

## CORRIGENUDM – 1

**Tender Reference No:** CE/RAVI/102/2023/SMARTCLASS

**Tender Name:** Civil, Interior finishes, and Electrical and Mechanical Works for the Smart Classroom

**Corrigendum details:** Amendment to Technical Specification as per the discussion in Pre-Bid Meeting held on 8/5/2023 @ Hall 1, IC&SR Building, IIT Madras.

### Amendment in Technical Specification

Civil and Interior work					
S.No	Description	Specification	Correction	Old Quantity	New Quantity
1	<b>Autoclaved Aerated Cement (AAC) Block masonry (floor gallery)</b>	Providing and constructing masonry using Autoclaved Aerated Cement( AAC) Blocks - 200mm thk blocks with Birla aerocon block jointing mortar including setting out, providing and raking out joints, curing including,	Providing and constructing Tiers using Autoclaved Aerated Cement ( AAC) Blocks - with Birla aerocon block jointing mortar including setting out, providing and raking out joints, curing including,	27 cum	27 cum

6	<b>Vinyl flooring</b>	<p>Providing &amp; fixing of Homogeneous vinyl flooring of 2mm thick, densely compacted for improved wear and ease of maintenance. The Vinyl shall be with antistatic, anti fungal, antibacterial &amp; have Phthalete free properties with directional or non-directional polychrome design colour dyed as a raw mixture to ensure even colour throughout the thickness. The flooring shall comply with the EN 649 and has a (Group P) wear rating. The vinyl shall be installed on base floor leveling with self leveling material. The rates are inclusive of all materials, labour charges, tools &amp; tackles. The adhesive used for laying the floor shall be as per written recommendation made by the manufacturer &amp; as approved by the Architect/Engineer. Cleaning for any stains before handover. etc. complete as per the drawing and to complete satisfaction of the Engineer.</p> <p>Make : Tarkett IQ Optima / Gerflor Mipolam Cosmo/ Responsive - Spica RQ</p>	<p>Providing &amp; fixing of Homogeneous vinyl flooring of 2mm thick, densely compacted for improved wear and ease of maintenance. The Vinyl shall be with antistatic, anti fungal, antibacterial &amp; have Phthalete free properties with directional or non-directional polychrome design colour dyed as a raw mixture to ensure even colour throughout the thickness. The flooring shall comply with the EN 649 and has a (Group P) wear rating. The vinyl shall be installed on base floor leveling with self leveling material. The rates are inclusive of all materials, labour charges, tools &amp; tackles. The adhesive used for laying the floor shall be as per written recommendation made by the manufacturer &amp; as approved by the Architect/Engineer. Cleaning for any stains before handover. etc. complete as per the drawing and to complete satisfaction of the Engineer. Joints between sheets to be thermowelded.</p> <p>Make : Tarkett IQ Optima / Gerflor Mipolam Cosmo/ Responsive - Spica RQ.</p>	274 sqm	274 sqm
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		Vinyl floor covering to confirm to the following standards:	Vinyl floor covering to confirm to the following standards:		
		2mm thick Vinyl Sheet (roll form of 2m width and 25m length)	2mm thick Vinyl Sheet (roll form of 2m width and 25m length)		
		Classification : Class 34 Commercial 43 industrial (EN 649 )	Classification : Class 34 Commercial 43 industrial (EN 649 )		
		Total thickness : 2mm (EN 428)	Total thickness : 2mm (EN 428)		
		Total weight : 2700 g/m <sup>2</sup>	Total weight : 2700 g/m <sup>2</sup>		
		Surface Treatment : New IQ PUR Reinforced	Surface Treatment : New IQ PUR Reinforced		
		Wear layer binder content: ISO 10581 Type 1	Wear layer binder content: ISO 10581 Type 1		
		Residual indentation : ≤ 0.10mm (EN ISO 24343-1)	Residual indentation : ≤ 0.10mm (EN ISO 24343-1)		
		Clean Room Test : ASTM F51/00 Class A ISO 14644-1 ISO class 4	Clean Room Test : ASTM F51/00 Class A ISO 14644-1 ISO class 4		
		Dimensional stability : ≤ 0.40% (EN ISO 23999)	Dimensional stability : ≤ 0.40% (EN ISO 23999)		
		Reaction to fire: > 8kW/m <sup>2</sup> (EN ISO 9239-1 )	Reaction to fire: > 8kW/m <sup>2</sup> (EN ISO 9239-1 )		
		Static electrical charge: < 2 kV (EN 1815)	Static electrical charge: < 2 kV (EN 1815)		
		Light fastness: ≥ level 7 (EN ISO 105-B02) Method 3a	Light fastness: ≥ level 7 (EN ISO 105-B02) Method 3a		
		Chemical resistance: Excellent (EN ISO 26987)	Chemical resistance: Excellent (EN ISO 26987)		
		Slip Resistance: R9 (DIN 51130), ≤ 0.3 ( EN13893)	Slip Resistance: R9 (DIN 51130), ≤ 0.3 ( EN13893)		

		Thermal resistance underfloor heating: 0.001 m2K / W Suitable - max 27° C (EN 12667/DIN 52612)	Thermal resistance underfloor heating: 0.001 m2K / W Suitable - max 27° C (EN 12667/DIN 52612)		
		Note: Pattern of flooring to be considered. Quantity to be taken as per site measurement before quoting	Note: Pattern of flooring to be considered. Quantity to be taken as per site measurement before quoting		
<b>7</b>	<b>Step edge nosings, beadings,trimmers etc.</b>	Supply and installation of Step edge nosing and beading between vertical and horizontal surfaces from Dural or approved equivalent	Supply and installation of Aluminium Step edge nosing and beading with anti-slip inserts in PVC to be provided from Dural or approved equivalent.	168 RM	168 RM
<b>8</b>	<b>Partition with wooden acoustic panelling.</b>  <b>To be read as Dry Wall Partition</b>	Dry wall partition and wooden acoustic panelling from Anutone or equivalent. Supply and installation of dry wall partition using Anutone tubloc panels of 12mm thick in two layers on either side of a 50x50mm Aluminium framework. Anutone soundsynth 50mm thick is used as infill in the gap between the two boards.Joints are filled with jointing compound and fibre mesh tape. Over the partition , Supply & installation of Anutone Salon Slats made of pinewood E1 grade fiberboard, melamine/veneer laminated finish, groove perforated slats L16-2 - (2mm Slats @16mm pitch) / L32-2 - (2mm grooves @ 32mm centers) backlined with Soundtexblack acoustical fleece, tongue-groove edge for a seamless	Supply and installation of dry wall partition using Anutone tubloc panels (or equivalent) , of 12mm thick with one layer on either side of a SC50 framework. Anutone soundsynth 50mm thick is used as infill in the gap between the two boards.Joints are filled with jointing compound and fibre mesh tape. Anutone tubloc panels on the side facing windows to be finished using dark grey paint. The dry wall partition to accomodate a small access service shutter panel for maintenance purposes as per drawings.	54 sqm	54 sqm

