ANNEXURE - F

General Note:-

1. The entire structure should be finished in all respect using appropriate Ply, lamination sheets, colour and shade etc. approved by engg. in charge.
2. All ply should be BWP (IS 710) and termite free phenol bonded type of Century/Green or equivalent make.
3. Laminated sheets should be 1mm thick in the flat surface and 0.5 to 1mm in curved area of Century/Green or equivalent make.
4. Woodworks should be painted with synthetic enamel paint using approved colour and shade of Berger/Asian/ICI over two or more coats on wood primer of similar make.
5. All welded joints of pipe structure should be highly finished with NC paint of approved colour.
6. All glasses are toughened glass or as prescribed in the respective drawing.
7. All curved surface to be covered with two layers of 6mm flexi-ply of Century/Green or equivalent make.
8. Good quality SS hinge with double key multipurpose lock.
9. Good quality SS C-type Handle.
10. Exact colour scheme of laminates and fixing pattern will be made available at the time of fabrication.
11. Framework for full/half height partition: 50X40mm vertical (@max 600mm C/C) and 50X40mm Horizontal (@max 600mm C/C) with teak wood or equivalent wood (approved by engg. In charge)
12. Mode of measurement for Low height/Full height partition: One side of the partition wall on finished work to be measured and no extra measurement shall be taken for opening area.
13. Backside frame work & ply wood surface including ceiling top should be painted with two coat enamel paint over two coats of wood primer of Asian/Berger/ICI or equivalent.
14. Rate should be inclusive of framework, door, French polishing, painting, bending, 8mm frosted with protective lamination glass panes, including necessary stainless steel screws/nuts/bolts/nails/ cleat, joining tape etc. as necessary to complete the work as directed by the department.
15. Dimensions may vary marginally as per site condition.

Specification of Acrylic UV Solid Surface sheet, Joint Adhesive, Adhesive Gun and Epoxy paint

A. Acrylic UV Solid Surface sheet:
2440 (L)x760(W)x6(Thickness) in mm
Qty. - As per drawing details of the table.

B. Joint Adhesive: As per requirement considering the fabrication work

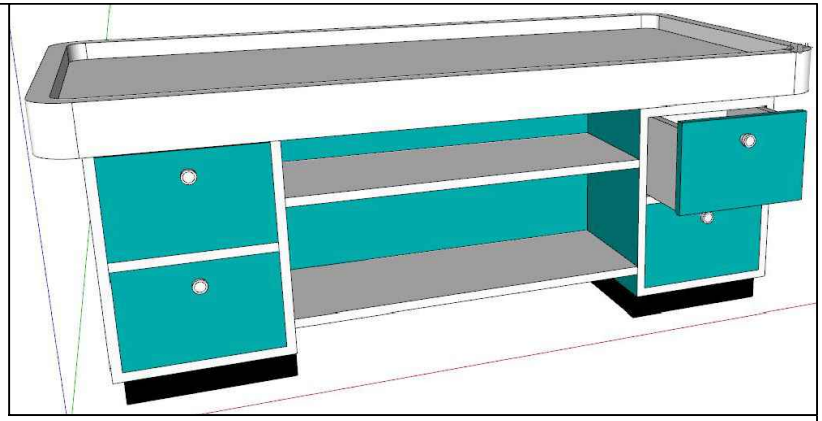
C. Epoxy Paint for Composite Development on Colour Sheet:
Qty. - As per requirement considering the fabrication work

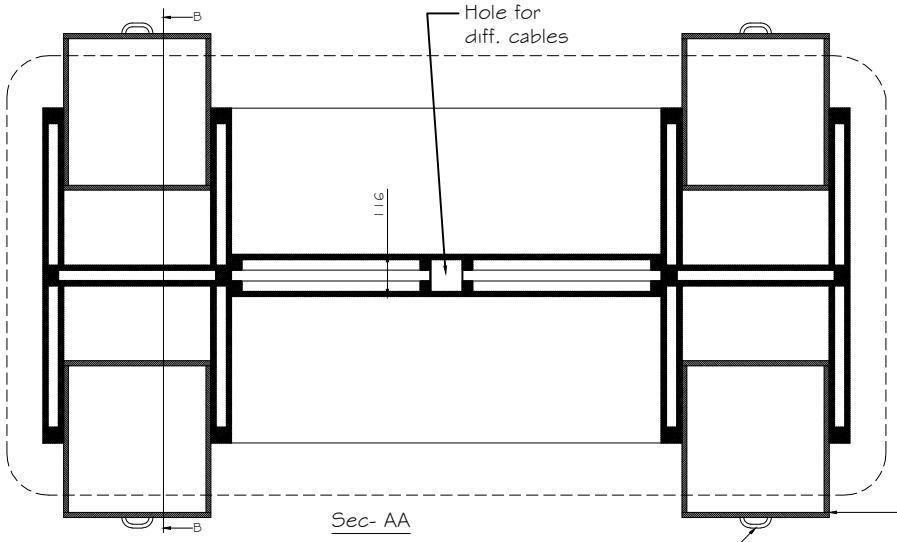
D. Adhesive Gun:
E. Qty.- As per requirement considering the fabrication work

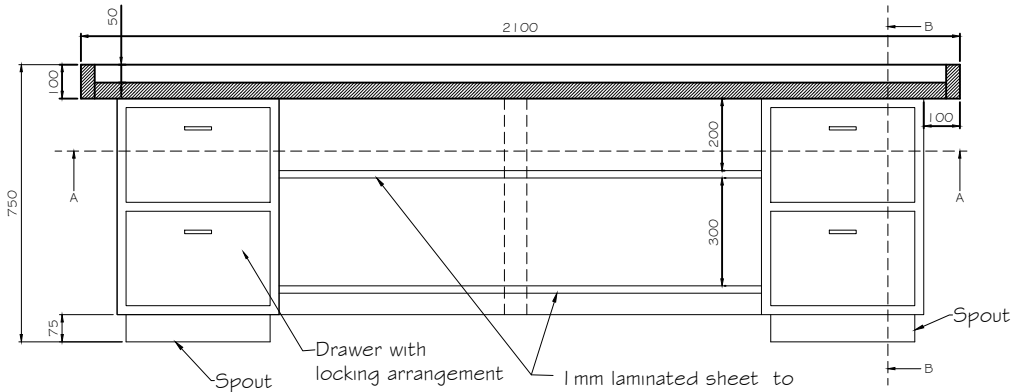
Technical Parameters of Item A

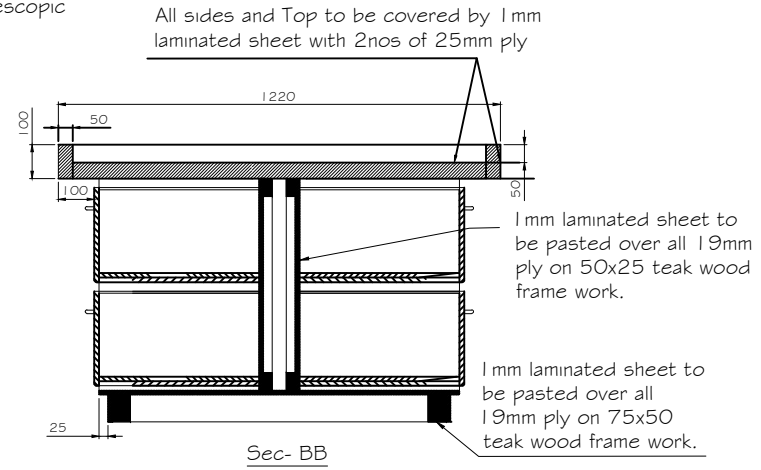
S. No.	Properties	Test Procedure	Requisites
1.	Tensile Strength	ASTM D638	6500 - 7000 psi min
2.	Tensile Elongation	ASTM D638	<0.30%
3.	Flexural Strength	ASTM D790	+/- 10000 psi min
4.	Flexural Modulus	ASTM D790	1.8×10^6 psi min
5.	Density	ASTM D638-2014	1.6-1.8 gm/cc
6.	Hardness	ASTM D785	≥ 85 -Rockwell "M" scale min,
7.	Thermal Expansion	ASTM E228	≤ 3.4×10^{-5} in./in./°C
8.	Fungi and Bacteria	ASTM G21 & G22	No Growth
9.	Microbial Resistance	UL 2824	Should have highly resistant to mold growth
10.	Ball Impact	NEMA LD 3,	No fracture - 1/2 lb. Ball
		Method 3.8	6 mm slab - 36" drop
11.	Weatherability	ASTM G155	No Change
12.	Flammability	ASTM E84, NFPA 255 & UL 723	CLASS A / Grade I
13.	Flame Spread	Class	FSI < 25
14.	Smoke Developed	-	SDI < 25
15.	Class	NFPA 101®, Life Safety	CLASS A
16.	Water Absorptions Weight	MAX%	< 0.05
17.	Toxicity	-	Non-toxic
18.	Testing and compliance Certifications	1. All the requisites must be supported by certified test results. 2. Unistar anti-bacterial certificate, TUV fire certificate, TUV acid alkaline certificate. 3. ISO 9001:2015, ISO 14001:2015. 4. Make in India. 5. More than 7 years manufacturer's warranty on material.	

