



QUAD00-0521-0141
To authenticate this document
please scan the QR Code



Republika ng Pilipinas
Kagawaran ng Edukasyon
Tanggapan ng Pangalawang Kalihim

OUA MEMO 00-0521-0141
MEMORANDUM
20 May 2021

For: Engr. ANNABELLE R. PANGAN
Chief, Education Facilities Division (EFD)

Subject: CHANGE OF SCHOOL FURNITURE DESIGN FOR 2021
AND LAST MILE SCHOOLS (LMS) PROJECTS

Based on various onsite checking and evaluation of school furniture, particularly those delivered in 2018 and 2019, indications of low quality, poor workmanship, and infestation with bukbok (wood borers), were found out, owing perhaps to agency design and specifications.

In the course of the onsite check, probable gaps or failures in the inspections, acceptance and enforcement of warranties were noted. Though limitations in these areas may already be addressed with the institutionalization of a logistics and warehousing system, along with strengthened inspection mechanisms, a revisit of the material specifications and workmanship standards proves helpful and will complement these interventions. A new detailed specifications and standards aimed at ensuring that these gaps are addressed should be welcome under the circumstances. Ultimately, low-quality, poor workmanship and otherwise substandard deliveries will be lessened, if not entirely eliminated.

To address these recurring issues, it is highly recommended/instructed that, instead of wooden chairs, Polypropylene (PP) plastic single chairs be provided for learners (and teachers) for 2021 and for Last Mile Schools projects.

More than this, and very important, PP plastic single chairs will allow maximum physical distancing as prescribed by IATF and health and safety protocols under the Covid-19 pandemic. (We do not wish it, but the pandemic situation will most likely stay for some time.)



Scan this QR Code to view
this and Magazines
of Trade Programs



Office of the Undersecretary for Administration (OUA)

(Administrative Service (AS), Information and Communications Technology Service (ICTS), Disaster Risk Reduction and Management Service (DRRMS), Bureau of Learner Support Services (BLSS), Baguio Teachers Camp (BTC), Central Security & Safety Office (CSSO))

Department of Education, Central Office, Meralco Avenue, Pasig City
Rm 519, Mabini Bldg; Mobile: +639260320762; Tel: (+632) 86337203, (+632) 86376207
Email: usec.admin@deped.gov.ph; Facebook/Twitter @depedtayo

Following are brief pros and cons of wood and PP plastic chairs.

Change in School Furniture for 2021 and Last Mile Schools Projects	
FROM Wood Chairs w/ Armrest and 2-seater Wood Benches for Learners	TO Polypropylene (PP) Plastic Single Chairs for Learners and Teachers
Wood is porous and absorbs water, and when it does, the wood expands/swells and warps causing structural problems. Wood is vulnerable to water damage, rot, fire, decay, termites and wood borers.	Made from molding material of injected Polypropylene (PP), considered the safest of all plastics; PP is a robust plastic that is heat resistant and is unlikely to leach even when exposed to warm or hot water.
Although wood may be treated or sealed, commercially available wood/lumber are often not completely seasoned or dried, and are susceptible to <i>bukbok</i> infestation.	PP plastic chairs are resistant to termites (<i>tanay</i>) and wood borers (<i>bukbok</i>); they are practical and not easily damaged by rain and floods.
Traditional wood chair w/ armrest and 2-seater wood benches are heavier and pose greater logistical problems.	Single PP Plastic chairs are lighter, can easily be transported, individually carried, moved, stacked, and stored.
2-seater wood benches are bulkier and takes more space. Though practical for use under normal face-face health conditions, they are not adapted to and are not designed to fully implement the physical distancing prescribed under the Covid pandemic.	Single PP plastic chair (as opposed to the traditional single wood chair w/ armrest and 2-seater wood benches) allows maximum prescribed physical distancing under the Covid pandemic health and safety protocols.
Cleaning of wood chairs is often limited to dusting/dry wipes.	PP plastic chairs are easy to clean, and can be sprayed on with liquid sanitizer.

Attached are the drawings and technical specs of **DepEd Student/Learner's Chair and Student/Learner's Table** (both using PP and Steel). The PP plastic single chairs will be complemented by individual student/learner's table, both ideal and practical to implement prescribed physical distancing. [Please note that the Teacher's Chair will be the same as the High School (HS) Learner Chair.]

Drawings and technical specs of **DepEd Teacher's Table** (using Wood and Steel) is also attached for reference/guidance.

Color of steel is black, and all the other materials is Tortilla (Color Code HEX #ab957e; RGB 171, 149, 126; CMYK 0%, 13%, 26%, 33%).

The original intent is to implement change in furniture design at same costing, that is, with no additional cost. However, the shift in furniture design from "double" to "single" format to allow and consider proper physical distancing will incur additional materials due to additional steel/metal legs. Note that iron ore

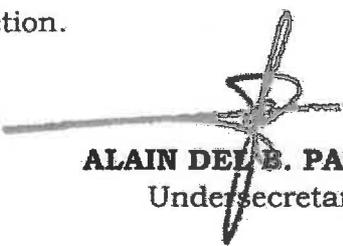


prices have significantly increased: iron ore price of \$87.68 (USD) per dry metric ton unit (dtmu) in February 2020 already cost \$164.77 (USD) in February 2021.

The other factor to consider in this Covid pandemic situation is the logistics cost. While delivery is to DepEd warehouses, the whole value chain got affected, from raw materials sourcing, manufacturing, packaging, and delivery. Delivery is only at the last stage of the whole process.

All said, the cost may need to be increased by 20%.

For your appropriate and immediate action.


ALAIN DEL B. PASCUA
Undersecretary

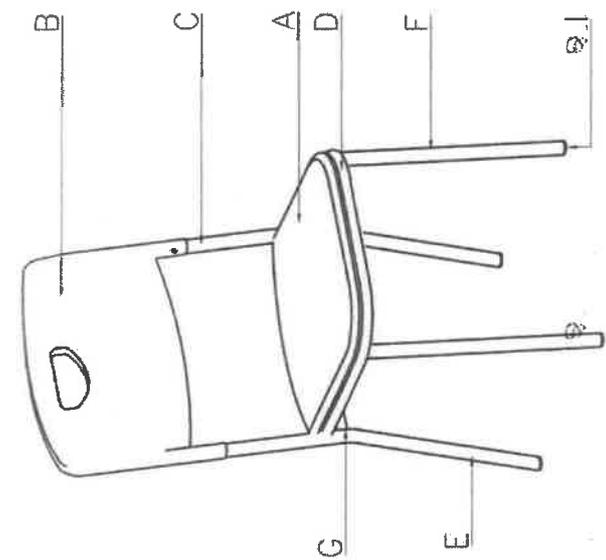


Cf: Assistant Secretary Salvador Malana III
Procurement and Administration



QUAD00-0521-0141
To authenticate this document,
please scan the QR Code

TECHNICAL SPECIFICATIONS OF LEARNER'S CHAIR



1 ISOMETRIC VIEW OF LEARNER'S CHAIR
SCALE 1:1

DIMENSIONS OF LEARNER'S CHAIR (mm)

COMPONENTS	DIMENSIONS	
	ELEMENTARY	SECONDARY
SEAT HEIGHT	392	412
SEAT DEPTH	380	380
SEAT WIDTH	370	370
BACK HEIGHT	800	800
BACK WIDTH	410	410

