

Name of Work : Repairing of RAC Quarters at Class 1/2 Colony, Ta. Dist.Valsad. (Kitchen Repairing, Colour Work, Door Window, Granite Flooring, Paver Block and Miscellaneous Work)

ITEM WISE SPECIFICATIONS

Item No: 1 Applying two coats of putty & two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.57+18.59 / P.No.136

Mode of measurements:

The rate shall be for a unit of **one square meter**.

Item No: 2 Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.57+18.59 / P.No.136 & It.No.18.60 / P.No.137.

Mode of measurements:

The rate shall be for a unit of **one square meter**.

Item No: 3 Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.57+18.59 / P.No.136 & It.No.18.60 / P.No.137.

Mode of measurements:

The rate shall be for a unit of **one square meter**.

Item No: 4 Finishing wall with weather proof exterior acrylic emulsion paint on wall surface (two coats) to give an required shape even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials.etc complete

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.51 P.No.135 and It.No.18.53 P.No.136. For weather proof exterior 100% acrylic emulsion paint

Mode of measurements:

The rate shall be for a unit of **one square meter**.

Item No: 5 Painting Two coats (excluding priming coat) on previously painted steel and other metal surface with enamel paint, brushing to give an even shade including cleaning the surface of all dirt, dust and other foreign matter.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.19.59(B) P.No.141

Mode of measurements:

The rate shall be for a unit of **one square meter**.

Item No: 6 Painting Two coats (excluding priming coat) on previously painted wood and wood based surface with enamel paint, to give an even shade including cleaning the of all dirt, dust and other foreign matter.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.19.11 P.No.138

Mode of measurements:

The rate shall be for a unit of **one square meter**.

Item No: 7 Removing, Repairing and Refixing Old existing wooden door shutter including repairing the shutter/frame using Randha machine and replacing old fixture and fastening with new SS 304 grade fixtures like 3 Hinges, 1 Stoppers, 1 Aldrop , 2 Handle & 1 lock etc. and as directed by engineer in charge etc comp.

Item including Removing, Repairing and Refixing Old existing wooden door shutter including repairing the shutter/frame using Randha machine and replacing old fixture and fastening with new SS 304 grade fixtures like 3 Hinges, 1 Stoppers, 1 Aldrop , 2 Handle & 1 lock etc. and as directed by engineer in charge etc comp.

The payment will be made on No basis of the finished work.

Mode of measurements:

The rate shall be for a unit of **one No.**

Item No: 8 Removing, Repairing and Refixing Old existing Main wooden door shutter including fixing New Europa Main Door Lock and repairing the shutter/frame using Randha machine and replacing old fixture and fastening with new SS 304 grade fixtures like 3 Hinges, 1 Stoppers, 1 Aldrop , 2 Handle & 1 lock etc. and as directed by engineer in charge etc comp.

Item including Removing, Repairing and Refixing Old existing wooden door shutter including repairing the shutter/frame using Randha machine and replacing old fixture and fastening with new SS 304 grade fixtures like 3 Hinges, 1 Stoppers, 1 Aldrop , 2 Handle & 1 lock etc. and as directed by engineer in charge etc comp.

The payment will be made on No basis of the finished work.

Mode of measurements:

The rate shall be for a unit of **one No.**

Item No: 9 Providing and fixing window having extruded aluminum Colour anodized section frame main outer size 95.00 mm x 24.10 mm x 1.17 mm (Weight:-0.738/Rmt) horizontal two track and Vertical member of size 92.00 mm x 31.75 mm x 1.50 mm (Weight:-1.06/Rmt), with Two Glass shutters & One Shutter Mosquito Net of horizontal member size 40mm x 18mm x 1.29mm (@ wt.of 0.456Kg/mt), vertical member of size 40mm x 18mm x 1.29mm with 5 mm thick transparent bronze colour tinted float glass with powder coated aluminum fittings & fixtures and Lock Strip , transparent silicon sealant glass fixing to frame as per details etc complete for window.W,W5

Providing, fabricating and fixing powder coated/anodized aluminium sliding window comprising outer frame made from extruded aluminium sections of size 95.00 mm × 24.10 mm × 1.17 mm weighing approximately 0.738 kg/Rmt for horizontal members and vertical members of size 92.00 mm × 31.75 mm × 1.50 mm weighing approximately 1.06 kg/Rmt.

