

SECTION-5  
**TECHNICAL SPECIFICATION**

**Item No. 7. Removing and scrapping of old deteriorated plaster of any thickness from masonry/RCC member including stacking of servicable material and disposal of unservicable from site of work with all lead and lift.**

**1. Scope of Work:**

- Carefully remove loose, cracked, and defective plaster using hand tools or mechanical means without causing damage to the underlying masonry or RCC surface.
- All thicknesses of plaster, irrespective of extent, shall be removed.

**2. Handling of Material:**

- Stack serviceable material in designated areas as directed by the Engineer-in-Charge.
- Collect, transport, and dispose of unserviceable material to approved dumping sites, including all lead, lift, and handling charges.

**3. Site Maintenance and Safety:**

- Maintain cleanliness at the site during and after work.
- Provide all necessary scaffolding, barriers, and personal protective equipment (PPE) for the safety of workers and others at the site.
- Prevent damage to adjacent structures, finishes, or surfaces.

**4. Measurement and Payment:**

- Measurement shall be in **square meters (m<sup>2</sup>)** of plaster removed.
- The rate includes: labor, tools, equipment, stacking of serviceable material, transportation, disposal of unserviceable material, and cleaning of the site.

**Remarks:**

- All removed material shall be segregated for serviceable and unserviceable use.
- Any serviceable material identified for reuse must be reported to the Engineer-in-Charge before disposal.

**Item No. 12 Providing laying and jointing in true line and level 15mm dia. U.P.V.C. Pipe ( SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.**

**1. Materials**

• **UPVC Pipe:**

- Size: **15 mm dia.**
- **Schedule 40 (SCH-40)**, conforming to relevant IS standards for cold water
- Approved make and quality as directed by Engineer-in-Charge

• **Fittings:**

- Elbows, tees, unions, sockets, reducers, and other approved UPVC fittings
- Solvent cement/adhesive as recommended by manufacturer for jointing

• **Pipe Supports:**

- Wall clamps, saddles, or hangers for exposed pipes
- Concealment materials for concealed pipe work (as directed)

**2. Workmanship**

- Check alignment, slope, and route for the pipeline before installation.
- Fix UPVC pipes **in true line and level**, either exposed or concealed as directed.
- Exposed pipes shall be fixed on walls using **clamps at every 2 m C/C** or as approved.
- Cut, clean, and deburr pipe ends before jointing.
- Join pipes and fittings using **adhesive solvent** as per manufacturer's instructions, ensuring leak-proof joints.
- Conceal pipes neatly in walls, slabs, or chase as directed by Engineer-in-Charge.
- Test the completed pipeline for leaks and proper functioning before handover.
- All work shall conform to the directions of the Engineer-in-Charge.

**3. Measurement**

- Measurement shall be in **running metres (Rm)** of 15 mm dia. UPVC pipe laid and jointed, including fittings and supports.
- Concealed and exposed pipes shall be measured along the centerline of the pipe.
- Measurement includes all fittings, solvent, clamps, supports, and accessories.
- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)**.
- The rate shall include:
  - Supply of 15 mm dia. UPVC pipe and fittings
  - Solvent cement/adhesive and supports
  - Labour for cutting, jointing, fixing, concealing, and testing
  - Tools, tackles, scaffolding (if required), and all incidentals
  - Completion of work as per specifications and directions of the Engineer-in-Charge

**Item No. 13 Providing laying and jointing in true line and level 25mm dia. U.P.V.C. Pipe ( SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.**

- **1. Materials**
- **UPVC Pipe:**
  - Size: **25 mm dia.**
  - **Schedule 40 (SCH-40)**, conforming to relevant IS standards for cold water
  - Approved make and quality as directed by Engineer-in-Charge
- **Fittings:**
  - Elbows, tees, unions, sockets, reducers, and other approved UPVC fittings
  - Solvent cement/adhesive as recommended by manufacturer for jointing
- **Pipe Supports:**
  - Wall clamps, saddles, or hangers for exposed pipes
  - Concealment materials for concealed pipe work (as directed)
- **2. Workmanship**
- Check alignment, slope, and route for the pipeline before installation.
- Fix UPVC pipes **in true line and level**, either exposed or concealed as directed.
- Exposed pipes shall be fixed on walls using **clamps at every 2 m C/C** or as approved.
- Cut, clean, and deburr pipe ends before jointing.
- Join pipes and fittings using **adhesive solvent** as per manufacturer's instructions, ensuring leak-proof joints.
- Conceal pipes neatly in walls, slabs, or chase as directed by Engineer-in-Charge.
- Test the completed pipeline for leaks and proper functioning before handover.
- All work shall conform to the directions of the Engineer-in-Charge.
- **3. Measurement**
- Measurement shall be in **running metres (Rm)** of 25 mm dia. UPVC pipe laid and jointed, including fittings and supports.
- Concealed and exposed pipes shall be measured along the centerline of the pipe.
- Measurement includes all fittings, solvent, clamps, supports, and accessories.
- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)**.
- The rate shall include:
  - Supply of 25 mm dia. UPVC pipe and fittings
  - Solvent cement/adhesive and supports
  - Labour for cutting, jointing, fixing, concealing, and testing
  - Tools, tackles, scaffolding (if required), and all incidentals
  - Completion of work as per specifications and directions of the Engineer-in-Charge

**Item No. 14** Providing laying and jointing in true line and level 40mm dia. U.P.V.C. Pipe ( SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.

- **1. Materials**
- **UPVC Pipe:**
  - Size: **40 mm dia.**
  - **Schedule 40 (SCH-40)**, conforming to relevant IS standards for cold water
  - Approved make and quality as directed by Engineer-in-Charge
- **Fittings:**
  - Elbows, tees, unions, sockets, reducers, and other approved UPVC fittings
  - Solvent cement/adhesive as recommended by manufacturer for jointing
- **Pipe Supports:**
  - Wall clamps, saddles, or hangers for exposed pipes
  - Concealment materials for concealed pipe work (as directed)
- **2. Workmanship**
- Check alignment, slope, and route for the pipeline before installation.
- Fix UPVC pipes **in true line and level**, either exposed or concealed as directed.
- Exposed pipes shall be fixed on walls using **clamps at every 2 m C/C** or as approved.
- Cut, clean, and deburr pipe ends before jointing.
- Join pipes and fittings using **adhesive solvent** as per manufacturer's instructions, ensuring leak-proof joints.
- Conceal pipes neatly in walls, slabs, or chase as directed by Engineer-in-Charge.
- Test the completed pipeline for leaks and proper functioning before handover.
- All work shall conform to the directions of the Engineer-in-Charge.
- **3. Measurement**
- Measurement shall be in **running metres (Rm)** of 40 mm dia. UPVC pipe laid and jointed, including fittings and supports.
- Concealed and exposed pipes shall be measured along the centerline of the pipe.
- Measurement includes all fittings, solvent, clamps, supports, and accessories.
- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)**.
- The rate shall include:
  - Supply of 40 mm dia. UPVC pipe and fittings
  - Solvent cement/adhesive and supports
  - Labour for cutting, jointing, fixing, concealing, and testing
  - Tools, tackles, scaffolding (if required), and all incidentals
  - Completion of work as per specifications and directions of the Engineer-in-Charge

**Item No. 15** Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete for hot water.[A] 15 mm.

Materials:

CPVC pipes and fittings shall conform to IS 15778 and shall have NSF seal for potable water. Pipes shall be of approved make and suitable for hot water service. Solvent cement shall be CPVC specific.

Clamps/supports shall be corrosion resistant.

Execution:

Walls / ceilings / floors shall be chased carefully without damaging structure. Pipes shall be laid concealed with proper alignment and adequate support at regular intervals. All joints shall be made with approved solvent cement. After laying, the line shall be pressure tested and on approval, chases shall be refilled with cement mortar and finished to match the original surface.

Testing:

Hydraulic pressure testing shall be carried out for the complete line as per R&B specifications. Any leakage shall be rectified and retested.

Finishing & Making Good:

All damaged surfaces shall be made good with cement mortar and finished smooth / painted to match surrounding.

Mode of Measurement:

Running Metre (Rmt) of CPVC pipeline actually laid, measured along the centre line of pipe including fittings.

**Item No. 16 Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 25 mm.**

Materials:

CPVC pipes and fittings shall conform to IS 15778 and shall have NSF seal for potable water. Pipes shall be of approved make and suitable for hot water service. Solvent cement shall be CPVC specific.

Clamps/supports shall be corrosion resistant.

Execution:

Walls / ceilings / floors shall be chased carefully without damaging structure. Pipes shall be laid concealed with proper alignment and adequate support at regular intervals. All joints shall be made with approved solvent cement. After laying, the line shall be pressure tested and on approval, chases shall be refilled with cement mortar and finished to match the original surface.

Testing:

Hydraulic pressure testing shall be carried out for the complete line as per R&B specifications. Any leakage shall be rectified and retested.

Finishing & Making Good:

All damaged surfaces shall be made good with cement mortar and finished smooth / painted to match surrounding.

Mode of Measurement:

Running Metre (Rmt) of CPVC pipeline actually laid, measured along the centre line of pipe including fittings.

**Item No. 18 Providing and fixing to wall ceiling and floor 10.0 Kg. F/Cm2 working pressure poluthene pipes of the following outside Dia. Low density, complete with special falnge compression type fittings, wall clipsetc. including making good the wall ceiling and floor.(D) 40mm**  
**1. Materials**

- **Polythene Pipe:**
  - Low-density, high-quality, corrosion-resistant polyethylene pipe
  - Working pressure: **10.0 Kg/cm<sup>2</sup>**
  - Outside **40 mm** diameter as per required size
  - Approved make and standard
- **Fittings & Accessories:**
  - Special flange compression-type fittings as per manufacturer
  - Wall/ceiling/floor clips at **40 mm C/C spacing** or as directed
  - Sealants or gaskets required for jointing
- **Materials for Making Good:**
  - Cement mortar, plaster, or finishes as required to repair walls, ceiling, or floor after fixing
- **2. Workmanship**
- Check pipe alignment, levels, and routing before installation.
- Fix pipes to walls, ceilings, or floors using approved clips at **75 mm C/C spacing** or as directed.
- Use **special flange compression fittings** for joints, ensuring leak-proof connections.
- Concealed or exposed pipes shall be neatly aligned, maintaining straight runs and proper slopes if required.
- Make good all cut or chased surfaces of walls, ceilings, and floors with cement mortar, plaster, or finishing as per site conditions.
- Test the completed pipeline for leakage and pressure compliance before handover.
- All work shall be executed as per the directions of the Engineer-in-Charge.
- **3. Measurement**
- Measurement shall be in **running metres (Rm)** of pipe laid and fixed, including fittings and supports.
- Includes making good of walls, ceilings, or floors.

- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)**.
- The rate shall include:
  - Supply of polythene pipe and compression-type fittings
  - Wall/ceiling/floor clips and other accessories
  - Labour for cutting, jointing, fixing, and testing
  - Making good of walls, ceilings, or floors after fixing
  - Tools, tackles, scaffolding (if required), and all incidentals
  - Completion of work as per specifications and directions of the Engineer-in-Charge

**Item No. 19** Providing and fixing to wall ceiling and floor 10.0 Kg. F/Cm2 working pressure polythene pipes of the following outside Dia. Low density, complete with special flange compression type fittings, wall clipsetc. including making good the wall ceiling and floor.(F) 75mm

#### **1. Materials**

- **Polythene Pipe:**
  - Low-density, high-quality, corrosion-resistant polyethylene pipe
  - Working pressure: **10.0 Kg/cm<sup>2</sup>**
  - Outside **75mm** diameter as per required size
  - Approved make and standard
- **Fittings & Accessories:**
  - Special flange compression-type fittings as per manufacturer
  - Wall/ceiling/floor clips at **75 mm C/C spacing** or as directed
  - Sealants or gaskets required for jointing
- **Materials for Making Good:**
  - Cement mortar, plaster, or finishes as required to repair walls, ceiling, or floor after fixing

#### **2. Workmanship**

- Check pipe alignment, levels, and routing before installation.
- Fix pipes to walls, ceilings, or floors using approved clips at **75 mm C/C spacing** or as directed.
- Use **special flange compression fittings** for joints, ensuring leak-proof connections.
- Concealed or exposed pipes shall be neatly aligned, maintaining straight runs and proper slopes if required.
- Make good all cut or chased surfaces of walls, ceilings, and floors with cement mortar, plaster, or finishing as per site conditions.
- Test the completed pipeline for leakage and pressure compliance before handover.
- All work shall be executed as per the directions of the Engineer-in-Charge.
- **3. Measurement**
- Measurement shall be in **running metres (Rm)** of pipe laid and fixed, including fittings and supports.
- Includes making good of walls, ceilings, or floors.

- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)**.
- The rate shall include:
  - Supply of polythene pipe and compression-type fittings
  - Wall/ceiling/floor clips and other accessories
  - Labour for cutting, jointing, fixing, and testing
  - Making good of walls, ceilings, or floors after fixing
  - Tools, tackles, scaffolding (if required), and all incidentals
  - Completion of work as per specifications and directions of the Engineer-in-Charge

**Item No. 20** Providing and fixing to wall ceiling and floor 10.0 Kg. F/Cm2 working pressure polythene pipes of the following outside Dia. Low density, complete with special flange compression type fittings, wall clipsetc. including making good the wall ceiling and floor.(G)110 mm

#### **1. Materials**

- **Polythene Pipe:**
  - Low-density, high-quality, corrosion-resistant polyethylene pipe
  - Working pressure: **10.0 Kg/cm<sup>2</sup>**
  - Outside **110mm** diameter as per required size
  - Approved make and standard
- **Fittings & Accessories:**
  - Special flange compression-type fittings as per manufacturer
  - Wall/ceiling/floor clips at **75 mm C/C spacing** or as directed
  - Sealants or gaskets required for jointing
- **Materials for Making Good:**
  - Cement mortar, plaster, or finishes as required to repair walls, ceiling, or floor after fixing
- **2. Workmanship**
- Check pipe alignment, levels, and routing before installation.
- Fix pipes to walls, ceilings, or floors using approved clips at **75 mm C/C spacing** or as directed.
- Use **special flange compression fittings** for joints, ensuring leak-proof connections.
- Concealed or exposed pipes shall be neatly aligned, maintaining straight runs and proper slopes if required.
- Make good all cut or chased surfaces of walls, ceilings, and floors with cement mortar, plaster, or finishing as per site conditions.
- Test the completed pipeline for leakage and pressure compliance before handover.
- All work shall be executed as per the directions of the Engineer-in-Charge.
- **3. Measurement**
- Measurement shall be in **running metres (Rm)** of pipe laid and fixed, including fittings and supports.
- Includes making good of walls, ceilings, or floors.
- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)**.
- The rate shall include:
  - Supply of polythene pipe and compression-type fittings
  - Wall/ceiling/floor clips and other accessories
  - Labour for cutting, jointing, fixing, and testing
  - Making good of walls, ceilings, or floors after fixing
  - Tools, tackles, scaffolding (if required), and all incidentals
  - Completion of work as per specifications and directions of the Engineer-in-Charge

**Item No. 22 Providing and laying in trenches 6 Kg/sqmt. working pressure I.S.I. mark PVC SWR pipe of 160 mm dia low density pipe including fitting etc complete in ground.**

- **1. Materials**
- **PVC-U SWR Pipe:**
  - Diameter: **160 mm**
  - Material: **Unplasticized PVC (PVC-U)**, conforming to **IS 13592**
  - Approved make and quality as per Engineer-in-Charge
- **Fittings & Accessories:**
  - Elbows, tees, junctions, bends, and couplings as required
  - Solvent cement or adhesive recommended by manufacturer for jointing
  - Support materials (if required) for proper alignment
- **2. Workmanship**
- Excavate trenches to the required depth and slope as instructed by Engineer-in-Charge.
- Lay PVC-U SWR pipes in **true line and level** with proper gradient to ensure self-cleansing flow.
- Joint pipes and fittings using **solvent cement/adhesive**, ensuring leak-proof connections.
- Provide proper bedding and backfilling with approved material around the pipe to prevent displacement or damage.
- Test the completed pipeline for leaks and proper drainage.
- Make good the excavated area after installation.