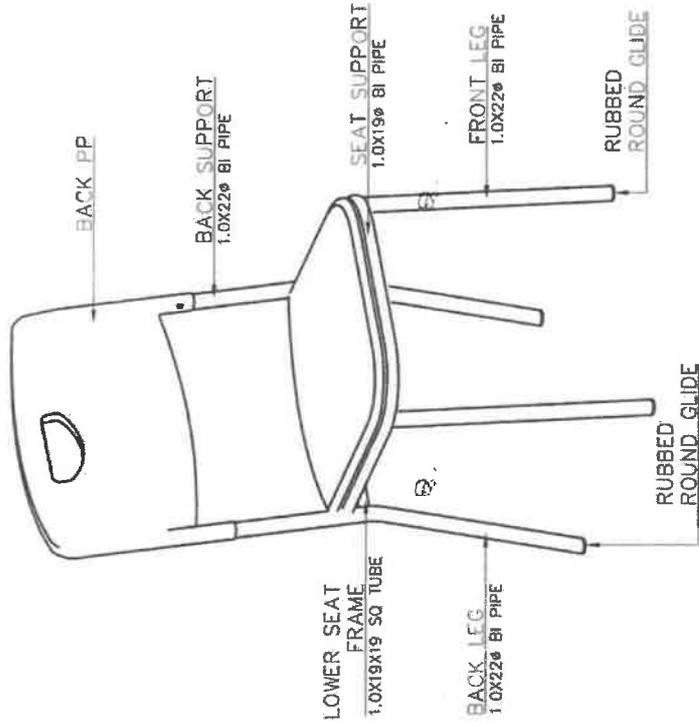
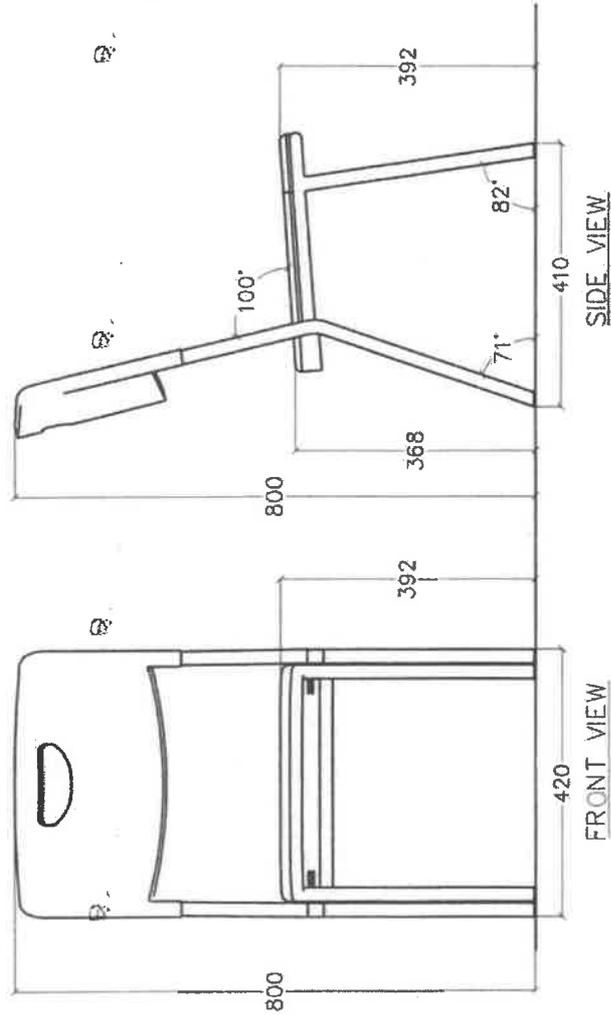
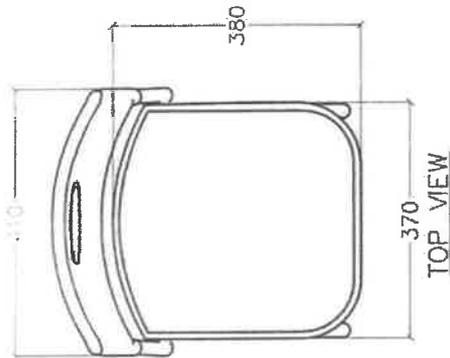
MARK	COMPONENTS	SPECIFICATIONS
A	SEAT	INJECTED PP WITH SEAT CONTOUR DESIGN
B	BACK	INJECTED PP WITH BACK CONTOUR DESIGN
C	BACK SUPPORT	BI PIPE TUBE 1.0MMX22MMφ
D	SEAT SUPPORT	BI PIPE TUBE 1.0MMX19MMφ
E	BACK LEG	BI PIPE TUBE 1.0MMX22MMφ
F	FRONT LEG	BI PIPE TUBE 1.0MMX22MMφ
G	LOWER SEAT SUPPORT SQ. TUBE	1.0MMX19MMX19MM
I	COVER CAP	ROUND RUBBER
	PP TO STEEL	BACK PP TO STEEL - SELF TAPPING SCREW
		SEAT PP TO STEEL - 1MM THK 25MMX30MM FLAT BAR, M6X12 BOLT

SCHEDULE OF FINISHES

INJECTED PP	POLYPROPYLENE TEXTURE FINISH
METAL/STEEL TUBULAR	60-80 MICRON POWDER COAT FINISH FLAT BLACK FINISH
PP COLOR	PP COLOR FINISHES

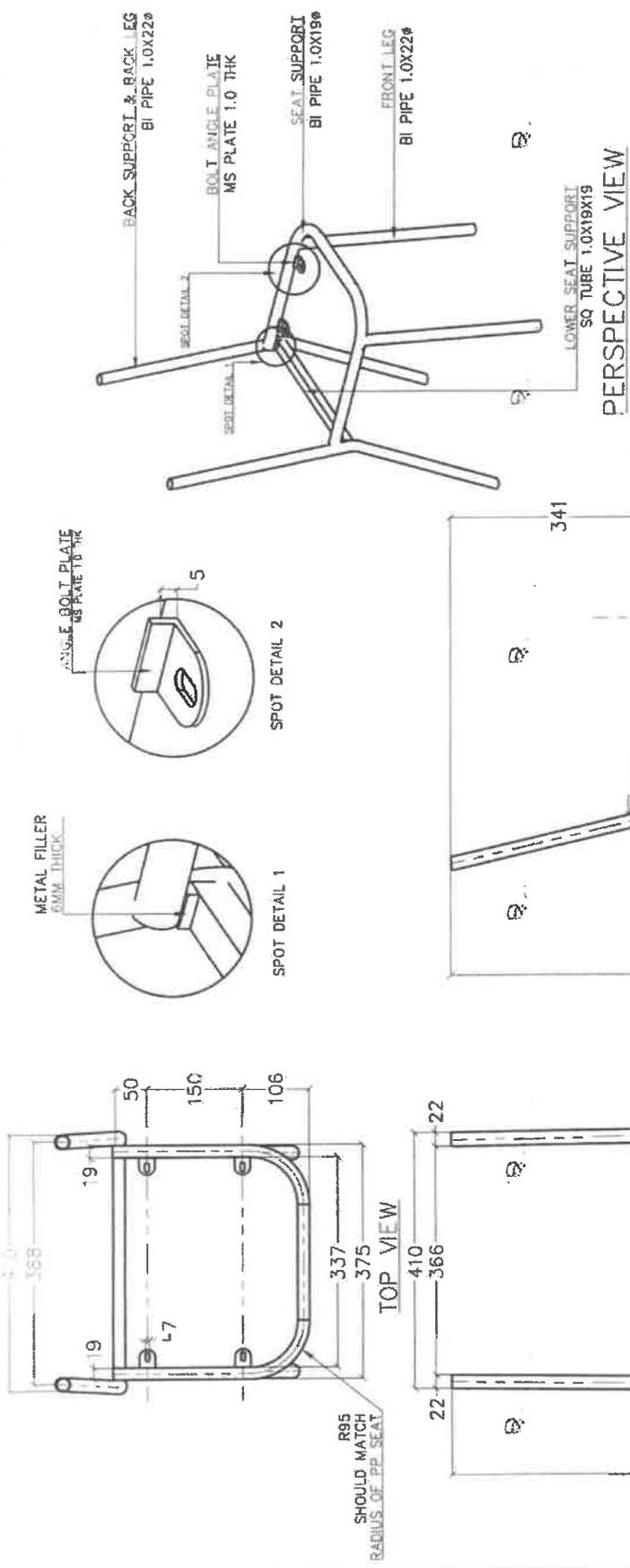
	PREPARED BY:	D/AR C. ENLANO	APPROVED BY:	ALAN DEL B. PASCUA UNDERSECRETARY FOR ADMINISTRATION	PROJECT TITLE:	LEARNER'S CHAIR (PP & STEEL)	TECHNICAL SPECIFICATION SCHEDULE OF FINISHES CODING APPLICATION DIMENSIONS ISOMETRIC VIEW	SHEET NO.	1 5
						CP-2021-5/LCS-2021-5			