	<p>look, size 128x2440x16mm, volume density of base board 800Kg/m<sup>3</sup>, weight 8Kgs/m<sup>2</sup> (L16), installed by using Anutone Strut framework system. Anutone Strut framework system includes Anutone Strut CC25 aluminium core cross channel having thickness 0.55mm, length 3600mm, knurled web 40mm, depth 10mm and equal flanges 15mm is fastened to wall or framework behind vertically/horizontally at every 600mm c/c. Anutone Strut CC18 aluminium core cross channel, thickness 0.5mm, length 2400mm, web 15mm &amp; 27mm, depth 18mm and flanges of 7mm with suitable edge &amp; centre brackets is then fixed perpendicular to the Strut CC25 Cross channel with the help of fasteners at every 400mm centers. Slats of size 128x 2440x16mm in then fixed perpendicular to CC18 with suitable edge &amp; centre brackets. Short edges of the panel are staggered. Contractor to provide expansion joints of 3mm at every 4.88m length wise and 4.992m width wise. Panels are backlined with Anutone SynthPF 10x25</p>		
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9	<b>Double glazing unit</b>	Providing and fixing full height double glazed partition using 6mm glass on either sides and necessary teak wood beading support. The rate shall be inclusive of necessary hardwares etc complete including beading, polish etc complete. Including frosted film of approved design and shade of 3M make or equivalent.	Providing and fixing full height double glazed unit using 10-12-10 toughened glass and necessary teak wood beading support. The rate shall be inclusive of necessary hardwares etc complete including beading, painted etc complete. Including frosted film of approved design and shade of 3M make or equivalent.	12 sqm	12 sqm
10	<b>Flush door</b>	Providing and fixing in position Single leaf solid core shutter made from 38mm thick marine grade block board thermo pressed with 12mm thick seasoned teak wood external lipping as per IS:2202 and finished in approved melamine polish. The external surfaces of the shutter to be finished in 1.5mm thick laminate on one side. The cost to include the following hardware (1) SS ball bearing hinges 4 Nos (2) Exposed Door closer (3) handle, lock. The rate to include providing Door frame using 110 x 75mm teak wood section for the same. Necessary provisions to be made to install specified acoustic material over the external door surface. Finished level to match with acoustic panel on adjacent surfaces	Providing and fixing in position Single leaf solid core shutter made from 38mm thick marine grade block board thermo pressed with 12mm thick seasoned teak wood external lipping as per IS:2202 and finished in approved melamine polish. The external surfaces of the shutter to be finished in 1.5mm thick laminate on both side. The cost to include the following hardware, SS ball bearing hinges- 4 Nos, Mortise SS handle and lock, Concealed door closer all as approved by the Architect . The rate to include providing Door frame using 74 x 50 mm teak wood section for the same, including hollock woods inserts in the Partition framework, all flushed with the partion panels. Necessary provisions to be made to install specified acoustic material over the	2 sqm	2 sqm

			external door surface. Finished level to match with acoustic panel on adjacent surfaces		
<b>11</b>	<b>Glass door</b>	Supply and fixing of 12mm thick openable glass door in toughened clear glass with patch fittings, including all necessary hardware.	Supply and fixing of full height 50mm thk, Solid Wooden frame Door with double glazed unit door using 10-12-10 toughened glass clear glass .Hardware: SS ball bearing hinges- 4 Nos, Mortise SS handle and lock, Concealed door closer all as approved by the Architect	2 sqm	2 sqm

12	<b>Acoustic cladding using Pinewood core panels</b>	<p>Acoustic cladding using pinewood core panels from Anutone or equivalent. Pinewood core panels supply &amp; installation of Anutone Salon Slats made of pinewood E1 grade fiberboard, melamine/veneer laminated finish, groove perforated slats L16-2 - (2mm Slats @16mm pitch) / L32-2 - (2mm grooves @ 32mm centers) backlined with Soundtexblack acoustical fleece, tongue-groove edge for a seamless look, size 128x2440x16mm, volume density of base board 800Kg/m<sup>3</sup>, weight 8Kgs/m<sup>2</sup> (L16), installed by using Anutone Strut framework system. Anutone Strut framework system includes Anutone Strut CC25 aluminium core cross channel having thickness 0.55mm, length 3600mm, knurled web 40mm, depth 10mm and equal flanges 15mm is fastened to wall or framework behind vertically/horizontally at every 600mm c/c. Anutone Strut CC18 aluminium core cross channel, thickness 0.5mm, length 2400mm, web 15mm &amp; 27mm, depth 18mm and flanges of 7mm with suitable edge &amp; centre brackets is then fixed perpendicular to the Strut CC25 Cross channel with the help of fasteners at every 400mm centers. Slats of size 128x2440x16mm in then fixed perpendicular</p>	<p>Acoustic cladding using pinewood core panels from Anutone or equivalent. Pinewood core panels supply &amp; installation of Anutone Salon Slats made of pinewood E1 grade fiberboard, melamine/veneer laminated finish, groove perforated slats L16-2 - (2mm Slats @16mm pitch) / L32-2 - (2mm grooves @ 32mm centers) backlined with Soundtexblack acoustical fleece, tongue-groove edge for a seamless look, size 128x2440x16mm, volume density of base board 800Kg/m<sup>3</sup>, weight 8Kgs/m<sup>2</sup> (L16), installed by using Anutone Strut framework system. Anutone Strut framework system includes Anutone Strut CC25 aluminium core cross channel having thickness 0.55mm, length 3600mm, knurled web 40mm, depth 10mm and equal flanges 15mm is fastened to wall or framework behind vertically/horizontally at every 600mm c/c. Anutone Strut CC18 aluminium core cross channel, thickness 0.5mm, length 2400mm, web 15mm &amp; 27mm, depth 18mm and flanges of 7mm with suitable edge &amp; centre brackets is then fixed perpendicular to the Strut CC25</p>	83 sqm	83 sqm
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to CC18 with suitable edge & centre brackets. Short edges of the panel are staggered. Contractor to provide expansion joints of 3mm at every 4.88m length wise and 4.992m width wise. Panels are backlined with Anutone SynthPF 10x25.