The window shall consist of two glazed sliding shutters and one sliding mosquito mesh shutter. The shutter frame shall be made from extruded aluminium sections of size 40 mm × 18 mm × 1.29 mm for both horizontal and vertical members having weight approximately 0.456 kg/Rmt.

The glazed shutters shall be fitted with 5 mm thick transparent bronze tinted float glass, fixed with approved quality EPDM gasket/transparent silicone sealant complete watertight. The mosquito mesh shutter shall be provided with suitable nylon/stainless steel mesh fixed properly in the aluminium frame.

The work shall include all necessary aluminium accessories and hardware such as:

- Rollers
- Handles
- Locking arrangement/lock strip
- Cleats
- Rubber gasket
- Wool pile/weather strip
- Screws and fasteners
- Powder coated aluminium fittings and fixtures

All aluminium sections shall be anodized/powder coated of approved colour and shade as directed by the Engineer-in-Charge. The window shall be fabricated true to line, level and plumb, ensuring smooth sliding operation.

The item includes cutting, fabrication, assembly, fixing in position, sealing joints with silicone sealant, and making good the surrounding surfaces complete in all respects as per approved drawings and directions of the Engineer-in-Charge.

Mode of measurements:

The consolidated item shall be measured and paid on its breadth, length and height dimensions to those specified in estimate/plan or as directed.

The payment will be made on **SQMT** basis of the one complete finished

Item No: 10 Providing & Fixing in position standard extruded approved colour anodised Aluminum Ventilator with outer frame 65 x 25 mm Stander Box Frame with 5mm thick Ground Glass Louvers and Fixed Mosquito Net For ventilation including all required materials, fixtures, fastenning, labours and equipments as per detailed drawing as directed. For Ventilators V,V1.

Providing, fabricating and fixing in position approved colour anodized/powder coated aluminium ventilator made from standard extruded aluminium sections comprising outer frame of size 65 mm × 25 mm standard box frame section.

The ventilator shall be provided with 5 mm thick ground/frosted glass louvers fixed in suitable aluminium louver channels complete with necessary supports, clips and fixtures to ensure proper alignment and operation.

The ventilator shall also include a fixed mosquito mesh/net of approved quality fixed in aluminium frame complete with all necessary accessories.

The work shall include all required materials, accessories and hardware such as:

- Aluminium cleats and brackets
- Screws and fasteners
- Rubber gasket
- Silicone sealant

Louvers supports/clips
Mesh fixing arrangement
Necessary fittings and fixtures

All aluminium sections shall be anodized/powder coated in approved colour and shade. Fabrication and installation shall be carried out true to line, level and plumb, ensuring proper ventilation and neat finish.

The item includes cutting, fabrication, assembly, fixing in position, sealing all joints, making good adjoining surfaces and completing the work in all respects as per approved detailed drawings and directions of the Engineer-in-Charge.

Mode of measurements:

The consolidated item shall be measured and paid on its breadth, length and height dimensions to those specified in estimate/plan or as directed.

The payment will be made on **SQMT** basis of the one complete finished.

