

**NAME OF WORK:- SR TO RESTORATION, REPAIR AND REPLACEMENT WORKS OF COURT ROOM AND JUDGE CHAMBER AT DISTRICT COURT, RAJKOT (DAMAGED DUE TO FIRE).**

**:: SPECIFICATION OF MATERIALS ::**

**M-1 Water**

**1.1** Water shall not be salty or brackish and shall be clean, **reasonably clear and free from objectionable** quantities of silt and traces of oil and injurious alkalies, salts, organic matter and other deleterious material which will either weaken the mortar or concrete or cause efflorescence or attack the steel in R.C.C. Container for transport, storage and handling of water shall be clean. Water shall conform to the standards specified in I.S. 456-1978.

**1.2.** If required by Engineer-in-charge it shall be tested by comparison with distilled water. Comparison shall be made by means of standard cement tests for soundness, time of setting and mortar strength as specified in I.S. 269-1976. Any indication of unsoundness, change in time of setting by 30 minutes or more or decrease of more than 10 per cent in strength of mortar prepared with water sample when compared with the results obtained with mortar prepared with distilled water shall be sufficient cause for rejection of water under test.

**1.3.** Water for curing mortar, concrete or masonry should not be too acidic or too alkaline. It shall be free of elements which significantly affect the hydration reaction or otherwise interfere-with the hardening of concrete during curing or those which produce objectionable stains or other unsightly deposits on concrete or mortar surfaces.

**1.4.** Hard and bitter water shall not be used for curing.

**1.5.** Potable water will be generally found suitable for curing mortar or concrete. **M-2. Lime**

**2. 1** Lime shall be hydraulic lime as per I.S. 712-1973. Necessary test shall be carried out as per I.S. 6932 (Part I to X), 1973.

**2.2** The following field tests for times are to be carried out:

(1) A very rough idea can be formed about the type of lime by its visual examination i.e. fat lime bears pure white colour, lime in form of porous lumps of dirty white colour indicates quick lime, and solid lumps are unburnt lime stone.

(2) Acid tests for determining the carbonate content in lime. Excessive amount of impurities and rough determination of class of lime.

**2.3** Storage shall comply with I.S. 712-1973. The slaked lime, if stored, shall be kept in a weather proof and damp-proof shed with impervious floor and sides to protect it against rain, moisture, weather and extraneous materials mixing with it. All lime that has been damaged in any way shall be rejected and all rejected materials shall be removed from site of work.

**2.4** Field testing shall be done according to I.S. 1624- 1974 to show the acceptability of materials.

**M-3. Cement**

**3.1** Cement shall be ordinary portland slag cement as per I.S. 269-1976 or Portland slag cement as per I.S. 455-1976.

**M-4. White Cement**

**4.1** The white cement shall conform to I.S. 804112-E 1978.

**M-5. Coloured Cement**

**5.1** Coloured cement shall be with white or gray portland cement as specified in the item of the work.

**5.2.** The pigments used for coloured cement shall be of approved quality and shall not exceed 10% of cement used in the Mix. The mixture of pigment shall be properly grounded to have a uniform colour and shade. The pigments shall have such properties to provide for durability under exposure to sunlight and weather.

**5.3.** The pigment shall have the property such that it is neither affected by the cement nor detrimental to it. **M-6. Sand**

**6.1.** Sand shall be natural sand, clean, well graded, hard strong durable and gritty particle free from injurious amounts of dust clay, kankar nodules, soft or flaky particles shale, alkali, salts organic matter, loam, mica or other deleterious substance and shall be got approved from the Engineer-in-charge. The sand shall not contain more than 8 percent of silt as determined by field test. If necessary the sand shall be washed to make it clean.

**6.2. Coarse Sand:**

The fineness modulus of coarse sand shall not be less than 2.5 and shall not exceed 3.0. The sieve analysis of coarse shall be as under.

<b>L S. Sieve Designation</b>	<b>Percentage by Weight Passing sieve</b>	<b>I S. Sieve Designation</b>	<b>Percentage by Weight Passing through sieve</b>
4.75 mm.	100	600 Micron	30-100
2.36 mm.	90 to 100	300 Micron	5-70
1.18 mm.	70-100	150 Micron	0-50

**6.3. Fine Sand:**

The fineness modulus shall not exceed 1.0. The sieve analysis of fine sand shall be as under:

<b>L S. Sieve Designation</b>	<b>Percentage by Weight Passing sieve</b>	<b>I S. Sieve Designation</b>	<b>Percentage by Weight Passing through sieve</b>
4.75 mm.	100	600 Micron	40-85
2.36 mm.	100	300 Micron	5-50
1.18 mm.	70-100	150 Micron	0-10

**M-7. Stone Dust:**

**7. 1.** This shall be obtained from crushing hard black trap or equivalent. it shall not contain 'more than 8%" silt as determined by field test with measuring cylinder. The method of determining silt contents- by field test is given as under:

**7.2.** A sample of stone dust to be tested shall be placed without. drying in 200 mm. measuring cylinder. The quantity of the sample shall be such, that it fills the cylinder upto 100 mm. mark. The clean water shall be added upto 150 mm. Mark, The mixture shall be stirred vigorously and the content allowed to settle for 3 hours.

**7.3.** The height of silt visible as settled layer above the stone dust shall be expressed as percentage of the height of the stone dust below. The stone dust containing more than 8% silt shall be washed so as to, bring the silt content within the allowable limit.

**7.4.** The fineness modulus of stone dust shall not be less than 1.80.

#### **M-8. Stone Grit**

**8.1.** Grit shall consist of crushed or broken stone and be hard strong, dense, durable, clean, of proper gradation and free from skin or coating likely to prevent adhesion of mortar. Grit shall generally be cubical in shape and as far as possible flaky elongated pieces shall be avoided. It shall generally comply with the provisions of I.S. 383-1970. Unless special stone of particular quarries is mentioned, grit shall be obtained from the best black trap or equivalent hard stone as approved by the Engineer-in-charge. The grit shall have no deleterious reaction with cement.

**8.2.** The grit shall conform to the following gradation as per sieve analysis

<b>L S. Sieve Designation</b>	<b>Percentage by Weight Passing sieve</b>	<b>I S. Sieve Designation</b>	<b>Percentage by Weight Passing through sieve</b>
12.50 mm	100 %	4.75 mm	0-20 %
10.00 mm	80-100 %	2.36 mm	0-25 %

**8.3.** The crushing strength of grit will be such as to allow the concrete in which it is used to built up the specified strength of concrete.

**8.4.** The necessary tests for 'grit shall carried out as per the requirements of I.S. 2386 (Parts I to VII) 1963, as per instructions of the Engineer-in-charge. The necessity of test will be decided by the Engineer-in-charge.

#### **M-9. Cinder:**

**9.1** Cinder is well burnt furnace residue which has been fused or sintered into lumps of varying sizes.

**9.2.** Cinder aggregates shall be well burnt furnace residue obtained from furnace using coal fuel only. It shall be sound clean free from clay, dirt, ash or other deleterious matter.

**9.3.** The average grading for cinder aggregates shall be as mentioned below:

<b>L S. Sieve Designation</b>	<b>Percentage Passing</b>	<b>I S. Sieve Designation</b>	<b>Percentage Passing</b>
20 mm	100	4.75 mm	70
10 mm	86	2.36 mm	52

#### **M-10. Lime Mortar**

**10. 1.** Lime shall conform to specification M-2. Water shall conform to specification M-1.

Sand shall conform to specification M-6.

#### **10.2. Proportion of Mix:**

**10.2.1.** Mortar shall consist of such proportions of slaked lime and sand as may be specified in the item. The slaked lime and sand be measured by volume. **10. 3. Preparation of mortar:** **10.3. 1.** Lime mortar shall be prepared by wet process as per I.S. 1625-1971. Power driven mill shall be used for preparation of lime mortar. The slaked lime shall be placed in the mill in an even layer and ground for the 180 revolutions with a sufficient water. Water shall be added as required during grinding (care being taken not to add more water) that will bring the mixed material to a

consistency of stiff paste. Thoroughly wetted sand shall then be added evenly and the mixture ground for another 180 revolutions.

**10.4. Storage**

**10.4. 1.** Mortar shall always be kept damp, protected from sun and rain till used up, covering, it by tarpaulin or open sheds.

**10.5. Use**

**10.5. 1.** All mortar shall be used as soon as possible after grinding. It should be used on the day on which it is prepared. But in no case mortar made earlier than 36 hours shall be permitted for use.

**M- 11. Cement Mortar**

**11. 1.** Water shall conform to specification M71. Cement shall conform to specification M-3. Sand shall conform to

**M-6. 11. 2. Proportion of Mix**

**11.2.1.** Cement and sand shall be mixed to specified proportion, sand being measured by-measuring boxed.

The proportion of cement will be by volume on the basis of 50 Kg./Bag of cement being equal to 0.0342

Cu.m. The mortar may be hand mixed or machine mixed as directed.

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**:: RECAPITULATION SHEET ::**

1]	Amount as per T.S. accorded Division office	Rs. 17,13,400.00
2]	Amount put to Tender	Rs. 14 39 771.06
3]	Amount not put to tender :: [a] Q.C. C. @ 1%	Rs. 14,397.71
4]	GST @ 18%	Rs. 2,59,158.59
<b>Total 2+ 3</b>		<b>Rs. 17,13,327.36</b>
5]	Deduct cost of Dismantalled materials	Rs. 2,400.00
		Rs. 17,10,927.36
4]	Due to rounding and Av. Rate	Rs. 2,472.64
		<b>Rs. 17,13,400.00</b>

Deputy Ex. Engineer,  
Police Campus (R&B) Sub-Division,  
Rajkot.

**NAME OF WORK:- SR TO RESTORATION, REPAIR AND REPLACEMENT WORKS OF COURT ROOM AND JUDGE CHAMBER AT DISTRICT COURT, RAJKOT (DAMAGED DUE TO FIRE).**

**:: ITEMSIE SPECIFICATION FOR THE WORK ::**

**Item No. 1 ::** Providing and Arranging dias table having Top 40 mm thick overall made from 18mm thick MR grade plywood with 4 mm thick veneer on top and 0.8 mm thick backing laminate and teakwood border having size 25 mm x 12 mm with melamine polished finish. Top border to be made from 75 mm x 50mm indian teak wood. Top and both side 40 mm thick finish with 4mm thick veneer having melamine polish finish. Apron to be made from 18mm thick MR grade plywood with 4mm thick veneer having melamine polish finish with 0.8 mm thick balancing laminate. All veneer surface to be melamine polish. Bookslot on the table shall be provided as per the detail drawing. Including all materials and labour etc. complete as per drawing and instruction of engineer-in charge. ( with T.W. border with melamine polish ) Dias Table - 2400mm x 900mm x 800mm (H))

MR Grade Ply of 18 mm

Top,sides,Drawers & apron finished with 4 mm thick Natural Teak veneer

Bottom and drawer inside is finished with 0.8mm thick balancing laminate

Horizontal & vertical structure made of 50x50x1.6 mm & 50x25x1.8 mm ERW rectangular / square tube (CRC )

Top frame is finished with 75x50mm indian teakwood

Top Border is finished with 50x12 mm indian teakwood border patti with moulding edge

Sides , drawer box border is finished with 25x12 mm indian teakwood border patti

Good quality adjustable stud/ shoe / buffer at bottom

All steel parts in powder coated finish with standard quality powder after 10 tanks anti rust treatment

All wooden and veneer surface is finished with melamine polish.

### **Materials**

ERW rectangle / square pipe (CRC) shall confirm to IS 1239 Part-I 2004 and shall be of specified size as per drawings.

18 mm & 6 mm thick MR Grade plywood shall confirm to IS 303- Reaffirmed 2003 & of approved make

Fixtures & joineries shall confirm to General Specification No.- 3

4 mm thick veneer shall be of approved make

0.8mm thick laminate shall be of approved make

8 mm thick back painted clear float glass shall confirm to IS - 14900-2000 Reaffirmed 2005 & of approved make

Adhesive shall confirm to General Specification No.- 3

All required hardwares shall confirm to General Specification No.- 3

Teakwood shall confirm to the standard specification of the booklet and confirm to M-29

Powder coating shall confirm to General Specification No.- 1

### **Workmanship**

The working table shall be of overall size 2400mm x 900mm x 800mm

Drawer Unit size : 450mm x 550mm x 600 mm

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

Vertical and horizontal & supporting structure made of 50x50x1.6mm thick square and 50x25x1.8mm thick rectangular ERW pipe ( CRC )

MR grade ply of 18 mm & 6 mm thick as per the requirement

All edges shall be finished with indian teakwood border of specified size with

melamine polish finish as per following specification

### **2.1 Directions of Melamine Polishing on new surface**

**a)** Sand the surface along the grains with Emery paper no 180 or with a suitable grade of sand paper. Brush the surface free of loose dust.

**b)** Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

**c)** Apply a coat of Asian/MRF/ Berger Natural wood finish clear sealer. After overnight drying, smooth sand with emery paper no 320 and wipe the surface free of loose dust. Clear sealer is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs. Compressed air used for spray application should be free from oil and water.

**d)** if instructed by the engineer - in - charge apply Asian/ MRF / Berger wood stains by ragging after filling step or mix it in apcolite natural wood finish up to 20% by volume and apply by spraying after sealer coat. In application by ragging allow a drying time of 5 - 10 mins In between coats and 30 - 60 mins before over coating with finish coats.

**e)**Apply Asian/MRF / Berger natural wood finish - clear matt/semi glossy/ glossy as follows. Asian/ Apcolite natural wood finish - is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency



adjustment. The mixture of base and hardener should be used within 8 hrs.

**f)**Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finishclear

matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

Bottom of working top and all other plywood surfaces which are not covered by veneer , shall be finished with balancing laminate of 0.8mm thick.

8 mm back painted clear float glass shall be placed such a way that its top flushes with the teakwood border frame.

Epoxy powder coating shall be carried out confirming to General specification No.-

Melamine polish shall be carried out as per the standard detail mentioned in the para 2.1 (Direction of Melamine polishing on new surface)( a to f ) of detailed specification of Item No.-1

Veneer and balancing laminate shall be used without any bubbles and scratches in perfect style and shape shall be used as per drawing and directed by Engineer-in-charge.All the ply member for table and drawer box shall be exactly in right angle and true shape.The right angle checked from inside surface of ply frames of the respective members.All the member shall be straight without any warp of bow and shall have smooth surface at all sides exposed in right angle to each other.Veneer/ Laminate sticking shall have airless pressing in true line,level and shape without any bubble as per drawing. All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

**Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 2 ::** Providing and Arranging side unit with top 40mm overall thickness made from 18 mm thick MR grade plywood with 4.00 mm thick veneer on top with melamine finished polish. Side and drawer made of 18mm thick MR grade plywood with 4.00 mm thick veneer with melamine finished polish and inside 0.8mm thick balancing laminate of approved shade. Teakwood border with melamine finished polish of specified size to be provided all around the borders of plywood. Drawer run on Ebco make telescopic channel with Godrej make lock with Two keys and shutter fixed with auto hinges incld. all necessary fixtures and fastening as approved and back of the unit with 6mm thick MR grade plywood with 0.8 mm thick laminate of approved shade with nylon bullet including all materials and labour etc. Complete as per drawing and instruction of Engineer-in charge  
Side table - Veneer - 900mm x 450mm x 750 mm

**The size of side table Veneer shall be 900mm x 450mm x 750mm as per Design or ad directed by the Engineer-in-charge**

- ‘ MR Grade Ply of 18 mm & 6 mm thick
- ‘ Top, sides, Drawers made of 1mm thick MR grade plywood with 4mm thick veneer with melamine finished polish and inside 0.8mm thick balancing laminate
- ‘ Bottom and drawer inside is finished with 0.8mm thick balancing laminate
- ‘ The drawers shall be run with Ebco make telescopic channels and shall be provided with Godrej or equivalent make locking system with two keys and shall be fixed on Auto Hinges
- ‘ Top frame is finished with 75x50mm indian teakwood
- ‘ Top Border is finished with required size indian teakwood border patti with moulding edge and shall be finished with melamine polish as per following specification
- ‘ Sides , drawer box border is finished with 25x12 mm indian teakwood border patti
- ‘ Good quality adjustable stud/ shoe / buffer at bottom

- ‘ All steel parts in powder coated finish with standard quality powder after tanks anti rust treatment
- ‘ All wooden and veneer surface is finished with melamine polish.