Technical Parameters : • Fire (Class) – 1 & P (For FR grade)

- Acoustics – NRC 0.77 (For E300\* Mounting)
- Thermal conductivity (W/mk)– na
- Climate (°C, RH) – 50, 70
- Light reflectance (%) – 75 (Maple Arce)
- Green (VOC, RC %) – Low, 25

Cross channel with the help of fasteners at every 400mm centers. Slats of size 128x 2440x16mm in then fixed perpendicular to CC18 with suitable edge & centre brackets. Short edges of the panel are staggered. Contractor to provide expansion joints of 3mm at every 4.88m length wise and 4.992m width wise. Panels are backlined with Anutone SynthPF 10x25. Anodized Aluminium corner profile from Dural or equivalent to be installed in corners where the panels touch the finished floor.

Technical Parameters : • Fire (Class) – 1 & P (For FR grade)

- Acoustics – NRC 0.77 (For E300\* Mounting)
- Thermal conductivity (W/mk)– na
- Climate (°C, RH) – 50, 70
- Light reflectance (%) – 75 (Maple Arce)
- Green (VOC, RC %) – Low, 25

<p><b>13</b></p>	<p><b>Acoustic cladding using fabric mounted glasswool core panels</b></p> <p><b>To be read as Acoustic cladding using stretch fabric.</b></p>	<p>Acoustic cladding using fabric mounted glasswool core panels. Acoustic cladding using fabric mounted glasswool core panels from Anutone or equivalent. Supply and installation of Anutone Acoustic wall fabric stretch system by using FR Grade fabric of size 1700mm width, shall be stretched by using infill of Synth PF 10X25 mm thick, rigid vinyl Stretch Tracks half wrap/full wrap 15mm (FS15) and Midseam 15mm (FS15), Strand board, Synth PF infill with requisite accessories &amp; tools. FS15 tracks to be installed on wooden base, after applying Stick S7 adhesive on both surfaces for a true and continuous secure grip, and heavy-duty fasteners at 150mm centers on one/both sides of Stretch Tracks. Anutone Strut framework system includes Anutone Strut FC50 GI Partition Channel of 50mm with SC48 Strut Channel. Strand3 Fibre square edge magnesite bonded pinewood fiber panels of size 600x1200x20mm having density 400 kg/m<sup>3</sup>, weight 4 kg which is fixed to the wall with suitable fasteners. Synth PF 10x25mm thick adhered on the strand panel by using adhesive. Fabric of width 1700mm, acoustically transparent to about 99% , is then aligned to the Stretch tracks by</p>	<p>Supply &amp; installation of Acoustic cladding on Walls / Dry Partition, using fabric mounted core panels from Anutone or equivalent. Supply and installation of Anutone Acoustic wall fabric stretch system by using FR Grade fabric of size 1700mm width, shall be stretched by using infill of Synth PF 10X25 mm thick, rigid vinyl Stretch Tracks half wrap/full wrap 15mm (FS15) and Midseam 15mm (FS15), Strand board, Synth PF infill with requisite accessories &amp; tools. FS15 tracks to be installed on wooden base, after applying Stick S7 adhesive on both surfaces for a true and continuous secure grip, and heavy-duty fasteners at 150mm centers on one/both sides of Stretch Tracks. Anutone Strut framework system includes Anutone Strut FC50 GI Partition Channel of 50mm with SC48 Strut Channel. Strand3 Fibre square edge magnesite bonded pinewood fiber panels of size 600x1200x20mm having density 400 kg/m<sup>3</sup>, weight 4 kg which is fixed to the wall with suitable fasteners. Synth PF 10x25mm thick adhered on the strand panel by using adhesive.</p>	<p>90 sqm</p>	<p>90 sqm</p>
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following the fabric thread line or pattern. The fabric is stretched and tucked into the Stretch tracks and secured into the locking jaws so that it will be smooth, free of wrinkles with the tucking tools. Note -minimum 50mm additional fabric is required for tucking hence maximum module wall fabric width would be 1600mm. Window openings to be closed with plywood and white laminate on the elevation side and on the inside with the fabric stretch system as above.

Technical Parameter: • Fire (Class) – 1 & P

- Acoustics – NRC 0.85 (For 25mm C50 Mounting)
- Thermal conductivity (W/mk)– 0.08
- Climate (°C, RH) – 50, 90
- Light reflectance (%) – colour dependant
- Green (VOC, RC %) – Low, 30

Fabric of width 1700mm, acoustically transparent to about 99% , is then aligned to the Stretch tracks by following the fabric thread line or pattern. The fabric is stretched and tucked into the Stretch tracks and secured into the locking jaws so that it will be smooth, free of wrinkles with the tucking tools. Anodized Aluminium corner profile from Dural or equivalent to be installed in corners where the panels touch the finished floor.