Item No: 11 Providing and fixing 35 mm thick flush door Single shutter, solid core with Shutter of Factory made & Stamped I.S 12823 Grade one ,Type one ,melamine faced three layred resin Flushed Door Having Decorative Lamination on both sides & 12 mm T.W.Beading Around the Door, FROM HOLDING LICENCE FOR MINIMUM 5 YEARS .and stainless steel handle and necessary Locking system of Godrej, zinc coated hinges ,fixtures & fastenings etc directed by engineer in charge.D2

General

Providing and fixing 35 mm thick flush door Single shutter, solid core with Shutter of Factory made & Stamped I.S 12823 Grade one ,Type one ,melamine faced three layred resin Flushed Door Having Decorative Lamination on both sides & 12 mm T.W.Beading Around the Door, FROM HOLDING LICENCE FOR MINIMUM 5 YEARS .and stainless steel handle and necessary Locking system of Godrej, zinc coated hinges ,fixtures & fastenings etc directed by engineer in charge.D2

All works shall be carried out as per item specifications, drawing, image and as per required condition or as directed by engineer in charge.

Also including below specify points as per following:

1 Teak wood Batten

The Non Teak wood Batten shall be confirm General Technical Specification no M-29 from specification booklet for Building works

Screws and nails should be provided as per requirement or as directed.

Workmanship should be done with good quality.

The Non Teakwood Patti should be fixed with level and line and workmanship should be good & as per drawing and item specification.

2 flush door shutter

The flush door shutter shall be confirm General Technical Specification no M-30 from specification booklet for Building works

3 Lamination sheet(1mm thick)

The lamination sheet (1mm thick) should be standard quality or as directed

The 1mm thick lamination sheet should be provide all visible parts of all component of Door

Lamination of 1.0mm thick in single or double shade or equivalent make of plain or textures finish, design and grooves as directed by architecture drawing.

Fixing the lamination sheets with adhesive materials like Favicol or equivalent.

Workmanship should be done with good quality.

The lamination sheet should be fixed with level and line & as per drawing and item specification.

4 Fixtures and Fastenings

The Fixtures and Fastenings shall be confirm General Technical Specification for Building work booklet M-43 / P.No.19. Use Stainless steel instead of iron, brass and aluminium.

All Fixtures and Fastenings should be S.S 304

Providing and 60cm long stainless steel handle and other necessary Fastenings

5 Godrej Lock

Lock should be Godrej or Standard Quality or as directed.

Providing floor lock per Door

Mode of measurements:

The consolidated item shall be measured and paid on its breadth, length and height dimensions to those specified in estimate/plan or as directed.

The payment will be made on **SQMT** basis of the one complete finished.

Item No: 12 Providing and fixing FRP frame size 100 x 50 mm and 35 mm thick FRP depress panel Single shutter having extra reinforcement on sides & edges in Gel coat finish. The core of the shutter & frame is to be filled up with injected fire retradat grade polyurethane foam done in situ along with embeded wooden pieces for stiffening & also taking hinges & fintures. The whole FRP frame & shutter is to be waterproof, weatherproof ,termite proof & resistance to mild acid/alkali. Rates are to be inclusive of S.S hinges with necessary screws & alluminum fixtures & fastenings & fartener sleeve. Colour and Shade approved by Engineer-In-Charge. D3

1.0 MATERIAL

1.1. FRP Frame 100x50mm

1.5 to 2.0 mm thick fire retardent grade FRP skin in depressed panel shall be of approved make as approved by Engineer in charge

FRP skin idepressed panel shall be of water proof weather proof termite proof mild acid and alkali proof, sound proof and fire resistance

FRP frame size as per required and 35 mm shall be in standard factory made members fabricated in factory including necessary stainless steel fixtures and fastenings of approved brand and make as approved by Engineer in Charge

Whole section shall be of water proof weather proof termite proof mild acid and alkali proof, sound proof and fire resistance

The frame shall be of best quality and free from any defect

1.2. FRP shutter 35mm thick

FRP Shutters of 35 mm thick in standard design of FRP and 3.12 mm hide and dandified molded wood primer coated skin on both side of shutter skin is to be confirmed to ASTM D - 1037 pressed under hot process over wood style 65 x 27 mm top and bottom rail and lock rail 125 mm x 27 mm including stainless steel hinges with necessary aluminum fixture and fastening remaining hole of portion is to be filled up with PUF and shutters is to be finished in gel coat