DEPED ELEMENTARY STUDENT CHAIR



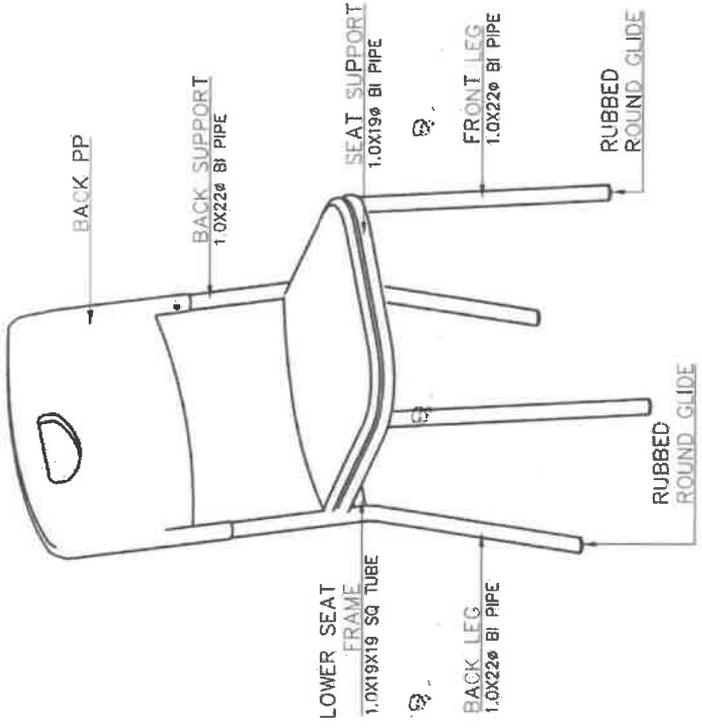
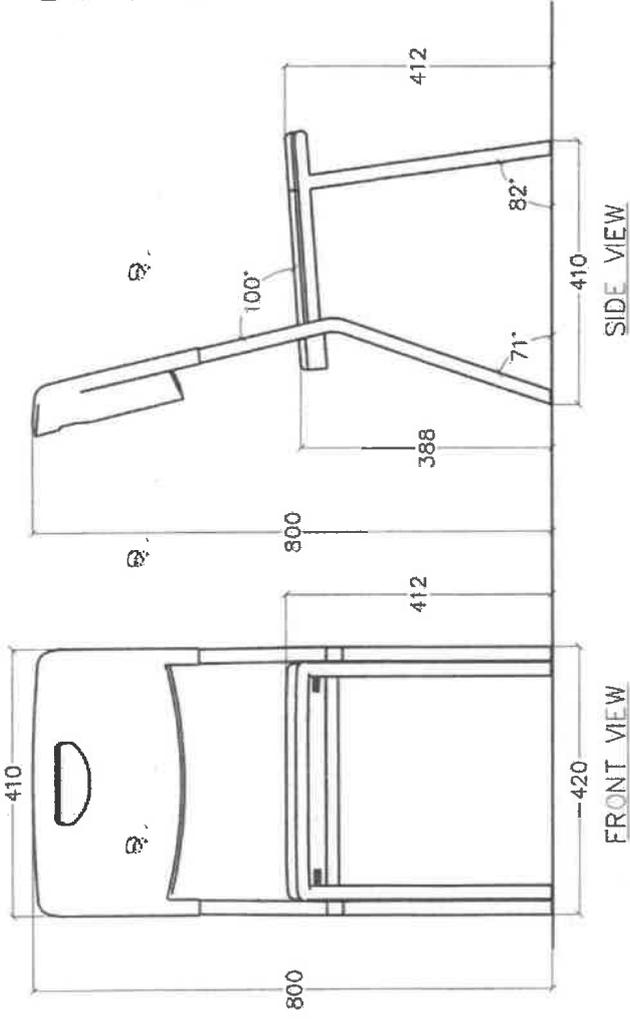
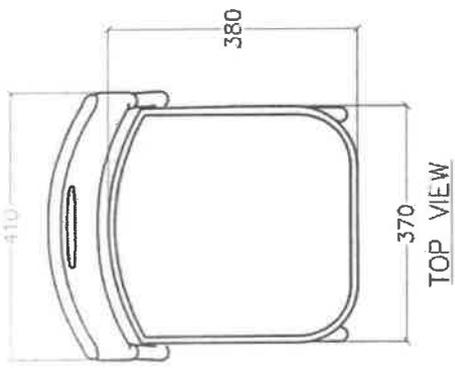
<p>DEPED Department of Education Division Office - Marikina City</p>	<p>PREPARED BY: <u>DAVE C. ENLADO</u> ARCHITECT</p>	<p>RECOMMENDING APPROVAL: ENGR. AMABELLE R. PANGCAN CHIEF-DESIGN/PROJECT FACILITIES DIVISION</p>	<p>APPROVED BY: ALVIN DEL B. PASCUA UNIVERSITY FOR ADMINISTRATIVE</p>	<p>PROJECT TITLE: LEARNER'S CHAIR (PP & STEEL) LCP-2021-5</p>	<p>PROJECT CONTEXT: TECHNICAL SPECIFICATION SCHEDULE OF FINISHES ERIGING APPLICATION DIMENSIONS ISOMETRIC VIEW</p>	<p>SHEET NO. 2 5</p>
	<p>CV: 021</p>					

LEARNER'S CHAIR



	PREPARED BY: <u>DIANE C. ERLANDO</u> ARCHITECT	RECOMMENDING APPROVAL: <u>ENGR. ANABELLE R. PANGAN</u> CIVIL ENGINEER REGISTERED ENGINEER	APPROVED BY: <u>ALUM DEL B. PABOJA</u> UNIVERSITY OF THE PHILIPPINES	PROJECT FILE: <u>LCP-2021-5</u>	TECHNICAL SPECIFICATION SCHEDULE OF FINISHES EDGING APPLICATION FINISHES ISOMETRIC VIEW	SHEET NO. <u>3</u> <u>5</u>
	LEARNER'S CHAIR (PP & STEEL)			CIVIL 1021		

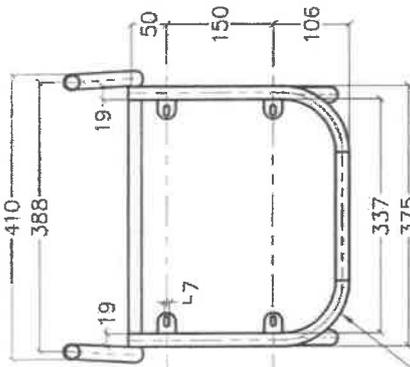
DEPED SECONDARY STUDENT CHAIR



LEARNER'S CHAIR
PERSPECTIVE VIEW

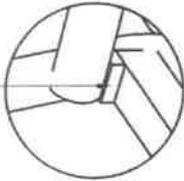
DEPED DIVISION OF THE EDUCATION DEPARTMENT - PASIGUA REGIONAL OFFICE DIVISION	PREPARED BY: DIANE C. ERLANDO ARCHITECT	RECOMMENDING APPROVAL: ENGR ANNABELLE R. PANGAN ENGR - EDUCATION FACILITIES DIVISION	APPROVED BY: ALJAN DEL B. PASCUA UNDERSECRETARY FOR ADMINISTRATION	PROJECT TITLE: LEARNER'S CHAIR (PP & STEEL) LCS-2021-5	SHEET CONTEXT: TECHNICAL SPECIFICATIONS SCHEDULE OF FINISHES ECONOMIC APPLICATION DIMENSIONS ISOMETRIC VIEW GS-1021	SHEET NO. 4 5
--	---	--	--	---	---	---------------------