### **Materials**

18 mm & 6 mm thick MR Grade plywood shall confirm to IS 303- Reaffirm 2003 & of approved make

Fixtures & joineries shall confirm to relevant I.S. Specification

4 mm thick veneer shall be of approved make

0.8mm thick laminate shall be of approved make

Adhesive shall confirm to General Specification No.- 3

All required hardwares shall confirm to relevant I.S. Specification

Teakwood shall confirm to the standard specification of the booklet and confirm to M-29

Powder coating shall confirm to relevant I.S. Specification

### **Workmanship**

The Side table shall be of overall size **900mm x 450mm x 750mm**

Drawer Unit-450 x 550 x 600 mm having all Structure 18 mm thick MR grade plywood with veneer and teakwood border of specified size with melamine polish finish.... Drawers (3 Nos) slides on Ebco make telescopic channel with Godrej make lock with two keys and necessary fixtures and fastening as approved with balancing laminate inside 0. mm thick of approved shade

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

- MR garde ply of 18 mm & 6 mm thick as per the requirement
- All edges shall be finished with indian teakwood border of specified size with melamine polish finish
- Bottom of working top and all other plywood surfaces which are not covered by veneer, shall be finished with balancing laminate of 0.8mm thick.
- Epoxy powder coating shall be carried out conforming to General I.S.specification

#### **2.1 Directions of Melamine Polishing on new surface**

**a)** Sand the surface along the grains with Emery paper no 180 or with suitable grade of sand paper. Brush the surface free of loose dust.

**b)** Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

**c)** Apply a coat of Asian/MRF/ Berger Natural wood finish clear seal. After overnight drying, smooth sand with emery paper no 320 and wash the surface free of loose dust. Clear sealer is a two - component system consisting of base and hardener. These should be mixed in recommended ratio. The two components should be mixed in a glass plastic, or enameled container. Allow the mixture to stand for 30 minutes and then apply by brushing or spraying using the recommended thinners for consistency adjustment. The mixture of base and hardener should be used within 8 hrs. Compressed air used for spray application should be free from oil and water.

**d)** if instructed by the engineer - in - charge apply Asian/ MRF / Berger wood stains by ragging after filling step or mix it in apcolite natural v finish up to 20% by volume and apply by spraying after sealer coat. application by ragging allow a drying time of 5 - 10 mins In between coats and 30 - 60 mins before over coating with finish coats.

**e)**Apply Asian/MRF / Berger natural wood finish - clear matt/semi glossy/ glossy as follows. Asian/ Apcolite natural wood finish - is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs.

**f)**Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finishclear matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

Veneer and balancing laminate shall be used without an bubbles and scra in perfect style and shape shall be used as per drawing and direct Engineer-in-charge.All the ply member for table and drawer box sh exactly in right angle and true shape.The right angle checked from i surface of ply frames of the respective members.All the member sh straight without any wrap of bow and shall have smooth surface at all exposed in right angle to each other.Veneer/ Laminate sticking shall airless pressing in true line,level and shape without any bubble as per dra

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and hardener should be used within 8 hrs.

f) Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finish clear matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

- All materials, hardware, accessories, adhesives, lamination sheet shall be per IS specification.

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.



**Item No. 3 ::** Providing and Arranging table having top 40mm thick made From 18mm Thick MR Grade plywood with 4.00mm thick veneer and Border patty on exposed edges and 0.8mm thick Balancing laminate and Melamine Polish finish. Leg and frame to be made from 50 x 50 x 1.6mm size CRC Square pipe and Top and apron Frame to be made from 50mm x 25mm x 1.8mm size MS CRC pipe with epoxy powder coating 50 micron with leveller. Apron 18mm thick MR Grade plywood with 4.00 mm thick veneer Melamine Polish Finish with balancing laminate 0.8mm thick including all Materials Fixtures & fastenings and Labours etc. Complete as per Drawing and intrusction of Engineer - in- charge ( with T.W border with Melamine polish )Steno Table & B.C Table Veneer - 1200mm x 900mm x 750mm

- MR Grade Ply of 18 mm & 6 mm thick
- Top,Front sides & Drawers finished with 4 mm thick Natural Teak veneer
- Bottom and drawer inside is finished with 0.8mm thick balancing laminate
- The drawers shall run on Ebco make telescopic channels with Godrej or equivalent make lock with TWO keys and shall be fixed with auto hinges
- The CRC Sqauare Pipe of 50x24x1.8mm shall be used for Frame
- Good quality adjustable stud / leg shoe at bottom
- All wooden and veneer surface is finished with melamine polish.

6mm thick MR grade plywood for back of the unit shall conform to relevent I.S. specifcations

The square CRC pipe shall conform to relevent IS specification

- \* The Melamine polish shall be of approved quality

## **1 Materials**

18 mm & 6 mm thick MR Grade plywood shall confirm to IS 303- Reaffirmed 2003 & of approved make

Fixtures & joineries shall confirm to General Specification of materials

4 mm thick veneer shall be of approved make

0.8mm thick laminate shall be of approved make

Melamine Polish shall conform to relevant IS specification

Adhesive shall conform to relevant I.S. Specification.

All required hardware shall conform to General requirement of materials as given in Specification of material in Technical Specification for building work

Teakwood shall conform to the standard specification of the booklet and confirm to M-29

## **2 Workmanship**

Side Unit size : 1200mm x 900mm x 750 mm

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

- MR grade ply of 18 mm & 6 mm thick as per the requirement
- Top shall be made from 18 mm thick MR grade ply having 40 mm thickness and Bottom & sided shall be of 18 mm thickness.
- All edges shall be finished with indian teakwood border of specified size with melamine polish finish
- Drawer shutter shall be made from 18 mm thick MR grade ply & fixed with the unit on auto hinges.
- Drawer shall slides on Telescopic channel of 500 mm of make shall confirm to General Specification No.-

- Drawer shutter shall be openable with S.S.Auto Hinges 16 degree & lock with two extra keys for each lock shall be of make as specified in the General Specification No.-
- Bottom of unit and all other plywood surfaces which are not covered by veneer , shall be finished with balancing laminate of 0.8mm thick.
- Veneer and balancing laminate shall be used without any bubbles and scratches in perfect style and shape shall be used as per drawing and directed by Engineer-in-charge.All the ply member for table and drawer box shall be exactly in right angle and true shape.The right angle checked from inside surface of ply frames of the respective members.All the member shall be straight without any warp of bow and shall have smooth surface at all sides exposed in right angle to each other.Veneer/ Laminate sticking shall have airless pressing in true line,level and shape without any bubble as per drawing.
- All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

### **2.1 Directions of Melamine Polishing on new surface**

**a)** Sand the surface along the grains with Emery paper no 180 or with a suitable grade of sand paper. Brush the surface free of loose dust.

**b)** Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

**c)** Apply a coat of Asian/MRF/ Berger Natural wood finish clear sealer. After overnight drying, smooth sand with emery paper no 320 and wipe the surface free of loose dust. Clear sealer is a two - component system

consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs. Compressed air used for spray application should be free from oil and water.

**d)** if instructed by the engineer - in - charge apply Asian/ MRF / Berger wood stains by ragging after filling step or mix it in apcolite natural wood finish up to 20% by volume and apply by spraying after sealer coat. In application by ragging allow a drying time of 5 - 10 mins In between coats and 30 - 60 mins before over coating with finish coats.

**e)**Apply Asian/MRF / Berger natural wood finish - clear matt/semi glossy/ glossy as follows. Asian/ Apcolite natural wood finish - is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs.

**f)**Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finishclear matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 4 ::** Providing And Arranging table for judge chamber having overall thickness of Top 40 mm (18+18+4mm)18 mm thick MR Grade plywood and 4.00 mm thick veneer at top with melamine polish finish including 8mm thick back painted glass. Top to be made from 75mm x 50 mm Indian teak wood with half round moulded on long side with melamine polish. Leg 50 mm x 50 mm x 1.6 mm thick CRCA Square pipe and supporting pipe 50 mm x 25mm x 1.8 mm finishing with epoxy powder coated 50 micron with leveller. Apron having 18 mm thick MR Grade plywood with 4.00 mm thick veneer having melamine polish finish. Drawer Unit-450 x 550 x 600 mm having all Structure 18 mm thick MR grade plywood with veneer and teakwood border of specified size with melamine polish finish. Drawers (3 Nos) .. slides on Ebco make telescopic channel with Godrej make lock with two keys and necessary fixtures and fastening as approved with balancing laminate inside 0.8 mm thick of approved shade including all materials and labour etc. Complete as per drawing and instruction of engineer-in charge. Side Unit to be provided saparetylly.Judge Table with MDU veneer Size :- 1800mm x 900mm x 750mm

**The size of table shall be 1800mm x 900mm x 750mm**

- MR Grade Ply of 18 mm & 6 mm thick
- Top to be made wotj 50x40mm Indian Teak wood with half round moudled on long side with PU Polish. Drawers & apron finished with 4 mm thick Natural Teak veneer with PU polish finish.
- Bottom and drawer inside is finished with 0.8mm thick balancing laminate
- Drawer Unit-450 x 550 x 600 mm having all Structure 18 mm thick MR grade plywood with veneer and teakwood border of specified size with PU polish finish.. Drawers slides on Ebco make telescopic channel with Godrej make lock with two keys and necessary fixtures and fastening as approved with balancing laminate inside 0.8 mm thick of approved shade
- Top 40 mm (18+18+4mm)18 mm thick MR Grade plywood and 4.00 mm thick Coriuan at top finish
- Leg 40 mm (18+18+4mm)18 mm thick MR Grade plywood and 4.00 mm thick veneer at top with PU polish finish

- Good quality adjustable stud/ shoe / buffer at bottom
- All wooden and veneer surface is finished with melamine polish.

The square CRC pipes shall conform to relevant IS specification

The Melamine polish shall be of approved quality

## **1 Materials**

18 mm & 6 mm thick MR Grade plywood shall conform to IS 303- Reaffirmed 2003 & of approved make

Fixtures & joineries shall conform to General I.S. Specification

4 mm thick veneer shall be of approved make

0.8mm thick laminate shall be of approved make

Top to be made with 50x40mm Indian Teak wood with half round moulded on long side with PU Polish. Drawers & apron finished with 4 mm thick Natural Teak veneer with PU polish finish.

Adhesive shall conform to General Specification of material

All required hardware shall conform to General Specification of materials

Teakwood shall conform to the standard specification of the booklet and confirm to M-29

Powder coating shall conform to General I.S. Specification

## **2 Workmanship**

Top to be made with 50x40mm Indian Teak wood with half round moulded on long side with PU Polish. Drawers & apron finished with 4 mm thick Natural Teak veneer with PU polish finish.

Drawer Unit-450 x 550 x 600 mm having all Structure 18 mm thick MR grade plywood with veneer and teakwood border of specified size with PU polish finish.. Drawers slides on Ebco make telescopic

channel with Godrej make lock with two keys and necessary fixtures and fastening as approved with balancing laminate inside 0.8 mm thick of approved shade

Top 40 mm (18+18+4mm) 18 mm thick MR Grade plywood and 4.00 mm thick Coriuan at top finish

Leg 40 mm (18+18+4mm) 18 mm thick MR Grade plywood and 4.00 mm thick veneer at top with PU polish finish

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

All edges shall be finished with indian teakwood border of specified size

- with melamine polish finish as per detailed specification of Item no. 19.70 in General Technical Specification for building work

Bottom of working top and all other plywood surfaces which are not

- covered by veneer , shall be finished with balancing laminate of 0.8mm thick.

Veneer and balancing laminate shall be used without any bubbles and scratches in perfect style and shape shall be used as per drawing and directed by Engineer-in-charge. All the ply member for table and drawer box shall be exactly in right angle and true shape. The right angle checked from inside surface of ply frames of the respective members. All the member

- shall be straight without any warp of bow and shall have smooth surface at all sides exposed in right angle to each other. Veneer/ Laminate sticking shall have airless pressing in true line, level and shape without any bubble as per drawing.

### **2.1 Directions of Melamine Polishing on new surface**

**a)** Sand the surface along the grains with Emery paper no 180 or with



a suitable grade of sand paper. Brush the surface free of loose dust.

**b)** Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

**c)** Apply a coat of Asian/MRF/ Berger Natural wood finish clearsealer. After overnight drying, smooth sand with emery paper no 320 and wipe the surface free of loose dust. Clear sealer is a two - component system consisting of base and hardener. These should be mixed

- All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 5 ::** Providing and Arranging acrylic work top with 10mm clear imported Acrylic sheet with two brass rods with height adjustable of overall size 580 mm x 400 mm etc complete as directed by engineer incharge. Approved Make: scholar/pearl/alkonsign/elora Acrylic Worktop

a] Materials :: Acrylic sheet of scholar/pearl/alkonsign/elora or equivalent make and shall be of 10mm thickness or as specified in the item and of an specified shape and size as the case may be. Panels may be flat or curved. It should be light in weight. It shall be colourless or coloured or opaque as specified in the item. Colourless sheet shall be as transparent as the finest optical glass. Its light transmission rate shall be about 95%. Transparency shall not be affected for the sheets of larger thickness. It shall be extremely resistant to sunlight, weather and low temperatures'. It shall not show any significant yellowing or change in physical properties or loss of light- transmission over a longer period of use. The sheet shall be impact resistant also. Sheets should be available in complete range of standard transparent, translucent and opaque colours. Sheets shall be of such quality that they can be cut, bent and jointed as desired. Solution for the joints shall be used as per the requirement of manufacturer.

[b] Workmanship :: The Acrylic worktop shall be provided with 10mm clear imported sheet with Two Brass rods with height adjustable of overall size 580mm x 400mm or as directed by the Engineer-in-charge

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries, hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 6 ::** Providing and Arranging side unit with top 40mm overall thickness made from 18 mm thick MR grade plywood with 4.00 mm thick veneer on top with melamine finished polish. Side and drawer made of 18mm thick MR grade plywood with 4.00 mm thick veneer with melamine finished polish and inside 0.8mm thick balancing laminate of approved shade. Teakwood border with melamine finished polish of specified size to be provided all around the borders of plywood. Drawer run on Ebco make telescopic channel with Godrej make lock with Two keys and shutter fixed with auto hinges incld. all necessary fixtures and fastening as approved and back of the unit with 6mm thick MR grade plywood with 0.8 mm thick laminate of approved shade with nylon bullet including all materials and labour etc. Complete as per drawing and instruction of Engineer-in charge .Side Table veneer Size :- 1200mm x 450mm x 750 mm

**The size of side table Veneer shall be 1200mm x 450mm x 750mm as per Design or as directed by the Engineer-in-charge**

- MR Grade Ply of 18 mm & 6 mm thick
- Top, sides, Drawers made of 18mm thick MR grade plywood with 4mm thick veneer with melamine finished polish and inside 0.8mm thick balancing laminate
- Bottom and drawer inside is finished with 0.8mm thick balancing laminate
- The drawers shall be run with Ebco make telescopic channels and shall be provided with Godrej or equivalent make locking system with two keys and shall be fixed on Auto Hinges
- Top frame is finished with 75x50mm indian teakwood
- Top Border is finished with required size indian teakwood border patti with moulding edge and shall be finished with melamine polish as per Para 19.70 of Melamine polish shall conform to relevant IS specification
- Sides , drawer box border is finished with 25x12 mm indian teakwood border patti
- Good quality adjustable stud/ shoe / buffer at bottom

- All steel parts in powder coated finish with standard quality powder after 10 tanks anti rust treatment
- All wooden and veneer surface is finished with melamine polish.