Whole section shall be of water proof weather proof termite proof mild acid and alkali proof, sound proof and fire resistance

The shutters shall be of best quality and free from any defect

2.0. S. S. FIXTURES AND FASTNINGS

2.1 Hinges,

Hinges shall be of approved make. shall be Free from any scratches or holes or any damages on surface. and shall have finished luster surface on all sides

The hinges shall be of best quality and free from any defect

2.2 Handles,

Handles shall be of approved make. shall be Free from any scratches or holes or any damages on surface. and shall have finished luster surface on all sides

The handles shall be of best quality and free from any defect

2.3 Bolts,

All bolts shall be of approved make. shall be Free from any scratches or holes or any damages on surface. and shall have finished luster surface on all sides

The bolts shall be of best quality and free from any defect

3.0 WORKMANSHIP

3.1. The Work of FRP door shall be done with extreme finishing. The FRP Shutters and granite frame shall be fixed in position in true line and level and shall be fitted as directed by Engineer in charge with all required fixtures and fastenings shall be fitted at right place as shown in the drawing and as directed by Engineer in charge.

3.2. The back of each Stone slab to be fixed shall be smeared with cement paste of matching colour and the Stone slab shall then be gently tapped against the surface, with a wooden mallet. The skirting shall be done only after the fixing is completed. Any pipes coming out of the wall through the dado or skirting shall only be at the intersection of the horizontal and vertical joints. The Stone slab shall not have staggered joints. The joints shall be true to entire line both ways and vertical joints shall be in line with joints or flooring. Stone slab shall be fixed as close as possible to the adjoining tiles and any difference in the thickness of the Stone slab shall be evened out in the cement paste so that all the tiles faces are set in conformity with one another. The skirting shall project uniformly and not more than 6 mm, thickness beyond the finished surface above. Top of skirting or dado shall be truly horizontal. The risers of steps, skirting or dado shall rest on top of treads of flooring. Wherever required the Stone slab shall be cut (saw n) and thin edges smoothed before use.

4.0 Mode of Measurement and Payment

4.1. The unit rate of FRP door shall include the cost of all materials, cost of all necessary fixtures and fastenings, labour charges for fixing frames, doors and fixing the FRP door in wall at the place shown in drawing and as instructed by Engineer in charge, all tools and plant required for assembling and fixing in position, finishing as per direction of the Engineer-in-charge, and all other incidental expenses for preparing door frame and shutter of specified size to complete the door structure or its components as shown on the drawings and according to these specifications. They shall also include the cost of making, fixing and making walls good by plaster patch colour etc as required

4.2. The FRP door shall be measured for its **length** or **width** and **height**, limiting dimensions to those specified on plan or as directed.

4.3. The rate shall be for a unit of one **square meter**.

Item No: 13 Providing and fixing Mirror polished 18 mm thick Granite stone in Single piece with full round edge and polished of approved quality in clading on Cill & Jambs and around the doors/ windows/ ventilation with 12 mm thick cement motor CM (1:4) and fixing with cement slurry & adhesive including moulding of exposed edges as directed by engineering in charge etc. complete.

MATERIAL

WATER

Water Shall confirm Material Specification no M- 1

CEMENT

Cement Shall confirm Material Specification no M- 3

SAND

Sand Shall confirm Material Specification no M- 6

4.0 Mirror polished 18 mm thick Granite stone:

4.1. 18mm thick **mirror polished granite stone** shall be hard even sound, and regular in shape and generally uniform in colour. The colour of the stone shall be approved by engineer in charge. Brown coloured shall not be allowed for use. They shall be without any soft veins cracks or flaws

4.2. The size of the stone to be used shall be of full length single piece and required width as directed. However smaller sizes will be allowed to be used to the extent of maintaining required pattern. Thickness shall be as specified.