- All work shall be executed strictly as per directions of the Engineer-in-Charge.
- **3. Measurement**
- Measurement shall be in **running metres (Rm)** of 160 mm dia PVC-U SWR pipe laid and jointed.
- Includes all fittings, joints, trench excavation, bedding, backfilling, and testing.
- **4. Payment**
- Payment shall be made at the **contract unit rate per running metre (Rm)** of pipe installed.
- The rate shall include:
  - Supply of 160 mm PVC-U SWR pipe (IS 13592) and fittings
  - Solvent cement/adhesive and necessary accessories
  - Labour for excavation, laying, jointing, testing, and backfilling
  - Tools, tackles, and all incidental charges

**Item No. 26 Removing and scraping old plaster and Providing and Applying polymer modified cementations repair treatment to existing damaged R.C.C surface (R.C.C lintel, slab, chhajja, stair, slab etc.) by removing effected concrete portion clean reinforcement thoroughly with light hammering wire brushing & later applying an approved rust remover on corroded reinforcement applying a slurry coat to reinforcement & concrete surface in the proportion of(1.5:1) (Cement: Polymer) as per manufacturer specification. After that applying a bond coat to the concrete surface in the proportion of (50 kg of OPC Cement:1.5 litres of acrylic base polymer:150 kg of sand) adding 8 to 10 litres water by hand packing or trowel finish up to required thickness including curing and colour washing with lime (two coat) etc. complete & as directed by Engineer In Charge.**

**1. Scope of Work:**

- The work involves repairing damaged or deteriorated RCC surfaces such as lintels, slabs, chhajjas, stairs, beams, or any other RCC member.
- The damaged concrete portion shall be carefully **removed**, ensuring not to damage surrounding sound concrete.

**2. Surface and Reinforcement Preparation:**

- Exposed reinforcement shall be thoroughly cleaned by **light hammering, wire brushing**, and removal of all loose rust or scale.
- Apply an **approved rust remover** on corroded reinforcement as per manufacturer's instructions.

**3. Slurry Coat Application:**

- Prepare a slurry coat by mixing **cement and polymer in the proportion of 1.5:1** (cement : polymer) as per the manufacturer's specifications.
- Apply this slurry coat to the cleaned reinforcement and prepared concrete surface to ensure proper bonding of the repair mortar.

**4. Bond Coat and Mortar Application:**

- Prepare the bond coat in the proportion: **50 kg OPC Cement : 2 liters acrylic-based polymer : 150 kg sand**, adding **8–10 liters of water** to achieve workable consistency.
- Apply the bond coat over the surface uniformly.
- Hand-pack or trowel the repair mortar to the required thickness, ensuring compactness and proper finish as directed by the Engineer-in-Charge.

**5. Finishing and Curing:**

- Finish the surface smoothly as per specifications or architectural requirements.
- Curing shall be carried out for the duration recommended by the polymer manufacturer to ensure proper hydration and strength development.

**6. Quality Requirements:**

- The repaired surface shall be **dense, well-bonded**, free from cracks, honeycombing, or voids.
- All materials including polymer, cement, sand, and rust remover shall be of approved brand and as directed by the Engineer-in-Charge.

**7. Measurement and Payment:**

- Measurement shall be in **square meters (m<sup>2</sup>)** of RCC surface repaired.
- The rate includes all labor, tools, materials, surface preparation, cleaning of



reinforcement, application of rust remover, slurry coat, bond coat, mortar application, finishing, curing, and cleaning of site.

**Remarks:**

- Work should strictly follow manufacturer specifications for polymer-modified repair materials.
- Proper supervision is required to ensure uniform application, bonding, and curing.

**Item No. 32 Providing and laying ordinary cement concrete 1:1.5:3 (1- Cement 1.5- coarse sand : 3 - graded stone aggregates 20 mm nominal size) and finishing smooth with curing etc. complete including the cost of formwork but excluding the cost of reinforcement for R.C.C work in (A) BEAMS : (i) Having cross-sectional area 0.05 to 0.08 Sq.M**

**2. Materials**

**2.1 Cement**

- Cement shall conform to relevant IS specifications (e.g., IS 269 / IS 8112 / IS 12269).
- It shall be fresh, free from lumps, and stored properly.

**2.2 Fine Aggregate (Sand)**

- Clean, coarse sand conforming to IS 383.
- Free from dust, clay, organic matter, and impurities.

**2.3 Coarse Aggregate**

- Hard, durable crushed stone aggregates of **20 mm nominal size**.
- Shall conform to IS 383.

**2.4 Water**

- Clean and potable water free from harmful substances.

**3. Proportioning**

- Concrete shall be prepared in the proportion of **1:1.5:3 (Cement : Sand : Coarse Aggregate)** by volume.
- Gauge boxes shall be used for measurement.

**4. Mixing**

- Mixing shall be done in a mechanical mixer unless otherwise approved.
- Hand mixing shall be permitted only in exceptional cases with 10% extra cement.

**5. Formwork (Shuttering)**

- Formwork shall be rigid, leak-proof, and properly aligned.
- It shall be designed to withstand all loads without deformation.
- Includes centering, shuttering, and staging.
- Formwork shall be removed as per IS recommendations.

**6. Placing of Concrete**

- Concrete shall be placed immediately after mixing.
- It shall be deposited as near as possible to its final position.
- Segregation and rehandling shall be avoided.

**7. Compaction**

- Concrete shall be compacted using mechanical vibrators.
- Care shall be taken to avoid honeycombing and air voids.

**8. Finishing**

- Exposed surfaces shall be finished smooth and even.
- No plastering shall be done unless specified.

**9. Curing**

- Concrete shall be kept continuously moist for at least **7 days**.
- Curing shall start as soon as the concrete sets.

**10. Measurement**

- Measurement shall be in **cubic meters (m³)**.
- Dimensions shall be measured as per drawings.
- Reinforcement steel shall **not** be included in this item.

**11. Classification**

- Applicable for **R.C.C. Beams**
- Cross-sectional area: **0.05 to 0.08 sq.m**

**12. Rate Includes**

The rate shall include:

- Cost of materials (cement, sand, aggregates, water)
- Labor charges
- Mixing, placing, vibrating
- Formwork (centering and shuttering)
- Finishing and curing
- All tools, plants, and incidental charges

**Item No. 33**

**Providing and Laying ordinary cement concrete 1:1.5:3 (1- Cement 1.5- coarse sand : 3- graded stone aggregates 20 mm nominal size) and finishing smooth with curing etc.complete including the cost of formwork but excluding the cost of reinforcement for R.C.C work in (ii) Slabs having more than 8 cm and upto 10 cm.thickness.**

**1. Scope of Work**

The work shall consist of providing and laying **Ordinary Cement Concrete (O.C.C.)** of nominal mix **1:1.5:3** in reinforced cement concrete slabs of thickness **more than 8 cm and up to 10 cm**, including batching, mixing, placing, compacting, finishing, curing, and formwork.

**2. Materials**

**2.1 Cement**

- Shall conform to relevant IS specifications (IS 269 / IS 8112 / IS 12269).
- Fresh, free from lumps, and properly stored.

**2.2 Fine Aggregate (Sand)**

- Clean, coarse sand conforming to IS 383.
- Free from silt, clay, and organic impurities.

**2.3 Coarse Aggregate**

- Crushed stone aggregates of **20 mm nominal size**.
- Hard, durable, and conforming to IS 383.

**2.4 Water**

- Clean and potable water suitable for construction.

**3. Proportioning**

- Concrete mix shall be **1:1.5:3 (Cement : Sand : Coarse Aggregate)** by volume.
- Gauge boxes shall be used for accurate batching.

**4. Mixing**

- Concrete shall be mixed in a mechanical mixer.
- Hand mixing allowed only with prior approval and with 10% extra cement.

**5. Formwork (Centering & Shuttering)**

- Formwork shall be:
  - Properly aligned and levelled
  - Rigid and watertight
  - Adequately supported to carry loads
- Includes centering, shuttering, staging, and strutting.
- Removal shall comply with IS recommendations.

**6. Placing of Concrete**

- Concrete shall be placed immediately after mixing.
- Laid in position without segregation.
- Proper care shall be taken to maintain uniform thickness.

**7. Compaction**

- Compaction shall be done using mechanical vibrators.
- Ensures dense and void-free concrete.

**8. Finishing**

- Top surface shall be finished smooth, level, and even.

- Proper screeding and trowel finishing shall be carried out.

#### **9. Curing**

- Concrete shall be kept continuously moist for **minimum 7 days**.
- Ponding method shall be adopted for slabs where feasible.

#### **10. Measurement**

- Measurement shall be in **cubic meters (m³)**.
- Thickness considered: **> 8 cm and ≤ 10 cm**.
- Reinforcement shall not be included in measurement.

#### **11. Rate Includes**

The rate shall include:

- Cost of all materials (cement, sand, aggregates, water)
- Labor and workmanship
- Mixing, placing, vibrating
- Formwork (centering and shuttering)
- Finishing and curing
- All tools, plants, and incidental charges

#### **Item No. 37**

**Providing and laying broken chine mosaic flooring for terrace using 12 mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar creme out upto surface using white cement including rounding off junctions and extending them upto 15 cm along the wall, clearing with water and oxalic acid etc. as directed.**

#### **1. Scope of Work**

The work shall consist of providing and laying **broken china mosaic flooring** on terrace surfaces using broken pieces of glazed tiles, laid over cement mortar, including finishing, curing, rounding off junctions, and cleaning complete as directed by the Engineer-in-Charge.

#### **2. Materials**

##### **2.1 Broken Glazed Tiles**

- Pieces of glazed ceramic tiles of size **12 mm to 20 mm**.
- Shall be of approved color, free from cracks, and properly graded.

##### **2.2 Cement**

- Shall conform to relevant IS specifications (IS 269 / IS 8112 / IS 12269).
- White cement shall be used for surface finishing.

##### **2.3 Sand**

- Clean, well-graded sand conforming to IS 383.
- Free from dust, clay, and organic impurities.

##### **2.4 Water**

- Clean and potable water suitable for construction.

##### **2.5 Oxalic Acid**

- Used for final cleaning and polishing of surface.

#### **3. Base Preparation**

- The terrace surface shall be cleaned of dust, laitance, oil, and loose materials.
- Surface shall be wetted before laying mortar.
- Proper slope shall be ensured for drainage as per drawings or instructions.

#### **4. Laying of Cement Mortar Bed**

- Cement mortar of proportion **1:3 (Cement : Sand)** shall be prepared.
- Mortar shall be laid evenly to required thickness over the base.
- Surface shall be levelled or sloped as specified.

#### **5. Laying of Mosaic Tiles**

- Broken glazed tile pieces (12–20 mm) shall be placed over the mortar bed.
- Tiles shall be arranged closely to achieve a uniform pattern.

- The surface shall be **gently beaten (tempered)** to:
  - Properly embed tiles
  - Bring cement slurry (cream) to the surface

## 6. Finishing

- White cement slurry shall be applied to fill joints.
- Surface shall be rubbed and finished smooth.
- Junctions between floor and wall shall be:
  - **Rounded (coving)**
  - Extended up to **15 cm along the wall**

## 7. Curing

- Flooring shall be cured continuously for **at least 7 days**.
- Surface shall be protected from damage during curing.

## 8. Cleaning and Polishing

- After curing, surface shall be cleaned with:
  - Water
  - **Oxalic acid** to remove stains and enhance finish
- Final surface shall be smooth, clean, and aesthetically uniform.

## 9. Measurement

- Measurement shall be in **square meters (m²)**.
- Area shall be measured as finished surface including coving.

### Item No. 37

**Carring out plinth treatment to post construction / existing structure by spraying chemical solution for termite control treatment including labour and material consistment with I.S.I specification. Using Chlordene and Chiorpurfiles 20 EC. As Per 6131\_paret-II Concentration Weight one percent is recommended i.e one litre 20 EC chemical emulsion with 19 liter give 1 % concentration inclusive of one litre chemical emulsion appication at the rate of 5 Litre chemical / Sqm of surface is recommended as per I.S**

### 1. Scope of Work

The work shall consist of carrying out **post-constructional anti-termite treatment** to existing structures at plinth level and other vulnerable locations by drilling, injecting, and spraying approved chemical emulsion, complete in all respects as per specifications.

The treatment shall cover:

- Plinth area and floors
- Junction of walls and floors
- Expansion joints, cracks, and crevices
- Surrounding soil in contact with structure (where accessible)

### 2. Materials

The anti-termite chemical shall be:

- **Chlorpyrifos 20% EC** or equivalent approved chemical
- Conforming to relevant ISI standards

The chemical shall be of approved make and brought to site in sealed containers. No diluted or substandard material shall be permitted.

### 3. Preparation of Chemical Emulsion

The emulsion shall be prepared as follows:

- **1% concentration** shall be used for treatment
- Mix **1 litre of Chlorpyrifos 20% EC** with **19 litres of clean water** to obtain the required concentration
- The solution shall be prepared fresh at site before application

### 4. Method of Application

- Holes of 10–12 mm diameter shall be drilled at intervals of 300 mm along wall-floor junctions and other required locations.
- Chemical emulsion shall be injected under pressure using suitable equipment.
- Treatment shall also be carried out by spraying on exposed surfaces.
- After injection, holes shall be sealed with cement mortar (1:3).
- Care shall be taken to ensure uniform and complete coverage.

#### 5. Application Rate

- The chemical emulsion shall be applied at the rate of: **5 litres per square metre (5 L/sqm)** of treated surface area.

#### 6. Workmanship

- The work shall be executed by trained personnel using proper equipment.
- All safety precautions shall be followed during handling and application of chemicals.
- Adjacent areas, fixtures, and finishes shall be protected from damage.

#### 7. Measurement

- Measurement shall be taken in **square metres (Sqm)** of actual treated area.
- No separate measurement shall be made for drilling, injection, or sealing.

#### 8. Rate

The rate shall include:

- Cost of all materials (chemicals, water, cement, etc.)
- Labour, tools, plants, and equipment
- Drilling, injection, spraying, and sealing
- All leads, lifts, wastage, and incidental charges
- Complete execution as per specification

#### Item No. 38

**Providing and fixing Flush door shutter 30 mm thick both side 1 mm thick laminated sheet having SS hinges AKS make Towerbolt, jasmin Brand handle, tadi as approved EIC etc**

##### 1. Scope of Work

The work shall consist of **providing and fixing factory-made flush door shutters** of specified thickness with laminated finish on both sides, including all fittings, fixtures, and accessories, complete as directed by the Engineer-in-Charge (EIC).

##### 2. Materials

###### Door Shutter

- Flush door shutter of **30 mm thickness**, solid core / block board type, conforming to relevant IS standards.
- Both sides finished with **1.0 mm thick decorative laminate sheet**, of approved shade and make.

###### Adhesive

- Synthetic resin adhesive of approved quality for fixing laminate.

###### Fittings & Fixtures

- **Stainless Steel hinges (SS hinges)** – heavy-duty, approved make
- **Tower bolt** – AKS make or equivalent approved
- **Door handle** – Jasmin brand or equivalent approved
- **Tadi (aldrop/stopper/other hardware)** – as approved by Engineer-in-Charge
- All fittings shall be of stainless steel / anodized finish unless specified otherwise.

##### 3. Fabrication & Finish

- The shutter shall be machine pressed and properly bonded.
- Laminates shall be pasted uniformly without bubbles, wrinkles, or defects.
- All edges shall be properly lipped with hardwood / PVC edge banding.
- The surface shall be smooth, even, and aesthetically finished.

#### 4. Fixing

- The shutter shall be fixed to the frame using approved quality **SS hinges**.
- All fittings such as tower bolts, handles, etc., shall be fixed in correct position with proper alignment.
- Necessary screws, fasteners, and accessories shall be included in the item.
- Work shall be carried out as per direction of EIC.

#### 5. Workmanship

- The work shall be executed by skilled carpenters.
- Proper care shall be taken to avoid damage to laminate surface.
- All hardware shall be firmly fixed and properly aligned.

#### 6. Measurement

- Measurement shall be taken in **square metre (Sqm)** for shutter area.
- No separate measurement shall be made for laminate, fittings, or fixing.

#### Item No. 38

**Providing & fixing standard powder coated 125 x 75x 3 mm (16 Gauge) pressed metal steel section frame with oil paint etc complete as directed by Engineer-in-charge.**

##### 1. Scope of Work

The work shall consist of **providing and fixing pressed metal steel door frames** of specified size and thickness, including fixing in position, finishing, and all incidental works, complete as directed by the Engineer-in-Charge (EIC).

##### 2. Materials

###### Steel Frame

- Pressed steel door frame of size **125 mm x 75 mm x 3 mm thickness (16 gauge)**.
- Manufactured from mild steel sheets conforming to relevant IS standards.
- Frame shall be factory-made, true to shape, straight, and free from defects.

###### Surface Finish

- Frame shall be **powder coated** of approved shade and thickness.
- Additionally finished with **one coat of primer and two coats of oil paint** of approved quality and colour (if specified).

###### Holdfasts

- MS holdfasts of suitable size and section, minimum 3 nos. on each jamb, welded to the frame.

##### 3. Fabrication

- Frames shall be fabricated with mitered or welded corners.
- Necessary holes, lugs, and recesses shall be provided for fixing shutters and hardware.
- Frames shall be provided with suitable rebate for door shutter.

##### 4. Fixing

- Frames shall be fixed in position true to line, level, and plumb.
- Holdfasts shall be embedded in cement concrete (1:3:6) blocks or masonry as directed.
- Temporary supports shall be provided to prevent distortion during fixing.
- All gaps between frame and wall shall be properly filled with cement mortar.

##### 5. Finishing

- Surface shall be smooth and free from rust, dents, or damages.
- Touch-up painting shall be done after fixing wherever required.