Technical Parameter: • Fire (Class) – 1 & P

- Acoustics – NRC 0.85 (For 25mm C50 Mounting)
- Thermal conductivity (W/mk)– 0.08
- Climate (°C, RH) – 50, 90
- Light reflectance (%) – colour dependant
- Green (VOC, RC %) – Low, 30

15	<b>1500mm Main doors - Double door</b>	<p>1500mm Main doors - Double door (to be acoustically treated )Providing and fixing of Noise Reduction doors (make ENVIROTECH or approved Equivalent ) consisting of Door frame made out of good quality hard wood , section size – 100 mm x 110 mm fitted with ‘D’ type rubber gasket to block noise leakage from gap and acoustic door shutter with minimum 60 mm thickness along with fire rating and smoke Intumescent seal strip of size 10mm x 4mm for 120 minutes fire rated and STC 37dB Tested by reputed Laboratory and having infill of 50mm thick resin bonded glasswool of 48 kg/cum density sandwiched by two 10mm thick approved quality marine grade ply and finished with 1 mm thick laminate of approved make, shade and colour and design on both sides. Further edges of shutter shall be provided with 6mm thick teak wood beading using exterior quality synthetic adhesive, headless GI nails, screws, beading finished with approved melamine polish etc.The ply shall be resistant to vermin, mold growth, minor impact, abrasion and short term water attack and with a smooth surface suitable to receive most forms of decoration. The door shall have acoustic</p>	<p>1500mm Main doors - Double door (to be acoustically treated )Main door to consist of two shutters of sizes 1050mm and 450mm width.Providing and fixing of Noise Reduction doors (make ENVIROTECH or approved Equivalent ) consisting of Door frame made out of good quality hard wood , section size – 100 mm x 110 mm fitted with ‘D’ type rubber gasket to block noise leakage from gap and wooden acoustic door shutter with minimum 60 mm thickness along with fire rating and smoke Intumescent seal strip of size 10mm x 4mm for 120 minutes fire rated and STC 37dB Tested by reputed Laboratory and having infill of 50mm thick resin bonded glasswool of 48 kg/cum density sandwiched by two 10mm thick approved quality marine grade ply and finished with 1.5 mm thick laminate of approved make, shade and colour and design on both sides. Further edges of shutter shall be provided with 6mm thick teak wood beading using exterior quality synthetic adhesive, headless GI nails, screws, beading finished with approved melamine polish etc.The</p>	7 sqm	7 sqm
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seal in door rebates and drop dead seal at the bottom of the door including ironmongeries. HARDWARE :-The door assembly shall be fixed to the door frame with heavy duty hardware i.e. Geze/ Assa abloy/Dorma Make or equivalent make SS Hinge Size: 4"x 3"x 3mm , 600 mm SS door handle , SS Tower bolt ,Door closer , Panic Bar ,Panic trim etc. ACOUSTIC INSULATION: The Panels filled with Acoustic material Rock wool confirming to IS-8183 of 96 kg/m<sup>3</sup> density, very good noise absorber for high, mid & low frequencies along with, 6 MM thick anti donning layer having Thermal Conductivity 0.037 @ 20 C as per EN ISO 8497 (DIN 52613) and 2 mm thick Sound Damping layer MTS 05- 303 to achieve higher Sound STC as per site condition.

ply shall be resistant to vermin, mold growth, minor impact, abrasion and short term water attack and with a smooth surface suitable to receive most forms of decoration. The door shall have acoustic seal in door rebates and drop dead seal at the bottom of the door including ironmongeries.HARDWARE :-The door assembly shall be fixed to the door frame with heavy duty hardware i.e. Geze/ Assa abloy/Dorma Make or equivalent make SS Hinge Size: 4"x 3"x 3mm , 600 mm SS door handle of 32mm dia , SS Tower bolt , Dead lock, Concealed Door closer. ACOUSTIC INSULATION: The Panels filled with Acoustic material Rock wool confirming to IS-8183 of 96 kg/m<sup>3</sup> density, very good noise absorber for high, mid & low frequencies along with, 6 MM thick anti donning layer having Thermal Conductivity 0.037 @ 20 C as per EN ISO 8497 (DIN 52613) and 2 mm thick Sound Damping layer MTS 05- 303 to achieve higher Sound STC as per site condition.

20	<b>Student tables of width 375 mm, height 750mm</b>	<p>Student tables of width 375 mm, height 750mm. Providing and fixing desk of specified size made of 18 mm thick BWR ply table top with adequate metal supports using MS hollow pipes in powder coated finish. The table top and exposed surfaces shall be finished with 1mm thick laminate of approved shade. Edges of the table top shall be finished using edge forming. The modesty panel shall be finished with flexi ply finished using 1mm thick laminate. MS stiffener connecting the legs to be provided using CRCA sheet in powder coated finish as per design. Tables to be provided with book tray and provisions for power outlet, made using CRCA sheets bent to profile in powder coated finish, as per drawings. Table legs to be bolted to the ground using chemical fasteners of Hilti / Ruth of approved model and specifications. Rate inclusive of providing all necessary supports, adhesive and hardwares etc complete. Approved make of Ply - Uniply, Laminate- Merino / Greenlam.</p>	<p>Student tables of width 375 mm, height 750mm. Providing and fixing desk of specified size made out of 12+12 mm thick BWP ply table top with adequate metal supports using MS hollow pipes in powder coated finish. The table top and exposed surfaces shall be finished with 1.5mm thick laminate of approved shade. Edges of the table top shall be finished using teak wood beadings in duco finish. The modesty panel shall be made with flexi ply and finished using 1.5mm thick laminate and teak wood beadings in matching duco finish. Tables to be provided with book tray, made using CRCA sheets bent to profile in powder coated finish, as per drawings. Necessary provision to be made to provide socket points on the table top as indicated in the drawing. Table legs to be bolted to the ground using anchor fasteners of Hilti / Ruth of approved model and specifications. Rate inclusive of providing all necessary supports, adhesive and hardwares etc complete. Approved make of Ply - Uniply, Laminate- Merino / Greenlam.</p>	60 rm	60 rm
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21	<b>Table for faculty (1200mm x 600mm x 750mm)</b>	Table for faculty (1200mm x 600mm x 750mm). Providing and fixing desk of specified size made of 19 mm thick BWR ply with adequate wood supports. The table top and exposed surfaces shall be finished with 1 mm thick laminate of approved shade. Edges of the table top shall be finished using edge forming. The Apron shall be finished with flexi ply on 50mm thk framework. Rate inclusive of providing all necessary supports, adhesive and hardwares etc complete.	Table for faculty (1200mm x 600mm x 750mm). Providing and fixing desk of specified size made of BWP ply with adequate wood supports. The table top and exposed surfaces shall be made out of 12+12 mm thick BWP ply table top and finished with 1.5 mm thick laminate of approved shade. Edges of the table top shall be finished using PVC edge forming. Vinyl logo of IIT Madras to be stuck on the front panel of lecturn. The table legs and modesty panel shall be made using 18mm thick BWP ply and shall be finished with 1.5 mm thick laminate of approved shade, providing all necessary supports, adhesive, hardwares, and electrical connections as per design and as approved by the Architect. etc complete.	1 no	1 no
22	<b>Lectern for faculty (750mm x 750mm x 1100mm)</b>	Lectern for faculty (1000mm x 750mm x 750mm). Providing and fixing desk of specified size made of 19 mm thick BWR ply with adequate wood supports. The table top and exposed surfaces shall be finished with 1 mm thick laminate of approved shade. Edges of the table top shall be finished using edge forming. The Apron shall be finished with flexi ply on 50mm thk framework. Rate inclusive	Lectern for faculty (750mm x 750mm x 1100mm). Providing and fixing lecturn of specified size made of BWP ply with adequate wood supports. The table top and exposed surfaces shall be made out of 12+12 mm thick BWP ply table top and finished with 1.5 mm thick laminate of approved shade. Edges of the table top shall be finished using PVC	1 no	1 no