19.	<u>Essential features to be ensured:</u> 1. Colours should be homogenous throughout the entire thickness of material. 2. Should be solid, non-porous, and homogeneous throughout the span. 3. Should be worked like hardwood using similar tools. 4. Should be thermoformed in wooden or metal moulds at controlled temperatures. 5. Should be glued or joined together inconspicuously for a seamless joint.



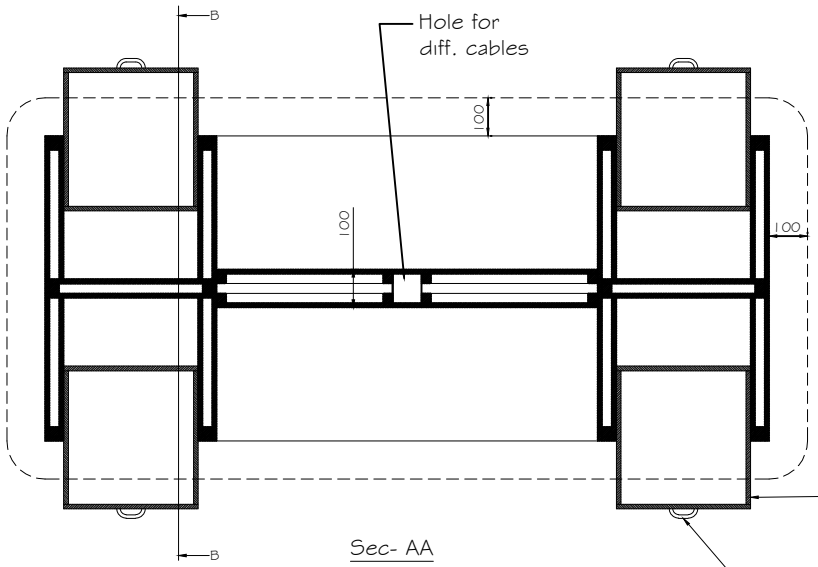




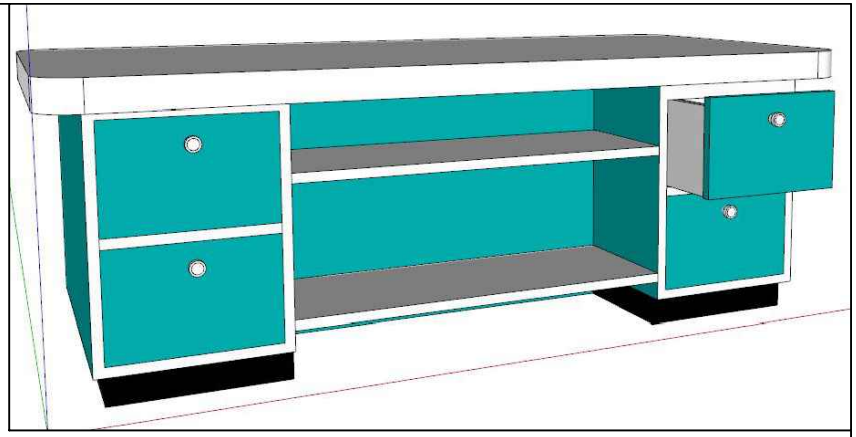


All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture-1	DATE 16-02-24	SCALE 1:1	TOLERANCE ± 0.25mm
TITLE:- Robotics Table			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	



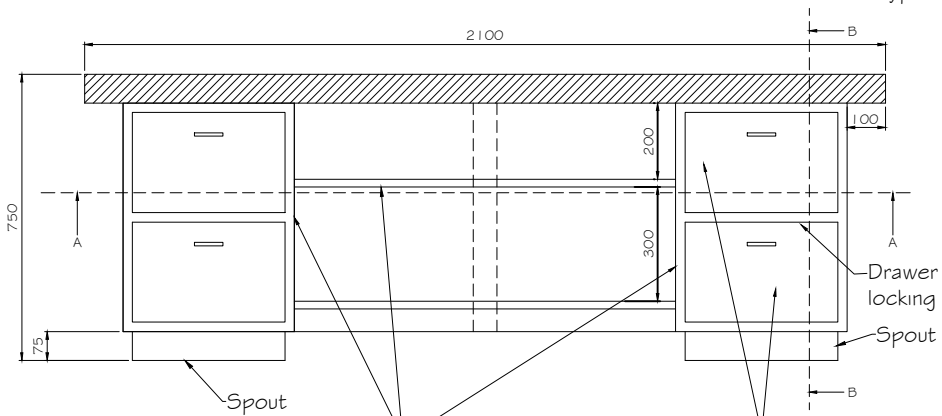
Sec- AA

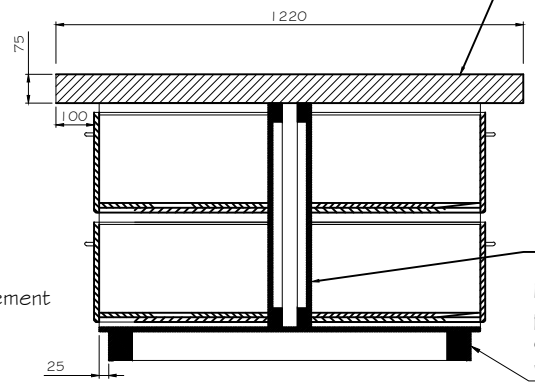


Drawer with
locking arrangement
and Telescopic
channel

'C' type SS handle

Top and edges to be painted with
approve colour with 2 coats enamel
paint over 3nos of 25mm ply.





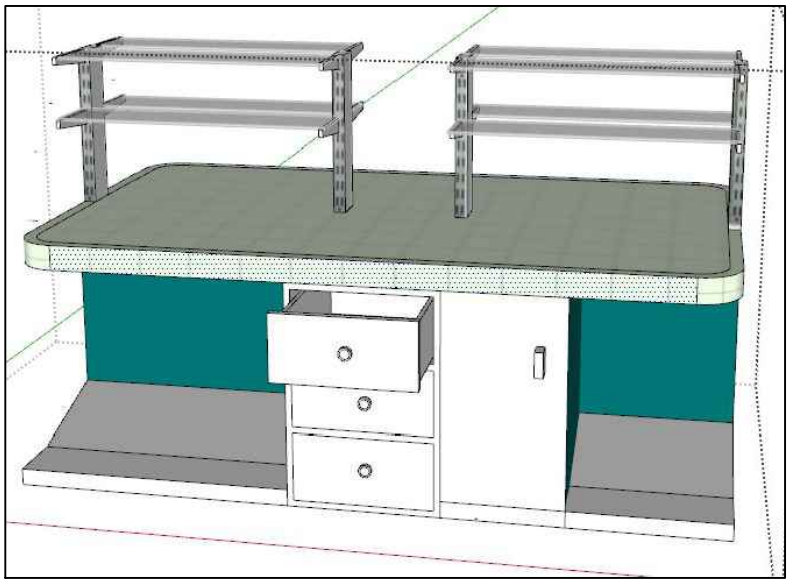
1 mm laminated sheet to be
pasted over all 19mm ply
on 50x25 teak wood frame
work.

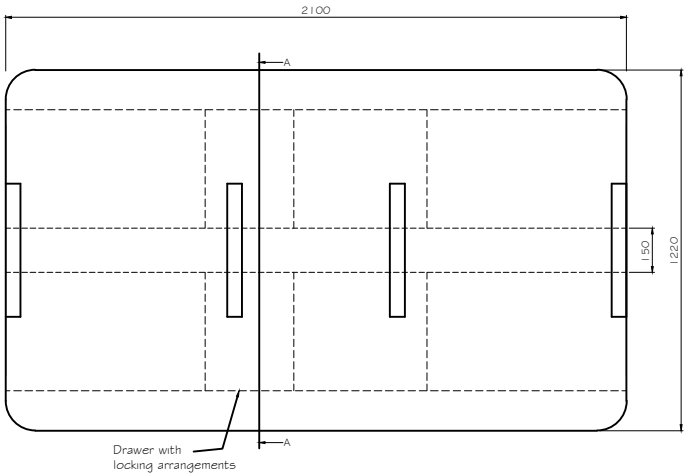
1 mm laminated sheet to be
pasted over all 19mm ply
on 75x50 teak wood frame
work.