4.3. Tolerance of minus 18 mm. on accounts of chisel dressing of edges shall be permitted for length as well as breadth. Tolerance in thickness shall be ± 3 % in mm.

4.5. When machine cut edges are specified the exposed and the edges at joints shall be machine cut the thickness of the exposed machine cut edges shall be uniform.

4.6. The stones shall have mirror polished surface.

5.0 WORKMANSHIP

5.1 Granite stone of approved quality shall be laid evenly to level and slope as directed by Engineer in charge over a bed of a base layer consisting of cement mortar 1:4 (1 cement: 4 coarse sand by volume).

5.2. Cement and sand for base layer shall be mixed in proportions of 1:4 (1 cement : 4 coarse sand by volume) Cement and sand shall be proportioned by volume after making due allowance for bulking. The required quantity of water shall then be added and the mortar mixed to produce workable consistency before mixing platform shall be thoroughly cleaned before changing from one type of cement to another.

5.3. The mixing for base layer shall be done intimately, The operation shall be carried out on clean water tight platform, and cement sand shall be first mixed dry in the required proportion to obtain uniform colour and then the mortar shall be mixed for at least two minutes after addition of water. In case of cement mortar, that has suffered because of evaporation of water the same shall be re-tempered by adding water as frequently as needed to restore the requisite consistency but its re-tempering shall be permitted only within thirty minute from the time of addition to water at the time of initial mixing.

5.4. Cement and sand for base layer shall be mixed in proportion as specified in the item, Cement and sand shall be proportioned by volume after making due allowance for bulking. The required quantity of water shall then be added and the mortar mixed to produce workable consistency.

5.5. Curing shall be started as soon as the mortar used for finished has hardened sufficiently so as not to be damaged when watered. It shall be kept wet for a period of at least 7 days. During this period, it shall be suitably protected from all damages;

5.6. During hot weather, all finished or partly finished work shall be covered or wetted in such manner as will prevent rapid drying of the flooring work.

5.7. Joints of flooring shall be through and continuous throughout the building as directed by Engineer in charge

5.8. joints shall be filled with a stiff mixture of gray cement surly

5.9. The flooring work shall be finished by rubbing and mirror polishing after the the work of flooring is set properly

6.0 PROPORTION OF MIX

6.1. The proportion of cement and sand for base layer shall be one part of cement. 4 (four) parts of sand and shall be measured by volume.

7.0 MODE OF MEASUREMENT & PAYMENT :

7.1. The unit rate cladding shall include the cost of all materials, tools and plant required for mixing, laying of base layer in true level and slope as required applying & placing stones in position, compacting, finishing, curing mirror polishing, and all other incidental expenses for producing flooring work to complete the structure or its components as shown on the drawings and according to these specifications. They shall also include the cost of making, fixing and removing of all scaffolding and forms required for the work.

The rate of cladding shall include the cost of all labour, materials tools and plant scaffolding and all incidental expenses as described herein above.

7.2. The cladding work shall be measured for its **length** and **width**, limiting dimensions to those specified on plan or as directed. The rate shall be for a unit of one square meter.

7.3. The payment will be made on **square Meter basis** of the visible work.

Item No: 14 Providing and fixing Safty grills of required pattern for windows/ Door using necessary M.S angle/ M.S pipe, M.S flats and other structural steel at required spacing including cutting, welding and fabrication etc. including one coat of primer of approved quality and two coats of oil painting as per detail drawing etc complete.

General

The scope includes design (if required), fabrication, supply, transportation, fixing, and finishing of M.S. safety grills complete in all respects as per drawings and instructions of the Engineer-in-Charge.

MATERIAL

All mild steel sections shall conform to relevant IS standards.

Steel shall be free from rust, scale, cracks, and defects.

Paint and primer shall be of approved make and quality.