##### 6. Workmanship

- Work shall be carried out by skilled personnel.
- Proper alignment and rigidity of frame shall be ensured.
- Care shall be taken to avoid damage to powder coating during handling and fixing.

##### 7. Measurement

- Measurement shall be taken in **Sq Metre (smt)** of frame.
- No separate measurement shall be made for holdfasts, painting, or fixing.
- Area shall be calculated based on the overall outer dimensions of the door frame (width × height).

#### **Item No. 48**

**Providing and laying Granite slab (18 mm thick) one side polished flooring over 20mm (average) base of cement mortar 1:6 (1 cement: 6 coarse sand) or L.M 1 :1.5 laid and jointed with grey cement slurry including rubbing and polishing complete**

##### **1. Scope of Work**

The work shall consist of **providing and laying granite stone slabs** of specified thickness and finish over cement mortar base, including surface preparation, laying, jointing, rubbing, and polishing, complete as directed by the Engineer-in-Charge (EIC).

##### **2. Materials**

###### **Granite Stone**

- Granite slabs of **18 mm thickness**, hard, dense, and durable.
- Free from cracks, flaws, veins, or other defects.
- One side machine polished to approved finish, colour, and texture.

###### **Cement Mortar Base**

- Cement mortar of proportion **1:6 (1 cement : 6 coarse sand)**
- Grey cement slurry for bedding and jointing.

##### **3. Preparation of Surface**

- Base surface shall be cleaned, wetted, and prepared to receive flooring.
- Proper level and slope shall be maintained as per drawings.

##### **4. Laying**

- Granite slabs shall be laid over **20 mm average thick cement mortar bed**.
- Slabs shall be properly bedded, aligned, and pressed to achieve full contact.
- Joints shall be kept as thin as possible and filled with cement slurry.
- Necessary cutting and dressing shall be done to fit edges and corners.

##### **5. Finishing**

- After laying, the surface shall be **rubbed and polished** to obtain smooth and even finish.
- The flooring shall be cleaned and made ready for use.

##### **6. Workmanship**

- Work shall be carried out by skilled masons.
- Proper alignment, levels, and slopes shall be ensured.
- Care shall be taken to avoid damage during and after execution.

##### **7. Measurement**

- Measurement shall be taken in **Square Metre (Sqm)** of finished flooring area.
- No deduction shall be made for small openings as per standard practice.
- No separate measurement for mortar bed, slurry, polishing, or finishing.

##### **8. Rate**

The rate shall include:

- Cost of granite slabs
- Cement, sand, mortar bed, and slurry
- Labour for laying, cutting, rubbing, and polishing
- Tools, plants, and equipment
- All leads, lifts, wastage, and incidental charges
- Complete finishing as per specification

##### **9. Relevant Standards**

- IS 14223 – Polished Granite Stone Slabs
- IS 383 – Coarse Sand
- IS 456 – Cement usage guidelines

#### **Item No. 49**

**Providing and laying polished granite stone slab 18mm thick in risers of steps, dedo and pilars laid on 10 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with gray cement slurry including rubbing & polishing etc. Complete**

## 1. Scope of Work

The work shall consist of **providing and fixing polished granite stone slabs** of specified thickness in **step risers, dado, and pillars**, including surface preparation, laying, jointing, rubbing, and polishing, complete as directed by the Engineer-in-Charge (EIC).

## 2. Materials

### Granite Stone

- Granite slabs of **18 mm thickness**, hard, dense, and durable.
- Free from cracks, veins, or defects.
- Machine polished on exposed face to approved shade, colour, and finish.

### Cement Mortar

- Cement mortar of proportion **1:3 (1 cement : 3 coarse sand)**.

### Cement Slurry

- Grey cement slurry for proper bonding and joint filling.

## 3. Surface Preparation

- The surface shall be cleaned, roughened, and wetted before laying.
- Proper alignment and levels shall be ensured.

## 4. Laying

- Granite slabs shall be fixed over **10 mm thick cement mortar bed (1:3)**.
- Slabs shall be properly aligned and pressed to achieve full bedding.
- Joints shall be thin and uniform, filled with grey cement slurry.
- Edges shall be neatly cut and finished to required shape and size.

## 5. Finishing

- After fixing, the surface shall be **rubbed and polished** to obtain smooth, even, and glossy finish.
- All exposed edges shall be properly finished.

## 6. Workmanship

- Work shall be executed by skilled masons.
- Proper verticality (for dado/pillars) and alignment shall be maintained.
- Care shall be taken to prevent damage to finished surfaces.

## 7. Measurement

- Measurement shall be taken in **Square Metre (Sqm)** of finished surface area.
- No separate measurement shall be made for mortar, slurry, or polishing.

### Item No. 50

**Providing and laying 18 mm thick polished Black Granite stone slab machine cut in single piece in stair tread of steps laid on 20 mm thick cement mortar 1 : 6 ( 1 cement : 6 coarse sand ) laid over and jointed with grey cement slurry incl. rubbing and polishing etc complete.**

#### 1. Scope of Work

The work shall consist of **providing and laying machine-cut black granite stone slabs** in **stair treads**, including preparation of base, laying, jointing, finishing, rubbing, and polishing, complete as directed by the Engineer-in-Charge (EIC).

#### 2. Materials

##### Granite Stone

- **Black granite slabs**, 18 mm thick, hard, dense, and durable.
- Machine-cut in **single piece for each tread**.
- Free from cracks, flaws, and defects.
- Top surface machine polished to approved finish.

##### Cement Mortar

- Cement mortar of proportion **1:6 (1 cement : 6 coarse sand)**.

##### Cement Slurry

- Grey cement slurry for bonding and joint filling.



### 3. Surface Preparation

- Base surface shall be cleaned, wetted, and prepared properly.
- Proper line, level, slope, and alignment shall be maintained.

### 4. Laying

- Granite slabs shall be laid over **20 mm thick cement mortar bed (1:6)**.
- Each tread shall be fixed in **single piece**, properly aligned and levelled.
- Slabs shall be pressed and tapped gently to achieve full bedding.
- Joints shall be thin and filled with grey cement slurry.
- Edges shall be properly cut and finished neatly (including front edge alignment).

### 5. Finishing

- After laying, the surface shall be **rubbed and polished** to achieve smooth and glossy finish.
- All exposed edges shall be properly finished and aligned uniformly.

### 6. Workmanship

- Work shall be executed by skilled masons.
- Proper care shall be taken to maintain uniform tread width and level.
- Finished surface shall be protected from damage.

### 7. Measurement

- Measurement shall be taken in **Square Metre (Sqm)** of finished tread surface area.
- No separate measurement shall be made for mortar bed, slurry, or polishing.

### Item No. 51

**Providing and laying 18 mm thick polished Black Granite stone slab machine cut in single piece in sill and jambs, Risers laid on 10 mm thick cement mortar 1 : 3 ( 1 cement : 3 coarse sand ) laid over and jointed with grey cement slurry incl. rubbing and polishing etc complete.**

### 1. Scope of Work

The work shall consist of **providing and fixing machine-cut black granite stone slabs** in **window sills, door jambs, and step risers**, including surface preparation, laying, jointing, rubbing, and polishing, complete as directed by the Engineer-in-Charge (EIC).

### 2. Materials

#### Granite Stone

- **Black granite slabs**, 18 mm thick, hard, dense, and durable.
- Machine-cut in **single piece wherever possible**.
- Free from cracks, flaws, veins, or defects.
- Exposed face shall be machine polished to approved finish.

#### Cement Mortar

- Cement mortar of proportion **1:3 (1 cement : 3 coarse sand)**.

#### Cement Slurry

- Grey cement slurry for bonding and joint filling.

### 3. Surface Preparation

- Surface shall be cleaned, roughened, and wetted before laying.
- Proper alignment, levels, and verticality shall be ensured.

### 4. Laying

- Granite slabs shall be laid over **10 mm thick cement mortar bed (1:3)**.
- Slabs shall be properly aligned and pressed to achieve full bedding.
- **Sills, jambs, and risers shall preferably be in single pieces** to avoid joints.
- Joints shall be thin and filled with grey cement slurry.
- Edges shall be neatly cut and finished true to line.

### 5. Finishing

- After laying, the surface shall be **rubbed and polished** to obtain smooth and glossy finish.
- All exposed edges shall be properly dressed and finished.

### 6. Workmanship

- Work shall be executed by skilled masons.
- Proper alignment and uniform thickness shall be maintained.
- Care shall be taken to protect finished surfaces from damage.

### 7. Measurement

- Measurement shall be taken in **Square Metre (Sqm)** of finished surface area.
- No separate measurement shall be made for mortar, slurry, cutting, or polishing.

#### **Item No. 54**

**Providing and fixing Domal series three track sliding windows with color anodized frame of size three track Top/Bottom of size 75.5 x 44.5 x 1.17 mm thick @ 1.02 Kg / Rmt and Shutter of size 65 x 26 x 1.17 mm thick @ 0.61 Kg / Rmt with 5 mm modigard glass with rubber gasket with help of Glazing Clip 29.5 x 30 x 1.2 mm @ 0.26 Kg / Rmt and using hardware material, bearing, lock and labour etc comp as approved by EIC**

#### **1. Scope of Work**

The work shall consist of **providing, fabricating, and fixing aluminium sliding windows (three track Domal series)** with glass panels, including all sections, fittings, fixtures, and accessories, complete as approved by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Aluminium Sections**

- Aluminium extruded sections conforming to relevant IS standards.
- **Frame (Three Track):**
  - Top/Bottom section size: **75.5 mm × 44.5 mm × 1.17 mm thickness**
  - Weight: **1.02 kg per running metre**
- **Shutter Section:**
  - Size: **65 mm × 26 mm × 1.17 mm thickness**
  - Weight: **0.61 kg per running metre**

##### **Surface Finish**

- Sections shall be **colour anodized** of approved shade and thickness.

##### **Glass**

- **5 mm thick Modiguard or equivalent approved float glass**, clear or as specified.

##### **Glazing Clips**

- Size: **29.5 mm × 30 mm × 1.2 mm thickness**
- Weight: **0.26 kg per running metre**

##### **Accessories & Hardware**

- EPDM / rubber gaskets for glass fixing
- Rollers and bearings for smooth sliding
- Locks, handles, stoppers
- Screws, fasteners, and all necessary accessories
- All hardware shall be of approved make and quality

#### **3. Fabrication**

- Aluminium sections shall be cut to required sizes and assembled properly.
- Corners shall be mechanically jointed or cleated.
- Frames and shutters shall be square, true, and free from defects.

#### **4. Fixing**

- Frames shall be fixed in position using suitable fasteners and anchors.
- Proper line, level, and plumb shall be maintained.
- Shutters shall be fitted with rollers/bearings for smooth sliding operation.
- Glass shall be fixed using rubber gaskets and glazing clips.
- All joints shall be properly sealed to ensure watertightness.

#### **5. Workmanship**

- Work shall be executed by skilled workers.
- Smooth, easy, and noiseless sliding operation shall be ensured.
- Care shall be taken to prevent damage to anodized surfaces and glass.

#### **6. Measurement**

- Measurement shall be taken in **square metre (Sqm)** based on outer frame dimensions.

- No separate measurement shall be made for glass, fittings, or accessories.

#### **Item No. 55**

**Providing and fixing R40 series alluminium openable windows with color anodized frame Top/Bottom/side of size 40.00 x 38 x 1.30 mm thick @ 0.54 Kg / Rmt and Shutter of size 54 x 39 x 1.05 mm thick @ 0.57 Kg / Rmt with 5 mm modigard glass with rubber gasket same mosquitonet shuttur using same section and frame and using hardware material, bearing, lock and labour etc comp as approved by EIC**

#### **1. Scope of Work**

The work shall consist of **providing, fabricating, and fixing aluminium openable windows (R40 series)** with glass panels and mosquito net shutters, including all sections, fittings, fixtures, and accessories, complete as approved by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Aluminium Sections**

- Aluminium extruded sections conforming to relevant IS standards.

##### **Frame Sections (Top/Bottom/Side):**

- Size: **40 mm × 38 mm × 1.30 mm thickness**
- Weight: **0.54 kg per running metre**

##### **Shutter Sections:**

- Size: **54 mm × 39 mm × 1.05 mm thickness**
- Weight: **0.57 kg per running metre**

##### **Surface Finish**

- Sections shall be **colour anodized** of approved shade and thickness.

##### **Glass**

- **5 mm thick Modiguard or equivalent approved float glass**, clear or as specified.

##### **Mosquito Net Shutter**

- Separate mosquito net shutter using the **same aluminium section** as specified.
- Fitted with **nylon / fibre mesh** of approved quality.

##### **Accessories & Hardware**

- EPDM / rubber gaskets for glass fixing
- Hinges suitable for openable shutters
- Handles, locks, stoppers
- Screws, fasteners, and all necessary fittings
- All hardware shall be of approved make and quality

#### **3. Fabrication**

- Aluminium sections shall be cut to size and assembled with proper joints.
- Corners shall be mechanically fixed or cleated.
- Frames and shutters shall be square, true, and free from defects.

#### **4. Fixing**

- Frames shall be fixed in position using suitable fasteners and anchors.
- Proper line, level, and plumb shall be maintained.
- Shutters shall be fixed with hinges for smooth opening and closing.
- Glass shall be fixed using rubber gaskets.
- Mosquito net shutter shall be properly aligned and fixed.
- All joints shall be sealed where required.

#### **5. Workmanship**

- Work shall be executed by skilled personnel.
- Smooth and proper operation of shutters shall be ensured.
- Care shall be taken to avoid scratches or damage to anodized surface and glass.

#### **6. Measurement**

- Measurement shall be taken in **square metre (Sqm)** based on outer frame dimensions.

- No separate measurement shall be made for mosquito net shutter, glass, or hardware.

#### **Item No. 56**

**Providing & Fixing Sandwich type Kitchen Platform of 600 wide using Top 18mm thick granite of approved shade and sample and bottom 25mm thick single side Polished kota stone with 25 mm thick screed of cement mortar 1:3 With granite Facia Patti. and vertical End granite supports. The stone shall be fixed by chassing in to the wall surface and supported vertically with 25mm thick sandwich kota stone support including SS Sink Glosy ASIS 304 Grade x 1mm thick with over all size 610x460 mm & bowl size 560x410x200 waste brass coupling hindware F850001, stainless steel extension nipple, flexible PVC outlay pipe,Hindware Sink cock with Casted Swinging Spout F330034 etc complete as suggested by Architect/Engineer -in-charge.**

#### **1. Scope of Work**

The work shall consist of **providing and fixing sandwich type kitchen platform** of specified size and materials, including granite top, Kota stone base, supports, sink, fittings, and all accessories, complete as directed by the Architect/Engineer-in-Charge.

#### **2. Materials**

##### **Granite (Top & Vertical Members)**

- **18 mm thick granite stone** for top, machine cut and polished.
- Granite shall be of approved shade, colour, and pattern.
- **Granite fascia (patti)** and **vertical end supports** shall be provided as specified.

##### **Kota Stone (Bottom Layer)**

- **25 mm thick Kota stone**, single side polished.

##### **Screed**

- **25 mm thick cement mortar screed (1:3)** (1 cement : 3 coarse sand).

##### **Sink**

- Stainless steel sink of **304 grade**, glossy finish.
- Thickness: **1.0 mm**
- Overall size: **610 mm × 460 mm**
- Bowl size: **560 mm × 410 mm × 200 mm**

##### **Plumbing Accessories**

- Waste coupling: **Brass waste coupling (Hindware F850001 or equivalent)**
- Stainless steel extension nipple
- Flexible PVC outlet pipe
- Sink cock: **Hindware with casted swinging spout (Model F330034 or equivalent)**

##### **Other Materials**

- Cement, sand, adhesives, sealants
- Necessary fasteners and fixing accessories

#### **3. Construction & Fixing**

- Platform shall be **600 mm wide** or as specified.
- Granite top shall be laid over Kota stone base with **cement mortar screed (1:3)** forming a sandwich section.
- The platform shall be properly **embedded (chased) into the wall surface**.
- **Vertical granite/Kota supports** shall be provided at ends and intermediate locations as required.
- Granite fascia (front edge) shall be fixed neatly.
- Sink shall be properly cut, fixed, and sealed in position.
- All joints shall be sealed to ensure watertightness.

#### **4. Finishing**

- Granite surface shall be **machine polished** and edges finished smoothly.
- All exposed edges shall be rounded or chamfered as directed.
- The platform shall be cleaned and made ready for use.

#### **5. Workmanship**

- Work shall be executed by skilled masons and plumbers.

- Proper alignment, slope (towards sink), and level shall be maintained.
- Care shall be taken to avoid damage to finished surfaces.

## 6. Measurement

- Measurement shall be taken in **Sq Metre (smt)** of finished kitchen platform length and width.
- No separate measurement shall be made for sink, fittings, supports, or accessories.