		of providing all necessary supports, adhesive and hardwares etc complete.	edge forming. The table legs and modesty panel shall be made using 18mm thick BWP ply and shall be finished with 1.5 mm thick laminate of approved shade, providing all necessary supports, adhesive, hardwares and electrical connections as per design and as approved by the Architect.		
<b>23</b>	<b>Table of size 2000mm x 600mm and height 750mm and ledge for control room</b>	Providing and fixing desk of specified size made of 19 mm thick BWR ply with adequate wood supports. The table top and exposed surfaces shall be finished with 1 mm thick laminate of approved shade. Edges of the table top shall be finished using edge forming. The Apron shall be finished with flexi ply on 50mm thk framework. Rate inclusive of providing all necessary supports, adhesive and hardwares etc complete.	Providing and fixing desk of size 2000mm X 600mm x750mm made of 19 mm thick BWP ply with adequate wood supports. The table top and exposed surfaces shall be made out of 12+12 mm thick BWP ply table top and finished with 1.5 mm thick laminate of approved shade. Edges of the table top shall be finished using PVC edge forming. The table legs shall be made using 18mm thick BWP ply and shall be finished with 1.5 mm thick laminate of approved shade, providing all necessary supports, adhesive and hardwares etc complete.	2 no	1 no



## Electrical Works

SL No	Old Specification	New Specification	Old Qty	New Qty	Make preferred
4.5 a	Table mounted socket	8 Module Table Mounted Pop up Box including 2 Nos of 5 Amps socket, 2 Nos of USB charger & one switch	43	47	Legrand/Honeywell
Detailed Technical Specification					
4.5 a	Supplying all materials and wiring for Table mounted 5A plugs points with switches- 2nos Sockets in combined positions complete with necessary accessories, box. Giving connections, earthing ,rough plastering etc complete as required	Supply and installation of Pop-up boxes conforming to IEC 60670-1, IEC 60670-23 et IEC 60884-1. Protection against mechanical impact: IK 07, Degree of protection: IP 30 cover open, IP 40 cover closed. Resistance to vertical load applied through small surface area: 1500 N cover open, 3000 N cover closed. Electric strength: 2000 V. Pop-up boxes shall be Slim design for perfect integration into the floor or office furniture Soft opening for enhanced comfort and safety Equipped with "push and slide" locking system to avoid accidental opening. For installation the flush-mounting boxes must be used for concrete floors or the			

		kits for raised access floors or table top. Same brand socket outlets to be equipped with the POP UP BOX;			
3.3	POWER & DATA RACEWAYS				
d		100x38mm	40	70	
e		50x38mm	18	50	
3.4	Junction Boxes				
b		150mm x 150mm x 65mm	1	20	
Detailed Technical Specification					

