

SECTION 6.0 SCHEDULE OF DESIGN REQUIREMENT

6.4 Kitchen Equipment Services

**SECTION 6.0 SCHEDULE OF DESIGN REQUIREMENT****6.4 KITCHEN EQUIPMENT SERVICES****SCOPE OF WORK****1 KITCHEN EQUIPMENT****1.1 Blok Dewan Makan 600 Pelajar**

General construction for all stainless steel worktables, workcabinets, sinks, racks, trolleys, counter tables, etc. shall be:

- 1.6mm thick stainless steel worktop
- 1.6mm thick backsplash for tables/sink attach to wall
- 1.6mm thick stainless steel sink bowl
- 1.6mm thick stainless steel scrap hole cover attach to table top
- 1.6mm thick stainless steel slatted/plain undershelf
- 1" Ø stainless steel crossrail
- 1.5" Ø stainless steel tubular leg c/w adjustable bullet feet

The equipment shall comprise of the following:

Item	Description of Equipment	Quantity	Utility
RUANG PENERIMAAN/ RECEIVING AREA			
1	S/Steel Platform trolley (RA-01)	1 No	
2	Digital platform Weighing Scale (RA-02)	1 No	Elect.
3	Coconut Scraper (RA-03)	1 No	Elect.
4	Insect Killer (RA-04)	1 No	Elect.
5	S/Steel 4 Tiers Slatted Rack (RA-05)	2 Nos	

Item	Description of Equipment	Quantity	Utility
BILIK SEJUK/ CHILLER ROOM			
1	S/Steel 4 Tiers Slatted Rack	2 Nos	

Item	Description of Equipment	Quantity	Utility
BILIK BEKU/ FREEZER ROOM			
1	S/Steel 4 Tiers Slatted Rack	2 Nos	



Item	Description of Equipment	Quantity	Utility
RUANG PENYEDIAAN SAYUR, DAGING & IKAN/ PREPARATION AREA			
1	S/Steel 4 Door Upright Chiller (PA-01)	2 Nos	Elect.
2	S/Steel Double Bowl Sink Table (PA-02)	2 Nos	
3	Chopping Block c/w S/Steel Stand (PA-03)	2 Nos	
4	S/Steel Work Table c/w solid undershelf (PA-04)	1 No	
5	S/Steel Work Table c/w solid undershelf (PA-05)	1 No	
6	S/Steel Work Table c/w solid undershelf (PA-06)	2 Nos	
7	S/Steel Single Bowl Sink Table (PA-07)	1 No	
8	S/Steel 4 Tiers Solid Rack (PA-08)	2 Nos	
9	Insect Killer (PA-09)	2 Nos	Elect.

Item	Description of Equipment	Quantity	Utility
RUANG MEMASAK/ COOKING AREA			
1	S/Steel Tilting Kettle (Capacity: 45 Gallon) (CA-01)	2 Nos	Gas
2	S/Steel Kwali Cooker c/w 36" Cast Iron Kwali (CA-02)	2 Nos	Gas
3	S/Steel Boiling Pan c/w S/Steel Basket for Rice Cooker (Capacity: 30 Gallon) (CA-03)	1 No	Gas
4	S/Steel Single Ring Kwali range c/w 24" Cast Iron Kwali (High Pressure) (CA-04)	2 Nos	Gas
5	S/Steel Work Table c/w solid undershelf (PA-05)	1 No	Gas
6	S/Steel Griddle (CA-06)	1	Gas
7	S/Steel Rice Cooker Counter (CA-07)	2	Gas
8	Portable Rice Cooker (CA-08)	8	Gas
9	Stainless Steel Kitchen Hood c/w grease filers, accessories, etc. (CA-09)	1 Lot	
10	Stainless Steel Hood Duct c/w fan, control panel & accessories (CA-09)	2 Nos	Elect.
11	S/Steel Mobile Worktable c/w Solid Undershelf (CA-10)	3 Nos	
12	Insect Killer (CA-11)	1 No	Elect.
13	S/Steel 4 Tiers Solid Rack (CA-12)	3 Nos	
14	S/Steel Food Pan c/w Cover (CA-13)	4 Nos	
15	S/Steel 3 Tiers Service Trolley (CA-14)	3 Nos	



Item	Description of Equipment	Quantity	Utility
RUANG PENYEDIAAN MINUMAN/ DRINKING PREPARATION AREA			
1	Ice Cube Machine (DP-01)	2 Nos	Elect.
2	S/Steel Single Bowl Sink Table (DP-02)	2 Nos	
3	S/Steel Floor Standing Water Boiler (Capacity:80 L) (DP-03)	2 Nos	Elect.
4	S/Steel Water Urn (DP-04)	2 Nos	Elect.
5	S/Steel Drink Preparation Cabinet (DP-05)	2 Nos	
6	Insect Killer (DP-06)	2 Nos	Elect.