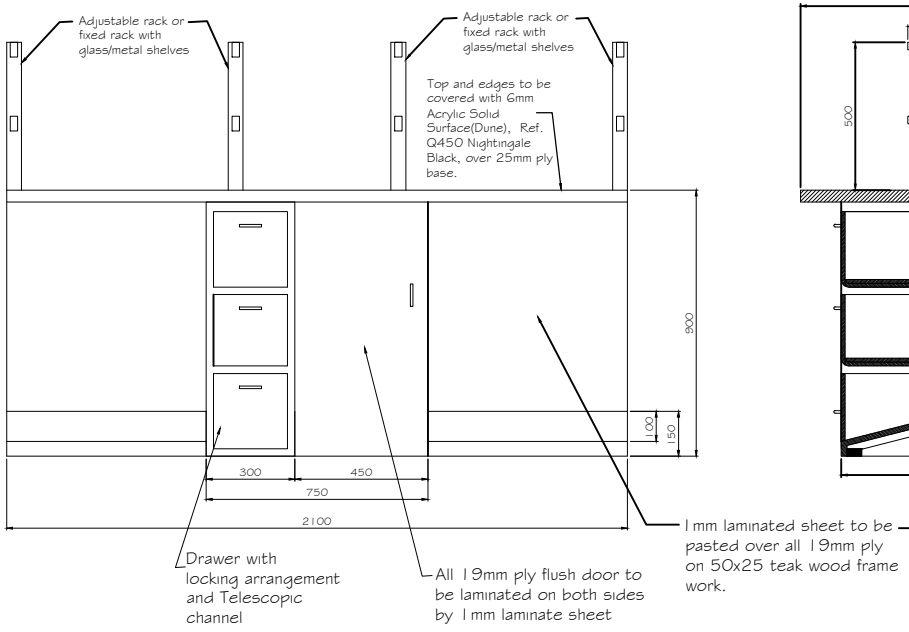
1 mm laminated sheet to be
pasted over all 19mm ply
on 50x25 teak wood frame
work.

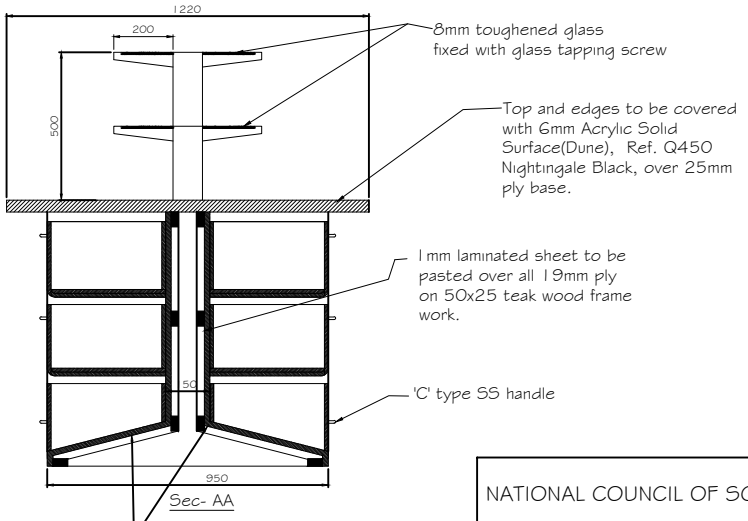
All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 2	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Work Table			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	



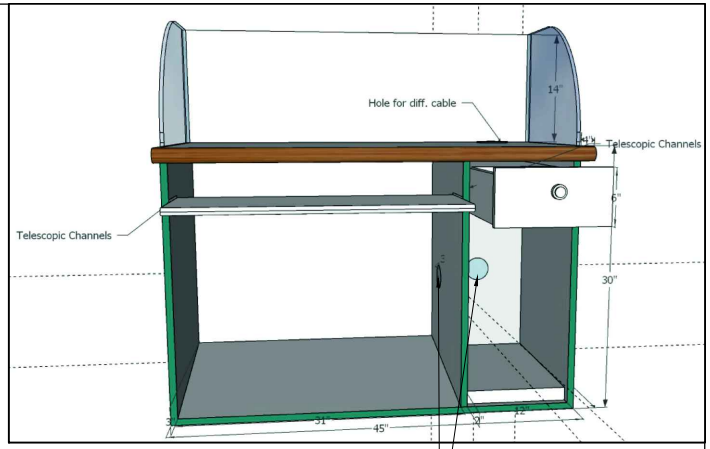


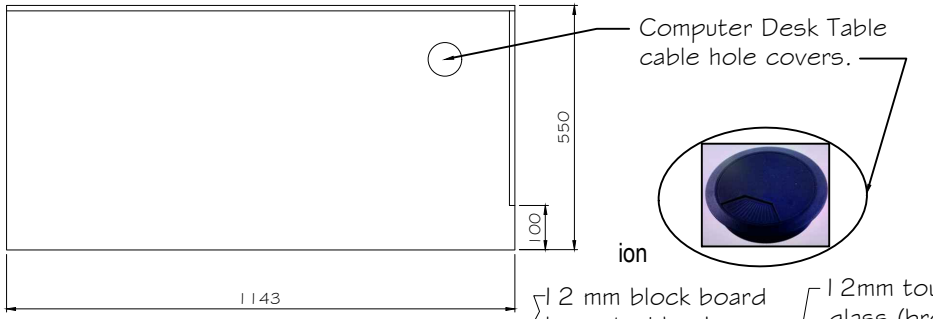




All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 3 & 4	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Chemistry Biology Table			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	





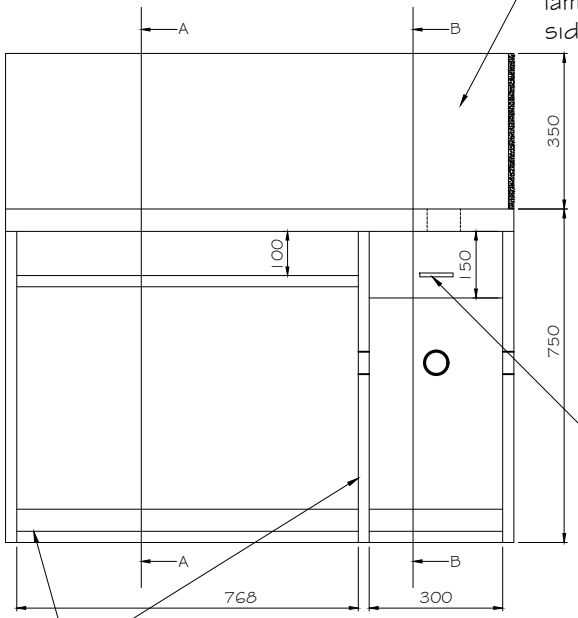
Computer Desk Table cable hole covers.

ion

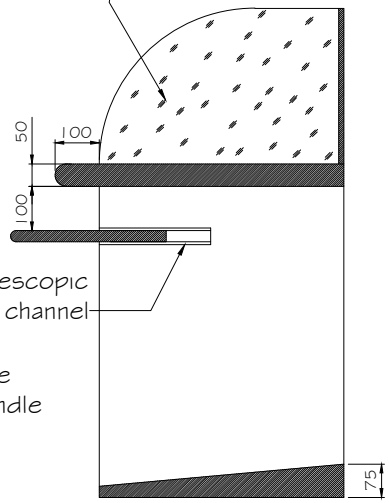
12 mm block board laminated by 1 mm laminate sheet both sides

