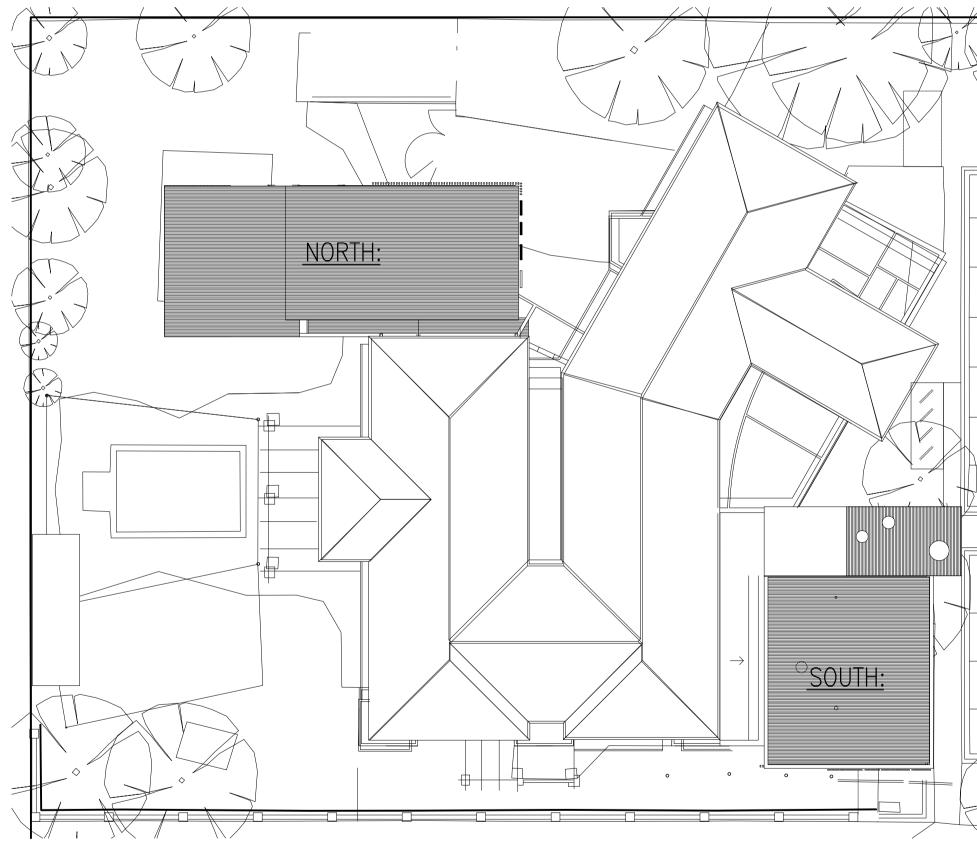
MARIBYRNONG RIVER CHILDREN'S CENTRE REDEVELOPMENT 6 WESTS RD, MARIBYRNONG MARIBYRNONG CITY COUNCIL



WESTS ROAD

MECHANICAL SERVICES

DRAWING INDEX

M1	-	NOTES & SPECIFICATION
M2	-	FLOOR PLAN
M3	-	SCHEDULES

SPECIFICATION

THE SPECIFICATION CONTAINED ON THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE MAIN CONTRACT SPECIFICATION. IF DISCREPANCIES, ARE FOUND SEEK CLARIFICATION FROM SUPERINTENDENT.

SCOPE OF WORK

THE CONTRACT WORK COMPRISES THE SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND WARRANTY OF THE MECHANICAL SERVICES INSTALLATION FOR THE PROJECT, TOGETHER WITH ALL MINOR AND INCIDENTAL WORK WHICH MAY BE OR BECOME NECESSARY, THOUGH NOT SPECIFICALLY MENTIONED HEREIN, TO ACHIEVE THE TRUE INTENT AND MEANING OF THE INSTALLATION DESCRIBED IN THIS SPECIFICATION AND ACCOMPANYING DRAWINGS.

THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

SUPPLY & INSTALLATION OF EXHAUST SYSTEMS INCLUDING ALL BACKDRAFT SHUTTERS.

- SUPPLY & INSTALLATION OF ALL DOCUMENTED AIR CONDITIONING SYSTEMS. ALL ASSOCIATED ELECTRICAL WORKS AND REQUIRED CONTROLS. • ALL ASSOCIATED BUILDING WORKS AND REQUIRED MAKING GOOD UNLESS NOTED OTHERWISE.
- TRANSPORTATION, CARTAGE AND LIFTING INTO PLACE OF ALL EQUIPMENT.
- TESTING, COMMISSIONING AND BALANCING OF ALL SYSTEMS. • CO-ORDINATION OF THE MECHANICAL SERVICES INSTALLATION WITH ALL OTHER SERVICES.
- MAINTENANCE AND DEFECTS LIABILITY FOR THE WORKS. THIS SHALL INCLUDE:-DEFECTS LIABILITY FOR 52 WEEKS FROM THE DATE OF PRACTICAL COMPLETION.
- 2. 52 WEEKS PREVENTATIVE MAINTENANCE (3 MONTHLY) DURING THE DEFECTS LIABILITY
- PROVISION OF THREE (3) SET OF OPERATING AND MAINTENANCE MANUALS. • TRAINING OF THE STAFF ON USAGE OF THE INSTALLED SYSTEMS.