## **1 Materials**

18 mm & 6 mm thick MR Grade plywood shall confirm to IS 303-

Reaffirmed 2003 & of approved make

Fixtures & joineries shall confirm to relevant I.S. Specification

4 mm thick veneer shall be of approved make

0.8mm thick laminate shall be of approved make

Adhesive shall confirm to General Specification No.- 3

All required hardwares shall confirm to relevant I.S. Specification

Teakwood shall confirm to the standard specification of the booklet and confirm to M-29

Powder coating shall confirm to relevant I.S. Specification

## **2 Workmanship**

The Side table shall be of overall size 1200mm x 450mm x 750mm

Drawer Unit-450 x 550 x 600 mm having all Structure 18 mm thick

MR grade plywood with veneer and teakwood border of specified

size with melamine polish finish.... Drawers (3 Nos) slides on Ebco

make telescopic channel with Godrej make lock with two keys and

necessary fixtures and fastening as approved with balancing

laminate inside 0.8 mm thick of approved shade

## **Skeleton**

Entire skeleton shall be made from materials described in item

Description and detailed drawing.

- MR garde ply of 18 mm & 6 mm thick as per the requirement
- All edges shall be finished with indian teakwood border of specified size with melamine polish finish
- Bottom of working top and all other plywood surfaces which are not covered by veneer , shall be finished with balancing laminate of 0.8mm thick.

Epoxy powder coating shall be carried out confirming to General I.S.specification

Melamine polish shall be carried out as per the standard detail mentioned in the Para 19.70 of Oil painting in Technical Specifications for Building work attached herewith

The 16mm (av.) thick stone of Korean shall be of approved quality Veneer and balancing laminate shall be used without any bubbles and scratches in perfect style and shape shall be used as per drawing and directed by Engineer-in-charge.All the ply member for table and drawer box shall be exactly in right angle and true shape.The right angle

- checked from inside surface of ply frames of the respective members.All the member shall be straight without any warp of bow and shall have smooth surface at all sides exposed in right angle to each other.Veneer/ Laminate sticking shall have airless pressing in true line,level and shape without any bubble as per drawing.
- All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 7 ::** Providing and Arranging Center table made from 37mm x 37 mm Indian teakwood leg and top frame made from 37mmx 75mm Indian teakwood having 18 mm thick Ply and 4mm thick Veneer with melamine polish and 0.8mm thick balancing laminate at bottom for shelf made with surrounding Indian teakwood frame of size 37 mm x 12 mm. The top having 12 mm thick glass with edge finish to be placed properly in groove made. Surface to be finished with melamine polish including all materials and labours etc. complete as per drawing and instruction of engineer-in charge. Center Table Veneer : size - 900mm x 600mm x 450mm

**The Center Table shall be of 900mm x 600mm x 450 as per Design or as directed by the Engineer-in-charge**

- MR Grade Ply of 18 mm thick
- Top frame is finished with 1mm thick Laminate finished with bushes
- The bushers shall be made of SS-20 Grade Steel for fixing with the understructure. It shall be welded assembly made in SS-202 Grade steel having dia 12+/-0.04
- All steel parts in powder coated finish with standard quality powder after 10 tanks anti rust treatment
- All wooden and veneer surface is finished with melamine polish.

**1 Materials**

18 mm thick MR Grade plywood shall confirm to IS 303- Reaffirmed 2003 & of approved make

a Fixtures & joineries shall confirm to relevant I.S. Specification

b 1 mm thick lamination shall be of approved make

c Adhesive shall confirm to General I.S. Specification

d All required hardwares shall confirm to relevant I.S. Specification

e Powder coating shall confirm to relevant I.S. Specification

f The 12mm thick Glass shall conform to M-38

g. Melamine shall materials shall conform to relevant IS specification

## **2 Workmanship**

The Center table shall be of overall size 900x600x450mm.

### **Skeleton**

Entire skeleton shall be made from materials described in item

Description and detailed drawing.

MR grade ply of 18 mm thick as per the requirement. Laminated sheet

- shall be I.S. Class quality

Epoxy powder coating shall be carried out conforming to General

- I.S. specification

The bushers shall be made of SS-20 Grade Steel for fixing with the

- understructure. It shall be welded assembly made in SS-202 Grade steel having dia 12 $\pm$ 0.04

All materials, hardware, accessories, adhesives, lamination sheet shall

- be as per IS specification.

## **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries, hardware etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.



**Item No. 8 ::** Providing and supply Sofa structure made from 18mm MR Grade Mr grad plywood supported with Maranti Solid wood, back side and curved part Covered with 3mm flexi ply, sofa arm made from 12mm thick MR Grade Mr grad plywood supported with maranti solid wood. Elastic Belt, 75mm board & 2.25 mm thick elastic webbing stapling in seat frame at 100 mm centre to centre distance, belt fastern in X and Y axes of seat, elastic belt elongation 45% tensile strength 350 kg. Foam 100 mm X 40 density Premium Quality foam covered with 25mm X 32 density super soft Premium Quality Foam for . soft touch filling in seat. 50 mm X 40 density Premium Quality foam covered with 25mm X 32 density super soft Premium Quality foam for soft touch filling in back. Stiching Stiching work done with well known german brand (Aman / Gutermann) Thread. Nylone & Polyster thread used as per application. 50 mm X 50 mm Wooden Legs applied with polishing. Including all materails. Hardware and labours etc. Completes as per drawing/Photographs & details and as Directed by Engineer - in - charge HOF MAKE : Cierzo 2 Seater Sofa Size :- 1425mm X 850mm x 850mm( H )

size of Sofa Structure shall be : 4925mm x 850mm x 850mm

## **1 Materials**

All materials shall be as per item description as approved by EIC and specified item's Manufacturer's specifications.

**2 seater sofa with frame :-** The indian teakwood confirming to M-29 shall be used for whole structure framing including legs ,armerest & other design with smooth polished edges & shape as per drawing / photograph or as directed by engineer-in-charge with melamine matt finish polish

**Seating Cushions :-** The seat cushion is made of 7 inches multi layered foam of density 40 D and 25mm supersoft HD with polyster fill outer layer of 180 gsm. The seating cushions have 100 mm of elastic webbing of 350 gsm with diagonal weave. The thread used is nylon bonded to provide long lasting stich strength.

**Back Rest :-** The back rest is 80mm foam of 40 Density with polyster

poly fill outer layer of 180 gsm. The polyester poly fill keeps the upholstery wrinkle free and soft.

The seat is made up of moulded Foam, upholstered with fabric. Foam density 40 kg/m<sup>3</sup> and hardness 14(+/-2) on Hampden machine at 25% compression

Tapestry, fabric & foam shall be of approved make and as per the General specification

## **2 Workmanship**

The two-seater sofa shall be of size 1425mm x 750mm x 750mm as per drawing / photograph as required & directed by Engineer-in-charge.

All teakwood members shall be finished with smooth edges and shape as directed by Engineer-in-charge.

After completion of teakwood framing and all foam fixing work, lining work and polishing work shall be executed.

The whole work is to be completed as per design, sample & drawing and shall be as per the instruction of Engineer-in-charge.

- Melamine polish shall be carried out as per the standard detail mentioned in the p19.70 of Oil painting in Technical Specifications for Building work attached herewith

## **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries, hardware etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

**Item No. 9 ::** Providing , Arranging & fixing wooden coat stand made of Indian teakwood size-vertical member 65mm x 65mm size and bottom cross design teakwood member of 75mm (H) x 37mm as per design with melamine polish including Moulding edges.with teakwood single hanger of standard size (75mm x 35 mm) along with 2 nos brass hook, including all materials and labours etc. complete as per drawing and instruction of engineer-in charge.Coat Stand: 650mm x 650mm x 1500mm (H)

Indian Teakwood shall be used with necessary moulding and edge polishing.

- 
- Good quality adjustable stud at bottom
- All wooden surface is finished with melamine polish in minimum 3 coats.
- 
- All wooden members shall be finished as directed by Engineer-in-charge.
- 
- Brass hook shall be fixed for holding the coat as directed
- 

### **Materials**

1

Teakwood shall confirm to the standard specification of the booklet and confirm to M-29

Fixtures & joineries shall confirm to General Specification No.- 3

Adhesive shall confirm to General Specification

All required hardwares shall confirm to General Specification

### **Workmanship**

2

Side Unit size : 650mm x 650mm x 1500mm

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

- Indian teakwood shall be used for the entire structure with polished smooth edge and shape with melamine polish finish as directed by engineer in charge.
- Melamine polish shall be carried out as per the standard detail mentioned in the Para 19.70 of Oil painting in Technical Specifications for Building work attached herewith
- All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 10 ::** Providing and Arranging Dinning Table made from indian Teakwood with legs having size 65mm x 65mm with moulding as per instruction and top framing to be made from 75 mm x 37mm size. Top to be made from 18mm thick MR grade plywood finish with 4mm thick approved veneer and 0.8mm balancing laminate on back side with Indian Teakwood beading on sides of size 50 mm x 25 mm and 16mm thick korean stone on top of the table. All veneer surfaces and wooden structure to be finished with melamine polish including all materials and labour etc.Complete as per drawing and instruction of engineer-in charge. Dinning Table Size veneer :- 750mmx 750mm x 750mm

**The Size of Dinning Table shall be 750mmx 750mm x 750mm or as directed by the Engineer-in-charge**

- MR Grade Ply of 18 mm thick
- Indian Teakwood shall be use for frame structure including legs of desired size and shape as shown in the drawings or as directed by engineer-in-charge.
- Top is finished with 4 mm thick Natural Teak veneer
- Bottom is finished with 0.8mm thick balancing laminate
- All exposed border is finished with 50 x25 mm indian teakwood border patti with smooth moulding edge
- Good quality adjustable stud at bottom
- All wooden and veneer surface is finished with melamine polish.

**1 Materials**

18 mm thick MR Grade plywood shall confirm to IS 303- Reaffirmed 2003 & of approved make

Fixtures & joineries shall confirm to General I.S. Specification

4 mm thick veneer shall be of approved make

0.8mm thick laminate shall be of approved make

Adhesive shall confirm to General I.S. Specification

All required hardware shall confirm to General I.S. Specification

Teakwood shall confirm to the standard specification of the booklet and confirm to M-29

Melamine polish shall be carried out as per the standard detail mentioned in the Para 19.70 of Oil painting in Technical Specifications for Building work attached herewith.

The 16mm (av.) thick stone of Korean shall be of approved quality

## **2 Workmanship**

2 Seater Dinning Table size : 750mm x 750mm x 750 mm (H)

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

- MR grade ply of 18 mm thick as per the requirement
- Top shall be made from 18 mm thick MR Grade ply and Legs shall be of Indian teakwood having size 65 mm x 65 mm ,frame support of size 75 mm x 37mm as specified in the drawing / Photograph or as directed by Engineer-in-charge.
- All teakwood edges shall be smooth polished as directed by Engineer-in-charge.
- Top edges shall be finished with indian teakwood border of size 50 mm x 25 mm with melamine polish finish
- Cable manager shall be provided as directed by EIC.
- Top of the table shall be finished with 4.00 mm thick natural teak veneer and Bottom of shelf shall be finished with balancing laminate of 0.8mm

thick.

- Melamine polish shall be carried out as per the standard detail mentioned in the Para 19.70 of Oil painting in Technical Specifications for Building work attached herewith
- Veneer and balancing laminate shall be used without any bubbles and scratches in perfect style and shape shall be used as per drawing and directed by Engineer-in-charge. All the ply member for table and drawer box shall be exactly in right angle and true shape. The right angle checked from inside surface of ply frames of the respective members. All the member shall be straight without any warp of bow and shall have smooth surface at all sides exposed in right angle to each other. Veneer/ Laminate sticking shall have airless pressing in true line, level and shape without any bubble as per drawing.
- All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries, hardware etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 11 ::** Providing and Arranging Cabinet made from 18mm thick MR grade Plywood box with one drawer unit having fixed on Ebco Made telescopic Channel with Godrej Make lock with two keys set one Shutter having SS Hinges ( Auto 16 deg.) Handles and Indian Teakwood Border Patty With Melamine Polish. Cabinet Finish with 4mm thick approved Veneer and 0.8 mm thick Balancing Laminate to be Provided. On top of the storage 16mm thick approved mirror Polished Granite with Rounding edge Moulding Shall be provided including Necessary Fixtures, Fastening includes all materials and Labours etc. Complete as per drawing and instructions of Engineer-in-charge. Crockery Unit Veneer Size :- 600mm x 450mm x 750mm

The size of the Key Cabinet shall be 600x450mm x750mm  
with 16mm (av.) thick mirror polished Granite Stone with rounding  
at Top of the Cabinet shall be provided

- MR Grade Ply  
of 18 mm thick
- Indian Teakwood shall be used for frame structure including legs of desired size and shape as shown in the drawings or as directed by engineer-in-charge.
- Top is finished with 4 mm thick Natural Teak veneer
- Bottom is finished with 0.8mm thick balancing laminate
- All exposed border is finished with 50 x25 mm Indian teakwood border patti with smooth moulding edge
- Good quality adjustable stud at bottom
- All wooden and veneer surface is finished with melamine polish.

**Workmanship ::**

The work shall be carried out with the best practice followed in the industry. The contractor shall make sure that the item to be installed is in its perfect state as per the standards established by its manufacturer. Additionally, the items installed shall not be damaged and shall be free



from any dents or scratches. It is the duty of the contractor to make proper arrangements for protection of the items during stacking, transporting, loading/unloading till handover. The contractor shall get the items inspected and approved by the architect and/or EIC before installation. Any claim, upon rejection of any item by the EIC will not be entertained. The contractor shall install the item as directed by EIC at all floors/all heights and all levels.

The entire work shall be carried out as per approved design and as directed by the Engineer-in-charge

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 12 ::** Providing and Arranging book storage having top 18 mm thick MR grade plywood with 4.00 mm thick veneer melamine polish finish with 0.8 mm balancing laminate. Shelves made of 12 mm thick clear float glass with all edge polish. Side and shutter made of 18mm thick MR grade plywood with 4.00 mm thick veneer melamine polish finish with 6mm thick clear float glass and Lock and nylon bullet including all necessary fixtures and fastenings as approved, incld. all materials and labour etc. Complete as per drawing and instruction of engineer-in charge ( with T.W. border patti with melamine polish ) Glass Storage veneer : 900mm x 450mm x 2100mm (H)

**The size of the Book Storage shall be 900xx 450mm x2100mm with required nos. of Shelves and 12 mm thick clear float glass with all edge polish. shall be provided at top The Entire work shall be carried out as per detailed drawing and as directed by the Engineer-in-charge**

- MR Grade Ply  
18 mm thick
- Indian Teakwood shall be use for frame structure including legs of desired size and shape as shown in the drawings or as directed by engineer-in-charge.
- Top is finished with 4 mm thick Natural Teak veneer with Malamine polished finish with 6mm thick clear float glass and Lock and nylon bullet
- Bottom is finished with 0.8mm thick balancing laminate
- All exposed border is finished with 50 x25 mm indian teakwood border patti with smooth moulding edge
- Good quality adjustable stud at bottom
- All wooden and veneer surface is finished with melamine polish.

**Workmanship :**

The work shall be carried out with the best practice followed in the industry. The contractor shall make sure that the item to be installed is in

its perfect state as per the standards established by its manufacturer. Additionally, the items installed shall not be damaged and shall be free from any dents or scratches. It is the duty of the contractor to make proper arrangements for protection of the items during stacking, transporting, loading/unloading till handover. The contractor shall get the items inspected and approved by the architect and/or EIC before installation. Any claim, upon rejection of any item by the EIC will not be entertained. The contractor shall install the item as directed by EIC at all floors/all heights and all levels.

