

# OLA SAMOA PARLIAMENTARY COMPLEX REDEVELOPMENT

## APIA, SAMOA

### MECHANICAL SERVICES DRAWING INDEX



DWG No:

M00  
M01  
M10.01

DWG TITLE:

MECHANICAL SERVICES - DRAWING INDEX  
MECHANICAL SERVICES - GENERAL NOTES, LEGEND, ABBREVIATIONS, SCHEDULE OF EQUIPMENT & TYPICAL DETAILS  
MECHANICAL SERVICES - MECHANICAL VENTILATION FOR THE ABLUTION AREA LAYOUT

**STATUS: DETAILED DESIGN  
ISSUE FOR TENDER**

REV	DATE	DESCRIPTION	DWN	ENG	CHK	CLIENT	 <b>Kramer Ausenco</b> DESIGN & PROJECT MANAGEMENT	QUALITY DRAWN: DR DATE: SEP 2023 DRAWING CHECKED: RS DATE: SEP 2023 ENGINEER: DR DATE: SEP 2023 DESIGN CHECKED: RS DATE: SEP 2023 APPROVED SSH SEP 2023 DIRECTOR/MANAGER DATE:	PROJECT NAME <b>OLA SAMOA PARLIAMENTARY COMPLEX REDEVELOPMENT</b>	PROJECT No. <b>19283W</b>	SCALE: AS NOTED FULL SIZE A1
A	29.09.23	FOR CLIENT REVIEW	DR	DR	RS	 OFFICE OF THE CLERK OF THE LEGISLATIVE ASSEMBLY	Ground floor, FNPF Place, 350 Victoria Parade, P.O. BOX 13969, Suva, FIJI. Phone: (679) 3363242 Fax: (679) 3363243 Email: suva@kramerausenco.com Web: www.kramerausenco.com				

