

MECHANICAL SERVICES

LOT 263, #49 GORDON STREET, KONDININ

prepared by ALPHAZETA GROUP

ABBREVIATIONS

AC	AIR CONDITIONING
AF	AIR FILTER
AFL	ABOVE FLOOR LEVEL
BCA	BUILDING CODE OF AUSTRALIA
C	CONTROLLER
CM	CEILING MOUNTED
CP	CONDENSATE PUMP
CS	CEILING SPACE
CU	CONDENSING UNIT
CW	COMPLETE WITH
D	INSULATED COPPER DRAIN
DB	DISTRIBUTION BOARD
DG	DOOR GRILLE
DWG	DRAWING
EA	EXHAUST AIR
EAF	EXHAUST AIR FAN
EAG	EXHAUST AIR GRILLE
ECG	EGG-CRATE GRILLE
F	FILTER
FD	FIRE DAMPER
H/L	HIGH LEVEL
L/s	LITER PER SECOND
M	MOTORIZED
NRD	NON RETURN DAMPER
OA	OUTSIDE AIR
P	PRESSURE SENSOR
RA	RETURN AIR / RELIEF AIR
RAG	RETURN AIR GRILLE
RC	ROOF COWL
S	SILENCER
T	THERMOSTAT
TBC	TO BE CONFIRMED
TD	TUNDISH
TEF	TOILET EXHAUST FAN
VCD	VOLUME CONTROL DAMPER
WM	WALL MOUNTED

SYMBOLS LEGEND

	FAN COIL UNIT
	OUTDOOR CONDENSING UNIT
	IN-LINE FAN C/W ACOUSTIC WRAPPING, VIBRATION ISOLATORS, SILENCERS AS SHOWN CONTROLS AND POWER SUPPLY.
	EXHAUST/RETURN AIR GRILLE AS PER EGG CRATE GRILLE SCHEDULE
	DOOR GRILLE REFERENCE, # DENOTES REFERENCE NUMBER IN DOOR GRILLE SCHEDULE, VANDAL PROOF.
	600X600 ACCESS PANEL
	WALL MOUNTED AC CONTROLLER
	38mm INTERNALLY INSULATED SHEET METAL DUCTWORK
	BAROMETRIC DAMPER
	NEW ACOUSTIC AND VAPOUR SEALED FLEXIBLE DUCTWORK - AS PER SPECIFICATION (Note: maximum TOTAL length to be 3.0m)