The entire work shall be carried out as per approved design and as directed by the Engineer-in-charge

### **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 13 ::** Providing and Arranging court storage having top 18 mm thick MR grade plywood with 4.00 mm thick veneer melamine polish finish with 0.8 mm balancing laminate. Shelves made of 18 mm thick MR grade plywood with 4.00 mm thick veneer melamine polish finish with 0.8 mm balancing laminate. Side and shutter made of 18mm thick MR grade plywood with 4.00 mm thick veneer melamine polish finish. Lock including all necessary fixtures and fastenings as approved, incld. all materials and labour etc. Complete as per drawing and instruction of engineer-in charge ( with T.W. border patti with melamine polish ) Coat storage veneer Size :- 600mm x 600mm x 2100mm

**The size of Cort storage shall be 600mm x 600mm x 2100mm**

**The shutters and Shelves shall be made of 18mm thick M.R. grade plywood with 4.00mm thick Veneer with malamine polish as per Design and as directed by the Engineer-in-charge**

18mm thick MR grade plyoowd, 4mm thick Veneer shall be

- of IS class.
- Good quality adjustable stud at bottom

All wooden surface is finished with melamine polish in

- minimum 3 coats.

All wooden members shall be finished as directed by Engineer-in-

- charge.

#### **1 Materials**

Teakwood shall confirm to the standard specification of the booklet and confirm to M-29

Fixtures & joineries shall confirm to General I.S.

Specification

Adhesive shall confirm to General I.S. Specification

All required har shelves shall confirm to General

Specification of material

## **2 Workmanship**

Side Unit size : 600mm x 600mm x 2100mm

### **Skeleton**

Entire skeleton shall be made from materials described in item Description and detailed drawing.

- Indian teakwood shall be used for the entire structure with polished smooth edge and shape with melamine polish finish as directed by engineer in charge.
- Melamine polish shall be carried out as per the standard detail mentioned in the Para 19.70 of Oil painting in Technical Specifications for Building work attached herewith
- All materials, hardware, accessories, adhesives, lamination sheet shall be as per IS specification.

## **3 Mode of easurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.

**Item No. 14 ::** Providing and supply Sofa structure made from 18mm MR Grade Mr grad plywood supported with Maranti Solid wood, back side and curved part Covered with 3mm flexi ply, sofa arm made from 12mm thick MR Grade Mr grad plywood supported with maranti solid wood. Elastic Belt, 75mm board & 2.25 mm thick elastic webbing stapling in seat frame at 100 mm centre to centre distance, belt fastern in X and Y axes of seat, elastic belt elongation 45% tensile strength 350 kg. Foam 100 mm X 40 density Premium Quality foam covered with 25mm X 32 density super soft Premium Quality Foam for. soft touch filling in seat. 50 mm X 40 density Premium Quality foam covered with 25mm X 32 density super soft Premium Quality foam for soft touch filling in back. Stiching Stiching work done with well known german brand (Aman / Gutermann) Thread. Nylone & Polyester thread used as per application. 50 mm X 50 mm Wooden Legs applied with polishing. Including all materails. Hardware and labours etc. Completes as per drawing/Photographs & details and as Directed by Engineer - in - charge HOF MAKE : Cierzo 3 Seater Sofa Size:- 1925mm X 850mm x 850mm ( H )

**The size of 3-Seater Sofa shall be 1925mm x 850mm x 850mm with wooden legs of 50x50mm and 350 kg.Foam 100mm x 40mm density premium quality. The stitching work shall be done with polyester threads. The Structure of Sofa shall be made from 18mm Mr grade plywood supported with Maranti Solid wood back side and curved part shall be covered with 3mm thick flexi ply. Entire work shall be carried as per HOF Cierzo model.**

#### **1 Materials**

All materials shall be as per item description as approved by EIC and specified item's Manufacturer's specifications.

**3 seater sofa with** The indian teakwood confirming to M-29  
**frame :-** shall be used

for whole structure framing including legs ,armerest & other design with smooth polished edges & shape as per drawing / photograph or as directed by engineer-in-charge with melamine matt finish polish

**Seating Cushions :-** Mide of 7 inches multi layered foam

of density 40 D and 25mm supersoft HD with polyster fill outer layer of 180 gsm. The seating cushions have 100 mm of elastic webbing of 350 gsm with diagonal weave. The thread used is nylon bonded to provide long lasting stich strength.

**Back Rest :-** 1 foam of 40 Density with polyster poly fill outer layer of 180 gsm. The polyster poly fill keeps the uphosltery wrinkle free and soft.

The seat is made up of moulded Foam, upholstered with fabric. Foam density 40 kg/m<sup>3</sup> and hardness 14(+/-2) on Hampden machine at 25% compression

Tapestry, fabric & foam shall of approved make and as per the General specification No.-

## **2 Workmanship**

The three seater sofa shall be of size 1925mm x 850mm x 850mm as per drawing / photograph as required & directed by Engineer-in-charge.

All teakwood members shall be finished with smooth edges and shape as directed by Engineer-in-charge.

After completion of teakwood framing and all foam fixing work , lining work and polishing work shall be executed.

The whole work is to be completed as per design, sample & drawing and shall be as per the instruction of Engineer-in-charge.

## **3 Mode of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

**Item No. 15 ::** Providing and Arranging Dinning chair made from Indian teakwood having Back leg size :75 mm x 37mm ,front leg 37mm x 37mm size, back support round (curvica) shape 150 mm x 37 mm size 2 nos, Back side sheet frame of size 100mm x 37mm and front side support size of 50 mm x 37 mm. Seat made from 12mm thick MR grade plywood and covered with 50 mm thick 40 density PU foam with 12mm supersoft HD covered for softness with high quality fabric of approved shade. Total height 900mm and back height 450mm, Seat size 400mm x 450mm including all materials and labours etc. Complete as per drawing and instruction of engineer-in charge. Dinning Chair

**The Dining Chair having size as per drawings shall be made from Indian Teak wood having back let 75x37mm, Front leg 37x37mm and back support 150mm x 37mm size 2 nos. Back side steel frame of size 100mmx37mm and front side support 50mm x 37mm Seat shall be made of 12mm thick MR grade plywood and couvered with 50mm thick 40 density PU foam with 12mm support Total height of the chair shall be 900mm and Back height 450mm, seat size 400x450mm**

The Dining Chair having overall height as per design shall be made from indian teakwood having Back leg size 75mm x 37mm, Back Support 150mm x 37mm, handel 75mm x 30mm to be fixed on wooden Teak wood frame The seat having 50mm thick 40 density foam to be fixed on 12mm MR grade MR Grade plywood and Back 50mm thick 40 density foam Bottom, Back and seat foam both with high quality fabric (Basic Rate : 950 RS) as approved shade. all wooden member to be melamine polish. Including all materials and labour ect. Complete as per drawing



and instruction of engineer - in charge.

- Whole chair shall be made from indian teakwood having members as shown in the drawings/ photographs or as directed by engineer - in - charge.
- Armrest/ handle shall be made of size as per design or as directed by the Enginner-in-charge
- Seat shall be made from 12 mm MR grade ply with & seat shall be made from 80 mm thick 40 density foam & back shall be made from 50 mm thick 40 density foam
- Seat and back shall be covered with fabric and madarpat at bottom of approved quality and shade.
- Good quality castor wheel shall be provided for smooth movement
- All wooden members shall be shaped as per drawing / photograph or as directed by Engineer - in charge.
- All wooden members shall be melamine polished with minimum 3 coats.

## **1 Materials**

Adhesive shall confirm to I.S. General Specification

All required hardwares shall confirm to I.S. General Specification

Indian Teakwood shall be used for whole structure of the given size as per drawing & shall confirm to specification of M - 29

Fabric / madarpat and foam shall confirm to Relevent I.S. Specification

Good quality castor wheel shall be provided at bottom

The melamine polish shall be of best quality and make as approved quality as per approved make list.

## **2 Workmanship**

Dining Chair ( Wooden) over all size as per design and drawings

**Skeleton :**

Entire skeleton shall be made from materials described in Item Description & as per design, sample , detailed drawing and shall be as per the instructions of Engineer - in - charge.

The melamine polish shall be applied on any woodwork or wood based surfaces with the help of spray gun. The work shall be carried out as per instruction of Engineer - in - charge and to the satisfaction of engineer in charge. Sample shall got approved before full scale application.

**2.1 Directions of Melamine Polishing on new surface**

- a) Sand the surface along the grains with Emery paper no 180 or with a suitable grade of sand paper. Brush the surface free of loose dust.
- b) Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

- c) Apply a coat of Asian/MRF/ Berger Natural wood finish clear sealer. After overnight drying, smooth sand with emery paper no 320 and wipe the surface free of loose dust. Clear sealer is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs. Compressed air used for spray application should be free from oil and water.

- d) if instructed by the engineer - in - charge apply Asian/ MRF / Berger wood stains by ragging after filling step or mix it in apcolite natural wood

finish up to 20% by volume and apply by spraying after sealer coat. In application by ragging allow a drying time of 5 - 10 mins In between coats and 30 - 60 mins before over coating with finish coats.

e)Apply Asian/MRF / Berger natural wood finish - clear matt/semi glossy/ glossy as follows. Asian/ Apcolite natural wood finish - is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs.

f)Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finishclear matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

### **3 Made of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges to complete the work satisfactorily including supplying and arranging as per layout paln at site of work and as per the instruction of Engineer - incharge. No Extra charge will be paid for any other reasons.

**The rate shall be for an unit of one number.**

**Item No. 16 ::** Providing and Arranging dias chair having overall height of 1.52 mtr made from Indian teakwood having Back leg size 50mm x 50mm, Back Support 75mm x 35mm size, handle 75mm x 30mm size Back Logo (National emblem ) made from bronze metal of size 150mm x 30 mm to be fixed on wooden back of size 225mm x 35mm Indian teakwood frame work.All the wooden members to be moulded as per the approved design. and as directed by Engineer in charge Seat having 80 mm (3") thick 40 density foam to be fixed on 12mm thick MR grade plywood and back having 50 mm (2") thick 40 mm density foam bottom, back and seat foam both with high quality fabric (Basic Rate Rs.950/ Rmt) of approved shade. All wooden members finished by melamine polish Including all materials and labour etc. complete as per drawing and instruction of Engineer-in charge.Dias Chair

**The dias chair having overall height of 1.52 mtr and 635 x 610mm. shall be made from indian teakwood having Back leg size 50mm x 50mm, Back Support 75mm x 35mm, handel 75mm x 30mm to be fixed on wooden back of Back Logo (national emblem ) made from bronze metal of size 150mm x 30mm to be fixed on wooden back size of 225mm x 35mm Indian Teak wood frame The seat having 80mm thick 40 density foam to be fixed on 12mm MR grade commercial plywood and Back 50mm thick 40 density foam Bottom, Back and seat foam both with high quality fabric (Basic Rate : 400 RS) as approved shade. all wooden member to be melamine polish. Including all materials and labour ect. Complete as per drawing and instruction of engineer - in charge.**

- Whole chair shall be made from indian teakwood having members as shown in the drawings/ photographs or as directed by engineer - in - charge.
- Armrest/ handle shall be made of size 75mm x 30mm , Back & front leg of 60mm dia., support frame size 75mm x 37mm
- Seat shall be made from 12 mm MR grade ply with & seat shall be made from 80 mm thick 40 density foam & back shall be made from 50 mm thick 40 density foam
- Seat and back shall be covered with fabric and madarpat at bottom of approved quality and shade.
- Good quality castor wheel shall be provided for smooth movement
- National emblem of approved design & size shall be provided at the top of chair.

- All wooden members shall be shaped as per drawing / photograph or as directed by Engineer - in charge.
- All wooden members shall be melamine polished with minimum 3 coats.

## **1 Materials**

Adhesive shall confirm to I.S. General Specification

All required hardwares shall confirm to I.S. General Specification

Indian Teakwood shall be used for whole structure of the given size as per drawing & shall confirm to specification of M - 29

Fabric / madarpat and foam shall confirm to Relevant I.S. Specification

Good quality castor wheel shall be provided at bottom

Bronze metal made national emblem of approved design/ size shall be provided as directed by EIC.

The melamine polish shall be of best quality and make as approved quality as per approved make list.

## **2 Workmanship**

Dias Chair ( Wooden) over all size : 1.52 mt (H) , seat size 0.635mm x 0.610mm

### **Skeleton :**

Entire skeleton shall be made from materials described in Item Description & as per design, sample , detailed drawing and shall be as per the instructions of Engineer - in - charge.

The melamine polish shall be applied on any woodwork or wood based surfaces with the help of spray gun. The work shall be carried out as per instruction of Engineer - in - charge and to the satisfaction of engineer in charge. Sample shall got approved before full scale application.

### **2.1 Directions of Melamine Polishing on new surface**

- a)** Sand the surface along the grains with Emery paper no 180 or with a suitable grade of sand paper. Brush the surface free of loose dust.
- b)** Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

- c)** Apply a coat of Asian/MRF/ Berger Natural wood finish clear sealer. After overnight drying, smooth sand with emery paper no 320 and wipe the surface free of loose dust. Clear sealer is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs. Compressed air used for spray application should be free from oil and water.

- d)** if instructed by the engineer - in - charge apply Asian/ MRF / Berger wood stains by ragging after filling step or mix it in apcolite natural wood finish up to 20% by volume and apply by spraying after sealer coat. In application by ragging allow a drying time of 5 - 10 mins In between coats and 30 - 60 mins before over coating with finish coats.

- e)**Apply Asian/MRF / Berger natural wood finish - clear matt/semi glossy/ glossy as follows. Asian/ Apcolite natural wood finish - is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended

thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs.

f) Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finish clear matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

### **3 Made of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer - incharge. No Extra charge will be paid for any other reasons.

**The rate shall be for an unit of one number.**

**Item No. 17 ::** Providing and Arranging dias chair having overall height of 1.52 mtr made from Indian teakwood having Back leg size 50mm x 50mm, Back Support 75mm x 35mm size, handle 75mm x 30mm size Back Logo (National emblem ) made from bronze metal of size 150mm x 30 mm to be fixed on wooden back of size 225mm x 35mm Indian teakwood frame work.All the wooden members to be moulded as per the approved design. and as directed by Engineer in charge Seat having 80 mm (3") thick 40 density foam to be fixed on 12mm thick MR grade plywood and back having 50 mm (2") thick 40 mm density foam bottom, back and seat foam both with high quality fabric (Basic Rate Rs.950/ Rmt) of approved shade. All wooden members finished by melamine polish Including all materials and labour etc. complete as per drawing and instruction of Engineer-in charge.Dias Chair

The dias chair having overall height of 1.52 mtr and size as per drawings shall be made from indian teakwood having Back leg size 50mm x 50mm, Back Support 75mm x 35mm, handel 75mm x 30mm to be fixed on wooden back of Back Logo (national emblem ) made from bronze metal of size 150mm x 30mm to be fixed on wooden back size of 225mm x 35mm Indian Teak wood frame The seat having 50mm thick 40 density foam to be fixed on 12mm MR grade commercial plywood and Back and Seat foam both with high quality fabric (Basic Rate : 950 RS/Rmt) as approved shade. all wooden member to be melamine polish. Including all materials and labour ect. Complete as per drawing and instruction of engineer - in charge.

- Whole chair shall be made from indian teakwood having members as shown in the drawings/ photographs or as directed by engineer - in - charge.
- Armrest/ handle shall be made of size 75mm x 30mm , Back & front leg of 60mm dia., support frame size 75mm x 37mm
- Seat shall be made from 12 mm MR grade ply with & seat shall be made from 50 mm thick 40 density foam & back shall be made from 50 mm thick 40 density foam
- Seat and back shall be covered with fabric and madarpat at bottom of approved quality and shade.
- Good quality castor wheel shall be provided for smooth movement



- National emblem of approved design & size shall be provided at the top of chair.
- All wooden members shall be shaped as per drawing / photograph or as directed by Engineer - in charge.
- All wooden members shall be melamine polished with minimum 3 coats.

## **1 Materials**

Adhesive shall confirm to I.S. General Specification

All required hardwares shall confirm to I.S. General Specification

Indian Teakwood shall be used for whole structure of the given size as per drawing & shall confirm to specification of M - 29

Fabric / madarpat and foam shall confirm to Relevant I.S. Specification

Good quality castor wheel shall be provided at bottom

Bronze metal made national emblem of approved design/ size shall be provided as directed by EIC.