WORKMANSHIP

Fabrication shall be true to line, level, and dimensions. All welds shall be continuous, strong, and neatly finished. Edges and surfaces shall be smooth and free from burrs. Steel surfaces shall be cleaned of dust, oil, grease, and rust. One coat of approved steel primer shall be applied. Two coats of synthetic enamel paint shall be applied after proper drying of primer. Grills shall be fixed with holdfasts/anchor fasteners or embedded in masonry/concrete. Proper alignment, plumb, and level shall be maintained. Damages to adjoining surfaces shall be made good to original finish.

Mode of measurements

The rate shall be for a unit of **Kg**.

Item No: 15 Providing and Fixing Pre Stitched Fiber Glass Mosquite Net with Fastener tap in four side for all window and other opening with required all accessories etc. complete.

General

This work shall consist of furnishing and placing Providing and Fixing Pre Stitched Fiber Glass Mosquite Net with Fastener tap in four side for all window and other opening with required all accessories etc. complete.

MATERIAL

Mosquite Net

Mosquite net should be Standard Quality or Pre Stitched Fiber Glass Mosquite Net as directed.

Fixtures

Specification no M-43 from specification booklet for Building works for fixture and fastening shall be applied for this item.

Bolts

All bolts shall be of approved make. Shall be Free from any scratches or holes or any damages on surface. And shall have finished luster surface on all sides.

WORKMANSHIP

The Mosquito Net shall be fixed in frame for window as directed by Engineer in charge. required all the fixtures and fastenings shall be fitted at right place and as directed by Engineer in charge.

Mode of Measurement and Payment

The payment will be made on **square Meter** basis of the finished work.

All necessary labour materials Equipment tools and plant, conveyance including loading and unloading etc shall be provided by the Contractor as directed by the Engineer in charge.

The consolidated item shall be measured for its **length and width** limiting dimensions to opening of window

The rate shall be for a unit of **one square meter**.

Item No: 16 Providing and fixing kitchen platform trolley having three drawers of SS (IS 304) of required size like thali, katleri, perforated, partition, cupsosar type in kitchen platform having drawer front side and backside by using 19mm thick all proof plywood of BWR confirming to IS 710 of green or century make, designs & grooves as directed by architectural drawings.lamination of 1.0 mm thick in single or double shade of green, broom or equivalent make of plain or texture finish as directed on all visible face including on teck wood batten patti and 0.80 mm white lamination on all non visible faces . The size of SS (IS 304) basket of size 4" to 18" for thali, dish, katleri, perforated, partition, cupsosar type as directed including necessary S.S. fittings, handles, nobs, telescopic channels, etc. as directed.

Providing and fixing kitchen platform trolley unit of required size and configuration comprising stainless steel baskets/drawers made from Stainless Steel Grade IS 304 suitable for storage of thali, dish, cutlery (katleri), perforated, partition and cup-saucer types as per approved architectural drawings and directions of the Engineer-in-Charge.

The cabinet framework, drawer front, back and other carcass members shall be made from 19 mm thick BWR grade waterproof plywood conforming to IS:710, of approved make such as Greenply, Century or equivalent.

All visible surfaces shall be finished with 1.0 mm thick decorative laminate of approved shade, colour and texture finish (plain/textured) of approved make such as Greenlam, Bloom, or equivalent, including teak wood batten/patti wherever required. All non-visible surfaces shall be finished with 0.80 mm thick white laminate.

The trolley shall be provided with stainless steel baskets/drawers of approved quality and required size ranging from 4 inch to 18 inch depth/height as specified for:

Thali basket

Dish basket

Cutlery basket

Perforated basket

Partition basket

Cup-saucer basket

The work shall include all necessary hardware and fittings such as:

- Stainless steel handles
- Knobs
- Telescopic channels/sliding runners
- Screws and fasteners
- Hinges and supports
- Edge banding/lipping
- Necessary stainless steel fittings and accessories

All exposed edges shall be neatly finished and polished. Laminate surfaces shall be properly bonded without bubbles or waviness. The trolley units shall be installed true to line and level ensuring smooth operation of drawers and baskets.