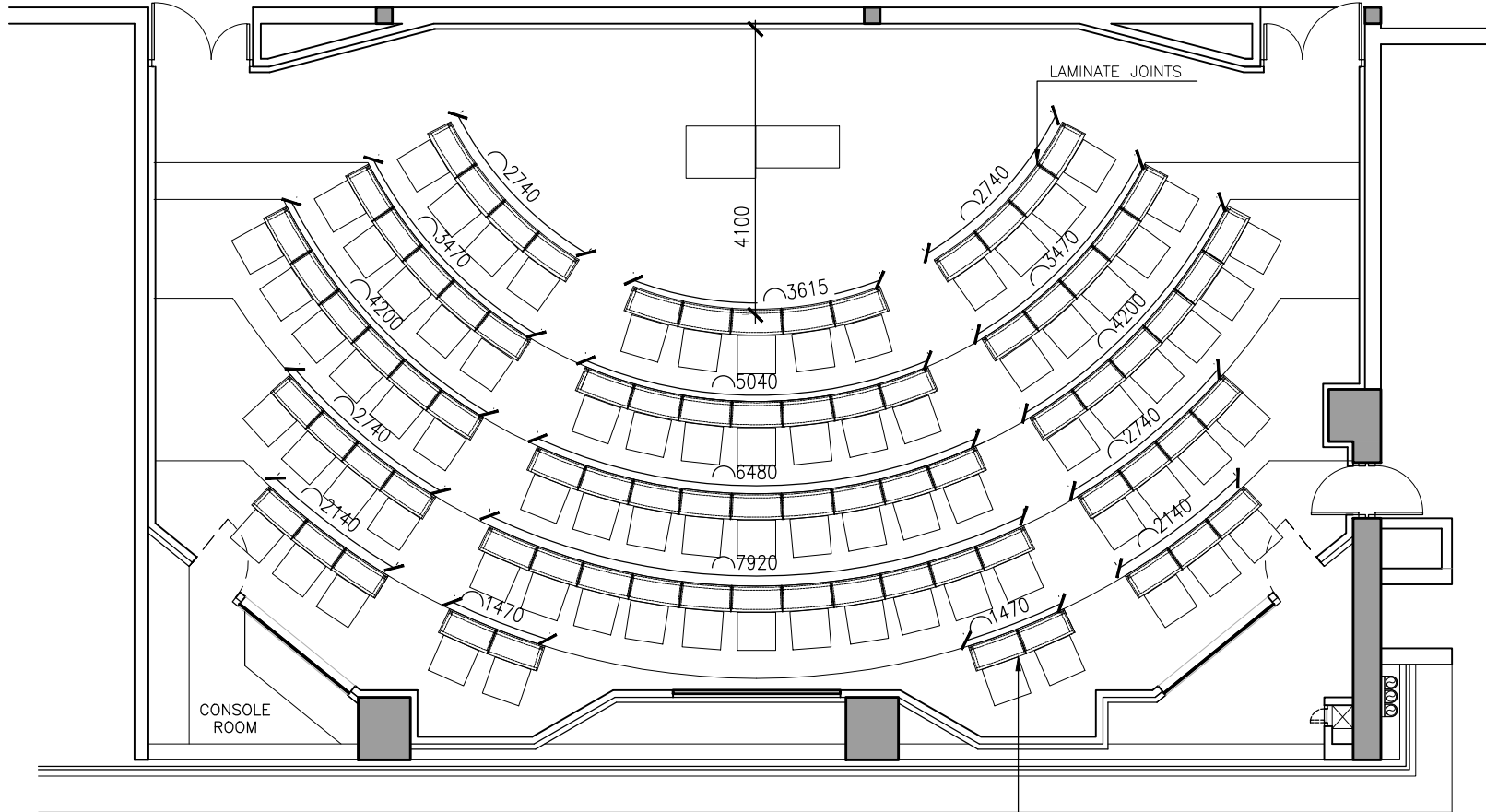
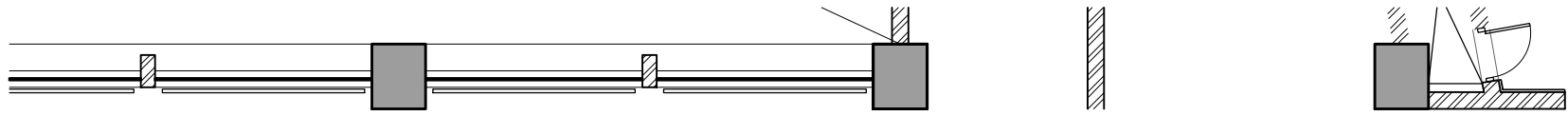
3.3	<p>Supply and fixing of covered Raceway with horizontal &amp; vertical bends, reducers, Tee's, cross over , suitable supports and brackets and other accessories as required. The raceways shall be anti corrosive powder coated with RAL 7032( Siemens grey . The raceways shall be of 14 G thickness and shall have a welded GI slotted angle at every 1.5m for tying the cables as well as clamping the body earthing GI earthing strips. The raceways shall be joined together with powder coated anti corrosive GI plates and cadmium coated anti corrosive bolts and nuts .Raceway poles only should be used to drop down the cables. Do not clamp the raceways onto the wall or to the partition and also do not bury any cables within the wall or the partition . The IS standard for powder coating IS 13871. No warping, &amp; raceways shall be temperature resistant only.</p>	<p>Supply and installation of Metal Raceways made of pre-galvanised sheet metal. Thickness of Raceways should be 1.5mm for body &amp; cover, 1mm for divider. Supplied in standard length of 2.44 meters. Manufactured according to EN 60-670 and EN 50085-2-2 concerns systems for distributing currents in the floor (sunken or surface mounted) It ensures constant performance along the entire distribution up to the user connection point. GI Raceway consists of Body and Cover. Cover fitted on to the body with screws &amp; can be opened easily if required. Raceways should not consist of any welding at Cover or Partition</p>			
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3.4	Supply,laying,testing and commissioning of Raceway junction boxes	<p>Supply and installation of Floor boxes conforming to EN 50085 - 2.2 and EN 60670-23, supplied with Back box and suitable Lid &amp; Trim. Flat and simple installation compatible with screed floor system. The back box should be fixed directly on the slab. The back box must be adjustable height from 65 to 90mm. Side plates are pierced to suit both metal and PVC