12mm toughened glass (bronze tinted with protective lamination) on right side

Hole for diff. cables

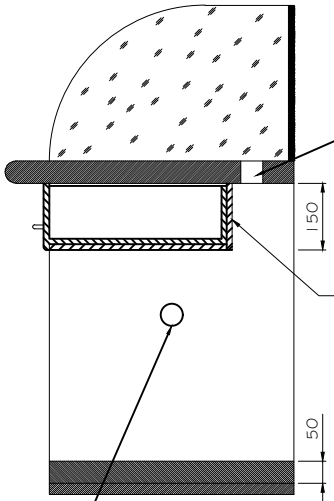


'C' type SS handle



Telescopic channel

Sec- AA



Hole cover cap to be fitted as per attached dimension

Drawer with locking arrangement and Telescopic channel

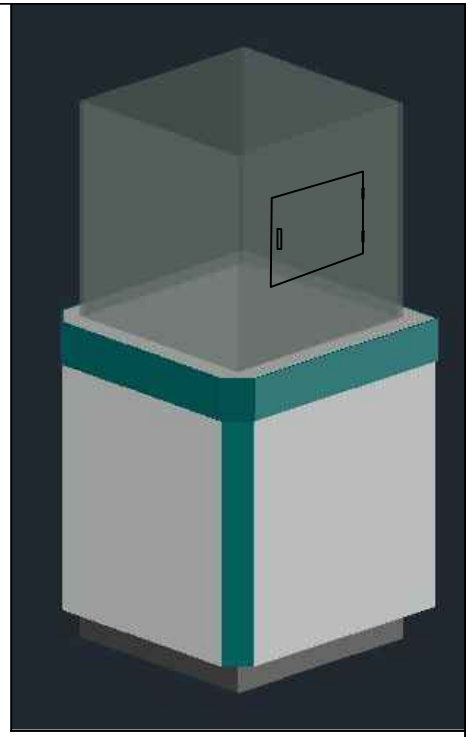
Sec- BB

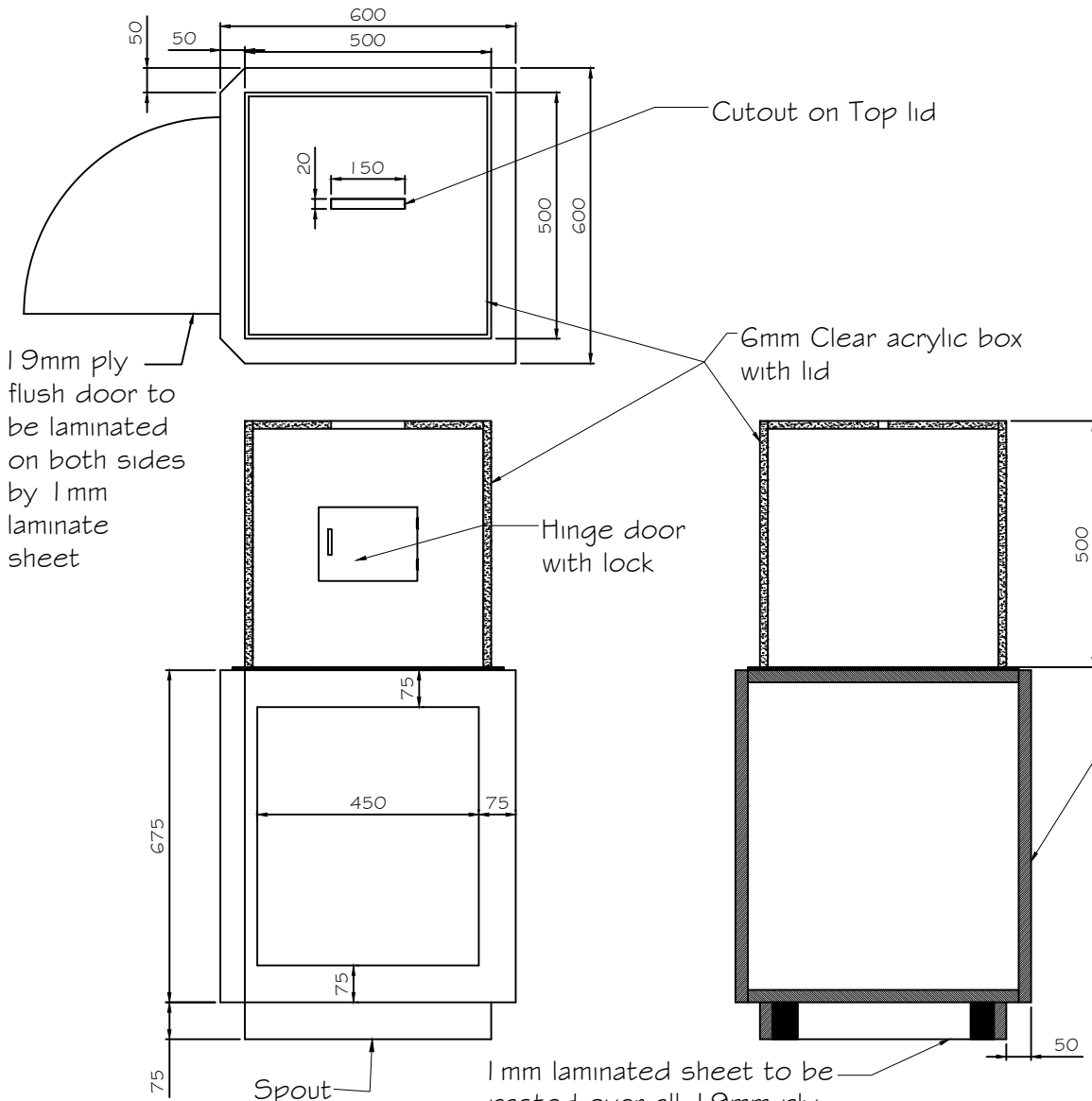
Hole for different cable

All 25 mm thick Block Board are to be laminated on both sides by 1 mm laminate sheet.

All dimensions are in mm

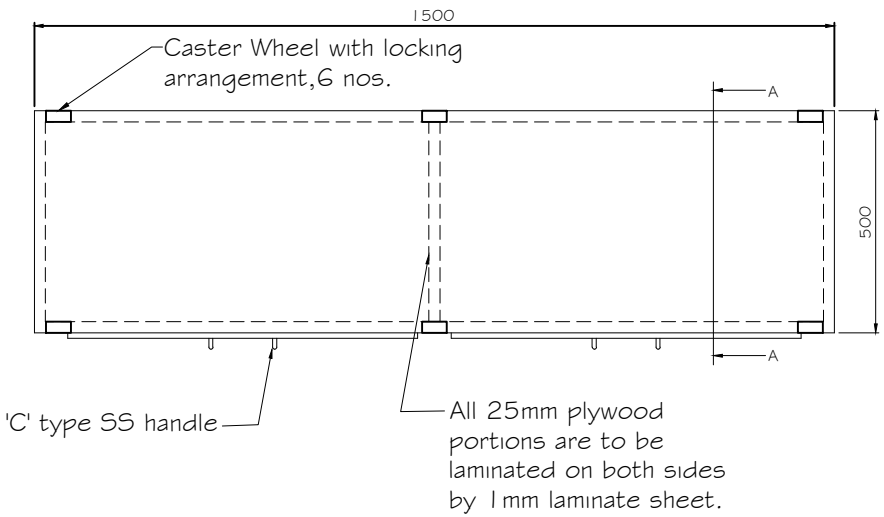
NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 5	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Computer Table			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	

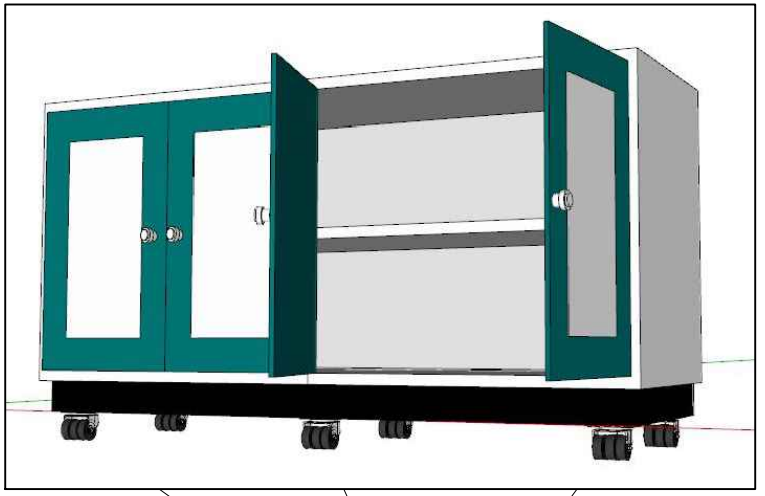




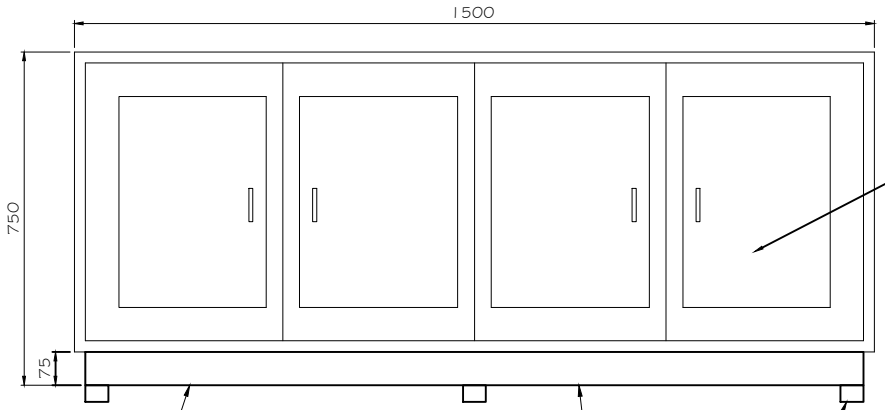
All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 6	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Idea Box			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	

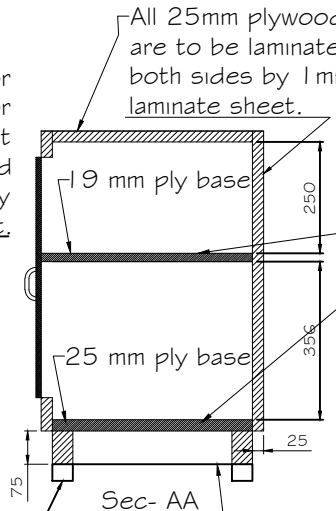




Caster Wheel with locking arrangement,6 nos.