The melamine polish shall be of best quality and make as approved quality as per approved make list.

## **2 Workmanship**

Dias Chair ( Wooden) over all size : as per Design and as directed by the Engineer-in-charge

### **Skeleton :**

Entire skeleton shall be made from materials described in Item Description & as per design, sample , detailed drawing and shall be as per the instructions of Engineer - in - charge.

The melamine polish shall be applied on any woodwork or wood based surfaces with the help of spray gun. The work shall be carried out as per instruction of Engineer - in - charge and to the satisfaction of engineer in charge. Sample shall got approved before full scale application.

## **2.1 Directions of Melamine Polishing on new surface**

- a)** Sand the surface along the grains with Emery paper no 180 or with a suitable grade of sand paper. Brush the surface free of loose dust.
- b)** Fill the wood using Asian/MRF / Berger wood filler. Remove excess filler immediately after applications. Allow 2 - 3 hrs of drying, before sanding with Emery paper no 180 followed by 320.

Ensure complete removal of filler from the surface.

- c)** Apply a coat of Asian/MRF/ Berger Natural wood finish clear sealer. After overnight drying, smooth sand with emery paper no 320 and wipe the surface free of loose dust. Clear sealer is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs. Compressed air used for spray application should be free from oil and water.

- d)** if instructed by the engineer - in - charge apply Asian/ MRF / Berger wood stains by ragging after filling step or mix it in apcolite natural wood finish up to 20% by volume and apply by spraying after sealer coat. In application by ragging allow a drying time of 5 - 10 mins In between coats and 30 - 60 mins before over coating with finish coats.

- e)**Apply Asian/MRF / Berger natural wood finish - clear matt/semi glossy/ glossy as follows. Asian/ Apcolite natural wood finish - is a two - component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic, or enameled container. Allow the mixture to stand for 30 mins and then apply by brushing or spraying using the recommended

thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hrs.

f) Apply minimum two or coats ( as per requirement) of Asian/MRF/ Berger Natural Wood finish clear matt/semi glossy/ glossy by spraying with an overnight time gap in between coats.

### **3 Made of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer - incharge. No Extra charge will be paid for any other reasons.

**The rate shall be for an unit of one number.**

**Item No. 18 ::** Providing and Arranging PREMIUM EXECUTIVE REVOLVING CHAIR (High Back) Sigma chrome Base with Knee Tilt Synchro Mechanism with Any Position back Lock, Seat & Back - Made from High Density U - FOAM, Armrest in two pieces 12mm outer boire cut veneer polyurathine High gloass & 6mm hot pressed plywood upholstered pad which fix with seat .Including all materials and labour etc.Complete as per drawing and instruction of engineer-in charge.Size : max.Height : 1300 mm to Min. 1200mm, Seat : 660mm x 660mm ,back 510 mm x 600 mm Molto 561 High Back Chairs

**The premium Executive Revolving Chair (High Back) Sigma Chrome base with Knee Tilt Synchro Mechanism with any position back lock, Seat and Back made from High Density U Foam, Armrest in Two pieces 12mm outer boire cut Veneer polyurathine High gloass & 6mm hot pressed plywood upholstered pad which fix with seat shall be prepared as per MOLTO 561 model and as directed by the Engineer-in-charge**

**Size : max.Height : 1300 mm to Min. 1200mm, Seat : 660mm x 660mm ,back 510 mm x 600 mm Molto 561 High Back Chairs**

**Workmanship ::**

Upholstered with Leatherite seat shall be made up of 12 MM +/- 1 MM thick hot pressed plywood and back in two Pieces - 12 MM Inner Back and 6 MM Rear Back. Moulded polyurethane foam with Fire Retardant Grade - (FR) used in making seat & back which shall be moulded with density 45+/- 2 kg/m<sup>3</sup>.Spine bracket should be made of M.S plate 8 MM Thickness connecting back with mechanism. Armrest top is soft touch upholstered with leatherite mounted on to an injection moulded fix type armrest which is fix on the Aluminum Pressure Die Casted (PDC) bracket with mirror finish and supported on powder coated twin pipe fittings. The mechanism of the chair shall have following features: 360° revolving type, synchronous. Mechanism, Tilt tension adjustment, 4-position locking with Anti-Shock feature. The chair shall be provided with pneumatic height adjustment which

shall have stroke of 100 +/- 5 MM. The Base shall be made of tubular CRC fabricated chrome finish. it shall be fitted with 5 nos. twin wheel castor – 50 MM Diameter. The size of the base shall be - 640 +/- 1 MM pitch-centre-diameter. Load test as per BIFMA compliance. The twin wheel castors shall be made of Nylon injection moulded in black colour. Overall dimensions of Chair shall be, Size : max. Height : 1300 mm to Min. 1200mm, Seat : 660mm x 660mm ,back 510 mm x 600 mm Molto 561 High Back Chairs

### **3 Made of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer - incharge. No Extra charge will be paid for any other reasons.

**The rate shall be for an unit of one number.**

**Item No. 19 ::** Providing and Arranging PREMIUM EXECUTIVE REVOLVING CHAIR (Medium Back) Sigma chrome Base with Knee Tilt Synchro Mechanism with Any Position back Lock, Seat & Back - Made from High Density U - FOAM, Armrest in two pieces 12mm outer boire cut veneer polyurathine High gloass & 6mm hot pressed plywood upholstered pad which fix with seat .Including all materials and labour etc.Complete as per drawing and instruction of engineer-in charge.Size : max.Height : 1300 mm to Min. 1200mm, Seat : 660mm x 660mm ,back 510 mm x 600 mm Molto 562 Medium Back Chairs

**The premium Executive Revolving Chair (High Back) Sigma Chrome base with Knee Tilt Synchro Mechanism with any position back lock, Seat and Back made from High Density U Foam, Armrest in Two pieces 12mm outer boire cut Veneer polyurathine High gloass & 6mm hot pressed plywood upholstered pad which fix with seat shall be prepared as per MOLTO 561 model and as directed by the Engineer-in-charge**

**Size : max.Height : Min. 1200mm, Seat : 660mm x 660mm ,back 510 mm x 600 mm Molto 562 High Back Chairs**

**Workmanship ::**

Upholstered with Leatherite seat shall be made up of 12 MM +/- 1 MM thick hot pressed plywood and back in two Pieces - 12 MM Inner Back and 6 MM Rear Back. Moulded polyurethane foam with Fire Retardant Grade - (FR) used in making seat & back which shall be moulded with density 45+/- 2 kg/m<sup>3</sup>.Spine bracket should be made of M.S plate 8 MM Thickness connecting back with mechanism. Armrest top is soft touch upholstered with leatherite mounted on to an injection moulded fix type armrest which is fix on the Aluminum Pressure Die Casted (PDC) bracket with mirror finish and supported on powder coated twin pipe fittings. The mechanism of the chair shall have following features: 360° revolving type, synchronous. Mechanism, Tilt tension adjustment, 4-position locking with Anti-Shock feature. The chair shall be provided with pneumatic height adjustment which

shall have stroke of 100 +/- 5 MM. The Base shall be made of tubular CRC fabricated chrome finish. it shall be fitted with 5 nos. twin wheel castor – 50 MM Diameter. The size of the base shall be - 640 +/- 1 MM pitch-centre-diameter. Load test as per BIFMA compliance. The twin wheel castors shall be made of Nylon injection moulded in black colour. Overall dimensions of Chair shall be, Size : max. Height : 1300 mm to Min. 1200mm, Seat : 660mm x 660mm ,back 510 mm x 600 mm Molto 561 High Back Chairs

### **3 Made of Measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer - incharge. No Extra charge will be paid for any other reasons.

**The rate shall be for an unit of one number.**

**Item No. 20 ::** Providing and fixing Ajanta / OREVA make wall clock of the desired shape and design as selected by engineer in charge Wall Clock

Providing and fixing AJANTA make or equivalent wall clock **Model AQ 5527** of the desired shape and design as selected by Engineer-in-charge.

Material :

The wall clock shall be as per sample approved by the Engineer-in-Charge, selected from approved make list as specified in the tender document. Materials for the wall clock shall be as per manufacturer's specifications.

### **Workmanship**

:

The contractor shall make sure that the item to be placed is in its perfect state as per the standards established by its manufacturer. Additionally, the items placed shall not be damaged and shall be free from any dents or scratches. The contractor shall get the items inspected and approved by the EIC before placing. Any claim, upon rejection of any item by the EIC will not be entertained. The contractor shall place the item as directed by EIC at all floors/all heights and all levels.

### **Mode of Measurements and Payment:**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

No Extra charge will be paid for any other reasons. The rate shall be for an unit of one number.



**Item No. 21 ::** Providing and supply Photo Frame of Mahatma Gandhiji made of Teakwood Border Patti of size 1" x 1/2" with melamine polish finish with 3 mm glass and inside the picture of Mahatma Gandhiji on Photo paper with high resolution picture quality and stucked on MDF as selected by engineer-in-charge including all necessary fixture, fasteners,labour , material etc comp.

**Material :**

Frame shall be made from best quality seasoned anti termite treated Indian teak wood.

Glass shall be 3 mm clear float glass. 4-6mm thick hardboard/IS 303 BWR ply board shall be used as backing. Heavy quality key holes chaplas shall be used for mounting the frame to the wall. Lacquer polish shall be applied of ASIAN or MRF with thinner of same company shall be used. Surfaces to be polished shall be properly grinned with sandpaper and all grains of the wood shall be filled by sealer coat over that multiple layers of approved company's Lacquer to be applied up to hot water resistance. Photo along with frame shall be as per selection made by the Engineer-in-charge.

**Workmanship :**

The Size of the Mahatma Gandhi Photo frame shall be 600x 850mm and shall be made of Border Patti of size 1"x1/2" with malamine polish with 3mm glass and Inside the the frame the picture of the Mahatma Gandhi shall be placed on photo paper.

Indian Teak wood confirming to M-29 of Material Specification. The work shall be carried out to in best workmanship manner & as directed by Engineer-in-charge.

The contractor shall make sure that the item to be installed is in its perfect state as mentioned in the drawings and as approved by the EIC. Additionally, the items installed shall not be damaged and shall be free from any dents or scratches

The contractor shall get the items inspected and approved by the EIC before installation. Any claim, upon rejection of any item by the EIC will not be entertained. The contractor shall install the item as directed by EIC at all floors/all heights and all levels

The frame shall be made as per profile shown in the drawing in perfect right angles and level .corners of frames shall be joined with “Vankiyo “. Frame shall be got approved from the Architect prior to mass production. Lacquer polishing shall be as per sample approved.

The picture shall be fixed on hard board with approved colour & make card board mounting around it with 3 M tape of sample by architect.

The frame shall be hanged to wall at positions as per drawing or as directed by EIC with heavy duty Key hole chaplas and sheet metal screw with Raul plugs

Mode of Measurements and Payment:

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardwares etc & labour charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer-in-charge.

**Item No. 22 ::** Providing and Fixing Impulse Blackout Roller Blinds with fabric of 0.53mm thickness and Top channel of non-rusting aluminium alloy with 1.25mm thickness and bottom channel of 1.50mm thickness & 21mm diameter. Tilt channel of ABS plastic with 1.50mm polyester cord with 4.50mm balls with stop lock arrangement including all necessary fixture, fastners, fittings, labour material machinery etc complete as seletced and diretced by Engineer Incharge.

Material :

Type of Fabrics	Blackout
Composition of Fab.	100 % Polyester woven
Visibility	Zero
Light Transparent	Zero
Available Width	2.50 Mtrs.
Fabric Thickness	0.53 MM (+-0.05)
Weight	475 g/m2 (+-5%)
Tearing Strength	Very High
Hanging Properties	Excellent
Coating	Acrylic coating resistant to Cracking & Fraying
Cleaning	Conditionally cleanable with damp cloth

### **Top Channel**

Roller Blind top channel extruded by Non rusting Aluminum alloy with 1.25 mm thickness, with anodized for long life. The Channel is designed with support beam to keep it straight and shall have a pocket for holding the fabrics in position. Available in 32 & 38 mm diameters for small and big blind respectively.

### **Bottom**

### **Channel**

Bottom Channel of Roller Blinds is again none rusting Aluminum powder coated with 1.50 mm thickness and 21 mm diameter. The fabric shall be enclosed in the suitably created pocket along with tube.

The channel shall be closed from sides with the end caps to give a neat look. 10 colors available to match with the fabrics perfectly.

### **Tilt**

### **Chain**

The tilt chain made by unbreakable ABS plastic, 1.50 mm polyester cord with 4.50 mm balls. The blind can be stop in desire position with help of stop lock.

### **Control Unit**

This operating mechanism made by High strength ABS plastic, consist of a ultra smooth gear with spring booster. High carbon steel spring to transmit motion from driving to driven members. The mechanism shall be operate with the use of tilt chain.

### **Fixing**

### **Brackets**

The Brackets are made by steel with powder coating to give greater finish. Brackets shall be accommodating overhead or side mounting with clutch assembly on either end of the blind.

### **Workmanship**

The work shall be carried out with the best practice followed in the industry. The contractor shall make sure that the item to be installed is in its perfect state as per the standards established by its manufacturer. Additionally, the items installed shall not be damaged and shall be free from any kind of damages. It is the duty of the contractor to make proper arrangements for protection of the items during stacking, transporting, loading/unloading till handover. The contractor shall get the items inspected and approved by the architect and/or EIC before installation. Any claim, upon rejection of any item by the EIC will not be entertained. The contractor shall install the item as directed by EIC at

all floors/all heights and all levels.

**3. Mode of Measurements ::**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joinaries, hardwares and labour charges for all height to complete the work **satisfactory**.

**Unit rate for payment shall be per 1-No. basis**

**Item No. 23 ::** Providing and Fixing Impulse Blackout Zebra Blinds with fabric of 0.53mm thickness and Top channel of non-rusting aluminium alloy with 1.25mm thickness and bottom channel of 1.50mm thickness & 21mm diameter. Tilt channel of ABS plastic with 1.50mm polyester cord with 4.50mm balls with stop lock arrangement including all necessary fixture, fasteners, fittings, labour material machinery etc complete as selected and directed by Engineer Incharge.

### **1. Material**

Type of Fabrics =Blackout or as directed by the Engineer-in-charge

Composition of Fab.= 100 % Polyester woven

Visibility=Zero

Light Transparent=Zero

Available Width=2.50 Mtrs.

Fabric Thickness=0.53 MM (+ - 0.05)

Weight=475 g/m<sup>2</sup> (+ - 5%)

Tearing Strength=Very High

Hanging Properties=Excellent

Cleaning=Conditionally cleanable with damp cloth

### **WORKMANSHIP ::**

Impulse Blackout Zebra Blinds with fabric of 0.53mm thickness and Top channel of non-rusting aluminium alloy with 1.25mm thickness and bottom channel of 1.50mm thickness & 21mm diameter. Tilt channel of ABS plastic with 1.50mm polyester cord with 4.50mm balls with stop lock arrangement

#### **Top Channel**

The Zebra Blind top channel extruded by Non rusting Aluminum alloy with 1.25 mm thickness, with anodized for long life. The Channel is designed with support beam to keep it straight and shall have a pocket for holding the fabrics in position.

#### **Bottom Channel**

Bottom Channel of Roller Blinds is again none rusting Aluminum powder coated with 1.50mm thickness and 21 mm diameter. The fabric shall be enclosed in the suitably created pocket along with tube. The channel shall

be closed from sides with the end caps to give a neat look. 10 colors available to match with the fabrics perfectly.

### **Tilt Chain**

The tilt chain made by unbreakable ABS plastic, 1.50 mm polyester cord with 4.50 mm balls. The blind can be stop in desire position with help of stop lock.

### **Control Unit**

This operating mechanism made by High strength ABS plastic, consist of a ultra smooth gear with spring booster. High carbon steel spring to transmit motion from driving to driven members. The mechanism shall be operate with the use of tilt chain.