raceways and are supplied with knockouts to fit conduits (20 or 25mm diameter).Lid and trim which can be used for accessing the floor box. Lid and trim comes with a building site protection to avoid damages during installation. This site protection should be removed to access the floor box and can be repositioned afterwards. Site protection cover should remain on the floor box until hand-over of the project. The lid is reversible (180°) to adapt reconfiguration. The floor box can be locked by means of a locking system on the lid (hidden under the opening handle). For safety reasons, floor box should not be locked when in use. The floor box has to be equipped with provision for using combination of wiring accessory plates like 8 module flat support plate, blank plates,4 modules Waved support plates for data applications.</p>			
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		<p>Supply and installation of Junction boxes conforming to EN 50085 - 2.2 and EN 60670-23, The junction box should be positioned directly on the slab. It provides access to cables at the intersection of trunkings or changes of direction. The junction box allows deviation of power and data cables. Screed height should be between 65 to 90mm. Junction boxes are supplied with a base with flyovers and a lid. A disposable cover protection is available as an option. Side plates are pierced to suit Raceways. The junction box shall be supplied with flyovers, disposable cover protection if required. The junction box is designed to suit Raceways allows cables to be pulled over long distances</p>			
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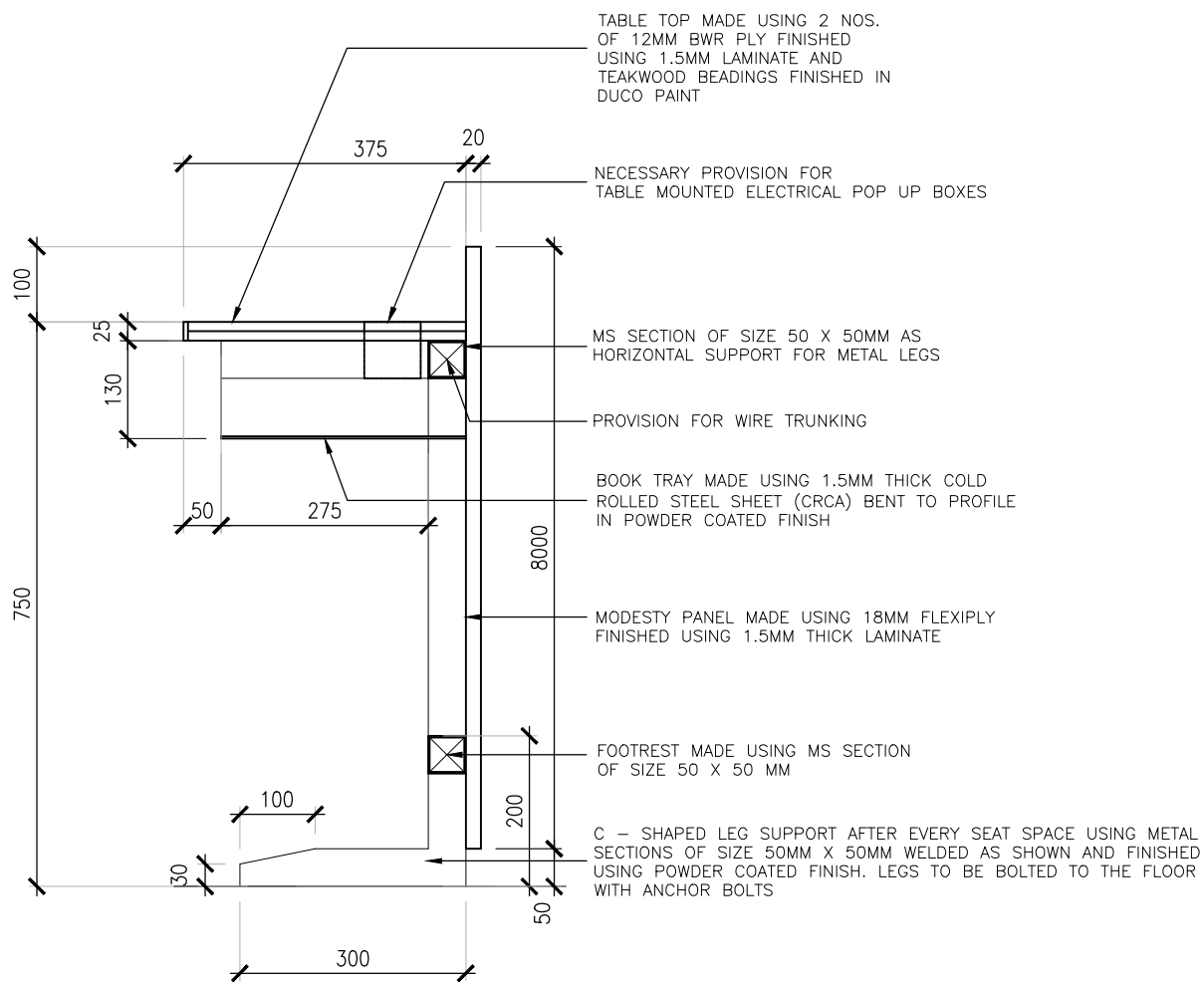
Note: For the items wherever the quantity is increased, Bidders are requested to consider the revised quantity for supply. And as the BOQ changes is not possible at this stage, Bidders are requested to fill the price for existing Quantity and the revised price as per the above final quantity will be calculated by IITM at the time of Financial Evaluation to arrive L1.