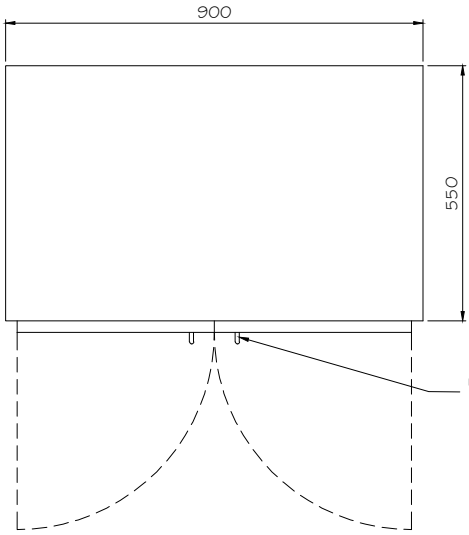


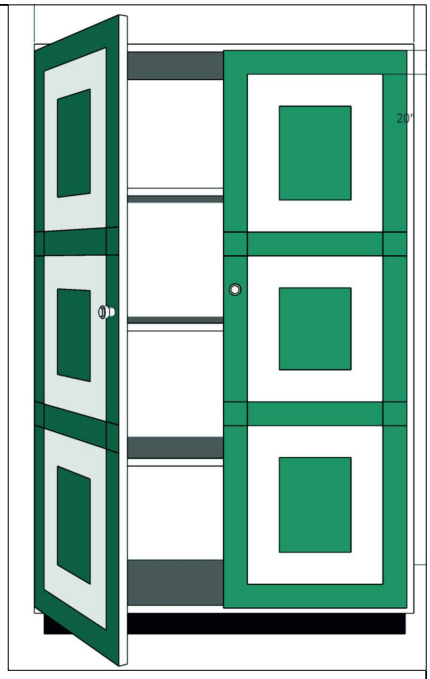
All 19mm ply door should be with door lock, magnet catches, laminated on both sides by 1 mm laminate sheet.

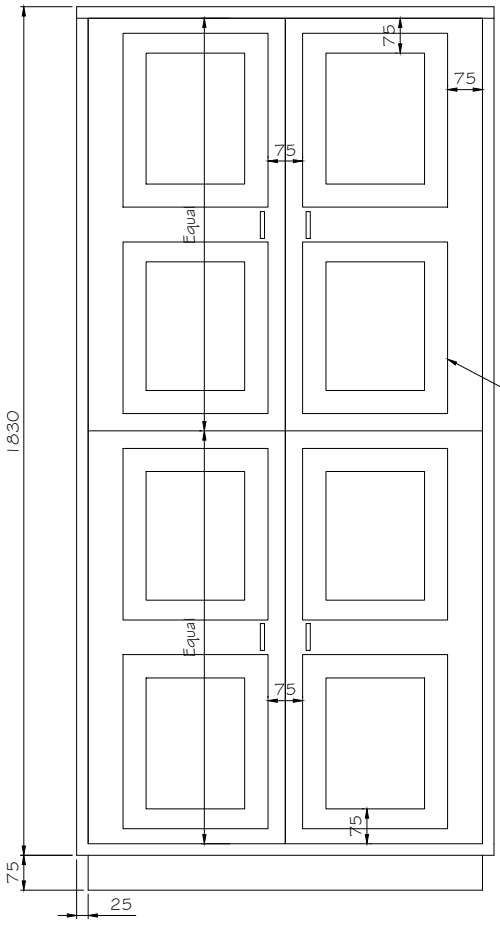


All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 7	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Low Height Rack			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	





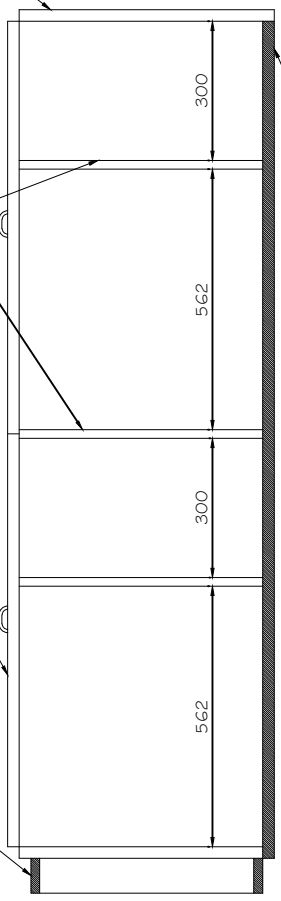


All 25mm plywood portions are to be laminated with 1 mm laminate sheet on both sides.

All 19mm ply rack to be laminated on both sides by 1 mm laminate sheet

All 19mm ply door(4nos. two pair) with door locks, magnet catcher

All 25mm plywood portions are to be laminated on both sides by 1 mm laminate sheet

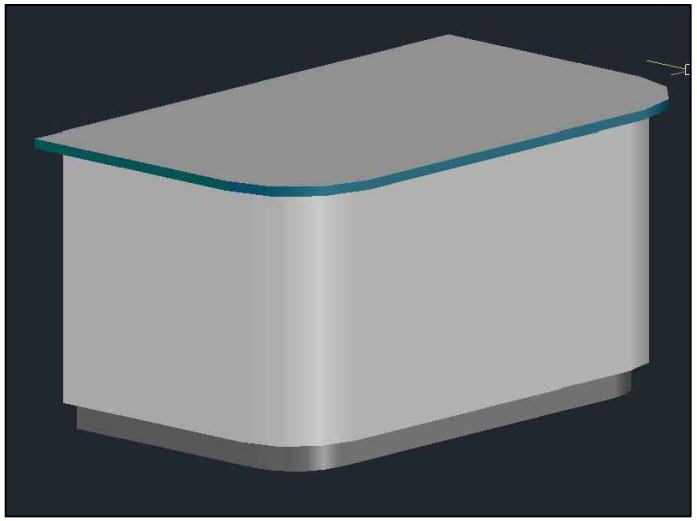


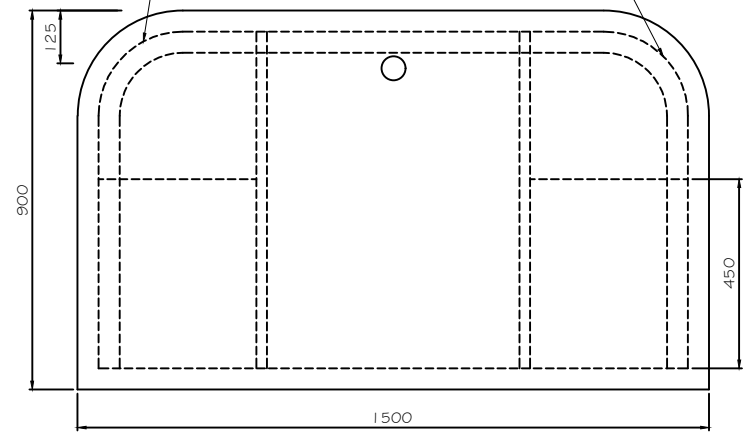
25mm ply partition

All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 8	DATE 16-02-24	SCALE 1:1	TOLERANCE ± 0.25mm
TITLE:- Full Height Rack			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	

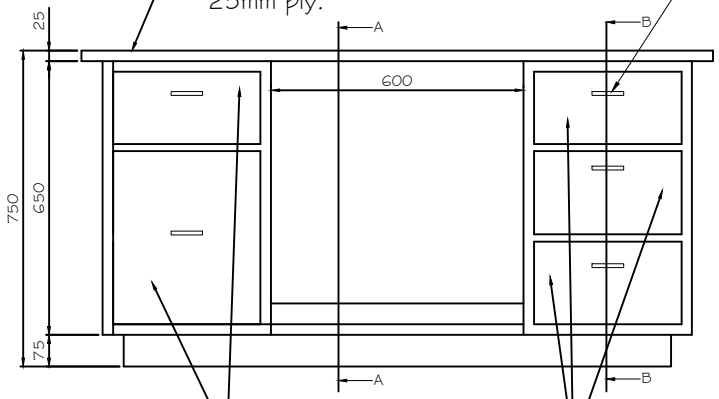
All curved sides to be covered with 1mm laminated sheet over 2nos. of 6mm ply.





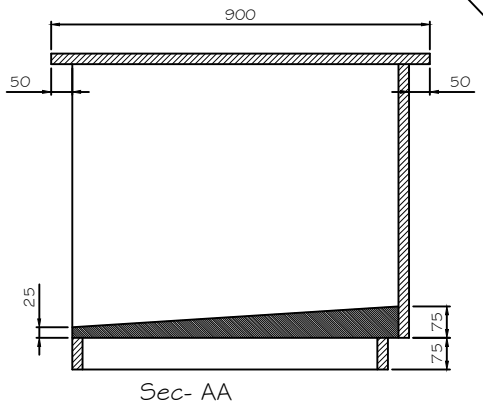
All sides and top to be covered with 1mm laminated sheet over 25mm ply.

