminium Items) Anodizing -Exposed surface of all members shall be anodized using two steps. Anodizing process to an anodic thickness of not less than 10-15 microns and shall be free of any defects. Powder coating - Powder coating shall be carried out using polyester coating with proper and appropriate pre- treatment to a thickness of not less than 60-80 microns, measured on all significant surfaces. Screws and Hardware Items Concealed screws, nuts, bolts, rivets and other fastening devices shall be of Aluminium, non-magnetic stainless steel or other approved corrosive resistant materials. If visible, they shall blend with the finish of the framing Aluminium sections. ***Total Carried Forward***				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Hardware items such as Hinges, Handles, Catches, fixtures etc., shall be minimum of grade 304 stainless steel. <u>Glass</u> Glazing shall be minimum of 6mm thick clear float glass unless otherwise stated. Glass shall be secured at all edges with compression gaskets and glazing beads. When fixing glass, all glazing sealant shall be carefully applied and cleaned off properly. <u>Workmanship</u> The fabrication and installation of all Aluminium work must be carried out by specialist tradesmen. All dimensions shown on the drawings and the shop drawings must be verified by actual site measurement before fabrication and installation. Any cutting to enlarge the size of openings and approved practical method to fill the excess void behind frames required after installation shall be executed by the Contractor at his own expense. All Aluminium members shall be factory fabricated to the best standard of workmanship under experienced factory supervision and control. Materials, method of fabrication, assembly, installation, fastenings, supports, braces, operating parts and the like shall be in accordance with the approved shop drawings. All joints in frames at corners, junctions and intersections shall be mechanically jointed and be such that when assembled they are as strong and rigid as adjoining sections. Due care must be taken to ensure that all joints are water tight and leak-proof. Joint lines should not be visible.				
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Provisions must be made for expansion and contraction in horizontal and vertical members which are exposed to the weather or environments. Any distortion of members or any glass cracked or broken as a result of inadequate provisions must be rectified by the Contractor at his own expenses. All works shall be securely installed and anchored in position, set plumb, square and level in accurate alignment with other work, all in accordance with the approved shop drawings to the Engineer's satisfaction.(The allowable tolerance in terms of specified dimensions shall be plus/minus 1.5mm.) <u>Submissions</u> The Contractor shall submit shop drawings showing the following information where appropriate to the item ; layout (Sectional plan and elevation) of complete assembly - full size sections of members - methods of assembly - methods of glazing - methods of installation, including fixings caulking, flashing - provisions for vertical and horizontal expansion - junctions and trim to adjoining surfaces - fittings and accessories The Contractor shall submit certificates from the Aluminium manufacture and/or an approved testing laboratory which attest that the coating thickness offered is as specified. <u>Doors & Windows</u> Frame and /or sash sections shall be of extruded EN-AW 6063-T5 Aluminium Alloy having a normal thickness of 1.5mm (Accepted commercial tolerance of tolerance of ± 0.15mm shall apply) ***Total Carried Forward***				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				

Aluminium Louvers

Fixed louvers shall be of the weather proof type, suitable for overcoming water carried-over by wind and the fixed louvers shall have free areas of not less than 50%

The Contractor shall provide a guarantee in respect of the weatherproof properties of the fixed louvers.

All powder coatings shall match the windows. Panels shall be so constructed as to be completely weather proof at junctions with adjoin structures .

Louver members shall be 1.2mm thick & Y type.

Partitions

The frames shall be properly machined no permit easy assembly and to form weather-tight joints when caulked.
Partition members shall be 76mm in depth and the thickness of 1.2mm.