The item includes cutting, fabrication, edge finishing, polishing, assembly, fixing in position and completing the work in all respects as per approved drawings and directions of the Engineer-in-Charge.

Mode of measurements:

The consolidated item shall be measured and paid on its breadth, length and height dimensions to those specified in estimate/plan or as directed.

The payment will be made on **SQMT** basis of the one complete finished.

Item No: 17 Providing and Fixing 6 mm thick Lexan Polycarbonate multi wall roofing sheet fixed with hilti screw and rubber silicon sealer and aluminium strip of size 50 x 3 mm etc complete as directed by Engineer in charge.

Providing and fixing 6 mm thick Lexan multiwall polycarbonate roofing sheets of approved make and quality, installed on existing supporting framework as per approved drawings and directions of the Engineer-in-Charge.

The polycarbonate sheets shall be fixed using approved quality Hilti/self-drilling screws with suitable washers, ensuring proper anchorage and watertight fixing. Joints and overlaps shall be sealed with approved quality rubber/silicone sealant to prevent leakage.

The sheets shall be secured with aluminium strips of size 50 mm × 3 mm or approved equivalent complete with all necessary accessories, fasteners and fittings required for proper installation.

The work shall include:

- Cutting and shaping of sheets as required
- Drilling and fixing with screws and washers
- Providing aluminium clamping strips
- Application of silicone/rubber sealant at joints and edges
- Ensuring proper slope, alignment and waterproofing
- Cleaning and finishing of completed work

The roofing shall be installed true to line and level, free from waviness, cracks or damage, complete in all respects as directed by the Engineer-in-Charge.

Mode of measurements:

The consolidated item shall be measured and paid on its breadth, length and height dimensions to those specified in estimate/plan or as directed.

The payment will be made on **SQMT** basis of the one complete finished.

Item No: 18 Steel work, welded in built up sections framed work including cutting, hoisting, fixing in position and applying a priming coat of red lead paint. (A)In beams and joists, channels angles Tees, flats, with connecting plates or angle cleats as in main and cross beams. Hip and jack rafters, purlins connected to common rafters and the like

Providing, fabricating and fixing in position structural steel work in built-up welded sections comprising beams, joists, channels, angles, tees, flats and other structural members including cutting, straightening, welding, hoisting, aligning and erecting complete as per approved structural drawings and directions of the Engineer-in-Charge.

The work shall include fabrication and erection of:

- Main and cross beams
- Joists
- Channels
- Angles
- Tee sections
- Flats
- Hip rafters
- Jack rafters
- Purlins connected to common rafters
- Connecting plates
- Angle cleats and similar structural components

All members shall be properly welded, assembled and fixed in position with required gusset plates, cleats, bolts, nuts, washers and accessories as necessary for complete structural stability.

The steel surfaces shall be thoroughly cleaned from rust, dust, oil, scales and other foreign matter before applying one coat of approved quality red oxide/red lead steel primer paint over all exposed surfaces prior to erection or as directed.

The item includes:

- Cutting, bending and shaping of steel sections
- Edge preparation and welding
- Hoisting, positioning and alignment
- Providing and fixing cleats, plates and stiffeners
- Grinding and finishing weld joints
- Application of primer coat
- All labour, tools, tackles, scaffolding and equipment required for completion of work

The work shall be executed true to line, level and plumb, complete in all respects as per specifications, approved drawings and directions of the Engineer-in-Charge.

Mode of measurements:

The payment will be made on **Qnt** basis of the one complete finished.