DEPED SECONDARY STUDENT CHAIR

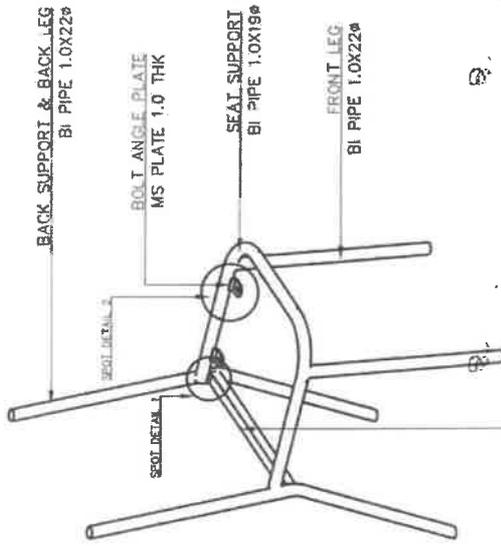
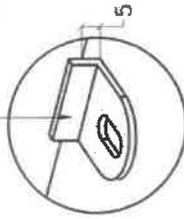


R95
SHOULD MATCH
RADIUS OF PP SEAT

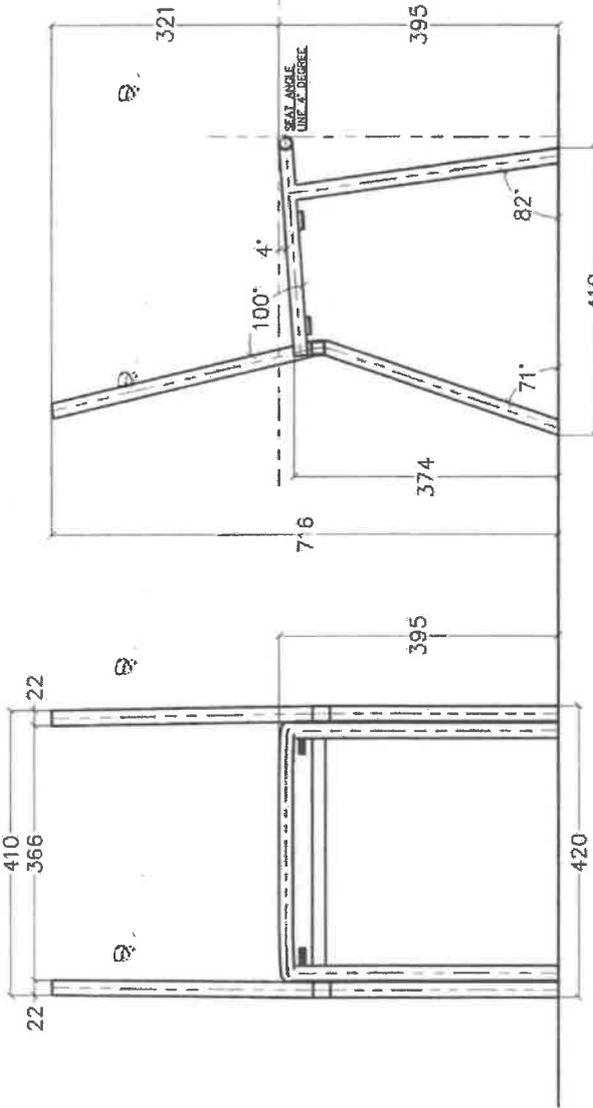
METAL FILLER
5MM THICK



ANGLE BOLT PLATE
IN PLATE 1.0 THK



PERSPECTIVE VIEW



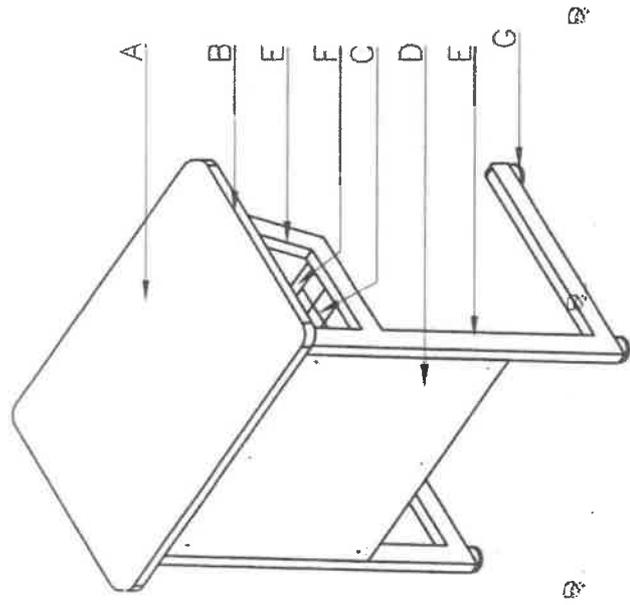
<p>DEPED Department of Education Division Office - Marikina City</p>	<p>PREPARED BY: DANE C. ERLAND ARCHITECT</p>	<p>RECOMMENDING APPROVAL: ENGR. ANNABELLE N. PANGAN CHIEF-BUILDING FACILITIES DIVISION</p>	<p>APPROVED BY: ALVIN DEL B. PASCUA UNIVERSITY SECRETARY FOR ADMINISTRATION</p>	<p>PROJECT TITLE: LEARNER'S CHAIR (PP & STEEL)</p>	<p>SHEET NO. 5</p>
	<p>PROJECT NO. 5</p>	<p>TECHNICAL SPECIFICATION FOR THE FABRICATION OF EDUCATIONAL APPLIANCE DIMENSIONS ISOMETRIC VIEW</p>	<p>DATE: 2021</p>	<p>PROJECT NO. 5</p>	

TECHNICAL SPECIFICATIONS OF LEARNER'S TABLE

MARK	COMPONENTS	SPECIFICATIONS
A	TABLE TOP	18MM THK TOP BOARD ROUND CORNERS (1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISHES ON MARINE PLYWOOD)
B	EDGING	1.0 MM THK PVC EDGING, ALL EDGES OF TABLE TOP
C	SHELF	METAL WIRE MESH 4MM THK X 50X50
D	FRONT COVER	6MM THK FRONT COVER (1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISHES ON MARINE PLYWOOD)
E	MAIN FRAME	1.0MM THK X 20MM X 40MM STEEL TUBULAR
F	SECONDARY FRAME	1.0MM THK X 20MM X 20MM STEEL TUBULAR
G	ADJUSTABLE LEVELER	8MM Ø THREAD WITH 38MM Ø PLASTIC BASE
	CONNECTOR/FLAT BAR	1MM THK X 25MM X 50MM STEEL FLAT BAR (TABLE TOP: 4PCS; SCREW)
	CONNECTION	WOOD TO STEEL: SCREW: M5X12MM LENGTH SCREW; RIVETS: BLIND RIVET
		STEEL TO STEEL: FULL WELDING FOR TUBULAR TO FLAT BAR/CONNECTION

SCHEDULE OF FINISHES

2a	TOP BOARD	1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISHES ON MARINE PLYWOOD
	EDGING	1.0 MM THK PVC EDGING, ALL EDGES OF TABLE TOP
	FRONT COVER	1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISHES ON MARINE PLYWOOD
	METAL/STEEL TUBULAR	60-80 MICRON POWDER COAT FINISH FLAT BLACK FINISH
	LAMINATE COLOR	SERANO BEECH OR EQUIVALENT
2b	EDGING - APPLICATION	
1	MACHINE APPLICATION OF GLUE TO TABLE TOP EDGES	
2	MACHINE APPLICATION OF PVC EDGING TO TABLE TOP EDGES	