CONTROLS / ELECTRICAL

	WALL MOUNTED AC CONTROLLER
	LIGHT/FAN ON-OFF SWITCH
	CONTROLS WIRE

PIPEWORK

	REFRIGERANT FLOW AND RETURN PIPEWORK
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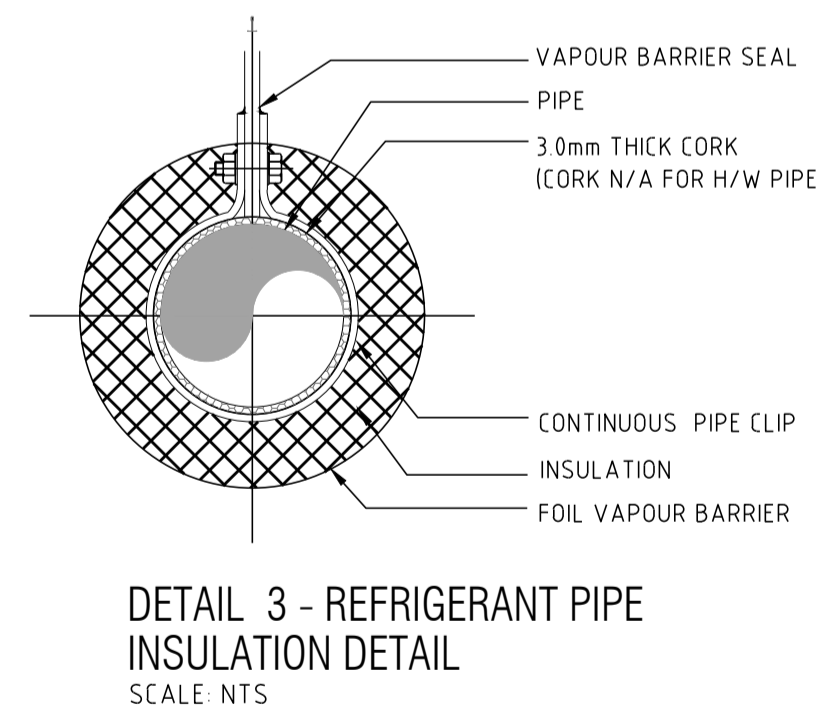