**GENERAL NOTES**

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS, SPECIFICATIONS AND CONTRACT DOCUMENTS.
- WHERE A CONFLICT OF INFORMATION ARISES BETWEEN THE DRAWINGS AND SPECIFICATION, THE SPECIFICATION SHALL TAKE PRECEDENCE.
- THE CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE WITH THE SITE CONDITIONS AND UNDERSTAND THE SERVICES DOCUMENTED (DRAWINGS AND SPECIFICATIONS) IN ORDER TO ASCERTAIN THE FULL SCOPE OF THE WORKS REQUIRED TO COMPLETE THE INSTALLATION SUCCESSFULLY.
- THE BUILDING SERVICES ENGINEER SHALL BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.
- ENGINEER'S DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- SUPPLY AND INSTALL ALL FIXTURES, FITTINGS, SECONDARY STEEL, SUPPORTS, BRACKETRY, HANGERS AND ACCESSORIES NECESSARY TO COMPLETE THE INTENT OF THIS PROJECT.
- THE COMPLETE INSTALLATION SHALL BE OF FIRST QUALITY WORKMANSHIP COMPLYING TO THE RELEVANT STANDARDS AND TO THE APPROVAL OF THE BUILDING SERVICES ENGINEER.
- THE MATERIALS, WORKS AND INSTALLATION SHALL COMPLY WITH ALL RELEVANT CURRENT AUSTRALIAN STANDARDS, BUILDING CODES, RULES, REGULATIONS AND AUTHORITIES HAVING JURISDICTION OVER THE SITE.
- THE CONTRACTOR SHALL COMPLY WITH HEALTH AND SAFETY REGULATIONS.
- THE SITE SHALL BE KEPT TIDY AT ALL TIMES WITH REGULAR CLEANING BEING UNDERTAKEN. DUST CONTROL MEASURES SHALL BE ERECTED WHERE REQUIRED.
- ANY SERVICES PASSING THROUGH A FIRE RATED COMPARTMENT OR STRUCTURE SHALL BE ADEQUATELY FIRE SEALED.
- THE LAYOUT OF EQUIPMENT SHOWN ON THE DRAWINGS IS DIAGRAMMATIC ONLY, AND EXACT POSITIONS SHALL BE AGREED ONSITE WITH THE BUILDING SERVICES ENGINEER PRIOR TO INSTALLATION.
- THE POSITION OF ALL PLANT AND EQUIPMENT SUCH AS CONTROL PANELS, EMITTERS, BOARDS, GRILLES, OUTLETS, SWITCHES, SOCKETS, ETC SHOWN ON THE DRAWINGS IS ASSUMED TO BE CORRECT HOWEVER, VARIATIONS OF UP TO 2 METRES MAY BE EFFECTED WITHOUT COST IF ADVISED BEFORE BEING INSTALLED. SUBJECT TO THE APPROVAL OF COORDINATED WORKSHOP DRAWINGS.
- WHERE UNISTRUT AND THREADED ROD IS UTILISED TO CARRY SERVICES, END CAPS SHALL BE FITTED ON BOTH SIDES OF THE UNISTRUT AND THE ROD CUT BACK TO THE UNDERSIDE OF THE UNISTRUT.
- ALL SERVICES SHALL BE COMPREHENSIVELY LABELLED TO CLEARLY INDICATE THEIR FUNCTION. EACH ITEM OF EQUIPMENT SHALL BE NUMBERED AND TAGGED.
- THE CONTRACTOR SHALL PROVIDE ON SITE THE EXACT LOCATION OF ANY OPENINGS, CORES, PLINTHS, CHASES, TRENCHES, ETC REQUIRED TO COMPLETE THE WORKS.
- THE CONTRACTOR SHALL PROVIDE ANY ACCESS DOORS IN ORDER TO READILY ACCESS AND MAINTAIN THE INSTALLED SERVICES. POSITIONS OF ACCESS DOORS SHALL BE INDICATED ON A COORDINATION DRAWING FOR SUBMITTAL, REVIEW AND APPROVAL TO THE BUILDING SERVICES ENGINEER.
- ALL EQUIPMENT SCHEDULES, PLANT ITEMS AND MATERIALS WHETHER OR NOT SPECIFIED, SHALL BE SUBMITTED TO THE BUILDING SERVICES ENGINEER FOR APPROVAL PRIOR TO ORDERING. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A SUBMITTAL SCHEDULE AND A PROCUREMENT SCHEDULE.
- ALL BARE FACED EXPOSED PIPEWORK SHALL BE PAINTED WITH TWO COATS OF CORROSION PROOF PAINT. COLOUR AS PER CONSULTANT ENGINEERS REQUIREMENTS.
- ALL SITE RETICULATION SERVICES SHALL BE COORDINATED. MINIMUM SEPARATION DISTANCES BETWEEN SERVICES SHALL BE MAINTAINED. SERVICES LOCATIONS AS WELL AS SERVICES ROUTES SHALL BE CONFIRMED ON SITE WITH THE SERVICES ENGINEER AND UTILITY PROVIDERS / LOCAL AUTHORITIES.

**VENTILATION**

- THE VENTILATION SYSTEM SHALL COMPLY WITH CURRENT AS/NZS 1668.1, AS 1668.2, AS 4254 AND ANY OTHER APPLICABLE STANDARD.
- UNLESS OTHERWISE NOTED ALL DUCTWORK SHALL BE FABRICATED FROM HOT DIP GALVANISED SHEET METAL.
- ALL DUCTWORK SHALL BE ADEQUATELY LABELLED. EACH DAMPER AND ITEM OF EQUIPMENT SHALL BE NUMBERED AND TAGGED.
- THE ENTIRE VENTILATION SYSTEM SHALL BE DESIGNED, FABRICATED, INSTALLED, TESTED AND COMMISSIONED IN SUCH A MANNER TO COMPLY WITH A NOISE RATING AS PER AS/NZS 2107. IF EXCESSIVE/NUISANCE NOISE IS GENERATED BY THE VENTILATION SYSTEM, THE CONTRACTOR MUST TAKE REMEDIAL ACTIONS TO COMPLY WITH THE AFOREMENTIONED NOISE RATINGS.
- INSULATED PLENUM BOXES (CUSHION HEADS) SHALL BE PROVIDED AT EACH DIFFUSER.
- EACH AIR TERMINAL DEVICE SHALL BE FITTED WITH AN OPPOSED BLADE DAMPER, EITHER INTEGRAL OR DIRECTLY PRIOR TO THE DEVICE.
- MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL BE NO MORE THAN 3 METRES.
- DUCT MOUNTED ACCESS/INSPECTION DOORS SHALL BE PROVIDED AT EACH ITEM OF INLINE EQUIPMENT, VOLUME CONTROL DAMPER, WHERE A CHANGE OF DIRECTION OCCURS AND AT EACH 10 METRES INTERVAL OF STRAIGHT DUCTWORK LENGTH.
- ALL DUCTWORK SIZES PROVIDED ARE OF INTERNAL DIMENSION.
- ALL HURRICANE TURBINE VENTILATORS SHALL BE INSTALLED WITH PROVISION OF PROPER FLASHING FROM THE RIDGE OF THE ROOF.
- ALL HURRICANE TURBINE VENTILATORS SHALL BE CORROSION RESISTANT AS REQUIRED BY AS/NZS 4740.
- ALL HURRICANE TURBINE VENTILATORS SHALL HAVE RAIN RESISTANCE LEVELS AS REQUIRED BY AS/NZS 4740.
- ALL HURRICANE TURBINE VENTILATORS SHALL BE PROVIDED WITH VERMIN PROOF MESH.