Corrigendum Drawings

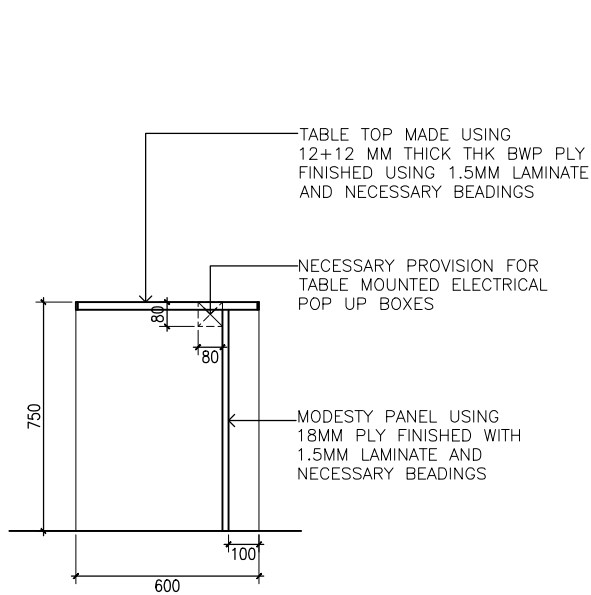


LAYOUT SHOWING TABLE DIMENSIONS

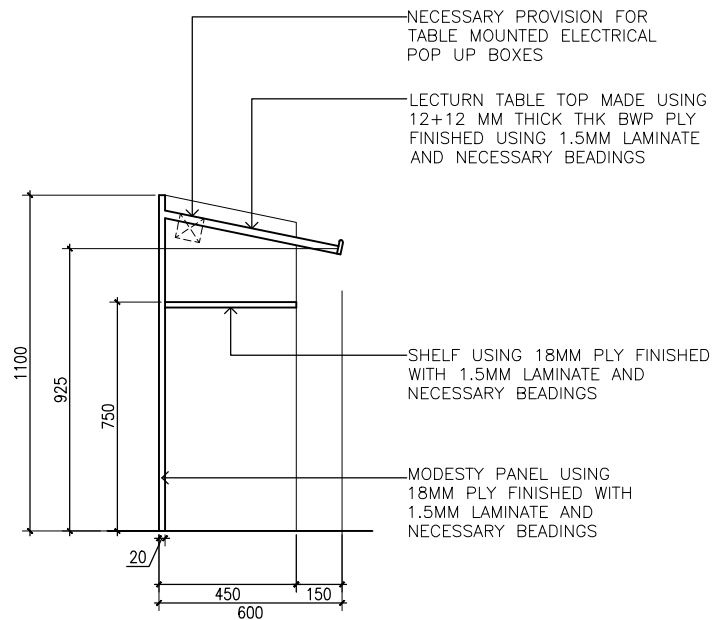
TABLES IN PLY TABLE TOP FINISHED WITH LAMINATE AND NECESSARY BEADINGS, HELD BY 50 X 50 MS HOLLOW PIPE LEGS, 50 X 50 MM STIFFENER CONNECTING LEGS AND BOOK TRAY UNDER THE TABLE IN MS AND MODESTY PANEL USING 18MM PLY FINISHED WITH LAMINATE



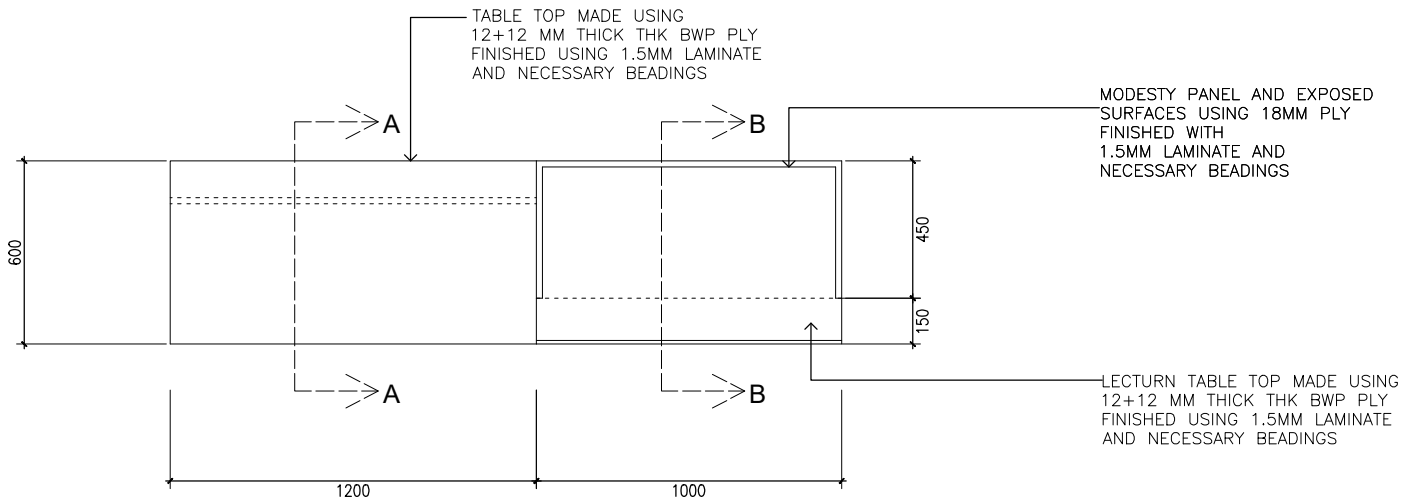
TYPICAL SECTION THROUGH TABLE  
SCALE 1: 10



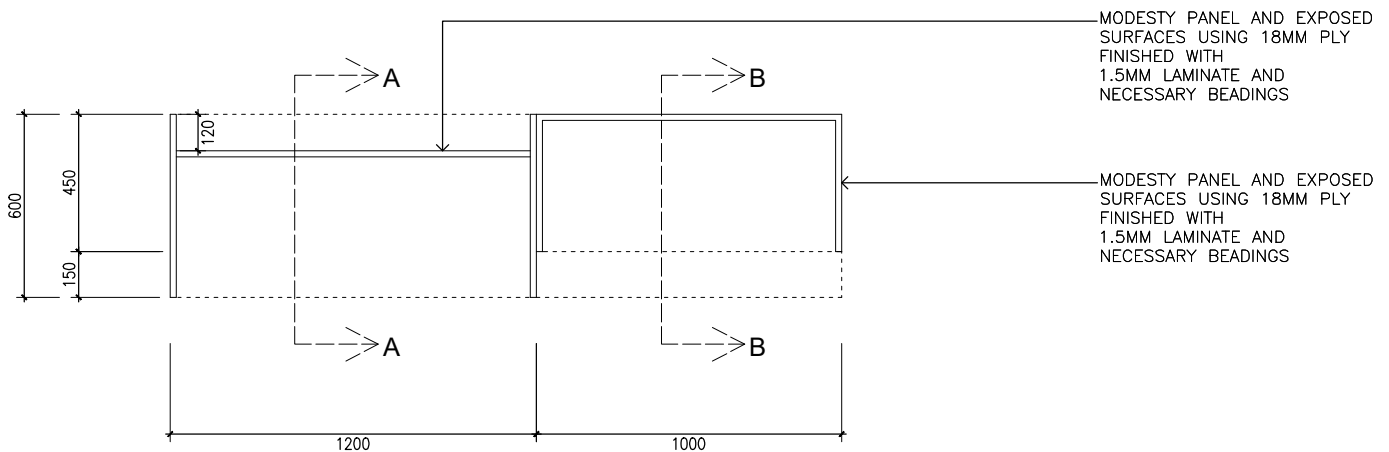
SECTION A-A



SECTION B-B



PLAN @ 1200 MM LVL.



PLAN @ 600 MM LVL