### **Fixing Brackets**

The Brackets are made by steel with powder coating to give greater finish. Brackets shall be accommodating overhead or side mounting with clutch assembly on either end of the blind.

## **2 Workmanship**

The work shall be carried out with the best practice followed in the industry. The contractor shall make sure that the item to be installed is in its perfect state as per the standards established by its manufacturer. Additionally, the items installed shall not be damaged and shall be free from any dents or scratches. It is the duty of the contractor to make proper arrangements for protection of the items during stacking, transporting, loading/unloading till handover. The contractor shall get the items inspected and approved by the architect and/or EIC before installation. Any claim, upon rejection of any item by the EIC will not be entertained. The contractor shall install the item as directed by EIC at all floors/all heights and all levels.

### **3 Made of measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries , hardware's etc & labor charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer - in - charge.

No Extra charge will be paid for any other reasons. **The rate shall be for an unit of one Square Meter base of complete item including cost of all materials, tools, required fixtures and fastening, all labour charges, conveyance charges and all the taxes and levies as may be admissible from time to time.**



**Item No. 24 ::** Repair and restoration of fire-affected veneer finished surfaces by replacing damaged veneer and re-polishing all furniture and panelling complete.

**Material and Workmanship ::**

The Existing Veneer which has been effected due to fire shall first be removed from its position with due care that adjoining items may not be effected by any way.

The area from which the veneer has been removed shall be cleaned with the cleaning materials and then New Veneer sheets shall be placed at the same place.

After fixing the veneer all the furniture as directed by the Engineer-in-charge shall be re-polished with Malamine polishing 2 coats.

**3 Made of measurement**

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries, hardware's etc & labor charges for all height to complete the work satisfactorily including supplying and arranging as per layout plan at site of work and as per the instruction of Engineer - in - charge.

**Unit rate for payment of this item shall be per 1-Sqm. basis** of complete item including cost of all materials, polishing and making good the walls and floors. The rates are also inclusive of cost of Tools and Plants, all labour charges and all the taxes and levies as may be admissible from time to time

**Item No. 25 ::** Providing & Fixing of Armstrong Mineral Fibre Acoustical Suspended Ceiling System with Dune (Bevelled Tegular) Edge Tiles With Armstrong 15mm Exposed GRID The tiles should have Humidity Resistance (RH) of 99%, NRC 0.5, Light Reflectance  $\geq 85\%$ , Thermal Conductivity  $k = 0.052 - 0.057 \text{ w/m K}$ , Colour White, Fire Performance UK Class 0 / Class 1 (BS 476 pt - 6 & 7) in module size of 600 x 600 x 16mm , suitable for Green Building application, with Recycled content of 32% be laid on Armstrong Suprafine 38 with 15 mm wide T - section flanges colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 38mm and a load carrying capacity of 14 Kgs/M2 & minimum pull out strength of 100 Kgs.. The T Sections have a Galvanizing of 90 grams per M2 and need to be installed with Suspension system of Armstrong make.

a] Materials ::

ARMSTRONG - DUNE MAX RH 99 MINERAL FIBREBOARD FALSE CEILING SYSTEM, using 600mm x 600mm BEVELLED REGULAR TILES WITH SUPERFINE 15MM SILHOUETTE CHANNELS

EQUIVALENT MAKES :- SAINT GOBAIN - SAND MICRO USG - OLYMPIA MINERAL FIBRE TILES TO BE USED

DUNE MAX RH 99-20MM CODE NO: H4988 : SIZE: 600MM X 600MM OR EQUIVALENT

ALL MAIN RUNNERS, LONG CROSS TEE, HANGERS, PERIMETER TRIMS, ETC. SHOULD BE AS PER THE SPECIFICATIONS OF ARMSTRONG DUNE MAX RH 99 CEILING SYSTEM OR EQUIVALENT.

CROSS TEE SHOULD BE ARMSTRONG DUNE MAX RH 99 - SUPERFINE 15MM/SILHOUETTE OR EQUIVALENT.

## **2.0 METHOD OF APPLICATION:**

**2.1** Determine the ceiling height and level at the perimeter with a suitable levelling device and mark the levelling line.

- 2.2 fix the perimeter trims with fixings suitable for the structure at not more than 400mm.
- 2.3 Establish the location of the top fixings (1200mm x 1200mm) as per receive the suspension clip.
- 2.4 Engage the suspension clips / hangers wire onto the main runner. If the dimension of the room is greater than the length of a main runner, join two or more sections together, by engaging their end clips and cut against the wall and snips.
- 2.5 Make sure that the edge of the first tile corresponds well with the rout hole to be aligned. All rout holes should be aligned with a string or laser. Then level all main runners and connect to the hangers.
- 2.6 Every 600mm connect a 1200mm cross tee into the rout holes of the main runner and lock them against the adjoining cross tees. Then position the 600mm cross tee in the rout holes in the centre of the 1200mm cross tees to obtain a 600mm x 600mm layout. Cut perimeter cross tees with snips.
- 2.7 Engage the tiles into the steel angle by lifting them diagonally upwards through the steel angle before being laid down onto the steel angle flanges.
- 2.8 if the tile has to be fixed in place for the fire protection, smoke extract or to counteract excessive wind pressure, hold down clips should be installed.
- 2.9 Cut and reshaped edges of mineral fibre tiles should be done with a sharp craft knife.
- 3.0 **MODE OF MEASUREMENTS:**  
The rate shall include the cost of material, labour and scaffolding, etc. involved in the operations described under workmanship.  
**Unit rate for payment of this item shall be per 1-Sqm. basis of complete item.**

**Item No. 26 ::** Dismantling doors, windows, ventilators etc. (wood or steel) shutters including chowkhats architraves, holdfasts and other attachment etc. complete and stacking them within all lead and lift.(i) Not exceeding 3 Sq.M. in area.

**The work shall be carried out for Dismantling of DOORS, WINDOWS, VENTILATORS (Wood or Steel) including chowkhats, Archtraves, hold fasts and other attachments for all height with all lead and lift including stacking of serviceable materials and disposing off the unserviceable materials with all lead and lift as directed**

**1. 0. Workmanship:**

**1. 1.** The Dismantling shall consist of Dismantling of one or more parts of the building as specified or shown in the drawings. Dismantling implies taking up or (town or breaking up. This shall consist of demolishing whole or part. of work including all relevant item as specified or shown in the drawings.

**1. 2.** The Dismantling shall always be planned before hand and shall be done in reverse order of the one in which the structure was constructed. This scheme shall be got approved from the Engineer- in-charge. be fore starting the work. This however will not absolve the contractor from the responsibility of proper and safe Dismantling.

**1.3.** Necessary dropping, shoring and under pinning shall be provided for the safety of the adjoining work or property, which is to be left intact, before dismantling and demolishing is taken up and the work shall be carried out in such a way that no damages is caused to the adjoining property.

**1.4.** Wherever required, temporary enclosures or partitions shall also be provided. Necessary precautions shall be taken to keep the dust nuisance down as and where necessary.

**1.5.** Dismantling shall be commenced in a systematic manner. All materials which are likely to be damaged by dropping from a height or demolishing

roof, masonry etc. shall be carefully dismantled first. The dismantled article's shall be properly stacked as directed.

**1.6.** All materials obtained from Dismantling shall be the property of **Contractor after entire amount of dismantled material shall be recovered from the First R.A. bill payable to the Contractor.** unless otherwise specified and shall be kept in safe custody until handed over to the Engineer-in-charge.

**1.6..1 During Dismantling proper care shall be taken by the contractor for Security of surrounding structure and their man power, even if such incident happens it will be total liability (Legal and Financial) of the contractor**

**1. 7.** Any serviceable materials, obtained during dismantling or Dismantling shall be separated out and stacked properly as directed, with all lead and lift. All unserviceable materials, rubbish etc. shall be stacked as directed by the Engineer-in- charge.

**1.8.** On completion of work, the, site shall be cleared of all debris rubbish and cleaned as directed.

**2. 0. Mode of measurements & payment:**

**2. 1.** Measurements of all work except hidden work shall be taken before Dismantling or dismantling and no allowance for increase in bulk shall be allowed. The Dismantling of lime concrete shall be measured under this item. Specification for deduction for voids, openings etc. shall be on same basis as that employed for construction of work.

**2.2.** All work shall be measured in decimal system as fixed in its place subject to the. following limits, unless otherwise stated hereinafter : (a) Dimensions shall be measured to the nearest 0.01 mt. (b) Area shall be worked out to the nearest 0.01 sq. mt. (c) Cubical connection -shall be worked out to the nearest 0.01 Cu. m

**2.3.** The rate shall include cost of all labour involved and tools used in demolishing and dismantling including scaffolding. The rate shall also include the charges for separating out and stacking the serviceable materials properly and disposing the unserviceable material with all lead and lift. The rate also includes for temporary storing for the safety of the portion of required to be pulled down or of adjoining property and providing temporary enclosures or partitions where considered necessary.

**2.4.** The rate shall be for a unit of one **NO. basis**

**Item No. 27 ::** P & L 24" x 24" vitrified 8 mm thick tile flooring over 20 mm (average) base of cement mortar 1:6 ( 1 cement: 6 coarse sand) on new surface or fixing on existing flooring by adhesive material including dismantling of existing flooring and jointed with color cement slurry including finished with flush pointing & cleaning the surface etc. complete for light shade

**The 85% Light shade and 10 to 15% Dark shade Vitrified tiles of 8mm thick made of Somani, Johnson, Varmora, Asian or equivalent. make 8mm thick and of required size shall be laid in flooring on a bed of 20mm (average) thick C.M. 1:6. The Colour and Design of the tiles shall be got approved from the Engineer-in-charge before laying**

### **1.0. Materials :**

**1.1.** Water shall conform M-1. Cement Mortar shall conform to M-11..  
Anti-Skid Vitrified tiles shall be as per I.S. standard

### **2.0. Workmanship :**

**2.1.** The size of each Anti Skid tiles shall be 24" x 24" and 8mm thickness. The sides thus dressed shall have a full contact if a straight edge is laid along. All angles and edges of the slabs shall be true square and free from chippings and giving a plane surface. The thickness of the base where the tiles to be laid shall not be less than 20 mm. at any place of the slab.

**2.2** Before laying of the vitrified tiles the existing flooring if any shall be dismantled manually. During this period proper care should be taken to see that the adjoining structure or work or man power may not meet with any type of accident. After dismantling the same, the ground shall be levelled to proper line, level and grade.

**2.2.** Bedding for the vitrified tiles shall be cement mortar 1: 6 (1 cement; 6 coarse sand) of average thickness 12 mm. as given in the description of the item. Sub grade shall be cleaned, wetted and mopped. Mortar of the specified mix and thickness shall be then be spread on an area sufficient to receive one tile. The tiles shall be washed clean before laying. It shall be laid on top pressed, tapped gently to bring it in level with the other slabs. It shall then be lifted and laid aside. Top surface of the mortar shall then be corrected by

adding fresh mortar at hollows or depressions. The mortar shall then be allowed to harden bit. Over this surface, cement slurry of honey like consistency shall be applied. The slab shall then be gently placed in position and tapped with wooden mallet till it is properly pedded in level with and close to the adjoining slab. The joint shall be as fine as possible. The slabs fixed in the floor adjoining the wall shall enter not less than 1.0 mm. under the plaster, skirting or dado. The junction between the wall floor shall be finished neatly. The finished surface shall be lure to levels and slopes as directed.

**2.3.** The floor shall be kept wet, for a minimum period of 7 days. so that bedding and joints set properly.

#### **2.4 Fixing of tiles ::**

The Light shade and Dark shade vitrified tiles of appropriate size and 8mm thick shall be fixed on the flooring with the flooring adhesive materials of approved quality and it shall be laid as recommended by the Manufacturer.

**2.5.** The holes required for Nahni traps, pipes any other fittings shall be made without any extra cost.

**3.0.** Mode of measurements & payment:

**3.1.** The rate shall include the cost of all materials and labour involved in all the operations described above. The vitrified tiles shall be measured in square metre correct to two places of decimal, length and breadth shall be measured correct to a centimetre and between the finished face of skirting dado or wall plaster and no deduction shall be made nor extra paid for any opening in floor of areas upto 0.1 [sq. mt.](#)

**3.2.** The rate shall be for a unit of one sq. metre.



**Item No. 28 ::** Providing and laying Vitrified tiles 8 to 10 mm thick , 24" x 24" in skirting risers of steps and dado on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry

**1.0. Materials:-**

Water shall conform to M-1. Cement mortar shall conform to M-11. Vitrified tiles shall conform to relevant I.S. specifications White cement for jointing shall be of I.S. specifications/

**2.0. Workmanship:-**

**2.1. Preparation of surface:-**

**The shade and colour of the Vitrified tiles of appropriate size shall be got approved from the Engineer in charge before laying of the same**  
**The vitrified tiles is to be laid on Flooring, riser of steps and Dado as directed by the Engineer-in-charge**

In case of brick masonry wall, the joints shall be raked out to a depth of atleast 15 mm. While the masonry is being laid. In case of concrete wall, the surface shall be chiseled and roughened with wire brushes. The surface shall be cleaned and wetted thoroughly before commencing the laying work.

**2.2. Laying:-**

**2.2.1.** The wall surface shall be covered 10 mm. thick plaster of cement mortar 1 :3 mix and allowed to harden. The plaster shall be roughened with wire brushes both way. The back of tiles shall be floated with grey cement slurry and edges with white cement slurry set in bedding mortar. The tiles shall be gently tapped in position one after the other keeping the joints as thin as possible. Top of skirting or dado shall be truly horizontal and the joints vertical or as per required pattern.

**2.2.2.** Risers of steps, skirting and dado shall rest on top of treads of flooring. Where full size tiles cannot be fixed, they shall be cut to the required size and the edges be smoothed.

**2.2.3.** The joints shall be cleaned and flush pointed with white cement. The surface shall be kept wet for seven days. After curing the surfaces shall be washed clean.

**3.0. Mode of measurements & payment:-**

**3.1.** The rate shall include the cost of all materials and labour required for various operations described above. Risers of steps, skirting and dado shall be measured in square metres. Length and height shall be measured along the finished face of the skirting or dado including curves, where special such as covers, internal and external angles, etc. used. The length and height shall be measured correct to the centimeter except in case of risers and skirting where height shall be measured correct to 3 mm.

**3.2 Unit rate for payment of this item shall be per 1-Sqm. basis of complete item**

**Item No. 29 ::** Providing and laying Vitrified tiles 8 to 10 mm thick , 24" x 24" in skirting risers of steps and dado on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry

**1.0. Materials:-**

Water shall conform to M-1. Cement mortar shall conform to M-11. Vitrified tiles shall conform to relevant I.S. specifications White cement for jointing shall be of I.S. specifications/

**2.0. Workmanship:-**

**2.1. Preparation of surface:-**

**The shade and colour of the Vitrified tiles of appropriate size shall be got approved from the Engineer in charge before laying of the same**

**The vitrified tiles is to be laid on skirting, riser of steps and Dado on a bed of 10mm thick C.M. 1:3 or as directed by the Engineer-in-charge**

In case of brick masonry wall, the joints shall be raked out to a depth of atleast 15 mm. While the masonry is being laid. In case of concrete wall, the surface shall be chiseled and roughened with wire brushes. The surface shall be cleaned and wetted thoroughly before commencing the laying work.

**2.2. Laying:-**

**2.2.1.** The wall surface shall be covered 10 mm. thick plaster of cement mortar 1 :3 mix and allowed to harden. The plaster shall be roughened with wire brushes both way. The back of tiles shall be floated with grey cement slurry and edges with white cement slurry set in bedding mortar. The tiles shall be gently tapped in position one after the other keeping the joints as thin as possible. Top of skirting or dado shall be truly horizontal and the joints vertical or as per required pattern.

**2.2.2.** Risers of steps, skirting and dado shall rest on top of treads of flooring. Where full size tiles cannot be fixed, they shall be cut to the required size and the edges be smoothed.

**2.2.3.** The joints shall be cleaned and flush pointed with white cement. The surface shall be kept wet for seven days. After curing the surfaces shall be washed clean.