### Item No. 57

**Providing & fixing 35 mm thick Indian teak wood shutter with partly ply wood paneled and partly fly proof jali S.S (0.56 mm dia) shutter for door including black enameled butt hinges with necessary screw including S.S fixtures & fastening etc.complete as directed.**

#### 1. Scope of Work

The work shall consist of **providing and fixing Indian teak wood door shutters** with a combination of plywood paneling and fly-proof stainless steel wire mesh (jali), including all fittings, fixtures, and accessories, complete as directed by the Engineer-in-Charge (EIC).

#### 2. Materials

##### Timber

- **Indian teak wood**, well-seasoned, free from warping, cracks, knots, and defects.
- Thickness of shutter: **35 mm**.

##### Paneling

- Partly **plywood paneling** of approved quality and thickness.

##### Fly-Proof Jali

- Stainless steel wire mesh (jali)
- Wire diameter: **0.56 mm**
- Fixed properly within teak wood framework.

##### Fittings & Fixtures

- **Black enameled butt hinges** of approved size and quality
- Stainless steel fixtures and fastenings
- Screws, nails, and all necessary hardware

#### 3. Fabrication

- Shutter shall be fabricated with proper stiles and rails using teak wood sections.
- Plywood panels shall be fixed neatly within the frame.
- SS wire mesh (jali) shall be tightly fixed without sagging.
- Joints shall be properly made, glued, and finished.

#### 4. Fixing

- Shutter shall be fixed to the frame using **butt hinges** with proper alignment.
- All fittings shall be securely fixed in position.
- Necessary adjustments shall be made to ensure smooth operation.

#### 5. Finishing

- Surface shall be smooth and properly finished.
- Edges shall be neatly dressed.
- Final finish (polish/paint) shall be done if specified separately.

#### 6. Workmanship

- Work shall be carried out by skilled carpenters.
- Proper alignment, squareness, and smooth operation shall be ensured.
- Care shall be taken to avoid damage during fixing.

#### 7. Measurement

- Measurement shall be taken in **Square Metre (Sqm)** of shutter area.
- No separate measurement shall be made for jali, plywood, or fittings.

**Item No. 63**

**Wall painting (two coats) with Royale 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.**

**1. Scope of Work**

The work shall consist of **preparing and painting wall surfaces with two coats of plastic emulsion paint (Royale or equivalent approved)** to achieve a smooth and even finish, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials**

- **Plastic Emulsion Paint (Royale / equivalent approved brand)**
- Paint shall be of approved manufacture, shade, and quality
- All materials shall conform to relevant IS standards

**3. Surface Preparation**

- Surface shall be **thoroughly cleaned** of dust, dirt, mortar droppings, grease, and foreign matter.
- Unevenness shall be removed and surface shall be made smooth.
- Surface shall be **sanded properly using sandpaper** to obtain uniform finish.
- Any cracks or defects shall be made good prior to painting.

**4. Application**

- Paint shall be applied in **two coats** using brush/roller/spray as approved.
- Each coat shall be applied only after the previous coat has dried completely.
- Proper care shall be taken to ensure **uniform colour, smooth finish, and even shade**.
- Scaffolding, if required, shall be included in the item.

**5. Workmanship**

- Work shall be executed by skilled painters.
- Proper coverage without streaks, patches, or marks shall be ensured.
- Adjacent surfaces shall be protected from paint splashes.

**6. Measurement**

- Measurement shall be taken in **Square Metre (Sqm)** of painted surface area.
- No deduction shall be made for small openings as per standard practice.
- No separate measurement shall be made for surface preparation.

**Item No. 64**

**Wall paintings with 1 coat of Trucare Interior Wall Primer - Water Thinnable, 2 coat of Royale Luxury Emulsion then final 1 coat of Royale Play Special Effects (make ASIAN PAINTS) complete as directed by Engineer in charge.**

**1. Scope of Work**

The work shall consist of **preparing and painting interior wall surfaces** with primer, luxury emulsion, and special effect finish, using approved materials of Asian Paints, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials**

- **Interior Wall Primer:** Trucare Interior Wall Primer (Water Thinnable) – Asian Paints
- **Paint:** Royale Luxury Emulsion – Asian Paints
- **Finish Coat:** Royale Play Special Effects – Asian Paints
- All materials shall be of approved make, shade, and quality.

**3. Surface Preparation**

- Surface shall be thoroughly cleaned of dust, dirt, grease, mortar droppings, and other foreign matter.
- Surface irregularities shall be made good and brought to a smooth finish.
- Surface shall be properly sanded using sandpaper.
- Putty application, if required, shall be carried out separately unless specified.

#### 4. Application

- **One coat of primer** (Trucare Interior Wall Primer – water thinnable) shall be applied evenly.
- **Two coats of Royale Luxury Emulsion** shall be applied after proper drying of primer.
- Final **one coat of Royale Play Special Effects finish** shall be applied as per manufacturer's specification.
- Each coat shall be applied only after the previous coat has dried.
- Proper tools, rollers, brushes, or applicators shall be used to achieve desired texture and finish.

#### 5. Finishing

- The final surface shall be smooth, uniform, and aesthetically finished with special effects as approved.
- No streaks, patches, or unevenness shall be visible.

#### 6. Workmanship

- Work shall be executed by skilled painters trained in special effect finishes.
- Proper protection shall be provided to adjacent surfaces.
- Manufacturer's guidelines shall be strictly followed.

#### 7. Measurement

- Measurement shall be taken in **Square Metre (Sqm)** of finished painted area.
- No separate measurement shall be made for primer, emulsion coats, or special finish.

#### Item No. 65

**Providing and fixing M.S. grills of required pattern to wooden frames of windows etc. with M.S. flats at required spacings and frame around, square or round bars with round headed bolts and nuts or by screws (A) Plain Grill.**

##### 1. Scope of Work

The work shall consist of **providing, fabricating, and fixing mild steel grills** of required pattern to wooden window frames or other locations, complete with all fittings and fastenings as directed by the Engineer-in-Charge (EIC).

##### 2. Materials

- Mild steel flats, square bars, or round bars of required sizes conforming to relevant IS standards
- Free from rust, cracks, and defects
- Bolts, nuts, screws, and fasteners of approved quality
- Red oxide primer for protective coating

##### 3. Fabrication

- Grills shall be fabricated using **M.S. flats for outer frame and square/round bars for infill members.**
- Members shall be properly cut, aligned, and welded.
- Welded joints shall be ground smooth and finished neatly.
- The grill shall be true to line, level, and free from distortion.

##### 4. Fixing

- Grills shall be fixed to wooden frames or openings using **round headed bolts and nuts or screws.**
- Proper alignment, level, and plumb shall be maintained.
- All joints and connections shall be firm and secure.

##### 5. Finishing

- Entire grill shall be cleaned and **one coat of red oxide primer** shall be applied.
- Final painting shall be done separately if specified.

##### 6. Workmanship

- Work shall be executed by skilled fabricators.
- Proper rigidity and alignment shall be ensured.
- Care shall be taken during handling and fixing.

#### **7. Measurement (Revised)**

- Measurement shall be taken in **Kilogram (Kg)** based on **actual weight of M.S. used in the grill.**
- Weight shall include **frame, bars, flats, and all welded components.**
- Standard weight tables shall be used for calculation if actual weighing is not feasible.
- No separate measurement shall be made for bolts, nuts, screws, or primer.

#### **Item No. 69**

**Providing and fixing wall mounted water closet wall hung type W.C pan approved brand list Hindware/cera/jeguar jointed with C.I. pipe in C.M 1:1 including C.I chair bracket , seat cover etc complete.**

##### **1. Scope of Work**

The work shall consist of **providing and fixing wall mounted wall-hung type water closet (W.C.) pan**, including all fittings, fixtures, supports, and connections, complete as directed by the Engineer-in-Charge (EIC).

##### **2. Materials**

###### **W.C. Pan**

- Wall hung type water closet (European type)
- Made of vitreous china, white or approved colour
- Make: **Hindware / Cera / Jaquar or equivalent approved**

###### **Seat Cover**

- Suitable **plastic / duroplast seat cover** of approved make and quality

###### **Supporting System**

- **C.I. (Cast Iron) chair brackets** for supporting the W.C. pan
- All necessary fasteners and fixing accessories

###### **Pipes & Joints**

- Connection to soil pipe using **C.I. pipe**
- Jointing in **cement mortar (1:1)**
- All necessary fittings for proper connection

##### **3. Fixing**

- W.C. pan shall be fixed to the wall using **C.I. chair brackets** ensuring proper alignment and level.
- Proper connection shall be made to the soil pipe using C.I. pipe.
- All joints shall be leak-proof and securely fixed.
- Seat cover shall be fixed properly.

##### **4. Workmanship**

- Work shall be executed by skilled plumbers.
- Proper level, alignment, and slope shall be ensured.
- Care shall be taken to avoid damage to sanitary ware during fixing.

##### **5. Testing**

- The installation shall be checked for **leakage and proper functioning.**
- Any defects shall be rectified before completion.

##### **6. Measurement**

- Measurement shall be taken in **Number (Each)** of W.C. units installed.
- No separate measurement shall be made for brackets, pipes, or fittings.

#### **Item No. 71**

**Providing & laying Low level Flush Tank approved brand list Hindware/cera/jeguar DUAL FLUSHING SYSTEM WITH AIR FRESHNER with all necessary fittings and connection etc. complete as per EIC.**

##### **1. Scope of Work**

The work shall consist of **providing and fixing low level flush tank** with dual flushing system and air



freshener arrangement, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Flush Tank**

- Low level flush tank made of high-quality **PVC / ceramic material**
- Provided with **dual flushing system (full and half flush)**
- Integrated or compatible **air freshener system**
- Make: **Hindware / Cera / Jaquar or equivalent approved**

### **Fittings & Accessories**

- Internal flushing mechanism (dual flush system)
- Float valve, inlet and outlet fittings
- Flush pipe and necessary connectors
- Brackets, clamps, and fixing accessories
- All components shall be of approved make and quality

## **3. Fixing**

- Flush tank shall be fixed at required height in proper alignment.
- It shall be securely fixed to the wall using suitable brackets and fasteners.
- Connection shall be made to the W.C. pan using flush pipe.
- Inlet water connection shall be properly provided.
- All joints shall be leak-proof and watertight.

## **4. Workmanship**

- Work shall be carried out by skilled plumbers.
- Proper alignment, level, and operation shall be ensured.
- Care shall be taken to avoid damage during installation.

## **5. Testing**

- The flush tank shall be tested for proper functioning of **dual flushing system**.
- All joints and connections shall be checked for leakage.
- Any defects shall be rectified before completion.

## **6. Measurement**

- Measurement shall be taken in **Number (Each)** of flush tank units installed.
- No separate measurement shall be made for fittings or connections.

### **Item No. 72**

**Providing and fixing health faucet Health Faucet ABS with 1.2 m SS Flexible Tube & ABS Wall Hook : F160023 ( Hindware series ) 15 mm Heavy duty with cap with necessary connections as per EIC.**

#### **1. Scope of Work**

The work shall consist of **providing and fixing health faucet (hand shower)** with flexible tube and wall hook, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Health Faucet**

- **ABS health faucet (hand shower)** of approved quality
- Make: **Hindware (Model F160023) or equivalent approved**
- Size: **15 mm (heavy duty)**

### **Flexible Tube**

- **1.2 metre long stainless steel flexible tube** of approved quality

### **Wall Hook**

- **ABS wall hook/holder** for supporting the health faucet

### **Other Accessories**

- Necessary CP fittings, connectors, nipples, and cap
- All components shall be of approved make and quality

### 3. Fixing

- Health faucet shall be fixed near W.C. at suitable location.
- Flexible tube shall be properly connected to water supply line.
- Wall hook shall be fixed firmly to support the faucet.
- All joints and connections shall be **leak-proof**.

### 4. Workmanship

- Work shall be carried out by skilled plumbers.
- Proper alignment and easy operation shall be ensured.
- Care shall be taken to avoid damage to fittings.

### 5. Testing

- The system shall be tested for **leakage and proper water flow**.
- Any defects shall be rectified before completion.

### 6. Measurement

- Measurement shall be taken in **Number (Each)** of complete unit installed.
- No separate measurement shall be made for tube, hook, or fittings.

#### Item No. 73

**Providing and fixing C.P. Brass screw down bibcock with wall flange (Hindware series ) Cat. No. F360004, 15 mm dia with center point as per EIC.**

### 1. Scope of Work

The work shall consist of providing and fixing C.P. brass screw down bibcock with wall flange, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

### 2. Materials

#### **Bibcock**

- C.P. brass screw down bibcock with wall flange of approved quality
- Make: Hindware (Cat. No. F360004) or equivalent approved
- Type: Screw down type
- Size: 15 mm nominal bore

#### **Material Specifications**

- Body: Heavy-duty brass
- Finish: Chrome plated
- Conforming to relevant IS standards

#### **Other Accessories**

- Necessary C.P. fittings, connectors, nipples, PTFE tape, etc.
- All components shall be of approved make and quality

### 3. Fixing

- Bibcock shall be fixed at required location on wall with proper alignment
- Connection shall be made to the water supply pipeline
- Wall flange shall be properly fitted to cover the gap at wall surface
- All joints and connections shall be leak-proof

### 4. Workmanship

- Work shall be carried out by skilled plumbers
- Proper alignment and smooth operation shall be ensured
- Care shall be taken to avoid damage to chrome finish
- Wall surface shall be made good after installation

## **5. Testing**

- The bibcock shall be tested for leakage and smooth operation
- Proper water flow shall be ensured
- Any defects shall be rectified before completion

## **6. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for fittings or accessories

### **Item No. 74**

**Providing and fixing C.P. Pillar tap , Hindware series Cat No F360001 capstan head, screw down high pressure with screws, shanks and back nuts. 15 mm dia with center point [kindle make brand] as per EIC.**

### **1. Scope of Work**

The work shall consist of providing and fixing C.P. brass pillar tap (capstan head, screw down high pressure) with center point, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **Pillar Tap**

- C.P. brass pillar tap of approved quality
- Make: Hindware (Cat. No. F360001) or equivalent approved (Jaquar/Ess Ess/Marc or as approved)
- Type: Capstan head, screw down, high pressure
- Size: 15 mm nominal bore

#### **Material Specifications**

- Body: Heavy-duty brass
- Finish: Chrome plated
- Complete with screws, shanks and back nuts
- Conforming to relevant IS standards

#### **Other Accessories**

- Necessary C.P. fittings, connectors, nipples, PTFE tape, etc.
- All components shall be of approved make and quality

### **3. Fixing**

- Pillar tap shall be fixed on wash basin or counter top at required location
- Connection shall be made to water supply line through center point
- Tap shall be properly tightened using shanks and back nuts
- All joints and connections shall be leak-proof

### **4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment and smooth operation shall be ensured
- Care shall be taken to avoid damage to chrome finish
- No leakage or wobbling shall be permitted

## **5. Testing**

- The pillar tap shall be tested for leakage and smooth operation
- Proper water flow under high pressure shall be ensured
- Any defects shall be rectified before completion

## **6. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for fittings or accessories

### **Item No. 75**

**Providing and fixing C.P. Brass screw down wall mixer 3 in 1 with bend and with wall flange ( Hindware series )Cat. No. F570022, 15 mm dia with center point as per EIC.**

## **1. Scope of Work**

The work shall consist of providing and fixing C.P. brass screw down wall mixer (3 in 1) with bend and wall flange, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Wall Mixer (3 in 1)**

- C.P. brass screw down wall mixer of approved quality
- Make: Hindware (Cat. No. F570022) or equivalent approved (Jaquar/Ess Ess/Marc or as approved)
- Type: 3 in 1 wall mixer (hot & cold with provision for overhead shower/hand shower)
- Size: 15 mm nominal bore

### **Material Specifications**

- Body: Heavy-duty brass
- Finish: Chrome plated
- Complete with operating handles (capstan head), bend, and wall flanges
- Conforming to relevant IS standards

### **Other Accessories**

- Necessary C.P. fittings, connectors, nipples, eccentrics, PTFE tape, etc.
- All components shall be of approved make and quality

## **3. Fixing**

- Wall mixer shall be fixed at required location on wall with proper alignment
- Connection shall be made to hot and cold water supply lines at center point
- Bend pipe shall be properly fixed for shower connection
- Wall flanges shall be fitted to cover wall gaps neatly
- All joints and connections shall be leak-proof

## **4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment, smooth operation, and correct mixing of hot and cold water shall be ensured
- Care shall be taken to avoid damage to chrome finish
- Wall surface shall be made good after installation

## **5. Testing**

- The wall mixer shall be tested for leakage and proper functioning
- Smooth operation of handles and proper water flow through all outlets shall be ensured
- Any defects shall be rectified before completion

## **6. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for bend, flanges, or fittings

**Item No. 76**

**Providing and fixing angular stop cock F360006 ( Hindwere series ) 15 mm Heavy duty with cap with necessary connections as per EIC.**

**1. Scope of Work**

The work shall consist of providing and fixing C.P. brass angular stop cock (heavy duty) with cap, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Angular Stop Cock**

- C.P. brass angular stop cock of approved quality
- Make: Hindware (Cat. No. F360006) or equivalent approved (Jaquar/Ess Ess/Marc or as approved)
- Type: Screw down type with cap
- Size: 15 mm nominal bore (heavy duty)