Following dimensions are applied for the frame members of each assembly units

Assembly Unit	Minimum member depth(mm)	Minimum member thickness (mm)
Door	100	1.5
Sliding door/ Window	80	1.5
Cesement Window, Fanlight	70	1.5
Fixed glass window	100	1.5

Rates shall include for all necessary hinges, screws, rubber beadings, skelton bolts, Aluminium louvers, pinhead stickers. (Locks,Handles,Door closers paid separately for doors or sliding doors)

Total Carried Forward

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Locks- (Union or equivalent) Mortice lock - Without handle- 4350/= (excluding VAT) With powder coated handle (Black/ White) 6000/= (excluding VAT) **Hinges**-(Union or equivalent) 102 x76 x 2mm 2000/= per pair 102 x76 x 3mm 2850/= per pair **Handle**-Grade 304 stainless steel 2900/= per pair(excluding VAT) **Door closer** 60kg-80kg [Yale -7000/= (excluding VAT)] 60kg-80kg [Union-7100/=(excluding VAT)] Refer drawing No.2019-04-001-AR **<u>Doors, Windows & Fanlights</u>** Supplying, Fabricating and Fixing twin sash louverd door **D17**, 2000x2400 mm high overall with 1.6mm thick & 45.0mmx100mm (deep) powder coated aluminium frame and aluminium sashes including louver panels with necessary accessories as per detail drawing and Engineers approval. (Door closers, handles, door locks paid separately each door 4.8 m²)				
2.F.1	In ground floor	1	Nr.		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Supplying,Fabricating and Fixing glazed & aluminium louvered window type **W8**, 3000x1800mm high overall with 1.5mm 5mm thick 70mm powder coated aluminium frame with 600x1800mm high 6mm thk. fixed clear glass window panel & 02 nos of 675x1800mm high aluminium louver panels at both sides , all complete as per Drawing and Engineers approval. (Rates to include necessary rubber beadings, locks,hinges.effective area of each window approx 5.4m²)				
2.F.2	In ground floor	2	Nr.		
	Supplying,Fabricating and Fixing glazed & aluminium louvered window type **W8**, 3000x1500mm high overall with 1.5mm 5mm thick 70mm powder coated aluminium frame with 600x1500mm high 6mm thk. fixed clear glass window panel & 02 nos of 675x1500mm high aluminium louver panels at both sides , all complete as per Drawing and Engineers approval. (Rates to include necessary rubber beadings, locks,hinges.effective area of each window approx 4.5m²)				
2.F.3	In ground floor	2	Nr.		
	Door Locks				
2.F.4	Supplying & Fixing lock (Union or equivalent) for Aluminium Casement double sash door with necessary accessories to working order.	1	Nr.		
	Door Closers				
2.F.5	Supplying & Fixing door closer for Aluminium Casement door with necessary accessories to working order.	2	Nr.		
	Door Handles				
2.F.6	Supplying & Fixing Brush matt finished stainless Steel door handles for Aluminium door with necessary accessories to working order.	2	Pairs		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	G - ROOF PLUMBING				
	Roof Plumbing				
	Note: All 0.47 mm thick zinc / Aluminium high tensile (grade 550) down pipes and fittings shall comply with the latest BSS for Zinc / Aluminium gutters down pipes and fittings				
	Supplying and fixing 0.47 mm thick zinc / Aluminium high tensile (grade 550) 140 x 140mm square down pipe with brackets fixed complete as per manufacture's specification.				
2.G.1	From roof slab level	3.50	m		
	Extra over Zn/Al down pipes and gutters for the following				
2.G.2	Shoes	1	Nr.		
2.G.3	Down pipe elbow	1	Nr.		
	Storm water disposal				
2.G.4	110mm dia. PVC down pipe drop and connected to 140x140 Zn/Al down pipe at roof slab(+3.3m) level as per detail drawing no.	1.00	m		
2.G.5	Strom water catch pit 150 x 150 x 150 mm deep internally, built in 75mm thick cement concrete 1:2:4 (20mm) sides and bottom including 12mm thick cement and sand 1:2 rendering finished smooth with neat cement floating to all exposed faces and cast iron grating on top,complete with inlet and outlet connections.	1	Nr.		