Item No: 19 Pro. And fixing single layer water proof gypsum board 12.5 mm thick sections using water proof board of size 1220 mm x 1830 mm x 8.0 mm suspended by GI suspender channel of size 25 mm x 3 mm with intermediate channel of size 18 mm x 40 mm x 0.8 mm at 1220 mm center to center ceiling section of size 40 mm x 35 mm x 0.55 mm at 457 mm c/c and perimeter channel A of size 20 mm x 27 mm x 30 mm x 0.5 mm at edges & drops incl.paper tap sand soffit cleat, anchor fastener, scotch bolt connecting cleat,joining compound top coat on ceiling incl.making necy.opening for light fitting,diffuser etc. comp. as per detail drawing as directed.

Providing and fixing suspended single layer waterproof gypsum board false ceiling system comprising 12.5 mm thick waterproof gypsum board fixed to a galvanized iron framework, complete in all respects as per approved drawings and directions of the Engineer-in-Charge.

The ceiling framework shall consist of:

- GI suspender channel of size 25 mm × 3 mm

- Intermediate channel of size 18 mm × 40 mm × 0.80 mm spaced at 1220 mm centre to centre

- Ceiling section of size 40 mm × 35 mm × 0.55 mm spaced at 457 mm centre to centre

- Perimeter channel of size 20 mm × 27 mm × 30 mm × 0.50 mm fixed along walls, edges and drops

The waterproof gypsum board panels shall be securely fixed to the framework using approved fasteners and screws. All joints shall be finished with approved paper tape, jointing compound and finishing top coat to obtain a smooth, seamless surface ready for painting.

The work shall include all necessary accessories and fittings such as:

- Soffit cleats

- Anchor fasteners

- Connecting cleats

- Scotch bolts

- Suspension system

- Jointing tape and compounds

- Screws and fixing accessories

The item shall also include making necessary cut-outs/openings for:

- Light fixtures

- Diffusers

- Grills

- Access panels

- Electrical and HVAC fittings

The entire ceiling system shall be properly aligned, levelled and fixed true to line and level, free from cracks, sagging or unevenness.

The work includes cutting, fabrication, suspension, fixing, joint finishing, surface preparation and completion of the false ceiling system complete in all respects as per detailed drawings and directions of the Engineer-in-Charge.

Mode of measurements:

The payment will be made on **Sqmt** basis of the one complete finished.

Item No: 20 Providing and fixing pre-cast Rubber Dye inter locking concrete block 60mm thick with grade of concrete M300 pneumatic compressed/Vibrated mechanically and as per approved design conforming to IS 15658: 2006 including 35 mm Sand layer for levelling and filling the joint with sand in proper line and level as per guidelines of IRC : SP 63-2018 etc complete.

Providing and fixing precast rubber mould/die interlocking concrete paver blocks of approved shape, size and pattern, 60 mm thick, manufactured using M300 grade concrete by pneumatic compression/vibro-mechanical process conforming to IS 15658:2006.

The paver blocks shall be laid over a prepared bedding layer consisting of 35 mm thick compacted sand layer for proper levelling and cushioning. The blocks shall be laid in approved pattern, true to line, grade and level, ensuring proper interlocking and uniform joints.

After laying, joints between the paver blocks shall be filled with clean, dry fine sand and compacted properly to achieve firm seating and alignment.

The work shall include:

- Preparation and dressing of base surface
- Supplying and laying sand bedding layer
- Laying interlocking paver blocks in required pattern
- Cutting of edge blocks wherever necessary
- Filling joints with sand
- Compaction and finishing
- All labour, tools, tackles and equipment required for complete execution

The paver blocks shall be free from cracks, honeycombing and other defects, and shall have uniform colour, texture and finish.

The entire work shall be carried out as per approved design, specifications and guidelines of IRC: SP:63-2018, complete in all respects and as directed by the Engineer-in-Charge.

Mode of measurements:

The payment will be made on **SQMT** basis of the one complete finished.

Signature of Contractor

**Deputy Executive Engineer
Valsad (R&B) Sub-Division
Valsad**

**Executive Engineer
Valsad (R&B) Division
Valsad**