**Material Specifications**

- Body: Heavy-duty brass
- Finish: Chrome plated
- Complete with operating handle (capstan head) and protective cap
- Conforming to relevant IS standards

**Other Accessories**

- Necessary C.P. fittings, connectors, nipples, PTFE tape, etc.
- All components shall be of approved make and quality

**3. Fixing**

- Angular stop cock shall be fixed at required location with proper alignment
- Connection shall be made between water supply line and fixture (e.g., wash basin/W.C.)
- All joints and connections shall be leak-proof
- Unit shall be firmly fixed without any movement

**4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment and smooth operation shall be ensured
- Care shall be taken to avoid damage to chrome finish
- No leakage or improper fitting shall be permitted

**5. Testing**

- The stop cock shall be tested for leakage and proper functioning
- Smooth opening and closing operation shall be ensured
- Any defects shall be rectified before completion

**6. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for fittings or accessories

**Item No. 77**

**Providing and fixing pressure adjustable "Hindwere series - glamour collection : Flow overhead shower with revolving joints 225 mm long shower arm code F160142 with necessary connections & including all necessary fittings as per EIC.**

**1. Scope of Work**

The work shall consist of providing and fixing pressure adjustable overhead shower with revolving joints and shower arm, including all fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Overhead Shower**

- Pressure adjustable overhead shower of approved quality
- Make: Hindware (Glamour Collection – Cat. No. F160142) or equivalent approved (Jaquar/Ess Ess/Marc or as approved)
- Type: Flow overhead shower with revolving joint
- Size: Standard

### **Shower Arm**

- 225 mm long shower arm of approved quality
- Material: C.P. brass or stainless steel with chrome finish

### **Material Specifications**

- Finish: Chrome plated
- Durable and corrosion-resistant construction
- Conforming to relevant IS standards

### **Other Accessories**

- Necessary C.P. fittings, connectors, nipples, wall flanges, PTFE tape, etc.
- All components shall be of approved make and quality

## **3. Fixing**

- Overhead shower shall be fixed at required height and location
- Shower arm shall be properly fixed to wall outlet
- Revolving joint shall allow directional adjustment of water flow
- Wall flange shall be provided to cover wall opening neatly
- All joints and connections shall be leak-proof

## **4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment and firm fixing shall be ensured
- Care shall be taken to avoid damage to chrome finish
- Neat and clean installation shall be maintained

## **5. Testing**

- The shower shall be tested for leakage and proper functioning
- Uniform water flow and pressure shall be ensured
- Any defects shall be rectified before completion

## **6. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for shower arm or fittings

### **Item No. 78**

**Providing and fixing flat back wash basin approved brand list Hindware/cera/jeguar with C.I. or M.S. bracket including cutting holes and making good the same including fixing, C.P. brass extension nipple 62mm long, S.S. flange water super connection pipe 60cm. long and full thread waste coupling F850001 etc. complete**

## **1. Scope of Work**

The work shall consist of providing and fixing flat back wash basin with brackets, including cutting holes, making good the same, and providing all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Wash Basin**

- Flat back wash basin of approved quality
- Make: Hindware / Cera / Jaquar or equivalent approved
- Type: Wall mounted flat back
- Size: Standard

### **Brackets**

- C.I. or M.S. brackets for supporting wash basin
- Properly painted/treated to prevent corrosion

### **Waste Coupling**

- C.P. brass full thread waste coupling
- Make: Hindware (Cat. No. F850001) or equivalent approved

### **Extension Nipple**

- C.P. brass extension nipple
- Length: 62 mm

### **Connection Pipe**

- S.S. braided water supply connection pipe
- Length: 600 mm (60 cm)

### **Other Accessories**

- S.S. flange, nuts, bolts, screws, PTFE tape, etc.
- All components shall be of approved make and quality

## **3. Fixing**

- Wash basin shall be fixed on wall using C.I./M.S. brackets at required height and level
- Holes shall be cut neatly and making good the same after installation
- Waste coupling shall be properly fixed to basin outlet
- Extension nipple and connection pipe shall be connected to water supply line
- All joints and connections shall be leak-proof

## **4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment, level, and firm fixing shall be ensured
- Care shall be taken to avoid damage to basin and fittings
- Neat and clean finish shall be maintained

## **5. Testing**

- The wash basin shall be tested for leakage and proper drainage
- Proper water flow and outlet discharge shall be ensured
- Any defects shall be rectified before completion

## **6. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for brackets, fittings, or accessories

### **Item No. 79**

**Providing wall mounting 600 mm x 450 mm size mirror 5 mm thick modi guard mirror with 4 mm**

## **acrylic back side sheet with clamps & necessary fittings**

### **1. Scope of Work**

The work shall consist of providing and fixing wall mounted mirror of specified size with acrylic backing, clamps, and all necessary fittings, complete as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **Mirror**

- Wall mounting mirror of approved quality
- Make: Modi Guard or equivalent approved
- Size: 600 mm × 450 mm
- Thickness: 5 mm

#### **Backing Sheet**

- 4 mm thick acrylic sheet provided at backside of mirror for protection and rigidity

#### **Clamps & Fittings**

- Stainless steel or C.P. brass mirror clamps (minimum 4 Nos.)
- Screws, wall plugs, and other fixing accessories

#### **Material Specifications**

- Mirror shall be free from distortion and scratches
- Edges shall be smooth and polished
- All components shall be of approved make and quality

### **3. Fixing**

- Mirror shall be fixed on wall at required height and position
- Acrylic backing shall be properly fixed to mirror
- Clamps shall be securely fixed to hold mirror firmly
- All fittings shall be aligned properly and fixed without damage

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and level shall be ensured
- Care shall be taken to avoid damage or breakage of mirror
- Neat and clean installation shall be maintained

### **5. Measurement**

- Measurement shall be taken in Number (Each) of complete unit installed
- No separate measurement shall be made for clamps or fittings

#### **Item No. 80**

**providing erecting and fixing three layer coated PVC (ISI) water tank of required capacity with all necessary fittings and connection etc. complete on terrace.**

### **1. Scope of Work**

The work shall consist of providing, erecting, and fixing three-layer coated PVC (ISI marked) water tank of required capacity on terrace, including all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

### **2. Materials**



**Water Tank**

- Three-layer rotational moulded PVC water storage tank of approved quality
- ISI marked
- Make: Sintex / Supreme / Plasto / Penguin or equivalent approved
- Capacity: As specified (in litres)

**Material Specifications**

- UV stabilized, food-grade inner layer
- Outer layer weather-resistant coating
- Leak-proof and durable construction
- Conforming to relevant IS standards

**Fittings & Accessories**

- Inlet, outlet, overflow, and washout connections
- Ball valve/float valve (if required)
- PVC/C.P. brass nipples, bends, tees, unions, PTFE tape, etc.
- All components shall be of approved make and quality

**3. Fixing**

- Tank shall be erected on terrace on a firm, level base/platform
- Proper alignment and positioning shall be ensured
- Inlet, outlet, overflow, and washout pipes shall be properly connected
- All joints and connections shall be leak-proof

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper handling shall be ensured to avoid damage to tank
- Neat and secure installation shall be maintained
- All connections shall be properly tightened and aligned

**5. Testing**

- Tank shall be tested for leakage after installation
- Proper functioning of inlet, outlet, and overflow shall be ensured
- Any defects shall be rectified before completion

**6. Measurement**

- Measurement shall be taken in **litres (capacity of tank installed)**
- Payment shall be made based on the approved capacity installed at site
- No separate measurement shall be made for fittings or accessories

**Item No. 81**

**Providing and fixing standard extruded of aluminium section of size 63mm x 38.10mm x 1.2mm @ Wt. 0.643 Kg/mt with colour anodized aluminium frame for ventilation with 5mm thick frosted glass as details etc complete for Ventilation**

**1. Scope of Work**

The work shall consist of providing and fixing standard extruded aluminium section frame for ventilation with frosted glass, including all materials, fittings, fixtures, and finishing, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Aluminium Section**

- Standard extruded aluminium section of approved quality

- Size: 63 mm × 38.10 mm × 1.2 mm thickness
- Weight: 0.643 kg per running metre
- Finish: Colour anodized aluminium

#### **Glass**

- 5 mm thick frosted (obscure) glass of approved quality
- Free from bubbles, waves, and defects

#### **Material Specifications**

- Aluminium sections shall be corrosion-resistant and properly anodized
- All joints shall be tight and properly finished
- Conforming to relevant IS standards

#### **Other Accessories**

- Rubber gaskets, glazing clips, screws, handles (if required), hinges (if openable), etc.
- All components shall be of approved make and quality

### **3. Fixing**

- Aluminium frame shall be fabricated and fixed in position for ventilation opening
- Glass shall be properly fitted using rubber gaskets/glazing clips
- Frame shall be fixed to wall using suitable fasteners and anchors
- All joints shall be properly sealed and aligned

### **4. Workmanship**

- Work shall be carried out by skilled fabricators
- Proper alignment, level, and plumb shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid scratches or damage to aluminium and glass

### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed ventilation area
- No separate measurement shall be made for aluminium sections, glass, or fittings

#### **Item No. 82**

**Providing and fixing modular type kitchen platform Cabin using water proof 18 mm thick plywood and laminates of different colors with fittings, hardware, hardware material, teakwood framing, and different type of SS baskets with color polishing etc complete as per design approved by EIC.**

#### **1. Scope of Work**

The work shall consist of providing and fixing modular type kitchen platform cabinets using waterproof plywood with laminate finish, including all fittings, hardware, teakwood framing, stainless steel baskets, and polishing, complete as per design approved by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Cabinet Structure**

- 18 mm thick waterproof plywood of approved quality
- Teakwood framing for structural support

##### **Laminates**

- Decorative laminates of approved make and colour (as selected by EIC)
- Finish: Matt/Glossy as approved

##### **Hardware & Fittings**

- Hinges, handles, channels, screws, locks, and other hardware of approved make
- Soft closing fittings (if specified)

**SS Baskets**

- Stainless steel baskets of various types (cutlery basket, thali basket, bottle pull-out, etc.)
- High-quality SS with corrosion resistance

**Polishing & Finish**

- Colour polishing/laminate finish as per approved design
- All exposed edges shall be finished with edge banding

**Material Specifications**

- All materials shall be of approved make and quality
- Conforming to relevant IS standards

**3. Fixing**

- Cabinets shall be fabricated as per approved design and layout
- Units shall be fixed firmly to wall/floor with proper alignment and level
- All hardware, shutters, and baskets shall be properly installed
- Joints shall be properly finished and secured

**4. Workmanship**

- Work shall be carried out by skilled carpenters/fabricators
- Proper alignment, level, and smooth operation of shutters and drawers shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during installation

**5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed cabinet work
- No separate measurement shall be made for plywood, laminates, hardware, baskets, or fittings

**Item No. 83**

**Providing and fixing ward robe-cup board using 18mm thick Ply board cupboard of approved brand and quality for shutters, self, top, bottom and sides 6mm thick water proof ply wood in drawers T.W. battern for beading channels for drawers, one coat of primer and two coats of oil paint and polishing work etc. complete.**

**1. Scope of Work**

The work shall consist of providing and fixing wardrobe/cupboard using plywood, including shutters, shelves, drawers, painting, polishing, and all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Plywood**

- 18 mm thick plywood of approved brand and quality for shutters, shelves, top, bottom, and sides
- 6 mm thick waterproof plywood for drawer bottoms

**Timber**

- Teakwood (T.W.) battens for framing, beading, and drawer channels

**Hardware & Fittings**

- Hinges, handles, tower bolts, locks, drawer channels, screws, etc. of approved make

**Painting & Polishing**

- One coat of primer

- Two coats of oil paint on external/internal surfaces as required
- Polishing for wooden members as specified

#### **Material Specifications**

- All materials shall be of approved make and quality
- Work shall conform to relevant IS standards

### **3. Fixing**

- Wardrobe/cupboard shall be fabricated as per required size and design
- Unit shall be fixed firmly in position with proper alignment and level
- Drawers and shutters shall be properly installed with smooth operation
- All joints shall be properly finished and secured

### **4. Workmanship**

- Work shall be carried out by skilled carpenters
- Proper alignment, level, and smooth functioning of shutters and drawers shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during installation

### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed cupboard work
- No separate measurement shall be made for plywood, timber, hardware, painting, or polishing

#### **Item No. 84**

**Providing and fixing loft cupboard using 18/19mm thick plywood of approved brand and quality for shutters, top, bottom and sides including teak wood batten for beading, one coat of primer and two coats of oil paint and polishing work etc. complete including S.S fixtures & fastening as directed by engineer incharge.**

### **1. Scope of Work**

The work shall consist of providing and fixing loft cupboard using plywood, including shutters, top, bottom, sides, teakwood beading, painting, polishing, and all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **Plywood**

- 18/19 mm thick plywood of approved brand and quality for shutters, top, bottom, and sides

#### **Timber**

- Teakwood battens for framing and beading

#### **Hardware & Fittings**

- S.S. fixtures and fastenings such as hinges, handles, screws, tower bolts, etc. of approved make

#### **Painting & Polishing**

- One coat of primer
- Two coats of oil paint on exposed surfaces
- Polishing work for wooden members as specified

#### **Material Specifications**

- All materials shall be of approved make and quality
- Work shall conform to relevant IS standards

### 3. Fixing

- Loft cupboard shall be fabricated as per required size and design
- Unit shall be fixed firmly at loft level with proper alignment and support
- Shutters shall be properly fixed with smooth operation
- All joints shall be properly finished and secured

### 4. Workmanship

- Work shall be carried out by skilled carpenters
- Proper alignment, level, and smooth functioning shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during installation

### 5. Measurement

- Measurement shall be taken in **square metres (Sqm)** of completed cupboard work
- No separate measurement shall be made for plywood, timber, hardware, painting, or polishing

#### **Item No. 85**

**Providing and Fixing S.S Hand Rail made from 50mm dia Round pipe supported by 16 mm thick SS pipe bend joint with modular "T" joint with 75 mm dia 8 mm thick base flange on wall at 1.0 mt C/C including accessories as per detailed drawing as directed etc. complete.**

#### **1. Scope of Work**

The work shall consist of providing and fixing stainless steel handrail with supporting members, base flanges, and all necessary accessories, complete as per detailed drawing and as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Handrail**

- Stainless steel round pipe of 50 mm diameter
- Grade: SS 304 as approved

##### **Supports & Joints**

- 16 mm thick stainless steel pipe/rod supports with bend joints
- Modular "T" joints for proper connection and alignment

##### **Base Flange**

- 75 mm diameter, 8 mm thick stainless steel base flange for fixing to wall

##### **Material Specifications**

- All stainless steel components shall have smooth, polished (mirror/matt) finish
- Corrosion-resistant and durable construction
- Conforming to relevant IS standards

##### **Other Accessories**

- S.S. screws, fasteners, anchor bolts, welding materials, etc.
- All components shall be of approved make and quality

### 3. Fixing

- Handrail shall be fixed on wall with supports at 1.0 m centre to centre spacing
- Base flanges shall be securely fixed using suitable fasteners/anchor bolts
- All joints shall be properly aligned and rigidly connected
- Installation shall be as per approved drawing and site requirements

#### **4. Workmanship**

- Work shall be carried out by skilled fabricators
- Proper alignment, level, and uniform spacing shall be ensured
- Welding and joints shall be neat and properly finished
- Surface finish shall be smooth without scratches or defects

#### **5. Measurement**

- Measurement shall be taken in **Running Metres (Rmt)** of completed handrail
- No separate measurement shall be made for supports, flanges, or accessories

#### **Item No. 86**

**Providing and fixing S.S curtain rod of 25mm dia. with clamp and SS side finial fixed directly on wall with necessary screws and fixtures in line and level on wall up to 6.00mt. height etc. complete as approved and directed by engineer in charge.**

#### **1. Scope of Work**

The work shall consist of providing and fixing stainless steel curtain rod with clamps and side finials, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Curtain Rod**

- Stainless steel curtain rod of 25 mm diameter
- Grade: SS 202 / SS 304 as approved

##### **Clamps & Finials**

- S.S. clamps/brackets for supporting the rod
- S.S. side finials (end caps) of approved design

##### **Material Specifications**

- All components shall have smooth polished finish
- Corrosion-resistant and durable construction
- Conforming to relevant IS standards

##### **Other Accessories**

- S.S. screws, wall plugs, fasteners, etc.
- All components shall be of approved make and quality

#### **3. Fixing**

- Curtain rod shall be fixed directly on wall with clamps at required spacing
- Installation shall be done in proper line and level
- Height of fixing shall be up to 6.00 m as specified
- All fittings shall be securely fixed and aligned

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and firm fixing shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid scratches or damage

#### **5. Measurement**

- Measurement shall be taken in **Running Metres (Rmt)** of completed curtain rod
- No separate measurement shall be made for clamps, finials, or fittings

**Item No. 87**

**Providing & fixing Roller blinds of imported fabrics as per approved shade and matching head rail with all accessories, material & Labour etc. complete.**

**1. Scope of Work**

The work shall consist of providing and fixing roller blinds with imported fabric, head rail, and all necessary accessories, complete as per approved shade and as directed by the Engineer-in-Charge (EIC).