**CONTROLS**

- UNLESS OTHERWISE NOTED, THIS CONTRACTOR SHALL SUPPLY, INSTALL, TEST AND COMMISSION ALL CONTROLS WIRING FOR ALL MECHANICAL EQUIPMENT AND DEVICES. SUPPLY AND INSTALLATION OF ALL CABLING AND CONNECTION FROM THE BOARDS TO EQUIPMENT SHALL BE BY THIS CONTRACTOR.
- THE COMPLETE POWER AND CONTROLS WIRING AND DISTRIBUTION SHALL COMPLY WITH ALL RELEVANT STANDARDS IN PARTICULARLY WITH CURRENT AS/NZS 3000 AND AS/NZS 3008.
- CONTROLS SPECIALIST TO CONFIRM AND MARK ON SITE POSITION OF ALL FIELD DEVICES.
- MECHANICAL CONTRACTOR TO ALLOW AND PROVIDE AN APPROPRIATE LEVEL OF INTERFACE FOR ALL MECHANICAL EQUIPMENT WITH THE SYSTEM CONTROLS. SUB CONTRACTOR TO WORK CLOSELY AND LIAISE WITH THE CONTROLS SPECIALIST FOR BETTER COORDINATING OF CONTROLS.

**POWER WIRING**

- THE COMPLETE POWER WIRING AND DISTRIBUTION SHALL COMPLY WITH ALL RELEVANT STANDARDS IN PARTICULARLY WITH AS/NZS 3000 AND AS/NZS 3008.
- ELECTRICAL LOAD INFORMATION SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR TO THE ELECTRICAL CONTRACTOR IN ORDER TO ALLOW THE ELECTRICAL CONTRACTOR TO CHECK SIZE OF ALL THE REQUIRED SUBMANS AND CIRCUIT PROTECTION.
- IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO CONFIRM ELECTRICAL LOADS OF ALL MECHANICAL EQUIPMENT BY COORDINATING WITH CONTRACTORS, SUPPLIERS AND MANUFACTURERS.