	Extra over UPVC pipes for the following;				
2.G.6	110mm dia bend	1	Nr.		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	H - WALL, FLOOR AND CEILING FINISHES				
	Note-Refer Pricing Preambles				
	Rates for plaster work shall include for reinforcing joints between different types of construction material (eg. Block work/ Brick work and Concrete work) with 150mm wide galvanized hexagonal wire mesh as directed by the Engineer.				
	Plinth plaster				
2.H.1	15mm thick plaster in cement and sand in 1:3 finished smooth with coloured cement floating to plinth including forming arises	13.50	m^2		
	Wall finishes				
	Plaster 15mm thick in cement and sand (1:5) finished semi rough including forming arises (Externally.)				
	On brick wall & attached columns				
2.H.2	From ground floor level to roof slab level	82.00	m^2		
	Reveals not exceeding 150mm wide				
2.H.3	From ground floor level to roof slab level	25.50	m		
	Finishes on Internal walls				
	Plaster 15mm thick in cement and sand (1:5) finished smooth with skim coat including forming arises (Internally.)				
	On brick wall & attached columns				
2.H.4	From ground floor level to roof slab level	82.00	m^2		
	Reveals not exceeding 150mm wide				
2.H.5	From upper floor level to roof level	25.50	m		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	Finishes on Concrete surfaces				
	Plaster 12mm thick in cement and sand (1:3) finished smooth with skim coat including forming arises (Internally.)				
	Soffit of suspended slab				
2.H.6	At roof slab level	64.00	m^2		
	Sides and soffit of beams				
2.H.7	At roof slab level	57.00	m^2		
	Sides and soffit of landing beams at staircase				
2.H.8	Between ground floor and roof slab level	0.80	m^2		
	Sides of steps and waist of staircase				
2.H.9	Between ground floor and roof slab level	1.50	m^2		
	Sloping soffit of staircase				
2.H.10	Between ground floor and roof slab level	3.60	m^2		
	Soffit of landing slab in staircase				
2.H.11	Between ground floor and roof slab level	0.90	m^2		
	Floor Finishes				
	Cut and polished Cement Rendering on Floors				
	Cut & polished cement rendering & smooth colored floating coat rendering 20mm. Thick cement & sand 1:3 floating coat,using colored finished smooth.(Color to be specified by architect)				
2.H.12	At ground floor level	64.00	m^2		
	Total Carried Forward				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	Brought forward				
	<u>Cut and polished Cement Skirting</u>				
	20mm thick 150mm high skirting in cement and sand 1:3 cut & polished cement rendering laid in one operation with floor rendering finished smooth with sunk bead at a junction of skirting and plaster above and the angle between floor and the skirting to be rounded off to a radius of 25mm.				
2.H.13	At ground floor level	32.00	m		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT
	J- PAINTING				
	Refer Pricing Preambles				
	External				
2.J.1	Prepare and apply two coats of approved colour weather shield paint to plinth. (paint approved by Engineer)	13.50	m^2		
	Prepare and apply one coat of wall primer and two coats of approved colour weather shield paint. (paint approved by Engineer)				
2.J.2	From ground floor level to roof slab level	86.00	m^2		
	Internal **Prepare and apply one coat wall primer and two coats of approved colour emulsion paint. (paint approved by Engineer)**				
	<u>On brick wall & attached columns</u>				
2.J.3	From ground floor level to roof slab level	86.00	m^2		
	<u>Soffit of suspended slab</u>				
2.J.4	At roof slab level	64.00	m^2		
	<u>Sides and soffit of beams</u>				
2.J.5	At roof slab level	57.00	m^2		
	TOTAL CARRIED TO COLLECTION ON PAGE NO S08 -273				