**2. Materials****Roller Blinds Fabric**

- Imported fabric of approved quality and shade
- Type: Light filtering / blackout as specified
- Colour and pattern as approved by EIC

**Head Rail & Mechanism**

- Matching head rail with roller mechanism of approved make
- Smooth operating system (chain/cord mechanism)

**Material Specifications**

- Fabric shall be durable, fade-resistant, and dust-resistant
- All components shall have proper finish and durability
- Conforming to relevant standards

**Other Accessories**

- Brackets, chains/cords, bottom rail, fasteners, screws, etc.
- All components shall be of approved make and quality

**3. Fixing**

- Roller blinds shall be fixed on wall/window frame as required
- Head rail shall be properly aligned and securely fixed
- Blinds shall operate smoothly without obstruction
- All fittings shall be properly installed and aligned

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and smooth operation shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

**5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of installed blind area
- No separate measurement shall be made for fabric, mechanism, or accessories

**Item No. 88**

**Providing and fixing pre-cast Rubber Dye/steel sye inter locking concrete block 60mm thick with grade of concrete M300 pneumatic compressed/vibrated mechanically and as per approved design confirming to IS 15658: 2006 including 35 mm sand layer for levelling and filling the joint with sand in proper line as per Guidance of IRC: SP 63-2018 etc. completed.**

**1. Scope of Work**

The work shall consist of providing and fixing precast interlocking concrete blocks (paver blocks) of required thickness, including preparation of base, laying sand bed, filling joints with sand, and all necessary operations, complete as per approved design and as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Paver Blocks**

- Precast interlocking concrete blocks manufactured by rubber dye/steel mould
- Thickness: 60 mm
- Grade of concrete: M300 (machine made, pneumatically compressed/vibrated)
- Shape and design: As approved

### **Material Specifications**

- Blocks shall conform to IS 15658: 2006
- Uniform shape, size, and colour
- Free from cracks, chips, or defects

### **Bedding Layer**

- 35 mm thick layer of clean, coarse sand for levelling

### **Joint Filling**

- Fine dry sand for filling joints between paver blocks

### **Other Requirements**

- All materials shall be of approved quality and conform to relevant standards

## **3. Fixing**

- Subgrade shall be prepared, levelled, and compacted properly
- 35 mm thick sand bed shall be laid and levelled
- Paver blocks shall be laid in proper pattern, line, and level
- Joints shall be filled with fine sand and compacted
- Surface shall be finished true to line and level as per approved design and IRC: SP 63-2018 guidelines

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and interlocking shall be ensured
- Compaction shall be done using suitable mechanical means
- Neat and uniform finish shall be maintained

## **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed paving work
- No separate measurement shall be made for sand bedding or joint filling

### **Item No. 89**

**Providing and fixing pre cast concrete kerb stone of gray cement based concrete block 30cm length, 30cm height and 15cm thick of M250 grade concrete as per approved design and including excavation for fixing in proper line and level, filling the joint with C:M 1:3 (1 cement:3 fine sand) etc complete.**

### **1. Scope of Work**

The work shall consist of providing and fixing precast concrete kerb stones, including excavation, laying, jointing with cement mortar, and all necessary operations, complete as per approved design and as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Kerb Stone**

- Precast concrete kerb stones of approved quality
- Size: 300 mm length × 300 mm height × 150 mm thickness
- Material: Grey cement based concrete



- Grade: M250
- Shape and design: As approved

#### **Material Specifications**

- Kerb stones shall be machine made and properly cured
- Uniform in size, shape, and finish
- Free from cracks, chips, or defects
- Conforming to relevant IS standards

#### **Jointing Material**

- Cement mortar in proportion 1:3 (1 cement : 3 fine sand)

#### **Other Materials**

- Fine sand for bedding (if required)
- All materials shall be of approved quality

### **3. Fixing**

- Excavation shall be carried out to required depth and width
- Base shall be properly prepared and levelled
- Kerb stones shall be placed in correct line and level
- Joints shall be filled with cement mortar (1:3)
- Proper alignment, level, and finishing shall be maintained as per approved design

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and uniformity shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during handling and fixing

### **5. Measurement**

- Measurement shall be taken in **Running Metres (Rmt)** of completed kerb work
- No separate measurement shall be made for excavation, mortar, or bedding

#### **Item No. 90**

**Providing & Fixing Green net for compound wall or chain link jali With clamp, Screw and all other required footing complete as suggested by Engineer in charge.**

#### **1. Scope of Work**

The work shall consist of providing and fixing green net on compound wall or chain link jali, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Green Net**

- Green shade net of approved quality
- UV stabilized, durable, and weather-resistant
- Density: As specified/approved

##### **Fixing Accessories**

- Clamps, screws, binding wire, ties, etc. for proper fixing

##### **Material Specifications**

- Net shall be strong, tear-resistant, and suitable for outdoor use
- All components shall be of approved make and quality
- Conforming to relevant standards

### **3. Fixing**

- Green net shall be fixed on compound wall or chain link jali as required
- Proper tension shall be maintained to avoid sagging
- Clamps and fasteners shall be securely fixed at required spacing
- Installation shall be done in proper line and alignment

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Neat and uniform fixing shall be ensured
- Care shall be taken to avoid damage to net during installation

### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of net installed
- No separate measurement shall be made for clamps, screws, or fittings

#### **Item No. 91**

**Providing anodized Galvalume sheet for roofing fixed with necessary scew/bolt, washers including all necessary fasteners and fixtures as directed by Engineer In Charge**

#### **1. Scope of Work**

The work shall consist of providing and fixing anodized Galvalume sheet roofing, including all necessary fasteners, fittings, and fixtures, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Galvalume Sheet**

- Anodized Galvalume roofing sheets of approved quality
- Thickness: As specified/approved
- Profile: Corrugated/Trapezoidal as approved

##### **Material Specifications**

- High corrosion resistance with aluminium-zinc coating
- Uniform thickness and proper finish
- Free from defects such as cracks, bends, or coating damage
- Conforming to relevant IS standards

##### **Fasteners & Accessories**

- G.I./S.S. screws/bolts with washers (including neoprene washers)
- Hooks, ridge pieces, flashing (if required), sealant, etc.
- All components shall be of approved make and quality

#### **3. Fixing**

- Sheets shall be laid and fixed on roof structure/purlins in proper line and level
- Overlaps shall be provided as per standard practice
- Fixing shall be done using suitable screws/bolts with washers to prevent leakage
- All joints shall be properly sealed to make the roof watertight

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and secure fixing shall be ensured
- Care shall be taken to avoid damage to sheets during handling and installation
- Neat and uniform finish shall be maintained

#### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed roofing area
- No separate measurement shall be made for fasteners, overlaps, or accessories

#### **Item No. 92**

**Providing and fixing PUF Insulated continuous sandwich panels for roofs of total thickness not less than 30 mm made out from continue line method.** Panel shall have 0.5 mm thick pre coated GI sheet on both side of Polyurethane foam with external face being corrugated in shape for GI and PU foam both material. The crest height of the panel shall be of 35mm minimum wiht 250mm c/c pitch. The Precoated sheet shall be of minimum 240 mpa steel grade confirming to IS 14246:1995 and shall have zinc coating of 120 gsm as per IS:277 , 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 micron. The PPGL Sheet shall have protective guard film of minimum 25 microns to avoid scratches wihile trasportation. The roof panels are laid over a frame work of trusses, columns and purlins fixed using 90mm self drilling bolt with rubber washer including all types of flashings. PU Foam must be self-extinguishing, fire retardant type having minimum density of 40 Kg/Cu.mt.( +, - 2 Kgs) including 0.25mm craft paper edging, self tappingscrews of required length and nos.etc complete as per structural design and direction of Engineer-in-charge.

### **1. Scope of Work**

The work shall consist of providing and fixing PUF insulated continuous sandwich panels for roofing, including all fasteners, flashings, and accessories, complete as per structural design and as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **PUF Sandwich Panels**

- Continuous type sandwich panels manufactured by continuous line method
- Total thickness: Not less than 30 mm

#### **Outer Sheets (PPGL)**

- 0.5 mm thick pre-coated GI sheets on both sides of PU foam
- External face corrugated in shape
- Minimum steel grade: 240 MPa conforming to IS 14246:1995
- Zinc coating: Minimum 120 GSM as per IS 277
- Coating:
  - 5–7 microns epoxy primer on both sides
  - 15–18 microns polyester top coat
  - Protective guard film: Minimum 25 microns

#### **Panel Profile**

- Crest height: Minimum 35 mm
- Pitch: 250 mm c/c

#### **PU Foam Core**

- Density: 40 kg/m<sup>3</sup> (± 2 kg/m<sup>3</sup>)
- Type: Self-extinguishing, fire-retardant
- Provided with 0.25 mm kraft paper edging

#### **Fasteners & Accessories**

- 90 mm long self-drilling bolts with rubber washers
- Self-tapping screws of required size and number
- All types of flashings, ridge pieces, trims, and sealants
- All components shall be of approved make and quality

### **3. Fixing**

- Panels shall be laid over structural framework of trusses, columns, and purlins
- Fixing shall be done using self-drilling bolts with rubber washers
- Proper alignment, level, and slope shall be maintained
- Side and end laps shall be properly sealed to ensure watertightness
- Flashings shall be provided at all junctions and edges

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper handling shall be ensured to avoid damage to protective coating
- Neat and uniform installation shall be maintained
- All joints and edges shall be properly finished and sealed

#### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed roofing area
- No separate measurement shall be made for fasteners, flashings, or accessories

#### **Item No. 93**

**Providing & fixing Color Coated Cold Rolled FRP Roofing Sheet fixed with G.I. plain and bitumen washer, complete excluding cost of purlines, rafters, trusses etc. complete as directed by Engineer in charge.**

#### **1. Scope of Work**

The work shall consist of providing and fixing colour coated cold rolled FRP roofing sheets, including all necessary fasteners and fittings, complete excluding cost of purlins, rafters, trusses, etc., as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **FRP Roofing Sheet**

- Colour coated cold rolled FRP sheets of approved quality
- Profile: Corrugated/Trapezoidal as approved
- Thickness: As specified/approved

##### **Material Specifications**

- Lightweight, corrosion-resistant, and weatherproof
- Uniform thickness and proper finish
- Free from cracks, pinholes, or surface defects
- Conforming to relevant IS standards

##### **Fasteners & Accessories**

- G.I. plain washers and bitumen washers
- G.I./S.S. screws, hooks, bolts, and fasteners
- Sealants and other necessary fittings
- All components shall be of approved make and quality

#### **3. Fixing**

- Sheets shall be laid on existing purlins/rafters/trusses (not included in this item)
- Proper overlaps shall be provided as per standard practice
- Fixing shall be done using suitable fasteners with G.I. and bitumen washers to ensure watertightness
- Sheets shall be aligned properly in line and level

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and secure fixing shall be ensured
- Care shall be taken to avoid damage during handling and installation
- Neat and uniform finish shall be maintained

## **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed roofing area
- No separate measurement shall be made for fasteners or accessories

### **Item No. 94**

**Providing & Fixing PVC Roofing sheet 2.5 mm thick ( shape same as village hut - Nliya ) with silicon sealant at the joint portion & necessary fitting & fixing etc complete as per instruction of E.I.C.**

## **1. Scope of Work**

The work shall consist of providing and fixing PVC roofing sheets of specified thickness and profile, including sealing of joints and all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **PVC Roofing Sheet**

- PVC roofing sheets of approved quality
- Thickness: 2.5 mm
- Profile: Traditional "Naliya" (village hut type) shape or equivalent approved

### **Material Specifications**

- Lightweight, weather-resistant, and durable
- UV stabilized and corrosion-resistant
- Uniform thickness and proper finish
- Free from cracks, warping, or defects
- Conforming to relevant standards

### **Sealant & Accessories**

- Silicone sealant for sealing joints
- G.I./S.S. screws, bolts, washers, hooks, and fasteners
- All components shall be of approved make and quality

## **3. Fixing**

- Sheets shall be laid on supporting structure in proper line and level
- Proper overlaps shall be maintained as per standard practice
- Joints shall be sealed using silicone sealant to ensure watertightness
- Fixing shall be done using suitable fasteners and washers

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and secure fixing shall be ensured
- Care shall be taken to avoid damage during handling and installation
- Neat and uniform finish shall be maintained

## **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed roofing area
- No separate measurement shall be made for sealant, fasteners, or accessories

### **Item No. 95**

**Providing and fixing 1.8 mm thick UV stabilized polycarbonate sheet made from 100% virgin**

material, IS 14443 certified, for P.N. shed roofing and boundary covering, including supply of approved quality polycarbonate sheets, cutting to required size and shape, fixing with self-drilling screws, washers/EPDM gaskets, and all necessary fittings and accessories, complete in all respects as per drawings, specifications and directions of the Engineer-in-Charge.

### **1. Scope of Work**

The work shall consist of providing and fixing UV stabilized polycarbonate sheets for shed roofing and boundary covering, including cutting, fixing, and all necessary fittings and accessories, complete as per drawings, specifications, and as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **Polycarbonate Sheet**

- UV stabilized polycarbonate sheet of approved quality
- Thickness: 1.8 mm
- Made from 100% virgin material
- IS 14443 certified

#### **Material Specifications**

- High impact strength, lightweight, and durable
- UV resistant and weatherproof
- Transparent/coloured as approved
- Uniform thickness and free from defects

#### **Fasteners & Accessories**

- Self-drilling screws with washers/EPDM gaskets
- Sealants, edge trims, and necessary fixing accessories
- All components shall be of approved make and quality

### **3. Fixing**

- Sheets shall be cut to required size and shape as per site conditions
- Laid and fixed on supporting structure in proper line and level
- Fixing shall be done using self-drilling screws with EPDM washers
- Proper overlaps and sealing shall be ensured for watertightness

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and secure fixing shall be ensured
- Care shall be taken to avoid scratches or damage during installation
- Neat and uniform finish shall be maintained

### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed work
- No separate measurement shall be made for cutting, fasteners, or accessories

#### **Item No. 97**

**Providing and fixing loft cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg), 1.2 mm thick pvc laminate and solid pvc framing, brand shutters, top, bottom and sides in framing with all accessories like, ss hinges, handle and magnet with labour work etc. complete including fixtures & fastening as directed by engineer incharge.**

### **1. Scope of Work**

The work shall consist of providing and fixing loft cupboard using PVC sheets with laminate finish and solid PVC framing, including shutters, fittings, fixtures, and all necessary accessories, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **PVC Sheets**

- 18 mm thick PVC sheet of approved quality
- Make: Kaka Brand (Kaka Excellent – 0.55 m × 1.95 m sheet, minimum weight 7 kg) or equivalent approved

### **Laminates**

- 1.2 mm thick PVC laminate of approved make and colour

### **Framing**

- Solid PVC framing for shutters, top, bottom, and sides

### **Hardware & Fittings**

- S.S. hinges, handles, magnetic catchers, screws, and fasteners of approved make

### **Material Specifications**

- PVC sheets shall be termite-proof, waterproof, and durable
- Smooth finish and uniform thickness
- All materials shall be of approved make and quality and conform to relevant standards

## **3. Fixing**

- Loft cupboard shall be fabricated as per required size and design
- Unit shall be fixed firmly in position with proper alignment and support
- Shutters shall be properly installed with smooth operation
- All fittings and accessories shall be securely fixed

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and finish shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during installation

## **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed cupboard work
- No separate measurement shall be made for PVC sheets, laminates, hardware, or fittings

### **Item No. 98**

**Providing & Fixing modular type kitchen platform cabin using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) & 1.2 mm thick pvc laminate of different colours with fittings hardware material PVC framing and different type of S.S. basket, hinges, sliding channel and profile handle with labour etc. complete as per design approved by Engineer In Charge.**

### **1. Scope of Work**

The work shall consist of providing and fixing modular type kitchen platform cabinets using PVC sheets with laminate finish, including framing, shutters, stainless steel baskets, hardware fittings, and all necessary accessories, complete as per design approved by the Engineer-in-Charge (EIC).