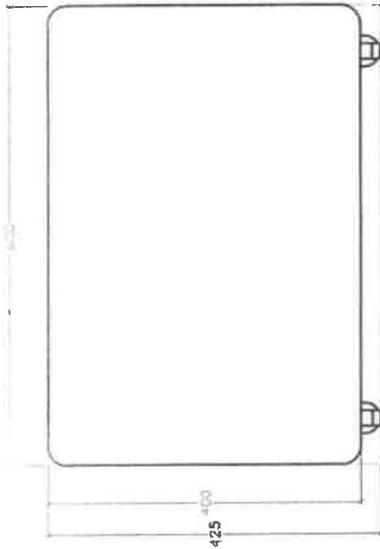
ISOMETRIC VIEW OF LEARNER'S TABLE
SCALE 1:1

3 DIMENSIONS OF LEARNER'S TABLE (mm)

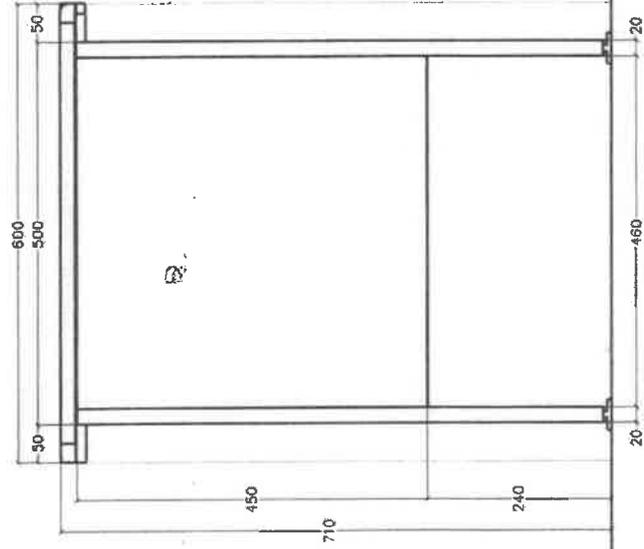
MARK	COMPONENTS	DIMENSIONS	
		ELEMENTARY	SECONDARY
a	TABLE HEIGHT	670 (+/-10)	710 (+/-10)
b	TABLE LENGTH	600	600
c	TABLE WIDTH	400	400

	PREPARED BY: <u>DAVE C. ENLAD</u> PROJECT	RECOMMENDING APPROVALS: ENGR. ANABELLE R. PANGAN CHIEF-DESIGNER / TABLES BRANCH	APPROVED BY: ALJAI DEL B. PASCUA SUPERVISOR / TABLES BRANCH	PROJECT TITLE: LEARNER'S TABLE (WOOD & STEEL) LTP 2021-5 / LTS 2021-5	SHEET CONTENT: TECHNICAL SPECIFICATION DIMENSIONS EDGING APPLICATION DIMENSIONS ISOMETRIC VIEW	SHEET NO. 1 3
	CIV-201					

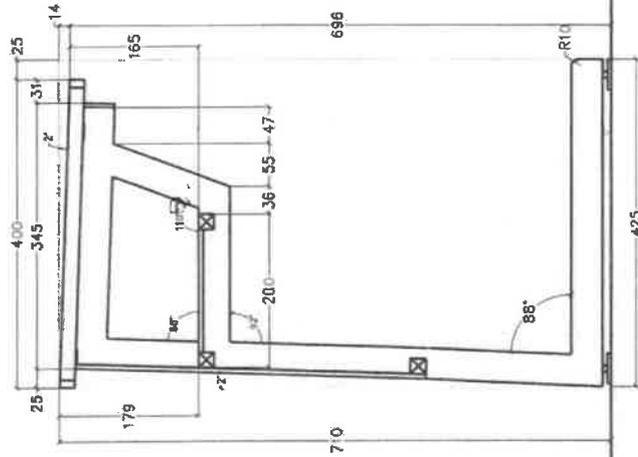
DEPED SECONDARY SINGLE STUDENT TABLE



TOP VIEW



FRONT VIEW



SIDE SECTION VIEW

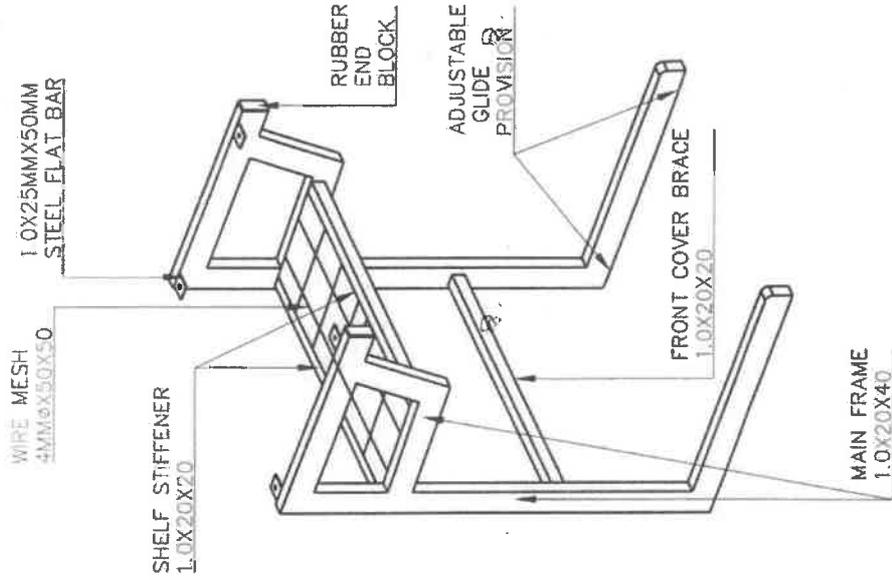
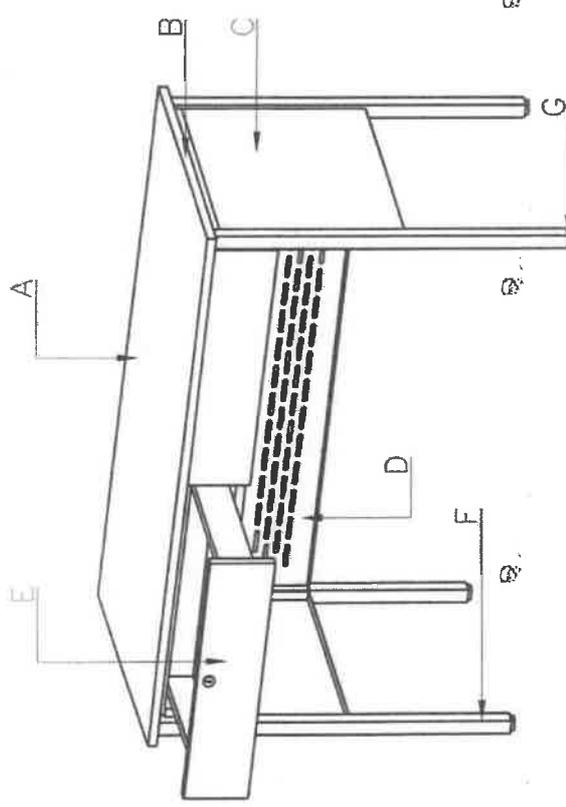


TABLE FRAMING PERSPECTIVE VIEW

 <p>DEPED DIVISION OFFICE - BUTUAN MINDANAO EDUCATION SUPERVISOR OFFICE - BUTUAN</p>	<p>PREPARED BY: DANE G. ENLADO ARCHITECT</p>	<p>RECOMMENDING APPROVAL: ENGR. ANABELLE R. PANGAN CHIEF-COLLEGE FACILITIES WORK</p>	<p>APPROVED BY: ALVIN DEL B. PASOJA UNIVERSITY COLLEGE SUPERVISOR</p>	<p>PROJECT TITLE: LEARNER'S TABLE (WOOD & STEEL)</p>	<p>SHEET CONTEXT: TOP VIEW DETAIL FRONT VIEW SECTION TABLE FRAMING PERSPECTIVE VIEW</p>	<p>SHEET NO. 3</p>
	<p>TS 2021-5</p>					<p>CS-2021</p>