'C' type SS handle



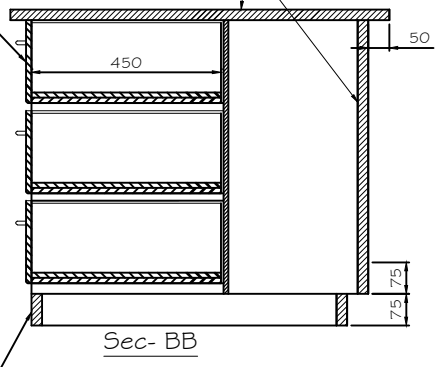
1mm laminated sheet to be pasted over all 19mm ply

Drawer with locking arrangement



Sec- AA

All sides and top to be covered with 1mm laminated sheet over 25mm ply.

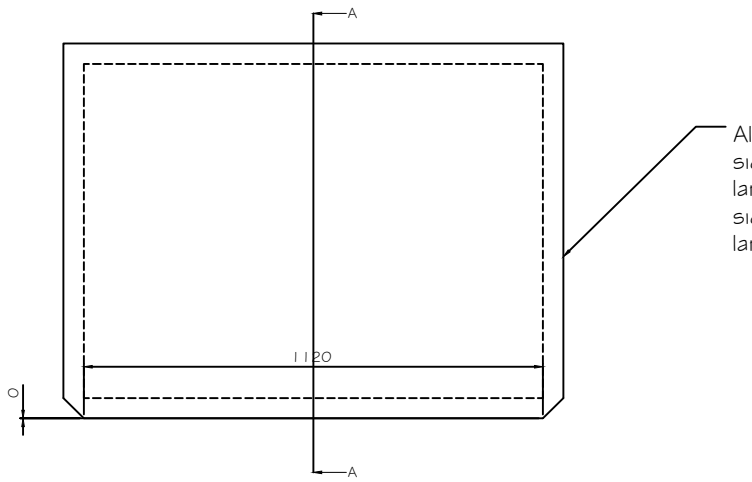


Sec- BB

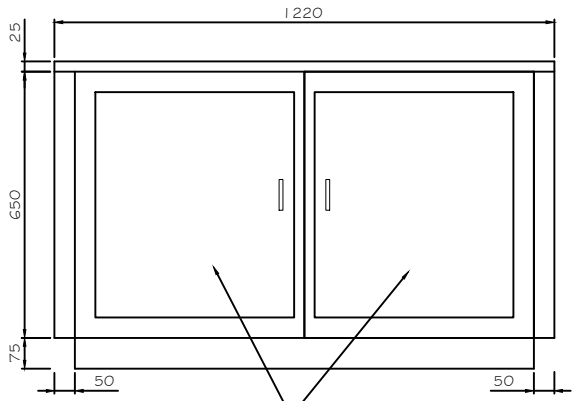
All 25mm plywood portions are to be laminated with 1mm lamination sheet on both sides.

All dimensions are in mm

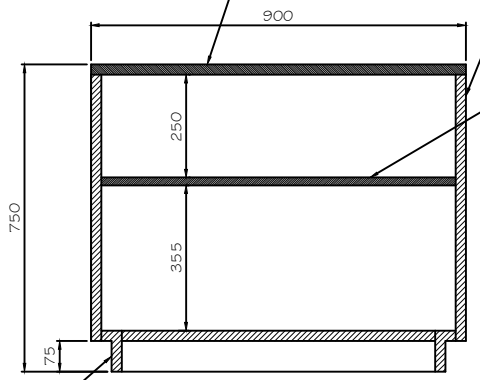
NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 9	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Office Mentor Table			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	



All 25mm plywood sides are to be laminated on both sides by 1mm laminate sheet



19mm ply flush door to be laminated on both sides.



All 25mm plywood sides are to be laminated on both sides by 1mm laminate sheet

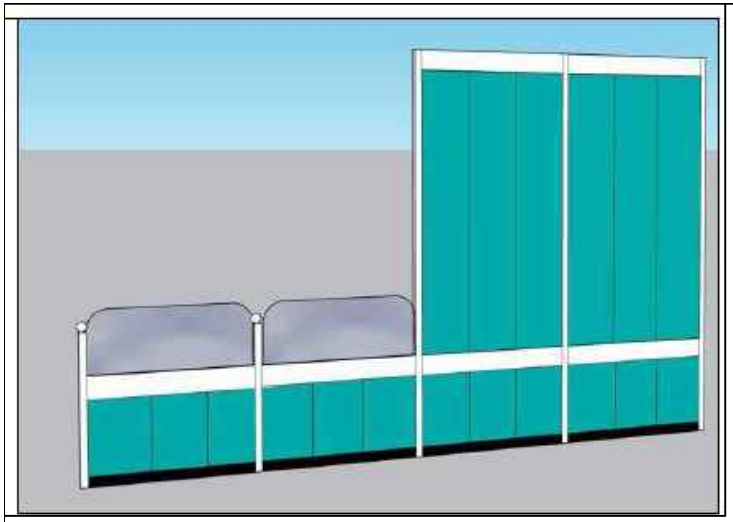
All 19mm ply rack are to be laminated on both sides by 1mm laminate sheet

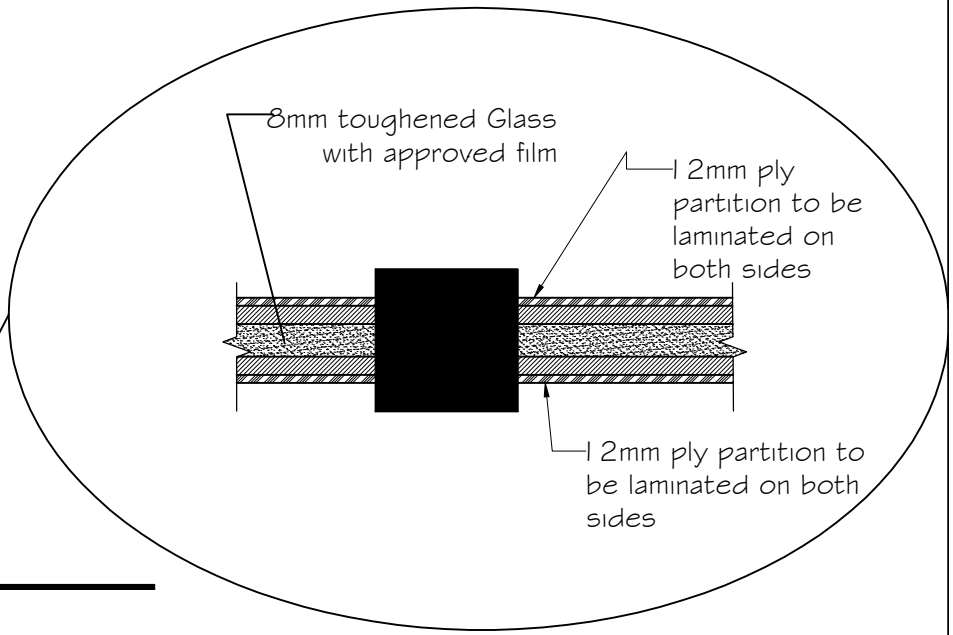
All 25mm plywood sides are to be laminated on both sides.

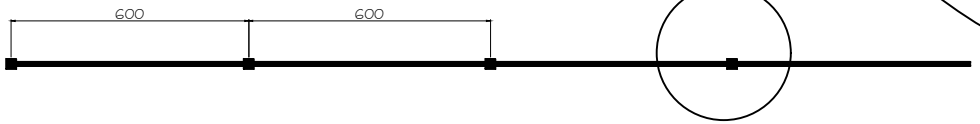
Sec- AA

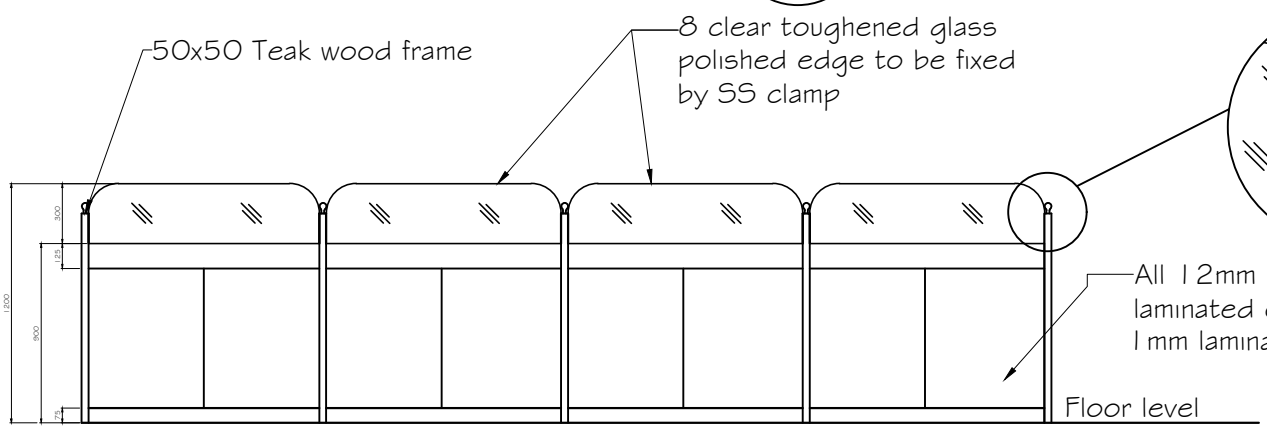
All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture -10	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- 3D Printer Table			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	