## **2. Materials**

### **PVC Sheets**

- 18 mm thick PVC sheet of approved quality
- Make: Kaka Brand (Kaka Excellent – 0.55 m × 1.95 m sheet, minimum weight 7 kg) or equivalent approved

**Laminates**

- 1.2 mm thick PVC laminate of approved make and colour
- Finish: As approved (matte/glossy)

**Framing**

- Solid PVC framing for cabinet structure, shutters, top, bottom, and sides

**Hardware & Fittings**

- S.S. baskets (cutlery basket, thali basket, bottle pull-out, etc.)
- Hinges, sliding channels, profile handles, screws, and fasteners of approved make
- Soft closing fittings (if specified)

**Material Specifications**

- PVC sheets shall be waterproof, termite-proof, and durable
- Smooth finish and uniform thickness
- All materials shall be of approved make and quality and conform to relevant standards

**3. Fixing**

- Cabinets shall be fabricated as per approved design and layout
- Units shall be fixed firmly with proper alignment and level
- Shutters, drawers, and baskets shall be properly installed
- All joints and fittings shall be securely fixed and finished

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and smooth operation of shutters and drawers shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during installation

**5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed cabinet work
- No separate measurement shall be made for PVC sheets, laminates, hardware, baskets, or fittings

**Item No. 99**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self , drawers base including ,1.2 mm thick pvc laminate all around ,Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**1. Scope of Work**

The work shall consist of providing and fixing wardrobe/cupboard using PVC sheets with laminate finish, including shutters, shelves, drawers, fittings, and all necessary accessories, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****PVC Sheets**

- 18 mm thick PVC sheet of approved quality
- Make: Kaka Brand (Kaka Excellent – 0.55 m × 1.95 m sheet, minimum weight 7 kg) or equivalent approved

**Laminates**

- 1.2 mm thick PVC laminate on all exposed surfaces
- Colour and finish as approved



**Drawers & Channels**

- Telescopic channels for smooth sliding of drawers
- Drawers base made from PVC sheet

**Hardware & Fittings**

- S.S. hinges, handles, locks, screws, fasteners, etc. of approved make

**Material Specifications**

- PVC sheets shall be waterproof, termite-proof, and durable
- Smooth finish and uniform thickness
- All materials shall be of approved make and quality and conform to relevant standards

**3. Fixing**

- Cupboard shall be fabricated as per required size and design
- Unit shall be fixed firmly with proper alignment and level
- Shutters and drawers shall be properly installed with smooth operation
- All fittings shall be securely fixed

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and smooth functioning shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during installation

**5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed cupboard work
- No separate measurement shall be made for PVC sheets, laminates, hardware, or fittings

**Item No. 100**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self , drawers base including ,1.2 mm thick pvc laminate all around ,Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing and fixing T.V Unit Cabinet using 18 mm thick PVC sheet of kaka or equivalent brand & laminates of different colours with sliding channels and drawers. like conceal hinges, Handles for drawers & shutters, polishing work etc Comp. as directed by EIC**

**1. Scope of Work**

The work shall consist of providing and fixing T.V. unit cabinet using PVC sheets with laminate finish, including shutters, drawers, fittings, and all necessary accessories, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****PVC Sheets**

- 18 mm thick PVC sheet of approved quality
- Make: Kaka or equivalent approved

**Laminates**

- Decorative laminates of approved make and different colours
- Finish: As approved (matte/glossy)

**Drawers & Channels**

- Drawers with sliding/telescopic channels for smooth operation

**Hardware & Fittings**

- Concealed hinges for shutters
- Handles for drawers and shutters
- Screws, fasteners, and other necessary fittings of approved make

**Polishing & Finish**

- Proper finishing/polishing work as specified

**Material Specifications**

- PVC sheets shall be waterproof, termite-proof, and durable
- Smooth finish and uniform thickness
- All materials shall be of approved make and quality and conform to relevant standards

**3. Fixing**

- T.V. unit cabinet shall be fabricated as per required design and layout
- Unit shall be fixed firmly with proper alignment and level
- Shutters and drawers shall be properly installed with smooth operation
- All fittings and accessories shall be securely fixed

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and smooth functioning shall be ensured
- Neat and clean finish shall be maintained
- Care shall be taken to avoid damage during installation

**5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed cabinet work
- No separate measurement shall be made for PVC sheets, laminates, hardware, or fittings

**Item No. 101**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self , drawers base including ,1.2 mm thick pvc laminate all around ,Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing & Fixing S.S. Grade 304 Anti Mosquito Net Make MARUTI, With battern patti and all required feeting complete as suggested by Engineer in charge.**

**1. Scope of Work**

The work shall consist of providing and fixing stainless steel anti-mosquito net with batten patti, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****S.S. Mosquito Net**

- Stainless steel mosquito net of approved quality
- Grade: SS 304
- Make: Maruti or equivalent approved

**Batten Patti**

- PVC/wooden/aluminium batten patti for fixing the net

**Material Specifications**

- Net shall be corrosion-resistant, durable, and properly woven
- Uniform mesh size and free from defects
- All materials shall be of approved make and quality and conform to relevant standards

**Other Accessories**

- Screws, fasteners, clips, and fixing accessories as required

**3. Fixing**

- Mosquito net shall be fixed on window/ventilator openings using batten patti
- Proper tension shall be maintained to avoid sagging
- Batten patti shall be securely fixed with screws/fasteners
- Installation shall be done in proper line and alignment

**4. Workmanship**

- Work shall be carried out by skilled workers
- Neat and uniform fixing shall be ensured
- Care shall be taken to avoid damage during installation

**5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of net installed
- No separate measurement shall be made for batten patti, screws, or fittings

**Item No. 102**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of Kaka Brand (Kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self, drawers base including 1.2 mm thick PVC laminate all around, Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing & fixing galvanised steel chain link 2, 10 x 10 gauge fencing on existing angle post with G.I. staples and welding with new angle and making square box including two coats of oil paint. etc complete**

**1. Scope of Work**

The work shall consist of providing and fixing galvanised steel chain link fencing on existing angle posts, including necessary welding, fixing with staples, fabrication of square box (if required), painting, and all accessories, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Chain Link Fencing**

- Galvanised steel chain link mesh of approved quality
- Size: 10 gauge, 2" x 2" (50 mm x 50 mm) mesh or as specified

**Angle & Supports**

- New M.S. angle sections for making square box/frame where required
- Existing angle posts for fixing

**Material Specifications**

- Galvanised coating shall be uniform and corrosion-resistant
- Mesh shall be properly woven and free from defects
- Angles shall be straight and free from bends

**Fasteners & Accessories**

- G.I. staples, binding wire, welding rods, etc.
- All components shall be of approved make and quality

**Painting**

- Two coats of oil paint over prepared surface

**3. Fixing**

- Chain link mesh shall be fixed on existing angle posts
- New angle sections shall be welded to form square box/frame where required
- Mesh shall be stretched properly and fixed with G.I. staples
- Welding shall be carried out neatly and securely
- Painting shall be done after proper surface preparation

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, tension, and uniformity shall be ensured
- Welding joints shall be neat and strong
- Neat and clean finish shall be maintained

#### **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed fencing
- No separate measurement shall be made for angles, welding, painting, or accessories

#### **Item No. 103**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of Kaka Brand (Kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self, drawers base including, 1.2 mm thick pvc laminate all around, Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing and fixing F.R.C.. Manhole cover 0.60 M. x 0.45M. size having weight not less than 10 Kg. with labour charges etc. complete.**

#### **1. Scope of Work**

The work shall consist of providing and fixing F.R.C. (Fibre Reinforced Concrete) manhole cover of specified size, including all labour, fittings, and accessories, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **F.R.C. Manhole Cover**

- Fibre Reinforced Concrete (F.R.C.) manhole cover of approved quality
- Size: 0.60 m × 0.45 m
- Weight: Not less than 10 kg

##### **Material Specifications**

- Strong, durable, and corrosion-resistant
- Properly cast and free from cracks or defects
- Conforming to relevant IS standards

##### **Other Accessories**

- Frame (if required), cement mortar, and fixing materials
- All components shall be of approved make and quality

#### **3. Fixing**

- Manhole cover shall be placed/fixed at required location over chamber
- Proper alignment and level shall be ensured
- Frame (if provided) shall be fixed using cement mortar
- Installation shall be firm and secure

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and finishing shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during handling

## 5. Measurement

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for labour or accessories

### Item No. 104

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self , drawers base including ,1.2 mm thick pvc laminate all around ,Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing and fixing 3/4" Heavy Duty Bird Netting for All Birds UV Stabilised including labour, Tools and other accessories as per instruction of Engineer in Charge.**

## 1. Scope of Work

The work shall consist of providing and fixing heavy duty bird netting, including all necessary fittings, fixtures, labour, tools, and accessories, complete as directed by the Engineer-in-Charge (EIC).

## 2. Materials

### **Bird Netting**

- Heavy duty bird netting of approved quality
- Mesh size: 3/4 inch
- UV stabilized for outdoor durability

### **Material Specifications**

- Strong, weather-resistant, and long-lasting material
- Tear-resistant and suitable for protection against all birds
- Uniform mesh size and free from defects
- Conforming to relevant standards

### **Other Accessories**

- Fixing hooks, clamps, nylon rope/wire, fasteners, etc.
- All components shall be of approved make and quality

## 3. Fixing

- Bird netting shall be fixed at required locations such as windows, balconies, or open areas
- Proper tension shall be maintained to avoid sagging
- Net shall be securely fixed using hooks, clamps, or wires
- Installation shall be done in proper line and alignment

## 4. Workmanship

- Work shall be carried out by skilled workers
- Neat and uniform fixing shall be ensured
- Care shall be taken to avoid damage during installation

## 5. Measurement

- Measurement shall be taken in **square metres (Sqm)** of net installed
- No separate measurement shall be made for labour, tools, or accessories

### Item No. 105

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self , drawers base including ,1.2 mm thick pvc laminate all around ,Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing and Fixing 8 mm thick moisture & fire resistant heavy duty Cement Fibre Board (High pressure steam cured) with 5mm groove for elasticity filled with Quick setting cement and then covered with mesh tape in wall panels of one face of cold formed galvanised light gauge steel frame structure to form wall / partition as & Where directed by Engineer-inCharge**

## **1. Scope of Work**

The work shall consist of providing and fixing cement fibre board panels on cold formed galvanised light gauge steel frame structure to form wall/partition, including grooves, filling, taping, and all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Cement Fibre Board**

- 8 mm thick moisture and fire-resistant cement fibre board of approved quality
- High pressure steam cured
- Provided with 5 mm groove for elasticity

### **Frame Structure**

- Cold formed galvanised light gauge steel frame structure of approved quality

### **Joint Treatment**

- Quick setting cement for groove filling
- Mesh tape for covering joints

### **Material Specifications**

- Boards shall be durable, moisture-resistant, and fire-retardant
- Smooth surface and free from cracks or defects
- All materials shall conform to relevant IS standards

### **Other Accessories**

- Screws, fasteners, anchors, and fixing accessories
- All components shall be of approved make and quality

## **3. Fixing**

- Galvanised steel frame shall be erected in proper line and level
- Cement fibre boards shall be fixed on one face of the frame using suitable fasteners
- 5 mm grooves shall be provided and filled with quick setting cement
- Joints shall be covered with mesh tape
- All panels shall be properly aligned and secured

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment, level, and finishing shall be ensured
- Neat and uniform surface shall be maintained
- Care shall be taken to avoid damage during installation

## **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of completed partition work
- No separate measurement shall be made for frame, grooves, joint filling, or accessories

### **Item No. 106**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of kaka Brand (kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self , drawers base including ,1.2 mm thick pvc laminate all around ,Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing and Laying Water Proofing Treatment of Dr. Fixit or equivalent make as per instruction of Engineer-in-Charge. All the works shall be carried as directed by Engineer-in-Charge. 1. Surface Preparation : Cleaning of existing surface from all dust and debris by applying blower, washing the surface by jet spray, Grinding the surface to proper slope and level to remove all unnecessary materials 2. Primer Coat : Apply one coat of Dr. Fixit Primeseal with part of water in the proportion of 2:1 ( 2 part Primeseal and 1 part of water). Assume 0.15 litre per Sq.m. per Coat 3. Top Coat: Apply the two coat of Dr. Fixit Newcoat without any dilution at the rate of 0.5 litre per Sq.m. and allow it to dry before taking up the second coats, the rate of application being the same. Drying time between coats will be 6 to 8 hrs. including grooves as per instruction of Engineer-in-Charge.**

## **1. Scope of Work**

The work shall consist of providing and laying waterproofing treatment using Dr. Fixit or equivalent make, including surface preparation, primer application, top coating, and all necessary operations, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Waterproofing System**

- Dr. Fixit or equivalent approved make waterproofing materials

### **Primer Coat**

- Dr. Fixit Primeseal or equivalent
- Mixing ratio: 2 parts Primeseal : 1 part water
- Application rate: 0.15 litre per Sqm per coat

### **Top Coat**

- Dr. Fixit Newcoat or equivalent
- Applied without dilution
- Application rate: 0.5 litre per Sqm per coat (two coats)

### **Material Specifications**

- All materials shall be of approved make and quality
- Compatible system for waterproofing and durability
- Conforming to relevant standards

## **3. Fixing / Application**

### **Surface Preparation**

- Cleaning of surface from dust and debris using blower
- Washing by jet spray
- Grinding to achieve proper slope and level
- Removal of all loose and unwanted materials

### **Primer Application**

- One coat of primer shall be applied uniformly
- Mixed in ratio 2:1 (Primeseal : water)
- Allowed to dry before application of top coat

### **Top Coat Application**

- Two coats of waterproofing compound shall be applied
- Each coat applied at specified rate (0.5 litre per Sqm)
- Second coat applied after drying of first coat
- Drying time between coats: 6 to 8 hours
- Grooves and joints shall be properly treated as per instructions

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Uniform and continuous coating shall be ensured
- Proper care shall be taken for curing and drying between coats
- Neat and effective waterproofing finish shall be maintained

## **5. Measurement**

- Measurement shall be taken in **square metres (Sqm)** of treated surface area
- No separate measurement shall be made for surface preparation, primer, grooves, or multiple coats

### **Item No. 107**

**Providing and fixing ward robe cupboard using 18mm thick PVC sheet of Kaka Brand (Kaka excellent 0.55 mt x 1.95 mt sheet min. weight 7. kg) for shutters, self, drawers base including, 1.2 mm thick pvc laminate all around, Telescopic channels for drawers, etc. complete with S.S fixtures & fastening as directed by engineer in charge.**

**Providing and fixing plantex S.S. folding Towel rack 1.5. feet/ Towel stand/ hanger including necessary S.S. screw and labour etc. complete.**

## **1. Scope of Work**

The work shall consist of providing and fixing stainless steel folding towel rack/towel stand/hanger, including all necessary fittings, fixtures, screws, and labour, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Towel Rack / Hanger**

- Stainless steel folding towel rack of approved quality
- Size: 1.5 feet length
- Make: Plantex or equivalent approved

### **Material Specifications**

- Material: Stainless steel (SS 202 / SS 304 as approved)
- Corrosion-resistant with smooth polished finish
- Durable and sturdy construction

### **Other Accessories**

- S.S. screws, wall plugs, and fixing accessories
- All components shall be of approved make and quality

## **3. Fixing**

- Towel rack shall be fixed on wall at required location and height
- Proper alignment and level shall be ensured
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without any looseness

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Neat and proper installation shall be ensured
- Care shall be taken to avoid damage during fixing

## **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for screws or fittings

### **Item No. 108**

**Providing and fixing 15 mm brass ball cock heavy with all necessary fittings as per EIC.**



## **1. Scope of Work**

The work shall consist of providing and fixing brass ball cock (heavy duty) including all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Ball Cock**

- Brass ball cock of approved quality
- Type: Heavy duty
- Size: 15 mm nominal bore

### **Material Specifications**

- Body: Heavy-duty brass
- Durable and corrosion-resistant construction
- Suitable for water storage tanks and supply systems
- Conforming to relevant IS standards

### **Other Accessories**

- Float ball, lever arm, connectors, nipples, PTFE tape, etc.
- All components shall be of approved make and quality

## **3. Fixing**

- Ball cock shall be fixed in water tank or required location
- Connection shall be made to inlet water supply line
- Proper adjustment shall be done to control water level
- All joints and connections shall be leak-proof

## **4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment and smooth functioning shall be ensured
- Care shall be taken to avoid leakage or improper fixing

## **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

### **Item No. 109**

**Providing and fixing 25 mm brass ball cock heavy with all necessary fittings as per EIC.**

## **1. Scope of Work**

The work shall consist of providing and fixing brass ball cock (heavy duty) including all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Ball Cock**

- Brass ball cock of approved quality
- Type: Heavy duty
- Size: 25 mm nominal bore

### **Material Specifications**

- Body: Heavy-duty brass
- Durable and corrosion-resistant construction
- Suitable for water storage tanks and supply systems
- Conforming to relevant IS standards

**Other Accessories**

- Float ball, lever arm, connectors, nipples, PTFE tape, etc.
- All components shall be of approved make and quality

**3. Fixing**

- Ball cock shall be fixed in water tank or required location
- Connection shall be made to inlet water supply line
- Proper adjustment shall be done to control water level
- All joints and connections shall be leak-proof

**4. Workmanship**

- Work shall be carried out by skilled plumbers
- Proper alignment and smooth functioning shall be ensured
- Care shall be taken to avoid leakage or improper fixing

**5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

**Item No. 110**

**Providing and fixing European type W/C's Plastic Seat with Cover with brass hinges and rubber buffers white vitrious china including necessary fittings and as directed by Engineer In Charge.**