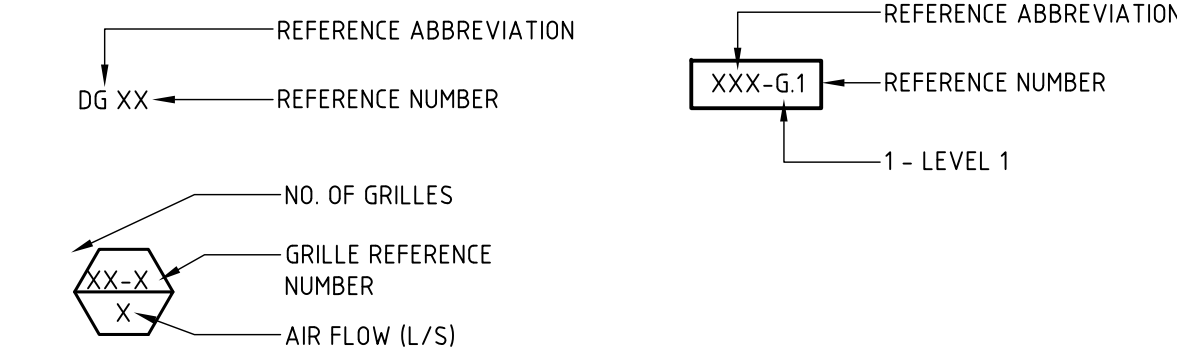
**ADDITIONAL PROJECTS NOTES**

- PRIOR TO ORDERING EQUIPMENT, PLANT, SWITCHBOARDS, DUCTWORK, ETC. THIS CONTRACTOR SHALL ENSURE THAT SUFFICIENT SPACE IS AVAILABLE BY SITE MEASUREMENT, TO ACCOMMODATE THE ACTUAL SIZE OF THE EQUIPMENT / ACCESSORY BEING INSTALLED.
- CONTRACTOR TO CONFIRM SIZES, DIMENSIONS, WEIGHT AND ELECTRICAL LOADING OF ALL PROPOSED AIR CONDITIONING AND VENTILATION EQUIPMENT PRIOR TO ORDERING AND COMMENCEMENT OF WORKS.

**TESTING, COMMISSIONING AND HANDOVER**

- ALL INSTALLATIONS INCLUDING ALL EQUIPMENT SHALL BE FULLY TESTED, COMMISSIONED AND CERTIFIED TO THE SATISFACTION OF THE SERVICES ENGINEER AND STATUTORY AUTHORITIES PRIOR TO ACCEPTANCE OF THE INSTALLATION AND COMMENCEMENT OF THE DEFECTS AND LIABILITY PERIOD.
- WHERE AN ITEM OF EQUIPMENT OR INSTALLATION FAILS A TEST OR THE DESIRED DESIGN CONDITIONS ARE NOT MET, THE CONTRACTOR SHALL AT HIS OWN COST RECTIFY THE PROBLEM AND HAVE THE INSTALLATION RE-COMMISSIONED IN ITS ENTIRETY.
- ALL PIPEWORK AND DUCTWORK WORK SHALL BE FULLY PRESSURE AND LEAK TESTED AND WITNESSED BY THE BUILDING SERVICES ENGINEER.
- THE CONTRACTOR TO DEMONSTRATE AND TRAIN THE CLIENT'S STAFF ON THE OPERATION OF EACH INSTALLATION.
- THE ENTIRE INSTALLATION SHALL BE HANDED OVER NEW, CLEAN AND FREE FROM ANY DAMAGE OR DEFECT.
- PRIOR TO HAND OVER, THE CONTRACTOR SHALL SUBMIT TO THE BUILDING SERVICES ENGINEER A COPY OF THE HEALTH AND SAFETY FILE, INSTALLATION OPERATION AND MAINTENANCE MANUALS, TESTING AND COMMISSIONING REPORTS, AND AS BUILT DRAWINGS FOR REVIEW AND APPROVAL.

**REFERENCING**



**ABBREVIATIONS**

- DG - DOOR GRILLE
- EF - EXHAUST FAN
- EX - EXHAUST AIR
- TYP - TYPICAL

**MECHANICAL LEGEND AND SYMBOLS**

	WALL MOUNTED FAN
	DOOR GRILLE

**SCHEDULE OF FANS**

FAN DESIGNATION	EF-11 (QUANTITY X2)
FAN LOCATION	LEVEL
MANUFACTURER	FANTECH
MODEL	VCW254
DESCRIPTION	VOGUE SERIES
IMPELLER TYPE	AXIAL
DESIGN AIR FLOW (L/s)	120
STATIC PRESSURE (Pa)	50
FAN SPEED (RPM)	1395
MOTOR POWER (kW)	0.06
ELECTRICAL SUPPLY	240V / 1PH / 50Hz
FULL LOAD CURRENT (A)	0.28
MOTOR SPEED	4 POLE
NOMINAL DIAMETER (mm)	250
FAN WEIGHT (kg)	2.8
INLET dB(A)	40 @ 3m
CONTROL	INTERLOCK WITH LIGHT SWITCH FOR OPERATIONS.