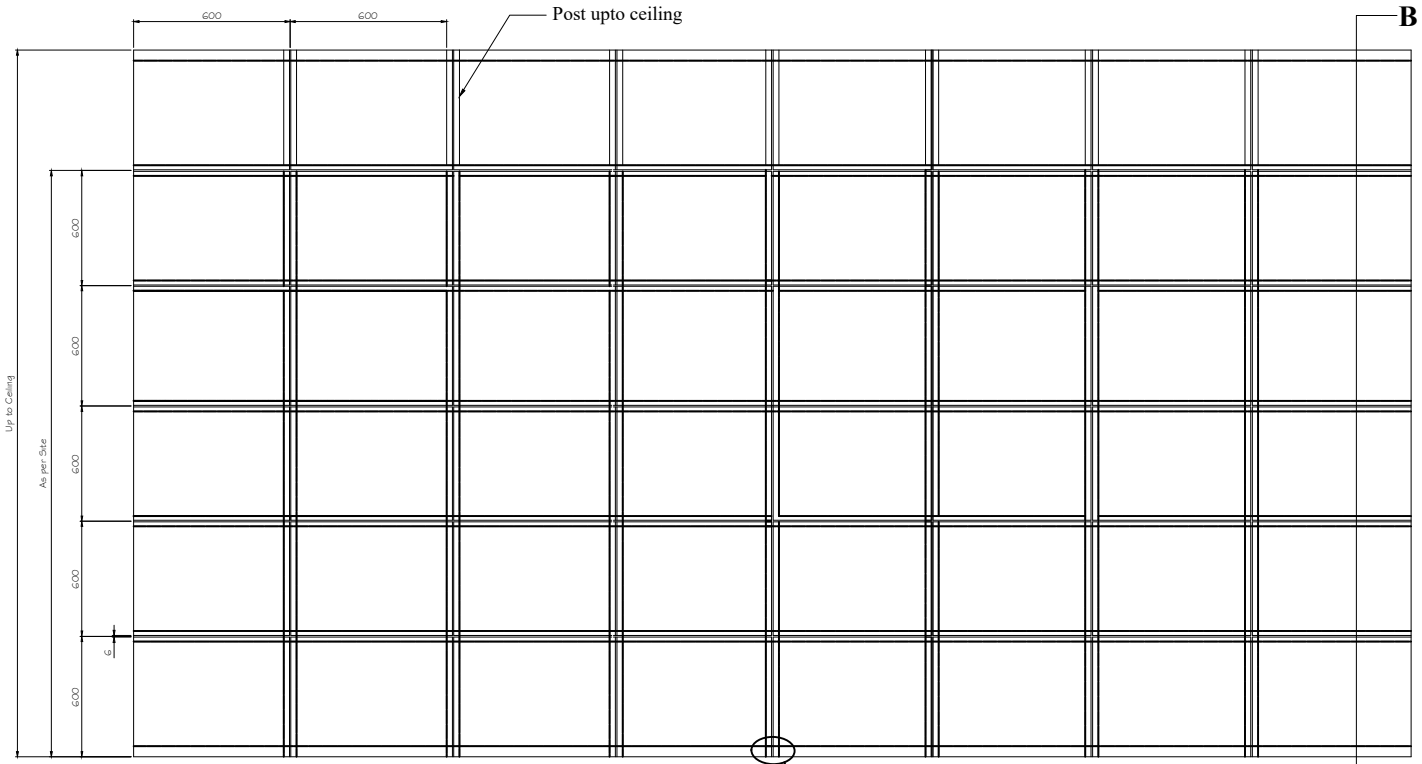






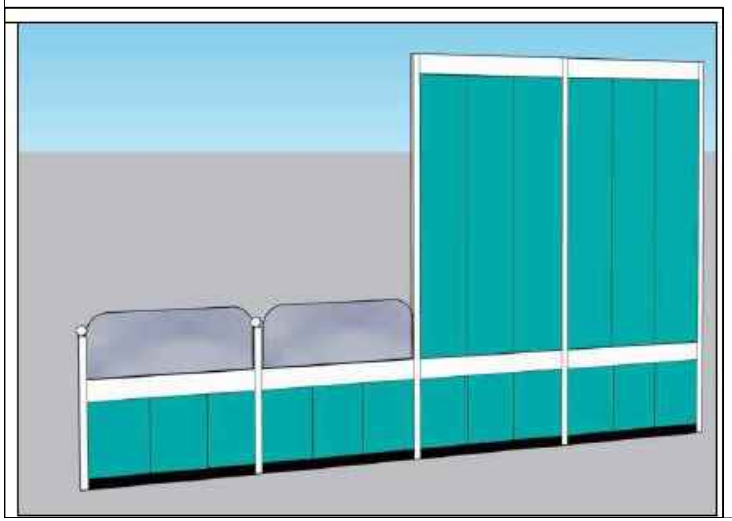
All dimensions are in mm

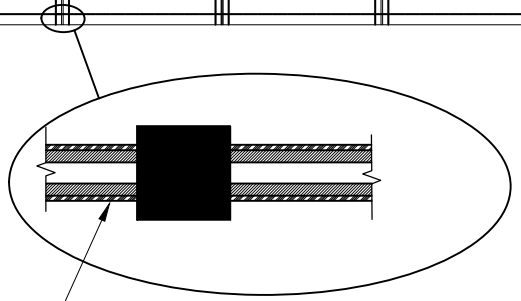
NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 11	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Low height Partition Wall			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	



Both side 1 mm laminated sheet (approved color) on 12mm phenol bonded ply over 50x50 (vertical) and 50x25(horizontal) teak wood or equivalent wood frame work.

Sectional view of 'B-B'

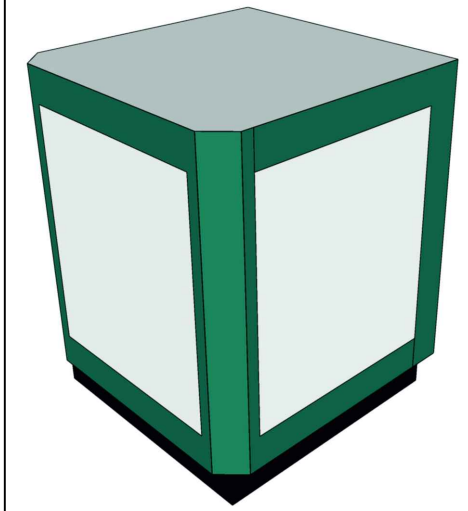


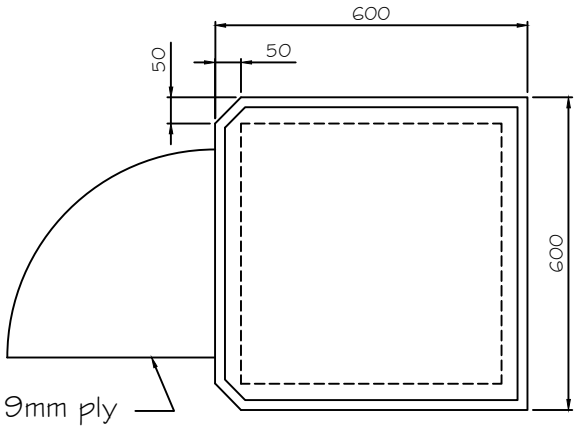


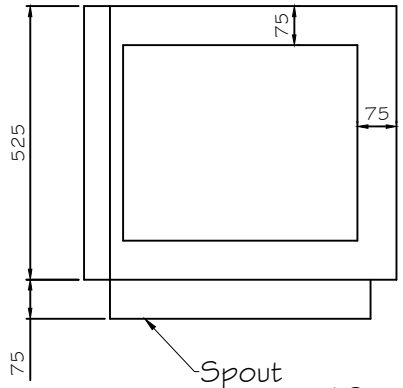
Both side 1 mm laminated sheet (approved color) on 12mm phenol bonded ply over 50x50 (vertical) and 50x25(horizontal) teak wood or equivalent wood frame work.