1		TECHNICAL SPECIFICATIONS OF TEACHER'S TABLE	
MARK	COMPONENTS	SPECIFICATIONS	
A	TABLE TOP	18MM THK TOP BOARD ROUND CORNER'S (1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISH'S ON MARINE PLYWOOD)	
B	EDGING	2.0MM THICK PVC EDGING	
C	SIDE COVER	0.6MM THICK COLD ROLL STEEL IN POWDER COATED FINISHES	
D	FRONT COVER	0.6MM THICK COLD ROLL STEEL IN POWDER COATED FINISHES WITH PUNCH HOLE DESIGN	
E	PULL OUT DRAWER	DRAWER FACE : 1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISHES ON MARINE PLYWOOD DRAWER BOX : 0.6MM THICK COLD ROLL STEEL IN POWDER COATED FINISHES DRAWER LOCK : 1 LOCK ONLY PER TABLE	
F	MAIN FRAME	1.0MM THK X 30MM X 30MM STEEL TUBULAR	
	SECONDARY FRAME	1.0MM THK X 20MM X 20MM STEEL TUBULAR	
G	ADJUSTABLE LEVELER	8MM Ø THREAD WITH 38MM Ø PLASTIC BASE	
	CONNECTOR	METAL FRAME BAR AND SCREW	
	CONNECTION	WOOD TO STEEL: SCREW: WOOD SCREW STEEL TO STEEL: FULL WELDING FOR TUBULAR TO FLAT BAR/CONNECTION STEEL TO STEEL (KNOCKDOWN OPTION): BOLT AND NUT FOR STEEL TUBULAR	
2a			
SCHEDULE OF FINISHES			
TOP BOARD	18MM THK TOP BOARD ROUND CORNER'S (1 SIDE 1.0MM THK HIGH PRESSURE LAMINATE / 1 SIDE VARNISH FINISHES ON MARINE PLYWOOD)		
EDGING	2.0MM THICK PVC EDGING		
SIDE / FRONT COVER	60-80 MICRON POWDER COAT FINISH FLAT BLACK FINISH		
METAL/STEEL TUBULAR	60-80 MICRON POWDER COAT FINISH FLAT BLACK FINISH		
LAMINATE COLOR	SERANO BEECH OR EQUIVALENT		
2b			
EDGING - APPLICATION			
1	GLUE APPLICATION ON EDGE OF TABLE TOP		
2	APPLY PVC EDGING AND TRIM AND CLEAN		

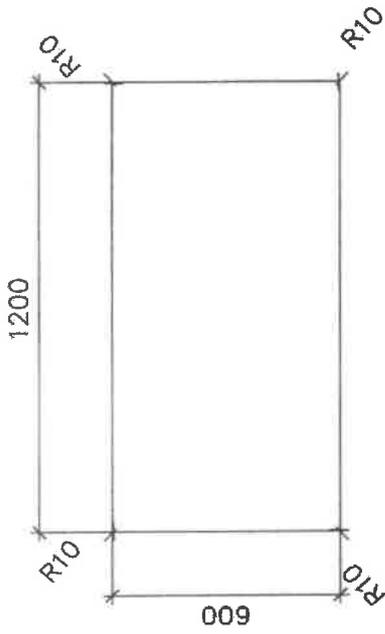


1 ISOMETRIC VIEW OF TEACHER'S TABLE
SCALE 1:1

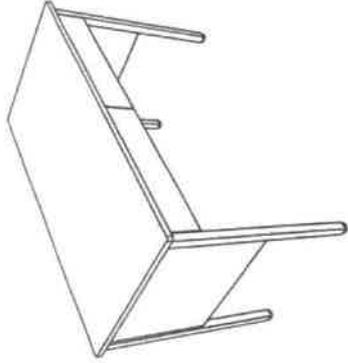
3		DIMENSIONS OF TEACHER'S TABLE (mm)	
MARK	COMPONENTS	DIMENSIONS	
a	TABLE HEIGHT	750	
b	TABLE LENGTH	1200	
c	TABLE WIDTH	600	
d	SIDING / FRONT COVER	380	

ALL DIMENSION SHALL BE SUBJECTED TO A MAXIMUM TOLERANCE OF PLUS MINUS 10MM

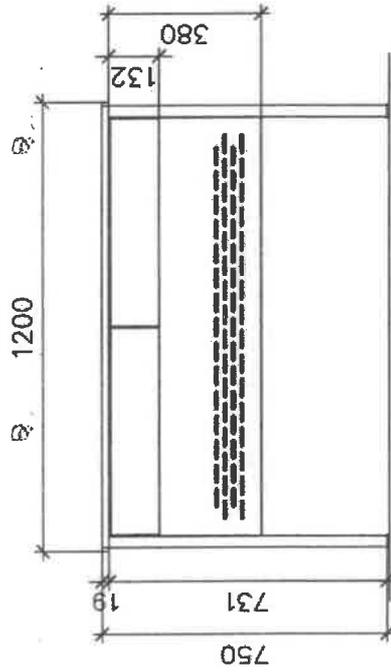
	PREPARED BY: <u>DAKE S. DELANO</u> <small>PROJECT</small>	RECOMMENDING APPROVAL: <u>ENGR. JANA BELLE B. PANCAN</u> <small>ENGR.-CIVIL/ENR. TRAINING DIVISION</small>	APPROVED BY: <u>ALVIN DEL B. PASQUA</u> <small>UNIVERSITY OF AGRIAN STATE</small>	PROJECT TITLE: TEACHER'S TABLE (WOOD & STEEL)	SHEET CONTEXT: <table border="1"> <tr> <td>TECHNICAL SPECIFICATION</td> <td>1</td> </tr> <tr> <td>SCHEDULE OF FINISHES</td> <td></td> </tr> <tr> <td>EDGING APPLICATION</td> <td></td> </tr> <tr> <td>DIMENSIONS</td> <td></td> </tr> <tr> <td>ISOMETRIC VIEW</td> <td>6</td> </tr> </table>	TECHNICAL SPECIFICATION	1	SCHEDULE OF FINISHES		EDGING APPLICATION		DIMENSIONS		ISOMETRIC VIEW	6
	TECHNICAL SPECIFICATION	1													
SCHEDULE OF FINISHES															
EDGING APPLICATION															
DIMENSIONS															
ISOMETRIC VIEW	6														
PROJECT FILE: ITA-2021-5				SHEET NO.											