**NOTES:**

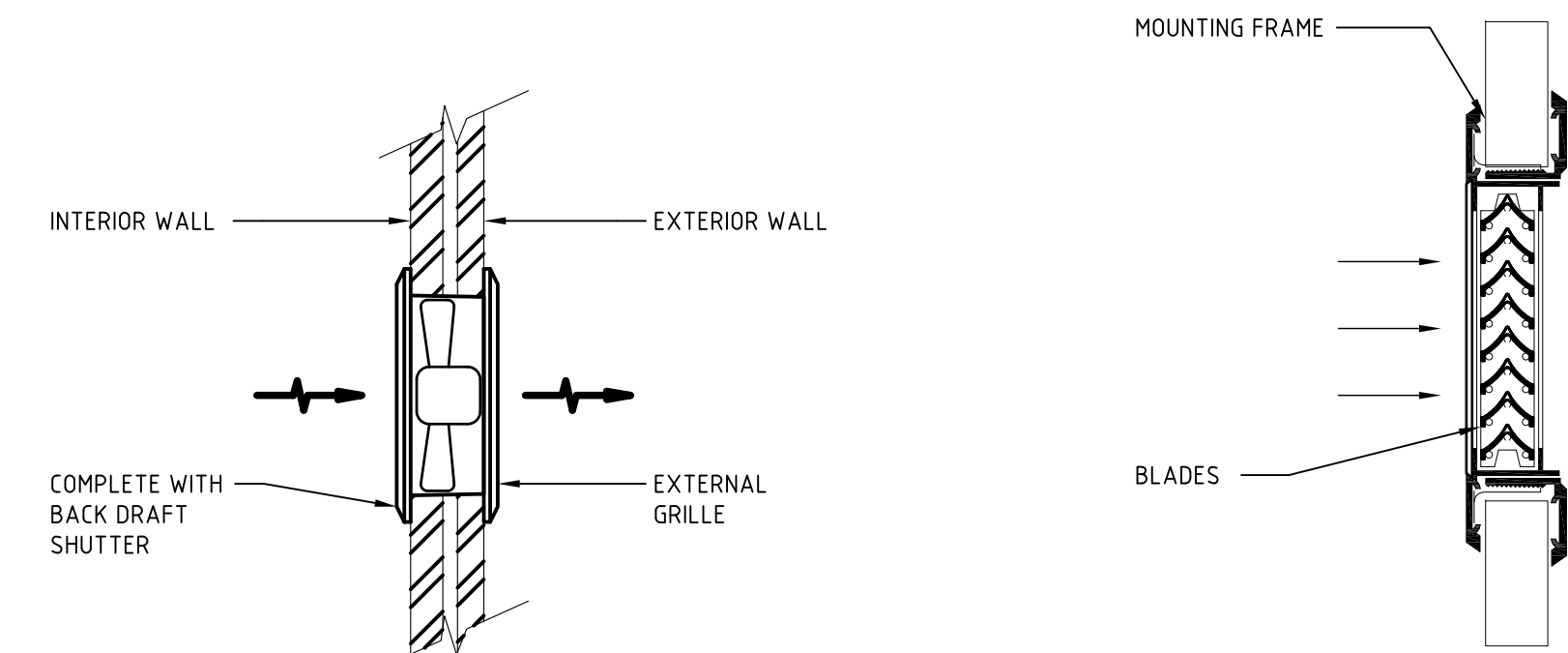
- PRESSURE DROPS INDICATED ARE NOMINAL ONLY. CONTRACTOR TO FINALIZE PRESSURE DROPS DEPENDING ON DUCT LAYOUT, LOUVERS AND ACCESSORIES INSTALLED.
- CONTRACTOR TO CONFIRM SELECTIONS OF FANS TO SUIT FINAL DUCT LAYOUTS.
- TO BE FANTECH OR EQUAL APPROVED AND ACOUSTICALLY WRAPPED FOR LOW NOISE.
- SOUND DECIBELS PROVIDED ARE MEASURED AT 3m FROM THE SOURCE AT 1000Hz.