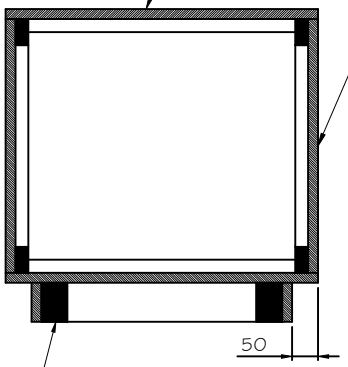
All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 12	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Full Height Partition Wall			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	







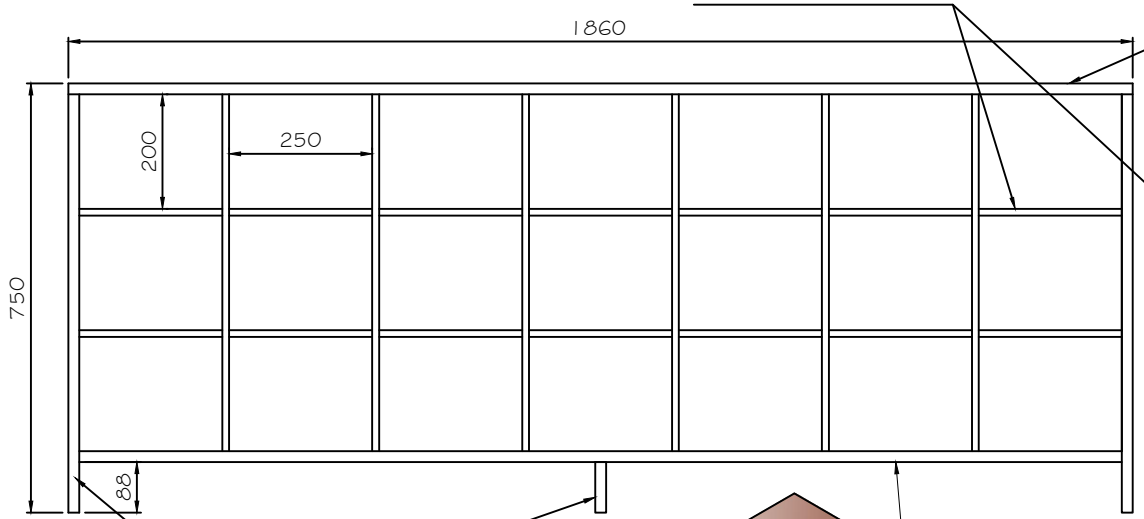


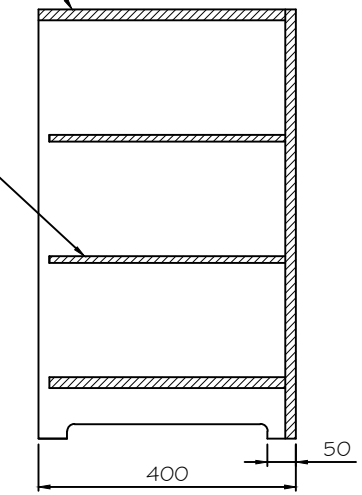
All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 13	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Table for Power Tools			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	

12mm ply shelf painted with two coat enamel (approve colour) after two coat primer on both sides.

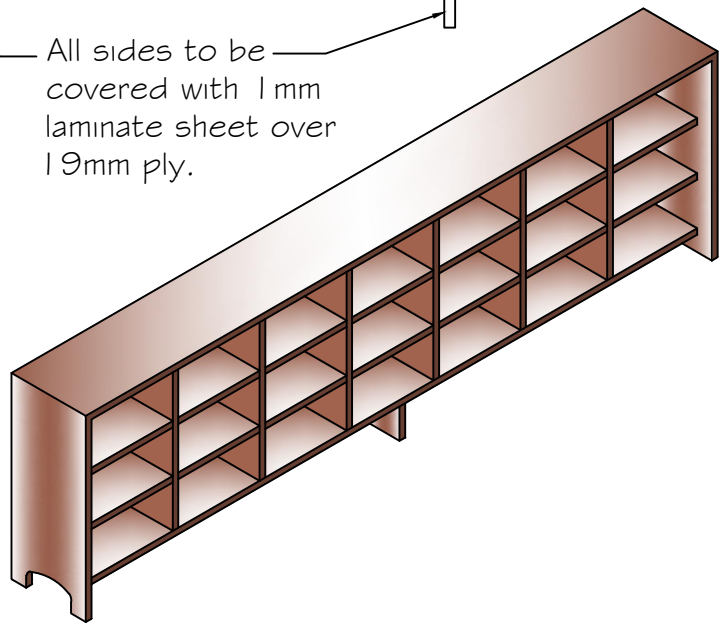
Top to be covered with 1mm laminate sheet over 19mm ply





SECTIONAL SIDE VIEW

All sides to be covered with 1mm laminate sheet over 19mm ply.

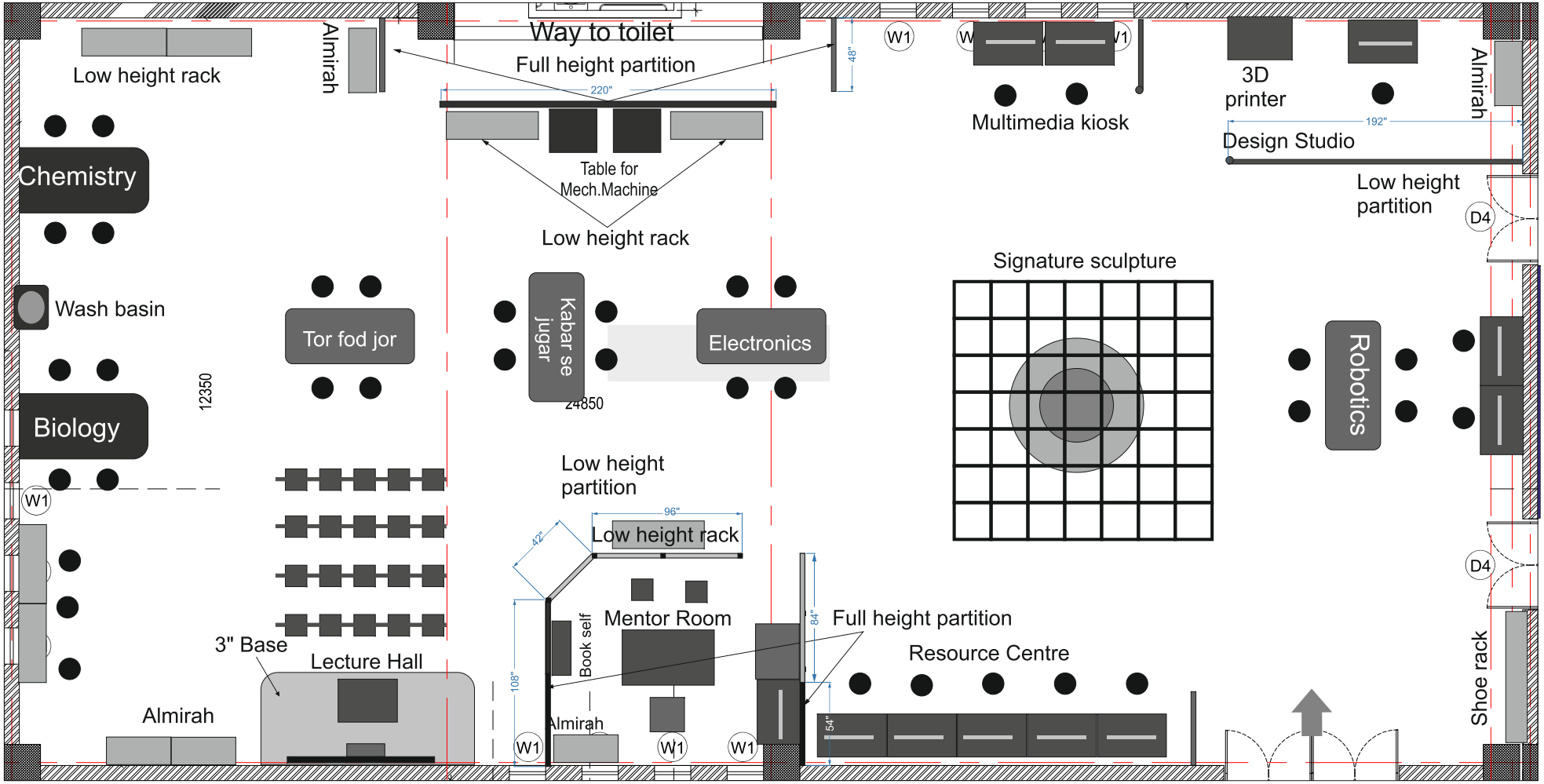


19mm ply bottom shelf painted with two coat enamel (approve colour) after two coat primer on both sides.

All dimensions are in mm

NATIONAL COUNCIL OF SCIENCE MUSEUMS			
UNIT: C.R.T.L.		PROJ.- Innovation Hub Ranchi	
DRG. NO. Furniture - 14	DATE 16-02-24	SCALE 1:1	TOLERANCE ±0.25mm
TITLE:- Shoe Rack			NO OFF.
DRN. BY Minakshi Dutta	CKD. BY	APPRD. BY	

Layout of Innovation Hub at Ranchi Science Centre, Jharkhand



Annexure F