**1. Scope of Work**

The work shall consist of providing and fixing European type W.C. plastic seat with cover, including brass hinges, rubber buffers, and all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****W.C. Seat Cover**

- European type plastic seat with cover of approved quality
- Colour: White

**Hinges & Buffers**

- Brass hinges for fixing seat cover
- Rubber buffers (buffers) for cushioning and proper seating

**Material Specifications**

- Seat cover shall be durable, smooth finish, and crack-resistant
- Hinges shall be corrosion-resistant brass
- All materials shall be of approved make and quality
- Conforming to relevant IS standards

**Other Accessories**

- Screws, fasteners, and fixing accessories

**3. Fixing**

- Seat cover shall be fixed to European W.C. pan using brass hinges
- Proper alignment and firm fixing shall be ensured
- Buffers shall be properly positioned for smooth operation
- All fittings shall be securely fixed

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and smooth operation shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

#### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for hinges, buffers, or fittings

#### **Item No. 111**

**Providing and fixing 15 cm long SS 2 in 1 Towerbolt "AKS " make heavy with all necessary fittings as per EIC.**

#### **. Scope of Work**

The work shall consist of providing and fixing stainless steel 2-in-1 tower bolt, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Tower Bolt**

- Stainless steel 2-in-1 tower bolt of approved quality
- Size: 15 cm long
- Make: AKS or equivalent approved

##### **Material Specifications**

- Material: Stainless steel (SS 202 / SS 304 as approved)
- Heavy duty, corrosion-resistant, and durable
- Smooth operation with proper locking mechanism
- Conforming to relevant standards

##### **Other Accessories**

- S.S. screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

#### **3. Fixing**

- Tower bolt shall be fixed on door/window shutters at required position
- Proper alignment shall be ensured for smooth locking
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and smooth operation shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

#### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for screws or fittings

#### **Item No. 112**

**Providing and fixing 10 cm long SS 2 in 1 Towerbolt "AKS " make heavy with all necessary fittings as per EIC.**

## **1. Scope of Work**

The work shall consist of providing and fixing stainless steel 2-in-1 tower bolt, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Tower Bolt**

- Stainless steel 2-in-1 tower bolt of approved quality
- Size: 10 cm long
- Make: AKS or equivalent approved

### **Material Specifications**

- Material: Stainless steel (SS 202 / SS 304 as approved)
- Heavy duty, corrosion-resistant, and durable
- Smooth operation with proper locking mechanism
- Conforming to relevant standards

### **Other Accessories**

- S.S. screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

## **3. Fixing**

- Tower bolt shall be fixed on door/window shutters at required position
- Proper alignment shall be ensured for smooth locking
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and smooth operation shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

## **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for screws or fittings

### **Item No. 113**

**Providing and fixing 25 cm Brass Heavy Latch ( Tadi ) "JESMINE" make with all necessary fittings as per EIC.**

## **1. Scope of Work**

The work shall consist of providing and fixing brass heavy latch (tadi), including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Latch (Tadi)**

- Brass heavy latch of approved quality
- Size: 25 cm long
- Make: Jesmine or equivalent approved

### **Material Specifications**

- Material: Heavy-duty brass

- Corrosion-resistant and durable construction
- Smooth operation and proper locking mechanism
- Conforming to relevant standards

#### **Other Accessories**

- Screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

### **3. Fixing**

- Latch shall be fixed on door/window shutters at required position
- Proper alignment shall be ensured for smooth operation
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and smooth functioning shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

#### **Item No. 114**

**Providing and fixing 25 cm long & 3 mm thick Brass heavy Door Aldrop made from JESMINE with all necessary fittings as per EIC.**

### **1. Scope of Work**

The work shall consist of providing and fixing brass heavy door aldrop, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **Door Aldrop**

- Brass heavy door aldrop of approved quality
- Size: 25 cm long
- Thickness: 3 mm
- Make: Jesmine or equivalent approved

#### **Material Specifications**

- Material: Heavy-duty brass
- Corrosion-resistant and durable construction
- Smooth sliding and proper locking mechanism
- Conforming to relevant standards

#### **Other Accessories**

- Screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

### **3. Fixing**

- Aldrop shall be fixed on door shutter at required position
- Proper alignment shall be ensured for smooth sliding
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and smooth operation shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

#### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

#### **Item No. 115**

**Providing and fixing 30 cm long & 3 mm thick Brass heavy Door Aldrop made from JESMINE with all necessary fittings as per EIC.**

#### **1. Scope of Work**

The work shall consist of providing and fixing brass heavy door aldrop, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Door Aldrop**

- Brass heavy door aldrop of approved quality
- Size: 30 cm long
- Thickness: 3 mm
- Make: Jesmine or equivalent approved

##### **Material Specifications**

- Material: Heavy-duty brass
- Corrosion-resistant and durable construction
- Smooth sliding and proper locking mechanism
- Conforming to relevant standards

##### **Other Accessories**

- Screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

#### **3. Fixing**

- Aldrop shall be fixed on door shutter at required position
- Proper alignment shall be ensured for smooth sliding
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and smooth operation shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

#### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

**Item No. 116**

**Providing and fixing 96 mm Brass Handle "KRIZA" make with all necessary fittings as per EIC.**

**1. Scope of Work**

The work shall consist of providing and fixing brass handle, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Handle**

- Brass handle of approved quality
- Size: 96 mm
- Make: Kriza or equivalent approved

**Material Specifications**

- Material: High-quality brass
- Corrosion-resistant and durable construction
- Smooth finish with proper grip
- Conforming to relevant standards

**Other Accessories**

- Screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

**3. Fixing**

- Handle shall be fixed on door/drawer/shutter at required position
- Proper alignment shall be ensured
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and neat installation shall be ensured
- Care shall be taken to avoid damage during fixing

**5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

**Item No. 117**

**Providing and fixing 150 mm Brass Handle "JESMINE" make with all necessary fittings as per EIC.**

**1. Scope of Work**

The work shall consist of providing and fixing brass handle, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Handle**

- Brass handle of approved quality
- Size: 150 mm
- Make: Jesmine or equivalent approved

**Material Specifications**

- Material: High-quality brass
- Corrosion-resistant and durable construction
- Smooth finish with proper grip
- Conforming to relevant standards

**Other Accessories**

- Screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

**3. Fixing**

- Handle shall be fixed on door/drawer/shutter at required position
- Proper alignment shall be ensured
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness

**4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and neat installation shall be ensured
- Care shall be taken to avoid damage during fixing

**5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

**Item No. 118**

**Providing and fixing 200 mm Brass Handle "JESMINE" make with all necessary fittings as per EIC.**

**1. Scope of Work**

The work shall consist of providing and fixing brass handle, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

**2. Materials****Handle**

- Brass handle of approved quality
- Size: 200 mm
- Make: Jesmine or equivalent approved

**Material Specifications**

- Material: High-quality brass
- Corrosion-resistant and durable construction
- Smooth finish with proper grip
- Conforming to relevant standards

**Other Accessories**

- Screws, fasteners, and fixing accessories
- All components shall be of approved make and quality

**3. Fixing**

- Handle shall be fixed on door/drawer/shutter at required position
- Proper alignment shall be ensured
- Fixing shall be done using suitable screws and fasteners
- Unit shall be firmly fixed without looseness



#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and neat installation shall be ensured
- Care shall be taken to avoid damage during fixing

#### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

#### **Item No. 119**

**Providing and fixing door stopper "DM" make with all necessary fittings as per EIC.**

#### **1. Scope of Work**

The work shall consist of providing and fixing door stopper, including all necessary fittings and fixtures, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Door Stopper**

- Door stopper of approved quality
- Make: DM or equivalent approved

##### **Material Specifications**

- Heavy duty, durable, and corrosion resistant
- Suitable for controlling door movement and preventing damage to walls/doors
- Conforming to relevant standards

##### **Other Accessories**

- Screws, fasteners, rubber buffers, and fixing accessories
- All components shall be of approved make and quality

#### **3. Fixing**

- Door stopper shall be fixed at required position on floor or wall as directed
- Proper alignment shall be ensured
- Fixing shall be done using suitable screws/anchors
- Unit shall be firmly fixed without looseness

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper positioning and alignment shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

#### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

#### **Item No. 120**

**Providing & fixing S.S. telescopic channel HATTICH MAKE ( pair ) make 500 mm with all accessories , material & Labour etc. complete.**

#### **1. Scope of Work**

The work shall consist of providing and fixing stainless steel telescopic channels (pair) for drawers, including all necessary fittings, accessories, and labour, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Telescopic Channels**

- Stainless steel telescopic channels (pair) of approved quality
- Size: 500 mm length
- Make: Hettich or equivalent approved

### **Material Specifications**

- Heavy duty, smooth sliding mechanism
- Corrosion resistant and durable construction
- Suitable for drawer applications
- Conforming to relevant standards

### **Other Accessories**

- Screws, fasteners, brackets, and fixing accessories
- All components shall be of approved make and quality

## **3. Fixing**

- Channels shall be fixed on drawers and cabinet sides as per manufacturer's instructions
- Proper alignment shall be ensured for smooth sliding operation
- Fixing shall be done using suitable screws and fasteners
- Movement shall be checked for smooth operation without obstruction

## **4. Workmanship**

- Work shall be carried out by skilled carpenters
- Proper alignment and smooth functioning shall be ensured
- Neat installation shall be maintained
- Care shall be taken to avoid damage during fixing

## **5. Measurement**

- Measurement shall be taken in **Number (Pair)** of complete channel set installed
- No separate measurement shall be made for screws or accessories

### **Item No. 121**

**Providing & fixing S.S. Jali 304 grade for nanhi trap "LIPKA " make with all accessories , material & Labour etc. complete.**

## **1. Scope of Work**

The work shall consist of providing and fixing stainless steel jali for nahani trap, including all necessary fittings, accessories, materials, and labour, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Stainless Steel Jali**

- Stainless steel jali of approved quality
- Grade: SS 304
- Make: Lipka or equivalent approved
- Suitable for nahani trap application

### **Material Specifications**

- Corrosion-resistant, durable, and hygienic
- Uniform perforation and smooth finish

- Free from sharp edges or defects
- Conforming to relevant standards

#### **Other Accessories**

- Fixing clips, screws, fasteners, and supporting accessories
- All components shall be of approved make and quality

### **3. Fixing**

- Jali shall be properly fixed over nahani trap at required location
- Proper seating and alignment shall be ensured
- Fixing shall be done securely using suitable accessories
- Jali shall be placed in a manner allowing proper water flow

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and secure fitting shall be ensured
- Neat and clean installation shall be maintained
- Care shall be taken to avoid damage during fixing

### **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for accessories or labour

#### **Item No. 122**

**Providing and fixing Hindwere/cera/jeguar brand double soap dish with necessary connections & including all necessary fittings as per EIC.**

### **1. Scope of Work**

The work shall consist of providing and fixing double soap dish of approved brand, including all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

### **2. Materials**

#### **Soap Dish**

- Double soap dish of approved quality
- Make: Hindware / Cera / Jaguar or equivalent approved

#### **Material Specifications**

- Durable, corrosion-resistant material (ceramic / CP brass / stainless steel as applicable)
- Smooth finish and hygienic design
- Conforming to relevant standards
- Fixed type suitable for bathroom use

#### **Other Accessories**

- Screws, wall plugs, brackets, and fixing accessories
- All components shall be of approved make and quality

### **3. Fixing**

- Soap dish shall be fixed on wall at required height and position
- Proper alignment and level shall be ensured
- Fixing shall be done using suitable screws and wall plugs
- Unit shall be firmly fixed without looseness

### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and neat installation shall be ensured
- Care shall be taken to avoid damage to tiles or wall surface during fixing
- Neat and hygienic finish shall be maintained

## **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

### **Item No. 123**

**Providing and fixing Hindware/cera/jeguar brand Towel Ring with necessary connections & including all necessary fittings as per EIC.**

#### **1. Scope of Work**

The work shall consist of providing and fixing towel ring of approved brand, including all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

#### **2. Materials**

##### **Towel Ring**

- Towel ring of approved quality
- Make: Hindware / Cera / Jaguar or equivalent approved

##### **Material Specifications**

- Durable, corrosion-resistant material (CP brass / stainless steel as applicable)
- Smooth polished finish
- Hygienic and suitable for bathroom use
- Conforming to relevant standards

##### **Other Accessories**

- Screws, wall plugs, brackets, and fixing accessories
- All components shall be of approved make and quality

#### **3. Fixing**

- Towel ring shall be fixed on wall at required height and location
- Proper alignment and level shall be ensured
- Fixing shall be done using suitable screws and wall plugs
- Unit shall be firmly fixed without looseness

#### **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and neat installation shall be ensured
- Care shall be taken to avoid damage to wall or tiles during fixing
- Clean and finished appearance shall be maintained

## **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

### **Item No. 124**

**Providing and fixing Hindware/cera/jeguar brand 24" Towel Rod with necessary connections & including all necessary fittings as per EIC.**

#### **1. Scope of Work**

The work shall consist of providing and fixing towel rod of approved brand, including all necessary fittings, fixtures, and connections, complete as directed by the Engineer-in-Charge (EIC).

## **2. Materials**

### **Towel Rod**

- Towel rod of approved quality
- Size: 24 inch
- Make: Hindware / Cera / Jaguar or equivalent approved

### **Material Specifications**

- Durable, corrosion-resistant material (CP brass / stainless steel as applicable)
- Smooth polished finish
- Hygienic and suitable for bathroom use
- Conforming to relevant standards

### **Other Accessories**

- Screws, wall plugs, brackets, and fixing accessories
- All components shall be of approved make and quality

## **3. Fixing**

- Towel rod shall be fixed on wall at required height and position
- Proper alignment and level shall be ensured
- Fixing shall be done using suitable screws and wall plugs
- Unit shall be firmly fixed without looseness

## **4. Workmanship**

- Work shall be carried out by skilled workers
- Proper alignment and neat installation shall be ensured
- Care shall be taken to avoid damage to wall or tiles during fixing
- Clean and finished appearance shall be maintained

## **5. Measurement**

- Measurement shall be taken in **Number (Each)** of complete unit installed
- No separate measurement shall be made for fittings or accessories

**Deputy Executive Engineer  
Capital Project Sub Div. No.02  
Gandhinagar**

**Executive Engineer  
Capital Project Division No.1  
Gandhinagar**

## SCHEDULE FOR TESTING OF MATERIAL

For ensuring quality control and workmanship, various tests prescribed below for corresponding to the material concerned shall be as periodic intervals as stipulated below.

The materials shall be got tested at GERI or Government recognised laboratory or field Laboratory of GERI for which 1% of the estimated amount to tender shall be recovered from the contractor from the R.A. Bill and Final Bill as the testing charges shall be paid by the Government to the Laboratory. However if the charges increase over 1% no excess recovery shall be made from the contractor as per resolution of B & C department dated 10<sup>th</sup> May 1985, vide TNC/1085 (4) S.

Sr. No.	Brief Description of materials to be tested.	Prescription of test which shall be carried out	Frequency @ which test shall be carried out (As per GERI Q.C. Vol.I, 2002)	Qty. of materials	Total No. of test to be carried out
1	2	3	4	5	6
1	Coarse Agreement (metal, H.B. gravel etc.)	Gradation test, impact value, flakiness index, water absorption, stripping value.	1/150 M <sup>3</sup> for concrete or as per specification. H.B. Metal		
2	Fine Agreement (Sand)	Gradation, fineness modulus, specific gravity, water absorption, silt content.	1/150 M <sup>3</sup> for concrete or as per requirement of relevant specification.		
3	Bricks	Dimension and tolerance, water absorption, compressive strength, efflorescence.	1 test per 50,000 Bricks 5 bricks from (Sample) 5 bricks from (Sample) 5 bricks from (Sample)		
4	Glazed Tiles	Water absorption Transverse strength abrasion, size tolerances.	1/2000 tiles (18 tiles for sample)		
5	Vitrified Tiles	Water absorption Transverse strength abrasion, size tolerances.	1/2000 tiles (18 tiles for sample)		
6	Ceramic Tiles	Water absorption Transverse strength abrasion, size tolerances.	1/2000 tiles (18 tiles for sample)		
7	C.C. Cube	Compressive strength (I.S.516-1959)	Qty of C.C.M <sup>3</sup> 1-5                      1 test 6-15                    2 test 16-30                  3 test 31-50                  4 test 51 & above          4 + 1 for each addni. 50M <sup>3</sup> or par thereof		
8	Cement	Consistency, setting time, compressive strength, fineness, chemical analysis, soundness	Upto 50 T              1 test 50-100 T              2 test 100-200 T            3 test 200-300 T            4 test 300-500 T            5 test 500-800 T            6 test 800-1300 T          7 test & 8test for larger consignment.		
9	- Kapachi - grit	Gradation test, impact value, flakiness index, abrasion test, stripping value for asphalt.			
10	Indian Teak wood.	Anatomy test, density test, moisture content test			
11	Flush Door				
12	Paver Block		1 Test Per 10,000 Blocks		
13	Kerb Stone				

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