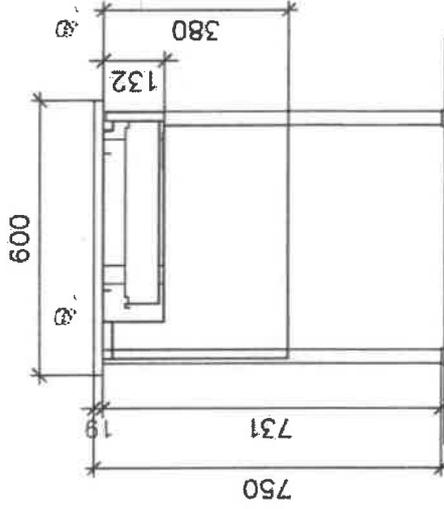
PLAN



PERSPECTIVE



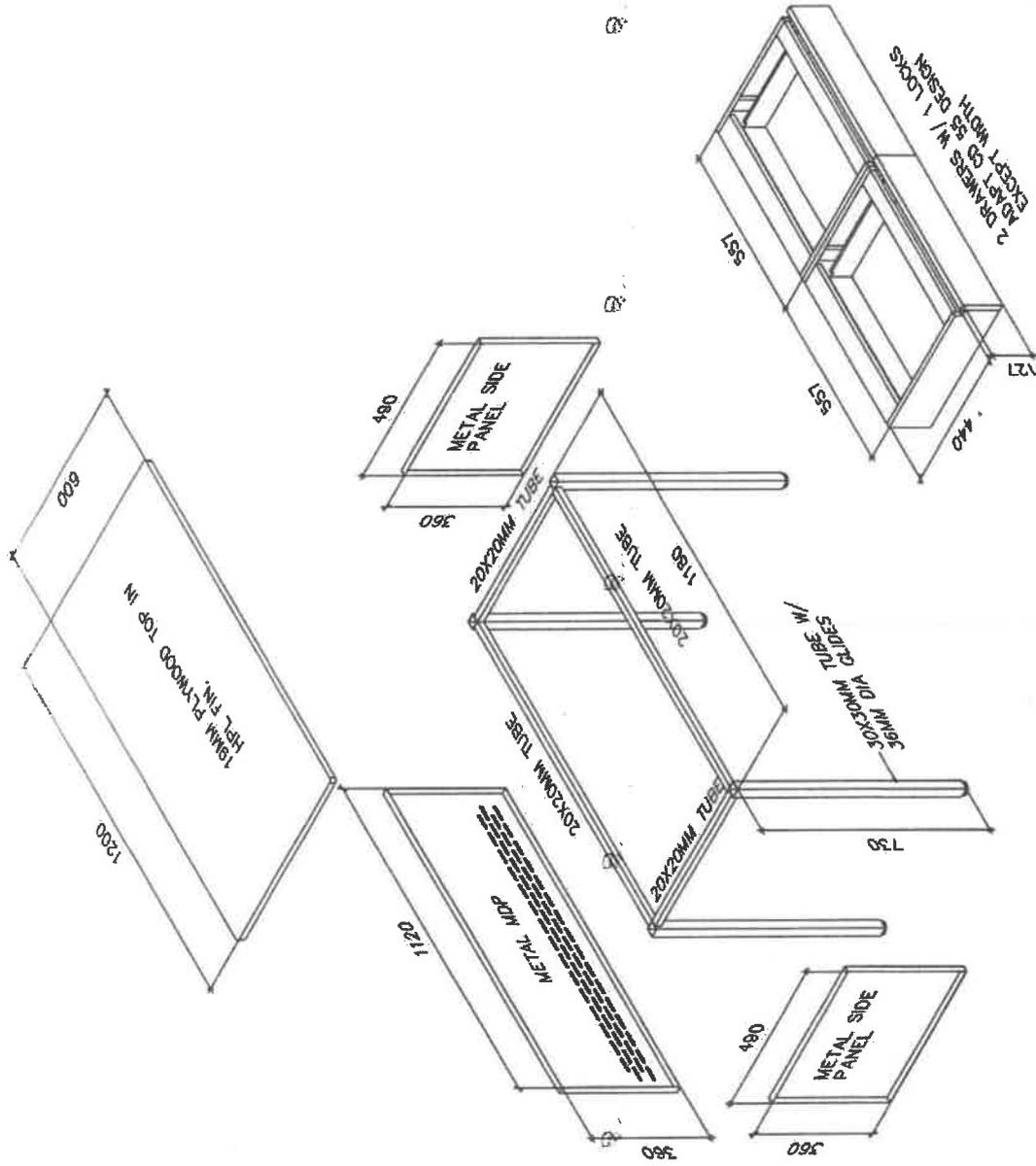
FRONT ELEV.



SECTION

 DEPED MARIKINA CITY OFFICE DIVISION OFFICE	PREPARED BY: DR. MAR C. PERALTA	RECOMMENDING APPROVAL: A. SHERWIN S. PERALTA DIVISION SUPERVISOR	APPROVED BY: ALVIN D. S. PASCUA DIVISION SUPERVISOR	PROJECT TITLE: TEACHER'S TABLE (WOOD & STEEL)	SHEET CONTENT	SHEET NO. 2 C
	OFFICE OF THE SUPERVISOR DEPED - MARIKINA CITY OFFICE					

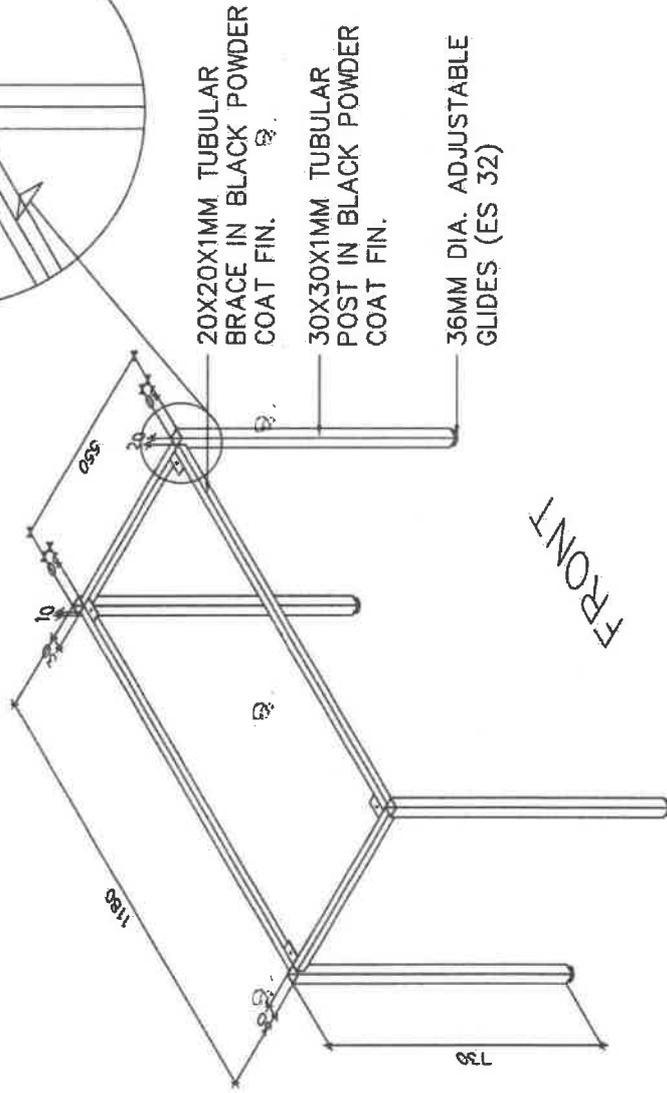
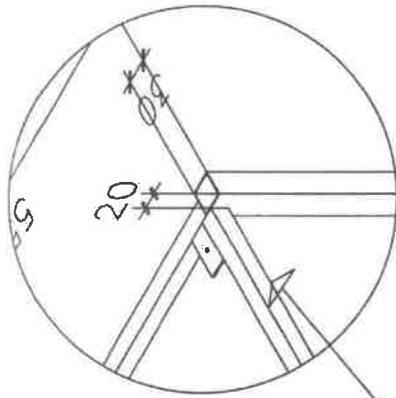
TEACHER'S TABLE



EXPLODED VIEW

	PREPARED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	PROJECT TITLE:	SHEET CONTEXT:	SHEET NO.
TEACHER'S TABLE (WOOD & STEEL)	ALAMI BINA PASCA	ALAMI BINA PASCA	ALAMI BINA PASCA	TEACHER'S TABLE (WOOD & STEEL)	TEACHER'S TABLE (WOOD & STEEL)	3

METAL FRAMING DETAIL



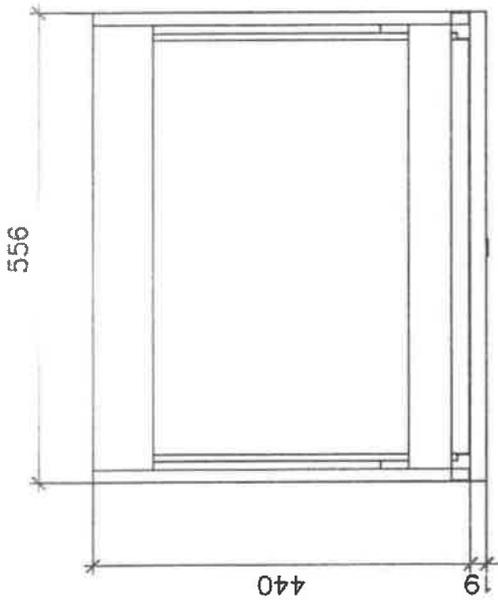
- 20X20X1MM TUBULAR BRACE IN BLACK POWDER COAT FIN.
- 30X30X1MM TUBULAR POST IN BLACK POWDER COAT FIN.
- 36MM DIA. ADJUSTABLE GLIDES (ES 32)