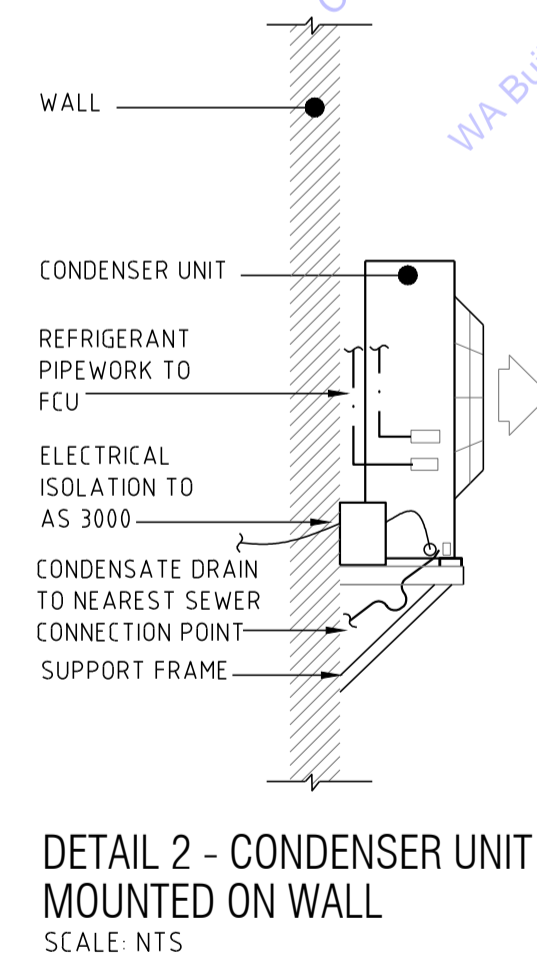
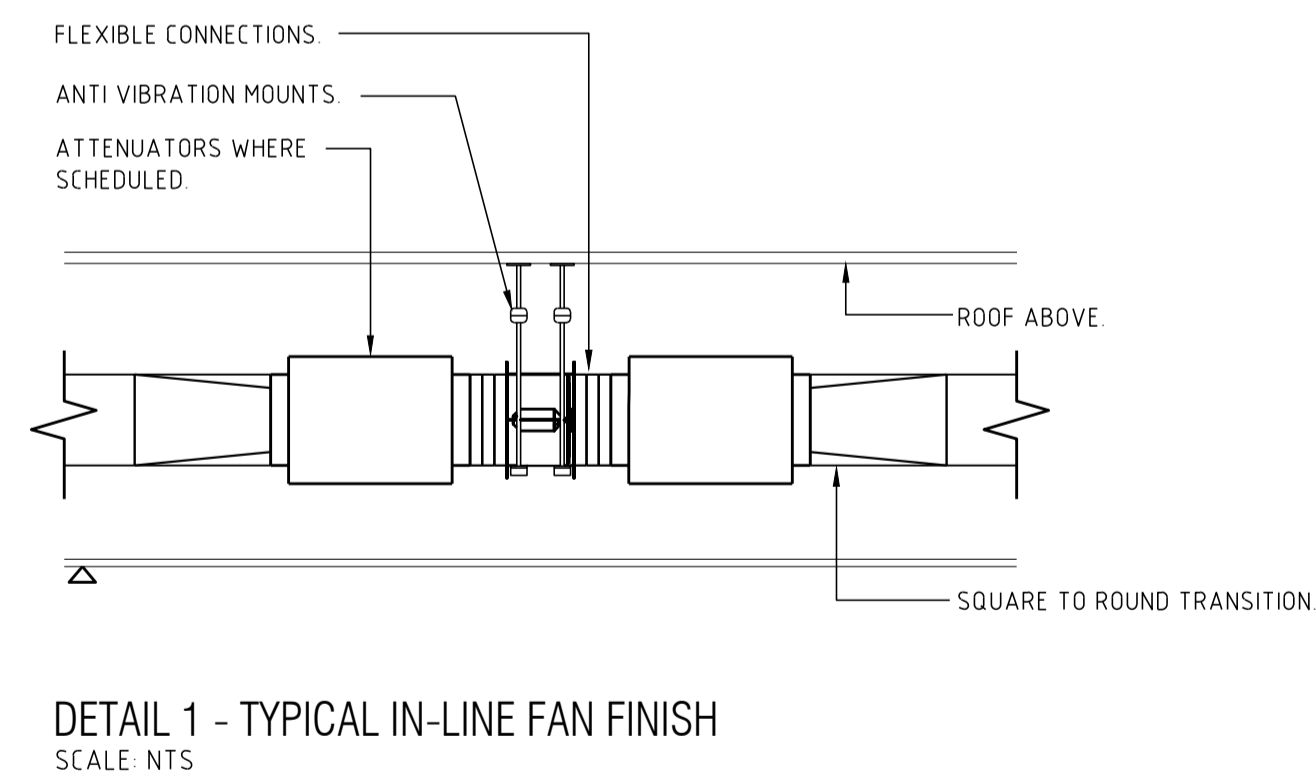
Air Quantity (L/s)	Flex Diameter (mm)
0 - 50	150
51 - 80	200
81 - 120	250
121 - 180	300
181 - 250	350
251 - 350	400