ITEM	DESCRIPTION	Qty	UNIT	RATE	AMOUNT

BILL NO B2 - SUPERSTRUCTURE
(CHILLER ROOM)

COLLECTION

C - CONCRETE WORK	(From Page 259)	Rs.
D - MASONRY WORK	(From Page 260)	Rs.
E - WATER PROOFING	(From Page 261)	Rs.
F - METAL WORK	(From Page 267)	Rs.
G - ROOF PLUMBING	(From Page 268)	Rs.
H- WALL AND FLOOR FINISHES	(From Page 271)	Rs.
J - PAINTING	(From Page 272)	Rs.

TOTAL CARRIED TO SUMMARY ON PAGE S 08 -274

SUMMARY (CHILLER ROOM)

ITEM		AMOUNT
BILL NO : B1 - SUBSTRUCTURE (S08-255)	Rs:	
BILL NO : B 2 - SUPERSTRUCTURE (S08-273)	Rs:	
SUB TOTAL (1)	Rs:	
Less Provisional Sums	Rs:	-
TOTAL CARRIED TO GRAND SUMMARY ON PAGES 08 - 275	Rs:	

GRAND SUMMARY

ITEM			AMOUNT
PRELIMINARIES	(S08-27)	Rs:	
BILL NO : A - AUDITORIUM	(S08-247)	Rs:	
BILL NO : B - CHILLER ROOM	(S08-274)	Rs:	
SUB TOTAL (1)		Rs:	
Discount ---------(%)(if any)		Rs:	
SUB TOTAL (2)		Rs:	
Add Contigencies 5%		Rs:	**13,460,000.00**
Add Provisional Sums			
PRELIMINARIES	(S08-27)	Rs:	**1,750,000.00**
BILL NO : A - AUDITORIUM	(S08-247)	Rs:	**700,000.00**
BILL NO : B - CHILLER ROOM	(S08-274)	Rs:	-
GRAND TOTAL		Rs:	

Bid Sum carried over to Form of Bid on Page No. S4 -02

…….
Signature of Bidder

Date :…….

Witness : (1) : …….

Address : ……..

Witness : (2) : …….

Address : ……..

PROPOSED AUDITORIUM FOR SVIAS OF THE EASTERN UNIVERSITY AT BATTICALOA.

Drawing Numbers

Architectural

2019 -04 - 001-AR01	Basement Floor plan
2019 -04 - 001-AR02	Ground Floor plan
2019 -04 - 001-AR03	First Floor plan
2019 -04 - 001-AR04	Floor plan
2019 -04 - 001-AR05	Roof plan
2019 -04 - 001-AR06	Sections
2019 -04 - 001-AR07	Sections, Schedule of openings
2019 -04 - 001-AR08	Section
2019 -04 - 001-AR09	Front Elevation, Rear Elevation
2019 -04 - 001-AR10	Side Elevation
2019 -04 - 001-AR11	Site plan, Schedule of finishes
2019 -04 - 001-AR12	Detail of Roof & Ceiling
2019 -04 - 001-AR13	Detail of Roof & Ceiling
2019 -04 - 001-AR14	Detail of Roof & Ceiling
2019 -04 - 001-AR15	Staircase Details
2019 -04 - 001-AR16	Staircase Details
2019 -04 - 001-AR17	Details of Toilets
2019 -04 - 001-AR18	Details of Toilets
2019 -04 - 001-AR19	Details of Toilets
2019 -04 - 001-AR20	Details of Doors & Windows
2019 -04 - 001-AR21	Details of Doors & Windows
2019 -04 - 001-AR22	Details of Doors & Windows
2019 -04 - 001-AR23	Details of Doors & Windows
2019 -04 - 001-AR24	Details of Partitions
2019 -04 - 001-AR25	Details of Ramp
2019 -04 - 001-AR26	Details of Ramp
2019 -04 - 001-AR27	Details of Stage
2019 -04 - 001-AR28	Landscaping Layout

Structural

2019-04-001ST01	General Notes
2019-04-001ST02	Layout of foundation
2019-04-001ST03	Layout of plinth beam
2019-04-001ST04	Schedule of columns
2019-04-001ST05	Deatail of foundation
2019-04-001ST06	Detail of combine footings
2019-04-001ST07	Detail of combine footings