**3.0. Mode of measurements & payment:-**

**3.1.** The rate shall include the cost of all materials and labour required for various operations described above. Risers of steps, skirting and dado shall be measured in square metres. Length and height shall be measured along the finished face of the skirting or dado including curves, where special such as covers, internal and external angles, etc. used. The length and height shall be measured correct to the centimeter except in case of risers and skirting where height shall be measured correct to 3 mm.

**3.2 Unit rate for payment of this item shall be per 1-Sqm. basis of complete item**

**Item No. 30 ::** Applying two coats of putty & two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth.

**This item shall be carried out using Birla or equivalent make putty in Two coats and there after Two coats of Primer of I.S. class for all height with all lead and lift**

## **1.0. Materials**

1.1. The Birla or Asian Acrylic Lappy (Putty), brushing, shall be laid on to new wall surface and shall conform to relevant I.S. specification

## **2.0. Workmanship:**

### **2. 1. Preparation of Surfaces**

2.2.1. All new surface shall be made dry and free from any foreign matter incidental to building operations. Nails shall be punched well below the surface to provide a firm key for stopping. Mouldings shall be carefully smoothened with abrasive paper and projecting fibers shall be removed. Flat portion shall be smoothened off with abrasive paper used across the grain prior to painting and with the grain prior to staining or if the wood is to be left in its natural colour, wood work which is to be stained may be, smoothened to scraping instead of by glass papering if so required.

2.2.2. Any knots, resinous or streaks or blueish sap wood that are not large enough to justify cutting out shall be treated with two coats of pure shellac knotting applied thinly and extended about 25 mm. beyond the actual area requiring treatment.

### **2.2. Application of paint: application of Lappy (putty)**

2.2.1. For undecorated surfaces, after the primer coat is dried for at least 48 hours, the surface shall be lightly sand papered to make it smooth for receiving the Lappy (putty), taking care not to rub out the priming coat. All loose particles shall be dusted off after rubbing. Minimum two coats, of

distemper shall be applied with brushes in horizontal strokes followed immediately by vertical strokes which together shall constitute one coat. The subsequent coats shall be applied after a time interval of atleast 24 hours between consecutive coats to permit proper drying of the preceeding coat. The finished surface shall be even and uniform without patches, brush marks, distemper drops etc.

**2.2.2.** Sufficient quantity of lappy (putty) shall be mixed to finish one room at a time. The application of a coat in each room shall be finished in one operation and no work shall be started in any room which cannot be completed on the same day.

**2.2.3.** 15 cm. double bristled Lappy (Putty) brush shall be used. After day's work brushes shall be thoroughly washed in hot water soap solution and hung down to dry. Old brushes which are dirty and caked with distemper shall not be used on the work.

## **6. Applying two coats of priemr**

### **6.0 [A] Application of Primer coats ::**

**6.1.** After the preparation of the surface, the priming coat shall be applied immediately. The brushing operations are to be adjusted to the spreading capacity advised by the manufacturer of the particular primer. The paint shall be applied evenly and smoothly by means of crossing and laying off. The crossing and laying off consists of covering the area over with paint, brushing alternately in opposite directions, two or three times and then finally brushing lightly in a direction at right angles to the same. In this process, no brush marks shall be left after the laying off is finished. The full process of crossing and laying off will constitute one coat.

**6.2.** During painting, every time after the printing coat has been worked out of the brush bristles or after the brush has been unloaded of the bristles of the brush shall be opened up by striking the brush against portion of the unpainted surface with the end of the bristles, held at right angles to the

surface, so that bristles thereafter will collect the correct amount of paint when dipped again into a paint container, The primary coat shall be allowed to dry completely before painting is started.

**6.3.** No hair marks from the brush or clogging at paint puddles in the corner or panels angles of mouldings etc. shall be left on the work.

**6.4.** Special care shall be taken while painting over bolts, nuts, rivets overlaps etc.

**6.5.** The container when not in use shall be kept close and free from air so that paint does not thicken and also shall be kept guarded from dust.

### **3.0. Mode of measurements & payment:-**

**3.1.** All the work shall be measured in the decimal system as under :

(a) Dimensions shall be measured to the nearest 0.01 M.

(b) Area in individual items shall be worked out to the nearest 0.01 Sq. M.

All the work shall be measured in sq. mt. Deductions for jambs, soffits, sills etc. for opening not exceeding 0.5 sq. mt. each in area for ends of joints, posts, beams, girders, steps etc. not exceeding 0.5 sq. mt. each in area and for opening exceeding 0.3 sq. mt. not exceeding 3.0 sq. mt. each in area deductions and additions shall be made as under :

**3.2.** No deductions shall be made for ends of joints beams, posts etc. and openings not exceeding 0.5 sq. mt. each. No addition shall be made for reveals, jambs, soffits, sills etc. of these openings nor for finish around ends of joints, beams, posts etc.

**3.3.** Deductions for openings exceeding 0.5 sq. mt. but not exceeding 3 sq. mt. each shall be made as follows and no addition shall be made for reveals, jambs, soffits etc. of these openings :

(a) When both the faces or walls are provided with finish, deduction shall be made for one face only.

(b) When each face of wall is provided with different finish deduction shall be made for that side of frame for door, windows etc. on which width of

reveals is less than that of the other side, where width of reveals on both faces of wall are equal, deduction of 50% of area of opening on each face shall be made from total area of finish.

(c) When only one face of wall is treated and the other face is not treated, full deduction shall be made if the width of reveal on the treated side is less than that on the untreated side, but if the width of the reveal is equal or more than on the untreated side neither deductions nor additions be made for reveals, jambs, soffits, sills etc.

**3.4.** In case of area of opening exceeding 3 sq. mt. each, deduction shall be made for openings but jambs, soffits shall be measured.

**3.5.** No deduction shall be made for attachment such as casing, conducts, pipe, electric wiring and the like.

**3.6.** Corrugated surfaces shall be measured flat as fixed and not girth. The quantities so measured shall be increased by the following percentage and the resultant shall be included with the general areas.

- |   |     |
|---|-----|
| (a) Corrugated steel sheets                           | 14% |
| (b) Corrugated A.C. Sheets                            | 20% |
| (c) Semi corrugated A.C. Sheets                       | 10% |
| (d) Nainital pattern roof (Plain sheeting with rolls) | 10% |
| (e) Nainital pattern roof (with corrugated sheets)    | 25% |

**3.7.** Cornices and other wall features, when they are not picked out in a different finish / colour shall be girthed and included in the general area.

**3.8.** The rate shall include the cost of all materials, labour, scaffoldings, protective measures etc. involved in all the operations described above.

**3.9.** The rate shall be for a unit of **one sq. metre.**



**Item No. 31 ::** Removing dry or oil bound distemper by a washing and scraping and sand papering the wall surface smooth

### **1..0. Materials & Workmanship**

**1.1.** All loose pieces and scales shall be- removed by sand papering and surface shall be cleared of all greasy, dust, dirt, etc, on decorated wall surface. Where heavy scaling-has taken place, the entire surface shall be scrapped by means, of steel scrapers so as to remove all accumulated distemper. leaving clean surfaces. Necessary repairs to the scratches shall be made as directed.

### **2.0.Mode of measurements & payment:**

### **3.0. Mode of measurements & payment :**

**3.1.** All the work shall be measured in the decimal system as under :

(a) Dimensions shall be measured to the nearest 0.01 M.

(b) Area in individual items shall be worked out to the nearest 0.01 Sq. M.

All the work shall be measured in sq. mt. Deductions for jambs, soffits, sills etc. for opening not exceeding 0.5 sq. mt. each in area for ends of joints, posts, beams, girders, steps etc. not exceeding 0.5 sq. mt. each in area and for opening exceeding 0.3 sq. mt. not exceeding 3.0 sq. mt. each in area deductions and additions shall be made as under :

**3.2.** No deductions shall be made for ends of joints beams, posts etc. and openings not exceeding 0.5 sq. mt. each. No addition shall be made for reveals, jambs, soffits, sills etc. of these openings nor for finish around ends of joints, beams, posts etc.

**3.3.** Deductions for openings exceeding 0.5 sq. mt. but not exceeding 3 sq. mt. each shall be made as follows and no addition shall be made for reveals, jambs, soffits etc. of these openings :

(a) When both the faces or walls are provided with finish, deduction shall be made for one face only.

(b) When each face of wall is provided with different finish deduction shall be made for that side of frame for door, windows etc. on which width of reveals is less than that of the other side, where width of reveals on both faces of wall are equal, deduction of 50% of area of opening on each face shall be made from total area of finish.

(c) When only one face of wall is treated and the other face is not treated, full deduction shall be made if the width of reveal on the treated side is less than that on the untreated side, but if the width of the reveal is equal or more than on the untreated side neither deductions nor additions be made for reveals, jambs, soffits, sills etc.

**3.4.** In case of area of opening exceeding 3 sq. mt. each, deduction shall be made for openings but jambs, soffits shall be measured.

**3.5.** No deduction shall be made for attachment such as casing, conducts, pipe, electric wiring and the like.

**3.6.** Corrugated surfaces shall be measured flat as fixed and not girth. The quantities so measured shall be increased by the following percentage and the resultant shall be included with the general areas.

- |   |     |
|---|-----|
| (a) Corrugated steel sheets                           | 14% |
| (b) Corrugated A.C. Sheets                            | 20% |
| (c) Semi corrugated A.C. Sheets                       | 10% |
| (d) Nainital pattern roof (Plain sheeting with rolls) | 10% |
| (e) Nainital pattern roof (with corrugated sheets)    | 25% |

**3.7.** Cornices and other wall features, when they are not picked out in a different finish / colour shall be girthed and included in the general area.

**3.8.** The rate shall include the cost of all materials, labour, scaffoldings, protective measures etc. involved in all the operations described above.

**3.9.** The rate shall be for a unit of one sq. metre.

**Item No. 32 ::** Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.

**The work shall be carried out on WALL SURFACE using plastic emulsion paint of I.S. class in TWO coats including One coat of primer for all height with all lead and lift as directed**

**1.0. Materials :** Water shall be conform to M-1. The plastic emulsion shall conform to I.S. 5411-1969 (part-I).

## **2.0. Workmanship**

### **2.1. Scaffolding :**

Wherever scaffolding is necessary it shall be erected in such a way that as far as possible on part of scaffolding shall rest against the surface to be white or white washed. A properly secured strong and well tied suspended platform (Zoola) may be used for white washing. Where ladders are used, pieces of old gunny bags shall be tied at top and bottom to prevent scratched to the floors and walls. For white washing of ceilings proper stage scaffolding shall be erected where necessary.

### **2.2. Preparation of surface :**

**2.2.1.** The surface shall be thoroughly cleaned of all dust, dirt., mortar croppings and other foreign matter before white wash is to be applied.

**2.2.2.** The surface spoiled by smoke soot shall be scraped with steel wire brushes or steel scrapers or shall be rubbed with over-burnt surkhi or brick bats. The surface shall be then broomed to remove all dust, dirt and shall be washed with clean water.

**2.2.3.** Oil or grease spots shall be removed by suitable chemical and smooth surface shall be rubbed with wire brushes.

**2.2.4.** All unsound portion of the surface plaster shall be removed to full depth of plaster in rectangular patches and plastered again after raking tile

masonry joints property. Such portion shall be wetted and allowed to dry. They shall then be given one coat of white wash.

**2.2.5.** All unnecessary nails shall be removed, the holes cracks patches etc. shall be made good with materials similar in composition to the surface to be prepared.

**2.3.** Preparation of Mix: This shall be done as per manufacturers instructions. The thinning of emulsion is -to be done with water and not with turpentine. The quantity of thinner to be added shall be as per manufacturer instructions.

#### **2.4. Applications:-**

**2.4.0.** The wall surface shall be first be applied with a Primer coat of plastic emulsion paint of approved quality by cleaning the surface of all dirt, dust and other foreign matter then the primer coat shall be applied.

**2.4.1.** Before pouring into small containers for use, the paint shall be stirred thoroughly in its container. When applying also, the paint shall be continuously stirred in the smaller container, so that its consistency is kept uniform.

**2.4.2.** The paint shall be laid on evenly and smoothly by meant of crossing and laying off the crossing and laying off consist of covering the area cover with paint, brushing the surface hard for the first time over and then brushing alternately in opposite direction two or three times and then finally brushing lightly in a direction at right angles to the same, In this process, no brush marks shall be left after the laying off is finished. No hair marks from the brush or clogging of paint puddles in the corners of panels, angles of moulding etc. shall be left on the work. The full process of crossing and laying off will constitute one coat.

**2.4.3.** The paint shall be applied with brush or rollers. For undecorated surfaces, the surface shall be treated with minimum two coats of cement water proofing paint. The second or subsequent coat shall not be started

until the preceding coat has become sufficiently hard to resist marking by brush being used.

**2.4.4.** The surface on finishing shall present a flat velvety smooth finish. It shall be even and uniform in shade patches, brush marks, paint drops etc.

## **2.5. Precautions**

(a) Old brushes if they are to be used with emulsion paints shall be completely dried of turpentine oil paint by washing in warm soap water. Brushes shall be quickly washed in water immediately after use and kept immersed in water during break periods to prevent the paint from hardening on the brush.

(b) In the preparation of wall for plastic emulsion painting, no oil base putties shall be used in filling cracks, holes etc.

(c) Splashes on floors etc. shall be cleaned out without delay as they will be difficult to remove after hardening.

(d) Washing of surfaces treated with emulsion paint shall not be done within 3 to 4 Weeks of application.

## **2.6. Protective measures:**

The surface of door window, floors, articles of furniture etc. and such other parts of the building not to be white washed shall be protected from being splashed upon. Such surface shall be cleaned of white wash splashed if any.

## **3.0. Mode of measurements & payment:**

**3.1.** All the work shall be measured in the decimal system as under :

(a) Dimensions shall be measured to the nearest 0.01 M.

(b) Area in individual items shall be worked out to the nearest 0.01 Sq. M.

All the work shall be measured in sq. mt. Deductions for jambs, soffits, sills etc. for opening not exceeding 0.5 sq. mt. each in area for ends of joints, posts, beams, girders, steps etc. not exceeding 0.5 sq. mt. each in area

and for opening exceeding 0.3 sq. mt. not exceeding 3.0 sq. mt. each in area deductions and additions shall be made as under :

**3.2.** No deductions shall be made for ends of joints beams, posts etc. and openings not exceeding 0.5 sq. mt. each. No addition shall be made for reveals, jambs, soffits, sills etc. of these openings nor for finish around ends of joints, beams, posts etc.

**3.3.** Deductions for openings exceeding 0.5 sq. mt. but not exceeding 3 sq. mt. each shall be made as follows and no addition shall be made for reveals, jambs, soffits etc. of these openings :

(a) When both the faces or walls are provided with finish, deduction shall be made for one face only.

(b) When each face of wall is provided with different finish deduction shall be made for that side of frame for door, windows etc. on which width of reveals is less than that of the other side, where width of reveals on both faces of wall are equal, deduction of 50% of area of opening on each face shall be made from total area of finish.

(c) When only one face of wall is treated and the other face is not treated, full deduction shall be made if the width of reveal on the treated side is less than that on the untreated side, but if the width of the reveal is equal or more than on the untreated side neither deductions nor additions be made for reveals, jambs, soffits, sills etc.

**3.4.** In case of area of opening exceeding 3 sq. mt. each, deduction shall be made for openings but jambs, soffits shall be measured.

**3.5.** No deduction shall be made for attachment such as casing, conducts, pipe, electric wiring and the like.

**3.6.** Corrugated surfaces shall be measured flat as fixed and not girth. The quantities so measured shall be increased by the following percentage and the resultant shall be included with the general areas.

(a) Corrugated steel sheets 14%

- |   |     |
|---|-----|
| (b) Corrugated A.C. Sheets                            | 20% |
| (c) Semi corrugated A.C. Sheets                       | 10% |
| (d) Nainital pattern roof (Plain sheeting with rolls) | 10% |
| (e) Nainital pattern roof (with corrugated sheets)    | 25% |

**3.7.** Cornices and other wall features, when they are not picked out in a different finish / white shall be girthed and included in the general area.