Air Quantity L/s	Grille Neck Size mm x mm
0 - 80	200x200
81 - 180	300x300
181 - 320	400x400
321 - 500	500x500
501 - 605	550x550
606 - 720	600x600

Sl.No	Air Quantity L/s	Grille Neck Size mm x mm
1	0 - 110	600x150
2	111 - 150	600x200
3	151 - 190	600x250
4	191 - 300	600x400
5	301 - 450	600x600

GENERAL NOTES

- THE CONTRACTOR SHALL SUBMIT DETAILED WORKSHOP/FABRICATION DRAWINGS TO THE CONSULTANT FOR APPROVAL BEFORE ORDERING OR INSTALLING ANY EQUIPMENT.
- THE DRAWINGS LISTED BELOW ARE DIAGRAMMATIC AND APPROXIMATE ONLY. THESE DRAWINGS, TOGETHER WITH SPECIFICATION, ARE INTENDED TO BE MUTUALLY EXPLANATORY AND SHOW THE COMPLETE SCOPE OF THE CONSTRUCTION WORK REQUIRED. ALL WORK SET FORTH BY ONE DOCUMENT, IF NOT BY THE OTHER, WILL FORM PART OF THE MECHANICAL SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THE FINAL SPATIAL COORDINATION DURING THE WORKSHOP DRAWING STAGE.
- DUCT SIZES ARE CLEAR AIRWAY DIMENSIONS IN MILLIMETERS (mm).
- FINAL COORDINATION WITH EXISTING/OTHER SERVICES AND STRUCTURE REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL ROOMS WITH SUPPLY AIR SHALL BE PROVIDED WITH RETURN AIR PATH, WHETHER OR NOT IT IS SHOWN ON THE DRAWINGS.
- MECHANICAL CONTRACTOR TO INVESTIGATE SITE PRIOR TO ORDERING OF EQUIPMENT FOR EXACT SIZES, LOCATIONS OF THE NEW EQUIPMENT AND SITE LIMITATIONS. ALL LOCATIONS AND SIZES ARE INDICATIVE AND SUBJECT TO SITE INVESTIGATION.
- ALL DIMENSIONS AND LOCATIONS TO BE CHECKED ON SITE PRIOR TO ORDER, MANUFACTURE AND CONSTRUCTION.
- ALL EQUIPMENT, PIPEWORK AND DUCTWORK ROUTES SHOWN ARE INDICATIVE ONLY. LOCATIONS AND ROUTES TO BE CONFIRMED & COORDINATED WITH OTHER TRADES ON SITE.
- THE CONTRACTOR SHALL CO-ORDINATE THE ACTUAL DIMENSIONS OF ALL DUCTWORK ON SITE WITH THE BUILDER AND CHANGE THE CROSS SECTION AREA OF THE DUCT TO SUITE THE CEILING SPACE AND FLOW RATE.
- FINAL ROUTE OF THE PIPEWORK TO BE CONFIRMED ON SITE. CONTRACTOR TO ALLOW FOR PIPE SET UPS & SET DOWNS AROUND ARCHITECTURAL BEAMS, EXISTING DUCTWORK & SERVICES.
- MECHANICAL CONTRACTOR TO ALLOW FOR REBALANCING OF ALL DIFFUSION WITHIN SCOPE OF WORKS. PROVIDE FINAL COMMISSIONING DATA PRIOR TO DEFECTS AND WITHIN OPERATION MANUALS.
- MAINTAIN ACCESS TO EXISTING AND NEW SERVICES.
- FINAL CUTOUTS OF GRILLES TO BE COORDINATED WITH THE BUILDER & APPROVED BY ARCHITECT.
- PROVIDE PRE-FILTERS FOR ALL AIR-CONDITIONING EQUIPMENT AFFECTED BY THE WORKS DURING THE DEMOLITION AND CONSTRUCTION PERIOD.
- ENSURE ALL EXHAUSTS ARE MINIMUM 6M AWAY FROM ANY OUTSIDE AIR INTAKES.
- ALL EXHAUST DISCHARGE AND OUTSIDE AIR INTAKE SHALL BE FITTED WITH MOTORISED DAMPERS THAT SHALL CLOSE WHEN THE RESPECTIVE SYSTEM IS DEACTIVATED.
- ALL AC SYSTEMS SERVING THE MULTI-PURPOSE ROOM SHALL BE CONTROLLED VIA A SINGLE WALL-MOUNTED CONTROLLER.
- ALL AC CONTROLLERS SHALL BE HARD-WIRED.
- WALL MOUNTED AC UNITS SHALL USE THEIR INTERNAL TEMPERATURE SENSORS.
- ALL EXPOSED REFRIGERANT PIPES SHALL BE COVERED WITH A COLOURBOND "TOP-HAT" SECTION COLOUR TO BE APPROVED BY ARCHITECT.



DRAWING SCHEDULE

AZ16053-M00	COVER SHEET, LEGEND, DETAILS AND GENERAL NOTES
AZ16053-M01	AIR CONDITIONING & VENTILATION LAYOUT - GROUND FLOOR PLAN