Item	Description of Equipment	Quantity	Utility
RUANG SAJIAN/ SERVERY AREA			
1	S/Steel Mobile Warmer Container (SA-01)	2 Nos	Elect.
2	S/Steel 2 Deck Overshelf (SA-02)	4 Nos	
3	S/Steel Bain Marie c/w 5 Number Size Pan (SA-03)	4 Nos	Elect.
4	S/Steel Ice Bin Counter (SA-04)	2 Nos	
5	S/Steel Drink Preparation Cabinet (SA-05)	2 Nos	
6	Twin Tank Juice Dispenser (SA-06)	4 Nos	Elect.
7	Insulated Type Drink Dispenser (SA-07)	4 Nos	
8	Insect Killer (SA-08)	2 Nos	Elect.
9	S/Steel Tray Slide (SA-09)	2 Nos	
10	S/Steel 'L' Shape Guide Rail (SA-10)	2 Nos	

Item	Description of Equipment	Quantity	Utility
STOR KERING/ DRY STORE			
1	Chorme Wire Shelving (DS-01)	2 Nos	

Item	Description of Equipment	Quantity	Utility
RUANG BASUH PINGGAN/ DISHWASHING AREA			
1	S/Steel Waste Disposal Trolley (WA-01)	1 No	
2	S/Steel Soil Dish Table c/w scrap hole	1 No	
3	Pre-Rinse Faucet c/w 12" ledge type add bowl filler	1 No	
4	Water Heater (Capacity: 30 Gallon)	1 No	Elect.
5	S/Steel Triple Bowl Sink Table	1 No	
6	S/Steel Clean Dish Table	1 No	
7	S/Steel 4 Tiers Slatted Rack	1 No	
8	Insect Killer	1 No	



NOTES: All equipment dimensions shall be referred to list of tender drawing attached ref.no. **MEK/Pend/2021/3-320/KE/3-01 to MEK/Pend/2021/3-320/KE/3-07.**



SECTION 6.0 SCHEDULE OF DESIGN REQUIREMENT

6.4 KITCHEN EQUIPMENT SERVICES

SCOPE OF WORK

2 LIQUEFIED PETROLEUM GAS (LPG) SYSTEM

Kitchen contractor is required to design, supply, install and carry out testing with commissioning on the entire LPG Pipe reticulation and LPG cylinders to ensure safe and reliable operation. All relevant and necessary approval from Suruhanjaya Tenaga (ST) shall be obtained prior to installation of works.

The complete LPG suppression system shall be installed complete with:

2.1 Blok Dewan Makan 600 Pelajar

Item	Description	Quantity
1	LPG cylinder, each c/w 50 Kg mix of Butene & Propane at Stor Gas	16 Nos
2	Pigtails connectors c/w check valves	16 Nos
3	Manifold c/w auto-changeover, regulator, necessary valves & pressure gauges, etc.	1 Lot
4	Emergency shut-off valve assembly c/w manual pull handle	1 Lot
5	Automatic Gas shut-off valve	1 No
6	2-Stage regulator c/w necessary valves, pressure gauge, etc.	1 No
7	LPG piping c/w fittings, valve, bracket, etc	1 Lot
8	20 Lbs. Dry Chemical Fire Extinguisher at Store Gas	1 No



SECTION 6.0 SCHEDULE OF DESIGN REQUIREMENT

6.4 KITCHEN EQUIPMENT SERVICES

3 WET CHEMICAL FIRE SUPPRESSION SYSTEM FOR KITCHEN HOOD

The contractor is required to design, supply, install and carry out all necessary test and commissioning to ensure a complete and safe operation of the system

The complete system of Wet Chemical Fire Suppression System shall be installed complete with:

3.1 Blok Dewan Makan 600 Pelajar (B6)

Item	Description	Quantity
1	Wet Chemical Agent Tank c/w Chemical	1 No
2	Spring loaded regulated release mechanism	1 Lot
3	Regulated Actuator Assembly	1 Lot
4	Nozzles c/w blow off cap	1 Lot
5	Nitrogen Gas Catridges	1 Lot
6	Fusible Link	1 Lot
7	Sign Board	1 No
8	Remote Manual Pull Station	1 No
9	Acutuation & Expellant Gas line piping	1 Lot
10	Distribution Piping	1 Lot
11	Detector and Bracket	1 Lot
12	Stainless Steel Cable	1 Lot
13	Manual Shut-off valve	1 No
14	Automatic Shut-off Valve	1 No



SECTION 6.0 SCHEDULE OF DESIGN REQUIREMENT

6.4 KITCHEN EQUIPMENT SERVICES

4 COLD ROOM SYSTEM

4.1 Scope Of Work

- a. The Cold Room System in this project shall consist of both Chiller Room and Freezer Room.
- b. To supply and install polyurethane pre-fabricated panel for wall, floor, ceiling and door for the Cold Room.
- c. To supply, deliver, install, testing and commissioning of a new refrigeration system with 100% duty and stand-by unit for the Cold Room. Refrigerant equipment including condenser unit, evaporator unit and all necessary accessories for the complete installation of the Cold Room.
- d. To supply and install of new electrical distribution board, control wiring and lighting system including compressor and evaporator. The system shall consist of 'RUN' and 'TRIP' indicating lighting as a standard features.
- e. To install LED Lighting complete with 2-Way Toggle switches to operate from inside and outside of the Cold Room.
- f. Safety Features including room temperature (High or Low), audio visual alarm and 2-Way door opened from both side (inside and outside) if the Cold Room.
- g. All associated minor civil works such as making good of opening for piping, conduit, rectify all hacking works, etc.

4.2 Design Information

4.2.1 Room Temperature

Chiller Room	: 2° to 5°C
Freezer Room	: -20°C to -30°C

4.2.2 Wall & Ceiling

Chiller Room	: 4 inch pre-fabricated polyurethane panel of 45 kg/m ³ density
Freezer Room	: 4 inch pre-fabricated polyurethane panel of 45 kg/m ³ density

4.2.3 Floor

Chiller Room	: 4 inch pre-fabricated + vapor barrier + 4 inch of concrete slab + Homogenous non-slip vinyl or epoxy coating or any other material capable of withstanding the room temperature
Freezer Room	: 4 inch pre-fabricated + vapor barrier + 4 inch of concrete slab + Homogenous non-slip vinyl or epoxy coating or any other material capable of withstanding the room temperature



4.2.4 Air Cooled Condensing Unit

Chiller Room

Refrigerant : HFC 134a/ HFC 404A
Compressor : Hermetic scroll
Refrigeration Load : 8.7 kW/ 29,600 Btu/hr
Motor Output : ≥ 3 HP

Freezer Room

Refrigerant : HFC 134a/ HFC 404A
Compressor : Hermetic scroll
Refrigeration Load : 11.14 kW/ 38,050 Btu/hr
Motor Output : ≥ 12 HP

4.2.5 Evaporator

Chiller Room

Type : Unit Cooler
Flow : 4,760 CFM
Defrost Type : Electric Heater (Capacity shall be proposed by contractor)
Construction : Aluminum, ceiling mounted

Freezer Room

Type : Unit Cooler
Flow : 11,000 CFM
Defrost Type : Electric Heater (Capacity shall be proposed by contractor)
Construction : Aluminum, ceiling mounted

4.2.6 Refrigerant Piping

Chiller Room

Inlet Pipe Size : ≥ 12.70 mm
Suction Outlet Size : ≥ 28.60 mm
Material : Seamless Dehydrated Soft Copper
Insulation : 25mm Pre Insulated Polyurethane with min 0.3mm G.I Sheet

Freezer Room

Inlet Pipe Size : ≥ 15.88 mm
Suction Outlet Size : ≥ 34.90 mm
Material : Seamless Dehydrated Soft Copper
Insulation : 50mm Pre Insulated Polyurethane with min 0.3mm G.I Sheet

4.2.7 Condensate Drain Pipe

Material : PVC
Pipe Insulation : 12mm Close-cell insulation
Note: Insulated Wire Heater required for Freezer Room system