**3.8.** The rate shall include the cost of all materials, labour, scaffoldings, protective measures etc. involved in all the operations described above.

**3.9.** The rate shall be for a unit of **one sq. metre.**

**Item No. 33 ::** Providing and laying 16mm thick Black Granite Stone ( all edge machine cut and rounding mirror polished) of approved shade in Cills & Jambs incl. applying coarse-cum-fine sand on the back side of the granite with approved adhesive like Araldite or eq. to make the surface rough for better bonding with the wall surface on 10 mm. thick Cement Mortar 1:3 (1- cement, 3-coarse sand) laid and jointed with white cement slurry including rubbing and polishing complete. use single piece or two pieces incl. overlapping in up-down position granite stone for jambs & soffits as required and directed by Engineer- in-Charge.

**The work shall be carried out for Sill and jambs of the doors and windows and ventilators . The Mirror Polished Granite stone shall cut to the exact size (in single piece) of the door/window sill/jambs on a bed of 10mm thick C. 1:3 for all height with all lead and lift**

**1.0. Materials :**

**1.1.** Water shall conform M-1. Lime mortar shall conform to M-40. Cement mortar shall conform to M-11 The Mirror polished Granite stone slab of required size shall conform to M-49.

**2.0. Workmanship :**

**2.1.** Each Mirror Polish Grenite stone slab of Av. 16mm thick shall be One side Mirror polished and of required size and shape and the front edges shall be rounded up in Trade of steps laid as directed. The sides thus dressed shall have a full contact if a straight edge is laid along. The sides shall be table rubbed with coarse sand before paving. All angles and edges of the slabs shall be true square and free from chippings and giving a plane surface. The thickness shall be 18 mm. (Average) in SINGLE PIECE as specified in the item but not less than 20 mm. at any place of the slab.

**2.2.** Bedding for the Mirror Polish Grenite stone slabs shall be cement mortar 1: 6 (1 cement; 6 coarse sand) of L.M. 1:1.5 of average thickness 20 mm. as given in the description of the item. Sub grade shall be cleaned, wetted and mopped. Mortar of the specified mix and thickness shall be



then be spread on an area sufficient to receive one kotah stone slab. The slab shall be washed clean before laying. It shall be laid on top pressed, tapped gently to bring it in level with the other slabs. It shall then be lifted and laid aside. Top surface of the mortar shall then be corrected by adding fresh mortar at hollows or depressions. The mortar shall then be allowed to harden bit. Over this surface, cement slurry of honey like consistency shall be applied. The slab shall then be gently placed in position and tapped with wooden mallet till it is properly pedded in level with and close to the adjoining slab. The joint shall be as fine as possible. The slabs fixed in the floor adjoining the wall shall enter not less than 1.0 mm. under the plaster, skirting or dado. The junction between the wall floor shall be finished neatly. The finished surface shall be lure to levels and slopes as directed.

**2.3.** The floor shall be kept wet, for a minimum period of 7 days. so that bedding and joints set properly.

**2.4.** Polishing shall be normally commenced after 14 clays of laying the stone slab. First polishing shall be done with carborundum stones of 120 grade grit fitted in the heavy machine and then second polishing shall be done with carborundurn stone of 220 to 350 grade grit fitted in heavy machine. Water shall be properly used during polishing. The stone shall then be washed clean with water. When directed by the Engineer-in-charge wax polish of approved quality shall be applied on, the surface with the help of soft cloth over a clean and dry surface. Then the polish machine fitted with bobs shall be run over it.

**2.5.** The holes required for Nahni traps, pipes any other fittings shall be made without any extra cost.

### **3.0. Mode of measurements & payment:**

**3. 1.** The rate shall include the cost of all materials and labour involved in all I he operations described above. The kotah stone flooring shall be measured in square metre correct to two places of decimal, length and

breadth shall be measured correct to a centimetre and between the finished face of skirting dado or wall plaster and no deduction shall be made nor extra paid for any opening in floor of areas upto 0.1 sq. mt.

**3.2. The rate shall be for a unit of one sq. metre.**

**Item No. 34 ::** Providing and fixing 37mm Single/double shutter flush door solid core (MD, ,D,D1) laminated both side of 1 mm thickness pattern and design is to be approved by the Architect, with Stainless Steel handle size 30 Cm Long, Tower Bolt size 15cm, & Heavy Stainless steel Aldrop as per attached detail architectural drawing

## **1.0. Materials**

Flush door shall conform to M-30. Plywood shall conform to M-37. Anodised aluminum butt hinges shall conform to M-43.

## **2.0. Workmanship**

**2.1.** The relevant specifications of item No. 10.23 shall be followed except that the shutters be non-decorative type and block board core with face veneer or plywood, with 35 mm thickness.

**2.2.** Ready made shutters shall be correct size and shall fit into the door or other openings without excessive scraping of edges. Adding of battens etc. to make up to the size shall not be allowed,

SPECIFICATION FOR ITEM NO. 10.23 (As Referred in para 2.1)

## **2.0 Workmanship**

The item covers the requirement of preparation of shutters for doors, windows, clerestory windows, their supply and fixing.

### **2.2. Shutters :**

**2.2.1.** Panelled shutters shall be Constructed in the form of timber frame work of styles and rails with panel inserted of type specified in the detailed drawings. Panel shall be fixed by providing grooves in the style and rails. The styles and rails shall be joined to each other by mortise and tenon joints at right angles.

**2.2.2.** All members of the shutter shall be straight without any warp or bow and shall have smooth, well planed faces at right, angles to each other

**2.2,3.** The size of styles and retails shall be as per drawing or as directed. Styles and rails of shutters shall be made of one piece only.

**2.3. Timber panelling :**

**2.3.1.** Thickness of the panel shall be as specified in the item is shown in the drawing or as directed. If tile panel is made from more than one piece, tile pieces shall be finished as shown in the detailed drawings and shall be joined with continuous groove with specified size. The end pieces of the panel and the top and bottom of the panel shall be provided with continuous tongue to frame into groove of the frame shutter. An air space of 1.5 mm. shall be left in the groove of frame shutter while fixing the panels in it.

**2.3.2.** The faces of the panel as well as various pieces of the panel shall be closely fitted to the sizes of the grooves.

**2.3.3.** Finishing of the corners of raised panel edges shall be done as shown in drawings or as directed.

**2.5. Fixtures & Fastenings :** **2.5.1.** The rate shall include anodised aluminum butt hinges including fixing with iron screws. The size and number of hinges shall be as per table given in annexure-1.

**3.0. Mode of measurements & payment**

**3.1.** The rate for shutter includes cost of providing block and clear for keeping the shutter in open position as directed.

**3.2.** The dimensions of the shutter shall be measured clear size of the shutter in close position between the grooves of the frame.

**3.3.** The rate shall be for a unit of one sq. metre.

**Item No. 35 ::** Providing and fixing THREE track sliding window ( 3 Glass shutters) using standard extruded color anodized aluminum section equivalent to Jindal series E (30mm) section numbers: frame bottom with weep holes - 20928, frame top & sides 20837, shutter top & Bottom - 20993, Shutter interlock - 20550, Shutter side ( Handle) - 20549 with 5mm thick transparent tinted float glass, with EPDM rubber gasket, air lock strip and finishing joints with transparent silicon sealant, with alluminium powder coated fittings and fixtures.

The work shall be carried out as per following specifications as describe in item or as per directive of the Engineer-in-charge are to be for this item or as per the detailed drawings.

The shutter of windows shall be sliding windows as per the requirement of site conditions and detailed architected drawings.

## **1.0 FRAMES AND SHUTTERS**

The double shutter of windows shall be fabricated from the following aluminum extrusions of Jindal 27mm series frame or equivalent quality.

**For Frame:-** confirm to M-31 P. No. 10 of Gem. Specification book.

- i) Three track verticle and top 92 x 31.75 mm at wt. 0.759 Kg/Rmt
- ii) Three track bottom 92 x 31.75 mm at wt. 0.911 Kg/Rmt

### **For shutter**

- a) Shutter frame 40.00 x 18.00 at 0.380 Kg/Rmt  
(Interlock)
- b) Shutter frame 40.00 x 18.00 at 0.325 Kg/Rmt  
(top & bottom)
- c) Shutter frame 40.00 x 18.00 at 0.325 Kg/Rmt  
D-Handle or equivalent

## **2.0 WORKMANSHIP**

The Three Track windows shall be constructed as per detailed design and drwaings for the same. The Aluminium sction of Jindal or equivalent make shall be used for the same. top fix vent having

frame size 92MM x 31.75MM including shutter frame size 18MM x 40MM sliding type one track for S.S. wire gauge shutter and top fix. vent having frame size 63.50 x 38.10MM size and extra angle at bottom of 30MM x 38MM including rubber beading PVC virgin 'P' smoke glass '4' thick glass Maruti type handle, bearing, fixture and fastening

### **GLAZING**

The windows should be fully aluminum sliding shutter and glazing with 4 mm thick smoke grey Glass shall be confirm to M-38 of general specification. All glass shall be of the best quality, free from specks, bubbles, smokes, veins and other detects. It shall have clear undisturbed vision and reflection. Glazing to be done by natural quality rubbed extrusion section.

Standard glazing clips and rubber bedding shall be used

The handle of door / window shall be specified design and suitable locking system for the window operated either from outside or inside shall be provided. In double shutter, the first closing shutter shall have concealed aluminum ally bolt at top and bottom.

The side of the handle shall be determined by the inside grip length of the handles. Handles shall have as base plate of length 50 mm more than the size of the handle.

### **3.0 FIXTURE AND FASTENING**

The sample of fixture and fastening Jumbo rubber, glazing chip, handle maruti type, rubber beading, PVC virgin, bearing shall be got approved as regards quality and shape and aluminum fixture and fastening shall be bright finished.

The fixture and fastenings as per schedules attached in schedule of dimension of doors as annexure II of General Specification book P. No. 166 to 169 which is printed hereunder

**EQUIVALENT PLAIN AREAS OF UNEVEN SURFACES**  
(Vide specifications for items relating to Painting & Polishing)

<b>Sr. No.</b>	<b>Description of work</b>	<b>How measured</b>	<b>Multiplying Factor</b>
1.	Panelled or framed and braced or ledged and battened or ledged and braced joinery.	Measured flat (not girthed) including chowkat or frame. Edges, chocks, cleats. etc. shall be deemed to be included in the item.	1.30 (For each side).
2.	Flush joinery.	Measured flat (not girthed) including chowkat or frame Edges, chocks, cleats, (.4c. shall be deemed to. be included in the item.	1.20 (For each side)
	Fully glazed or gauzed joinery.	Measured flat (not girthed) including chowkat or frame. Edges, chocks, cleats, etc. shall be deemed to be included in the item.	0.80 (For each side)
4	Partly panelled and partly glazed or gauzed joinery.	Measured flat (not girthed) including chowkat or frame. Edges, chocks, cleats, etc. shall be deemed to be included in the item.	1.00 (For each Side)
5.	Fully venetioned or louvered joinery.	Measured -flat (not girthed) including chowkat or frame. Edges, chocks, cleats, etc., shall be deemed to be included in the item.	1.8Q (For each side)
6	Weather boarding-	Measured flat (not girthed) supporting frame work shall not be measured separately.	1.20 (For each side)
7	Wood single rooting.	Measured flat (not girthed).	1.10 (For each side)
8	Boarding with cover fillets and match boarding.	Measured flat, (not. girthed)	1.05 (For each side)
9	Tile and State battening.	Measured flat, over all : No deduction shall be made for open space.	0.80 (For painting all over)
10	Trellies (or Jafri) work one way or two way.	Measured flat, over all : No deduction shall be made for open spaces, supporting members shall not be measured sepearal Ay,	1.00 (For painting all over)
11	Guard bars, balustrades gates, gratings, grills, sexpanded metal and railings.	Measured flat, over all No deduction shall be made for open spaces, over supporting members shall not be measured separately.	1.00 (For painting all over)

- |    |   |  |
|----|---|--|
| 12 | Gates and open palisade                                   | Measured flat, over all : No deduction 1.00 (For painting fencing including standards. shall be made for open spaces, all over) supporting, met bers shall not be measured separately. (See Note). |
| 13 | Curved or enriched work                                   | Measured flat. 2.0 (For each side)   |
| 14 | Steel roller shutters.                                    | Measured flat (size of opening) over 1.10 (For each side) all, jamb, guides bottom rails and locking arrangement etc. shall be included in the item (top cover shall be measured separately).      |
| 15 | Plain sheet steel door and windows                        | Measured flat (not girthed) including frame. 1.10 (For each side)  |
| 16 | Fully glazed of gauze steel door and windows              | Measured flat (not girthed) including frame edges etc. 0.50 (For each side)  |
| 17 | Partly panneled and partly glazed or gauzed steel ,doors. | Measured flat (not girtlied) including frame edges etc., 0.80 (For each side)  |
| 18 | Collapsible gate.   | Measured flat (size of opening) no separate measurement shall be taken for the top and :ottom guide rails, rollers, fittings etc. 1.50 (For painting all over)                                     |

**Note** The height shall be taken from the bottom of the lowest rail if the palisades-do not go below it (or from the lower end of palisades, if they protect below the lowest rail) upto the top of palisades, but not upto the top of standards if they are higher than the palisades

#### **CODE PRACTIC-13(B)**

#### **SCHEDULE OF FIXTURE AND FASTENINGS FOR DOORS, WINDOWS VENTILATORS, WARDROBES AND CUPBOARDS.**

#### **NOTATIONS**

Da - -----

Teak wood doors fully  
panelled or fully glazed  
or partly panelied anti  
glazed

Db -----

Bathroom and W.C. door  
with single shutter



Dd -----	Doors battenned ledged and braced
De -----	Doors battenned framed and braced
Wa, -----	Teakwood windows fully pannelled or fully glazed or partly pannelled and glazed
Va:Ind --- - ----	Teakwood ventilators (independent)
S.W - -----	Steel Windows
SV-Ind -----	Steel ventilators (independent)
CB -----	Cupboard
S.1 -----	Single shutter
S.2 -----	Double shutter
SA --- - - - -	1-our shutter
B -----	Breadth of door shutter
T -----	Thickness of door shutter
H -----	Height of window shutter
900 -----	900 mm and below
900 - - -----	above 900 mm.
1200 -----	1200 mm. & below
1200	above 1200 mm.

## **TOLERANCE**

-/+ 1.5 mm tolerance will be allowed in thickness.

The size shall have to be supplied as per the actual dimension available on site for a particular door / windows an properly fixing shall be done with hold fast to masonry walls and coatch bolts in RCC members.

## **4.0 MODE OF MEASUREMENT AND PAYMENTS**

- 1.0 The rate shall include the cost of all materials, aluminum sections, glass, holdfast, coat bolts etc. and labour and scaffolding etc. involved in the operation said above.
- 2.0 The windows shall be measured in Sqmt correct to a centimeter of outer edge of frames.
- 3.0 The rate shall be for a unit of One Sqmt.

**NAME OF WORK:- SR TO RESTORATION, REPAIR AND REPLACEMENT WORKS OF COURT ROOM AND JUDGE CHAMBER AT DISTRICT COURT, RAJKOT (DAMAGED DUE TO FIRE).**

**:: RECAPITULATION SHEET ::**

a]	Amount as per T.S.	17,13,400.00
b]	Amount as per Schedule B (Put to tender)	<b>14,39,771.06</b>
c]	Amount not put to Tender ::	
	a] Q.C. @ 1.00%	14,397.71
	b] GSt @ 18.00%	2,59,158.79
		-----
	Total B + C	17,13,327.56
d]	Due to rounding	72.44
		-----
	Total as per T.S.	17,13,400.00
		-----

Deputy Ex. Engineer,  
Police Campus (R&B) Sub-Dvision  
Rajkot.

Executive Engineer,  
City ( R & B) Division,  
Rajkot