Revision No	Description	Date
A	TENDER ISSUE	30.06.2017

Revision No	Description	Date

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PROJECT NAME

KONDININ CRC UPGRADE
LOT 263, #49 GORDON ST, KONDININ

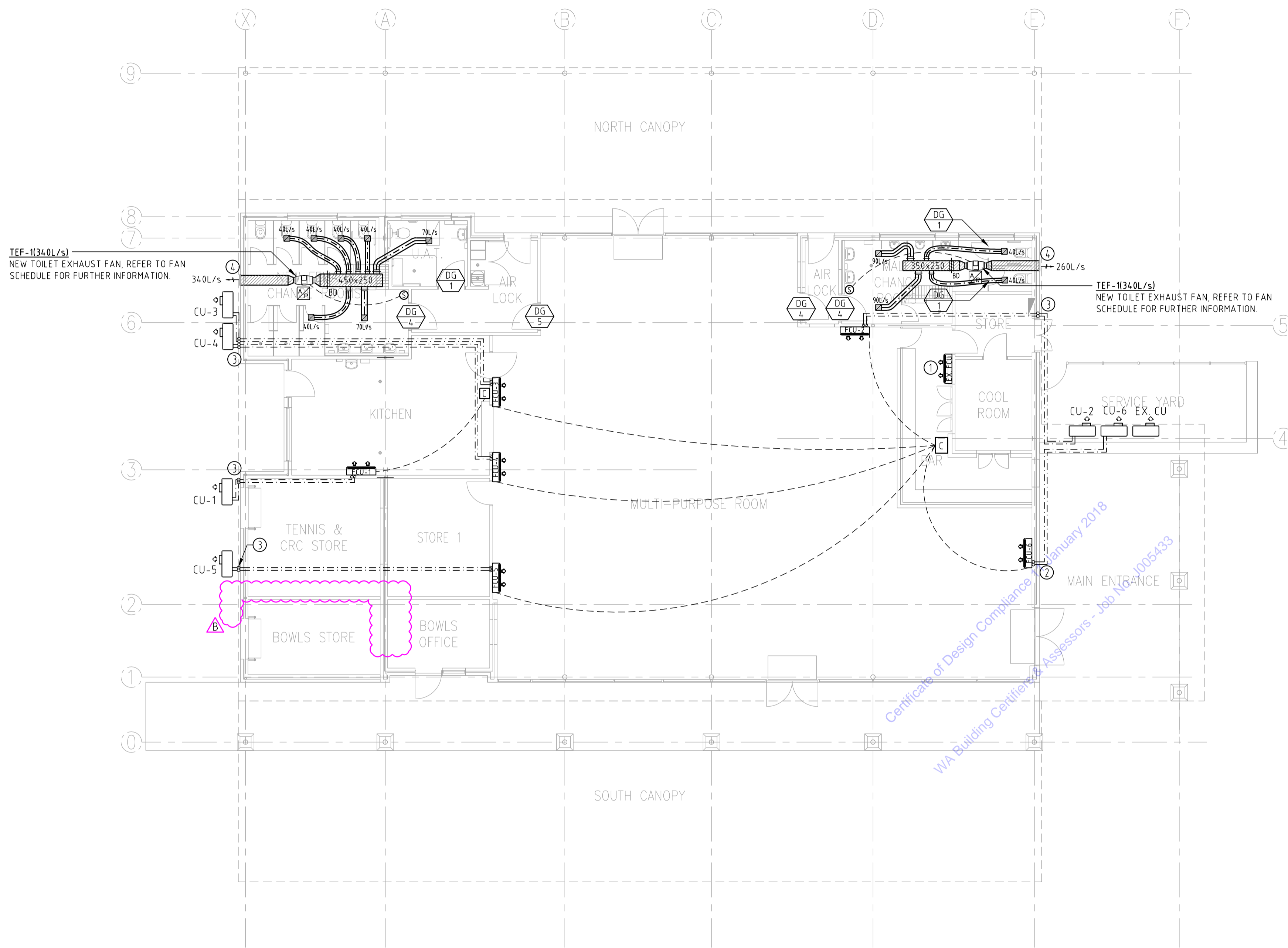
TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION PURPOSES