**SCHEDULE OF DOOR GRILLES**

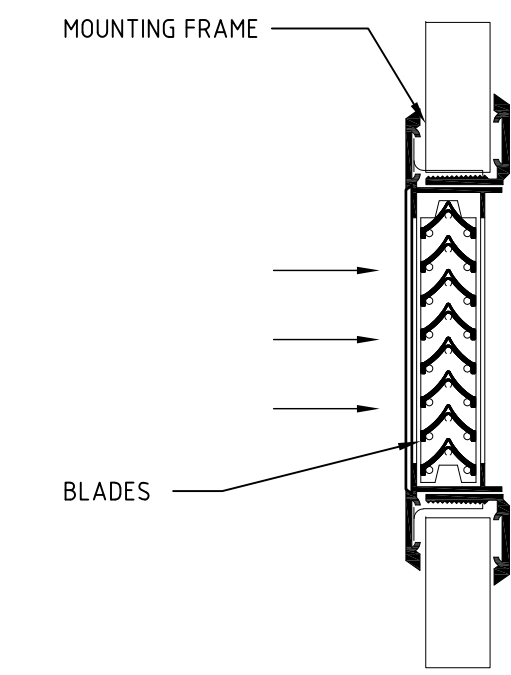
REF. NO.	MAKE / MODEL	SIZE (MM)
DG (QUANTITY X2)	HOLYOAKE DG-52-BFL	300x300

**NOTES:**

- TO BE C/W FLANGE, AUXILIARY FRAME AND CONCEALED FIXING.
- TO BE HOLYOAKE, KILARGO OR EQUAL APPROVED.
- COLOR TO BE NOMINATED BY THE ARCHITECT.



**1** TYPICAL WALL MOUNTED FAN DETAIL SCALE: NTS



NOTE:  
1. DOOR GRILLE TO BE C/W INTUMESCENT CORE IF THE GRILLE IS MOUNTED ON A FIRE RATE WALL.

**2** TYPICAL DOOR GRILLE DETAIL SCALE: NTS

**STATUS: DETAILED DESIGN ISSUE FOR TENDER**

<b>REVISIONS</b>	REV	DATE	DESCRIPTION	DWN	ENG	CHK	CLIENT 	<b>Kramer Ausenco</b> DESIGN & PROJECT MANAGEMENT Ground floor, FNPF Place, 350 Victoria Parade, P.O. BOX 13969, Suva, FIJI. Phone: (679) 3363242 Fax: (679) 3363243 Email: suva@kramerausenco.com Web: www.kramerausenco.com	<b>QUALITY</b> DRAWN: DR DATE: SEP 2020 DRAWING CHECKED: RS DATE: SEP 2020 ENGINEER: DR DATE: SEP 2020 DESIGN CHECKED: RS DATE: SEP 2020 APPROVED: SSH SEP 2023 DIRECTOR/MANAGER DATE:	PROJECT NAME <b>OLA SAMOA PARLIAMETARY COMPLEX REDEVELOPMENT</b>		PROJECT No. <b>19283W</b>	SCALE: AS NOTED FULL SIZE A1
			PROJECT DESCRIPTION <b>MAOTA FONO PODIUM PROJECT</b>	DRAWING TITLE <b>MECHANICAL SERVICES</b>		DRAWING NO. <b>M01</b>				REVISION <b>A</b>			
			<b>SOGI, APIA SAMOA</b>	<b>GENERAL NOTES, ABBREVIATIONS, LEGENDS SCHEDULE OF EQUIPMENT &amp; TYPICAL DETAILS</b>									
	A		29.09.23	FOR CLIENT APPROVAL	DR	DR				RS			SCALE BAR(mm) FULL SIZE A1





1 MECHANICAL VENTILATION FOR THE ABLUTION AREA LAYOUT  
 - PLAN  
 SCALE: 1:25 @ A1  
 1:50 @ A3

**STATUS: DETAILED DESIGN  
 ISSUE FOR TENDER**

REV	DATE	DESCRIPTION	DWN	ENG	CHK	CLIENT	Kramer Ausenco			PROJECT NAME		PROJECT No.	SCALE:		
							DESIGN & PROJECT MANAGEMENT			OLA SAMOA PARLIAMENTARY COMPLEX REDEVELOPMENT		19283W	AS NOTED FULL SIZE A1		
						<p>OFFICE OF THE CLERK OF THE LEGISLATIVE ASSEMBLY</p>	<p>Ground floor, FNPF Place, 350 Victoria Parade, P.O. BOX 13969, Suva, FIJI. Phone: (679) 3363242 Fax: (679) 3363243 Email: suva@kramerausenco.com Web: www.kramerausenco.com</p>			<p>PROJECT DESCRIPTION</p> <p><b>MAOTA FONU PODIUM PROJECT SOGI, APIA SAMOA</b></p>		<p>DRAWING TITLE</p> <p><b>MECHANICAL SERVICES MECHANICAL VENTILATION FOR THE ABLUTION AREA LAYOUT</b></p>		DRAWING NO.	REVISION
										<p>APPROVED</p> <p>SSH SEP 2023</p> <p>DIRECTOR/MANAGER DATE:</p>				<b>M10.01</b>	<b>A</b>
A	29.09.23	FOR CLIENT REVIEW		DR	DR	RS									