FRONT

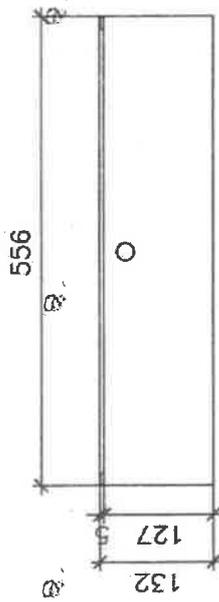
PERSPECTIVE

	PREPARED BY: [Signature]	RECOMMENDING APPROVAL: [Signature]	APPROVED BY: ALAM P. [Signature]	PROJECT TITLE: TEACHER'S TABLE (WOOD & STEEL)	SHEET CONTENT: [Blank]	SHEET NO. 4
	DepEd DIVISION OFFICE - [Location]					

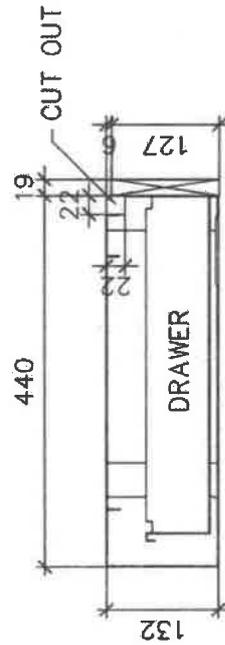
METAL CENTRAL DRAWER DETAIL



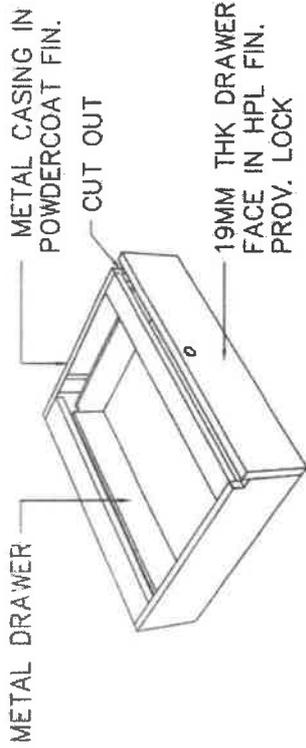
PLAN



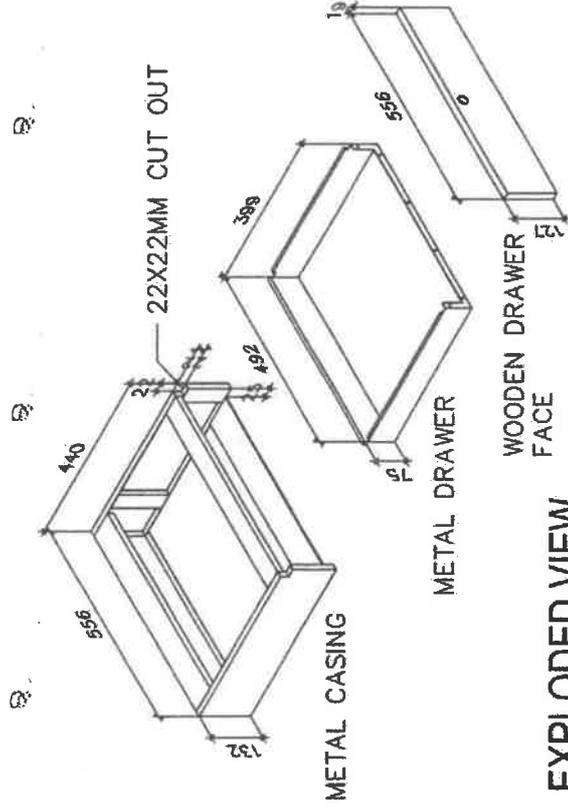
FRONT ELEV.



SECTION



PERSPECTIVE

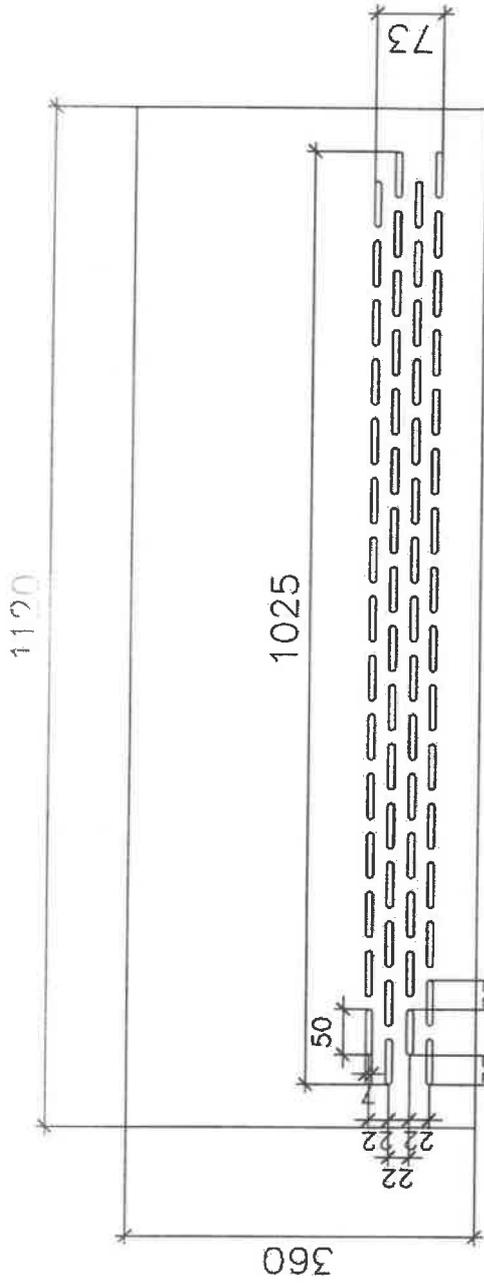


EXPLODED VIEW

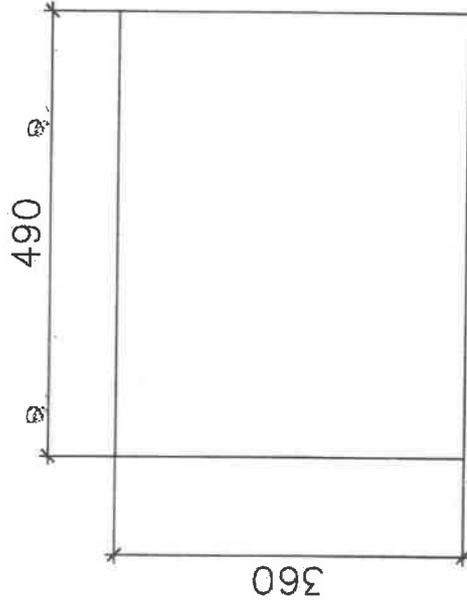
<p>PREPARED BY: [Signature]</p>	<p>RECOMMENDING APPROVAL: [Signature]</p>	<p>APPROVED BY: [Signature]</p>	<p>PROJECT TITLE: TEACHER'S TABLE (WOOD & STEEL)</p>	<p>SHEET CONTEXT: [Blank]</p>	<p>SHEET NO. 5</p>
---------------------------------	---	---------------------------------	--	-------------------------------	--------------------



PERFORATED MDP & SIDE PANEL DETAIL



MDP ELEVATION



SIDE PANEL ELEVATION

	PREPARED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	PROJECT TITLE:	SHEET CONTENT:	SHEET NO.
	[Signature]	[Signature]	[Signature]	TEACHER'S TABLE (WOOD & STEEL)	6	6