TITLE

MECHANICAL SERVICES
COVER SHEET, LEGEND, ABBREVIATIONS
GENERAL NOTES AND DRAWING SCHEDULE

DRAWN	CHECKED	APPROVED	DATE	SCALE
JG	CA	CA	MAR' 17	-

PROJECT NO.	DRAWING NO.	REV. NO.
AZ17029	AZ17029-M00	A



NOTES

- ① EXISTING AIR-CONDITIONER IN THE BAR AREA TO REMAIN.
- ② REFRIGERANT PIPES TO RISE IN WALL AND CONNECT TO WALL MOUNTED AC UNITS.
- ③ REFRIGERANT PIPES TO RISE IN WALL, RUN AT HIGH LEVEL IN CEILING SPACE AND CONNECT TO WALL MOUNTED AC UNITS.
- ④ PROVIDE EXTERNAL WEATHERPROOF LOUVRES FOR TOILET EXHAUST FOR SUITABLE AIRFLOW SHOWN ON THE DRAWING, COMPLETE WITH LOUVRE FLANGE AND FRAME.
- ⑤ REFER HYDRAULIC DWG AZ17029-H02 FOR CONDENSATE DRAINAGE CONNECTIONS FOR ALL FCUs.
- ⑥ SWITCH AND AC CONTROLLER LOCATIONS TO BE CONFIRMED BY CLIENT/ARCHITECT.
- ⑦ MECHANICAL CONTRACTOR SHALL RETICULATE DRAIN PIPEWORK OF THE FCU'S TO THE PROVIDED TUNDISH AS INDICATED ON HYDRAULIC DRAWINGS.
- ⑧ REFER TO DWG AZ17029-M00 FOR LEGEND AND NOTES.

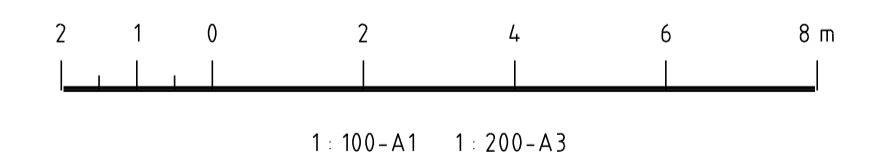
FAN SCHEDULE

LABEL	AREA SERVED	TYPE	SUPPLY AIR (L/s)	ESTIMATED STATIC PRESSURE (Pa)*	POWER (kW)
TEF-1	FEMALE CHANGE ROOMS	DUCTED IN-LINE	340	100	0.18
TEF-2	MALE CHANGE ROOMS	DUCTED IN-LINE	260	100	0.18

* Estimated static pressures are provided for tendering purposes only. The contractor must submit detailed pressure loss calculations and confirm fan selections along with the mechanical workshop drawings.

SCHEDULE OF AIR CONDITIONING UNITS

LOCATION	INDOOR UNIT	OUTDOOR UNIT	INDOOR UNIT TYPE	OUTDOOR UNIT POWER (kW)	COOLING MODE				HEATING KW	COMMENTS
					COOLING KW		COIL ENTERING TEMP.			
					Total	Sensible	°C DB	°C WB		
KITCHEN	FCU-1	CU-1	WALL-MOUNTED	1.54	4.0	3.0	25.3	18.9		ALL OUTDOOR CONDENSING UNITS SHALL BE MOUNTED ON A WALL BRACKET 1Ph / 240V / 50Hz
MULTI-PURPOSE ROOMS	FCU-2	CU-2	WALL MOUNTED	2.98	8.3	4.8	24.8	20.4	0.9	
MULTI-PURPOSE ROOMS	FCU-3	CU-3	WALL MOUNTED	2.98	8.3	4.8	24.8	20.4	0.9	
MULTI-PURPOSE ROOMS	FCU-4	CU-4	WALL MOUNTED	2.98	8.3	4.8	24.8	20.4	0.9	
MULTI-PURPOSE ROOMS	FCU-5	CU-5	WALL MOUNTED	2.98	8.3	4.8	24.8	20.4	0.9	
MULTI-PURPOSE ROOMS	FCU-6	CU-6	WALL MOUNTED	2.98	8.3	4.8	24.8	20.4	0.9	



AMENDMENTS / REVISION			AMENDMENTS / REVISION		
Revision No.	Description	Date	Revision No.	Description	Date
A	TENDER ISSUE	30.06.2017			
B	REVISED TENDER ISSUE	17.07.2017			

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PROJECT NAME

**KONDININ CRC UPGRADE
LOT 263, #49 GORDON ST, KONDININ**

TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION PURPOSES

TITLE

**MECHANICAL SERVICES
GROUND FLOOR PLAN
AIRCONDITIONING AND VENTILATION LAYOUT**

DRAWN JG	CHECKED CA	APPROVED CA	DATE MAR' 17	SCALE 1:100 @ A1
PROJECT NO. AZ17029	DRAWING NO. AZ17029-M01	REV. NO. B		