2019-04-001ST08	Detail of combine footings
2019-04-001ST09	Detail of combine footings
2019-04-001ST10	Details of staircase "A"
2019-04-001ST11	Details of staircase to electrical room, "B", "C", "D"
2019-04-001ST12	Layout of slab & Beam at ground floor level
2019-04-001ST13	Layout of slab & Beam at first & 10.2m floor level
2019-04-001ST14	Layout of slab & Beam at 9.30m, 14.05m & 7.55m floor level
2019-04-001ST15	RCC details of ground & 1st floor beams
2019-04-001ST16	RCC details of ground & 1st floor beams
2019-04-001ST17	RCC details of ground & 1st floor beams
2019-04-001ST18	RCC details of ground & 1st floor beams
2019-04-001ST19	RCC details of ground & 1st floor beams
2019-04-001ST20	RCC details of ground & 1st floor beams
2019-04-001ST21	RCC Details of beams at 1st floor level
2019-04-001ST22	RCC Details of beams at 1st floor level
2019-04-001ST23	RCC Details of beams at 1st floor level
2019-04-001ST24	RCC Details of beams at 1st floor level
2019-04-001ST25	RCC Details of beams at +9.30m level
2019-04-001ST26	RCC Details of slab at ground floor level
2019-04-001ST27	RCC Details of slab at ground floor level
2019-04-001ST28	RCC Details of slab at ground floor level
2019-04-001ST29	RCC Details of slab at ground floor level
2019-04-001ST30	RCC Details of slab at 1st floor level
2019-04-001ST31	RCC Details of slab at 1st floor level
2019-04-001ST32	RCC Details of slab at 1st floor level & +14.05m level
2019-04-001ST33	RCC Details of slab at +7.55m level, weather shades & facia
2019-04-001ST34	RCC Details of slab at +9.75m & 9.3m level
2019-04-001ST35	Deatails of steel staircase
2019-04-001ST36	Deatails of steel staircase
2019-04-001ST37	Layout of roof on stage and Layout & details of beams at 19.75m level
2019-04-001ST38	RCC Details of beams at +19.75m level
2019-04-001ST39	Layout of upper and lower roof
2019-04-001ST40	Details of roof
2019-04-001ST41	Details of roof & cat walk
2019-04-001ST42	Details of roof & cat walk
2019-04-001ST43	Details of roof, layout & details of cat walk
2019-04-001ST44	Details of cat walk & roof
2019-04-001ST45	Details of roof on stage

Water Supply

2019 -04 - 001-WSS01	Basement Floor Paln
2019 -04 - 001-WSS02	Ground Floor Paln
2019 -04 - 001-WSS03	First Floor Paln
2019 -04 - 001-WSS04	Detail at - A
2019 -04 - 001-WSS05	Detail at - B
2019 -04 - 001-WSS06	Detail at - C & D
2019 -04 - 001-WSS07	Layout & detail of storm water at basement floor
2019 -04 - 014-WSS08	Layout & detail of storm water at roof level

Electrical

2019 -04 - 001-EL01	Electrical Layout Plan at Basement Floor
2019 -04 - 014-EL02	Electrical Layout Plan at Ground Floor
2019 -04 - 014-EL03	Electrical Layout Plan at First Floor
2019 -04 - 014-EL04	Electrical Layout Plan at 19.3m level
2019 -04 - 014-EL05	Lighting protection system
2019 -04 - 014-EL06	Lighting protection system
2019 -04 - 014-EL07	Lighting protection system
2019 -04 - 014-EL08	Lighting protection system
2019 -04 - 014-EL09	Electrical wiring diagrams

Mechnical

2019 -04 - 001-BS01	Fire protection layout for Basement floor
2019 -04 - 001-BS02	Fire protection layout for Ground floor
2019 -04 - 001-BS03	Fire protection layout for First floor
2019 -04 - 001-BS04	Fire protection layout for ceilling level
2019 -04 - 001-BS05	Fire dection schematic diagram
2019 -04 - 001-BS06	Fire hose real & landing valve schematic