THE CONTRACTOR SHALL ENTER INTO A CONTRACT WITH THE BUILDER.

INSPECTION OF THE SITE

THE CONTRACTOR SHALL VISIT THE SITE BEFORE TENDERING TO FAMILIARISE THEMSELVES WITH THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHALL BE TAKEN INTO ACCOUNT WHEN PROVIDING TENDER COSTING.

SHOP DRAWINGS & EQUIPMENT SCHEDULES

THE CONTRACTOR SHALL PROVIDE ONE SET OF SHOP DRAWINGS AND EQUIPMENT SCHEDULES FOR THE WORKS FOR APPROVAL PRIOR TO ORDERING EQUIPMENT OR COMMENCING MANUFACTURE OR INSTALLATION.

SPECIFIED EQUIPMENT

THE WORKS AS DOCUMENTED ARE BASED UPON PROPRIETARY ITEMS, AS NOMINATED, TENDERERS ARE AT LIBERTY TO OFFER ALTERNATIVE EQUIPMENT PROVIDED IT MEETS THE FULL PERFORMANCE AND APPEARANCE CRITERIA OF THE EQUIPMENT AS SPECIFIED. WHERE ALTERNATIVE EQUIPMENT IS OFFERED, SUBSTANTIATE THE OFFER WITH TECHNICAL INFORMATION, DIMENSIONS, FINISHES AND AN EXAMPLE OF THE ALTERNATIVE. ALL SUCH ALTERNATIVE OFFERS ARE SUBJECT TO APPROVAL BY THE ENGINEER.

<u>NOTIFICATION, PERMITS AND REGULATIONS</u>

NOTIFY ALL RELEVANT AUTHORITIES OF THE NATURE OF THE WORK TO BE CARRIED OUT AND PAY ALL NECESSARY RATES AND FEES DUE TO SUCH AUTHORITIES. BE RESPONSIBLE FOR ANY LIABILITY DUE TO SUCH NOTIFICATION NOT BEING CARRIED OUT. ALL WORK IS TO BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA, OH&S REGULATIONS AND GUIDELINES, LOCAL COUNCIL REGULATIONS AND AUSTRALIAN STANDARD CODES GOVERNING THIS TYPE OF INSTALLATION. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL TEST REPORTS AND CERTIFICATES REQUIRED BY REGULATIONS

GUARANTEES

GUARANTEE THAT ALL FITTINGS, EQUIPMENT AND MATERIALS PROVIDED ARE OF CORRECT DESIGN, TYPE, CONSTRUCTION AND CAPACITY TO EFFICIENTLY PERFORM THE WORK SPECIFIED. ALL MATERIALS AND WORKMANSHIP USED IN THE EXECUTION OF THE WORKS TO BE CARRIED OUT AS PART OF THE INSTALLATION ARE TO COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS, INCLUDING ALL SUBSEQUENT AMENDMENTS, APPLICABLE TO ANY PART, OR ITEM FORMING PART OF THE INSTALLATION.

RESPONSIBILITY OF MECHANICAL CONTRACTOR THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORKMANSHIP AND MATERIALS

COVERED BY THE CONTRACT WORKS AND THE DISCIPLINE OF EMPLOYEES, SERVANTS OR AGENTS FROM THE TIME OF ENGAGEMENT UNTIL THE COMPLETION OF THE CONTRACT. MAKE GOOD ANY ACCIDENTAL DAMAGE TO SITE SERVICES. FENCING, PIPING, PATHS, ROADWAYS, KERBS, GUTTERING OR ANY ADJOINING PROPERTY WHICH HAS BEEN DISTURBED OR DAMAGED DUE TO THE ACTIONS OF EMPLOYEES, SERVANTS OR AGENTS. CARRY OUT ALL NECESSARY REPAIRS PROPERLY AND TO THE APPROVAL OF THE ENGINEER. AT ALL TIMES MAINTAIN THE WORKING AREAS OF THE BUILDING IN A CLEAN AND TIDY CONDITION AND REGULARLY REMOVE ACCUMULATED WASTE AND SCRAP CAUSED BY THE PROGRESS OF THE WORK.

DEFECTS LIABILITY PERIOD

THE MECHANICAL CONTRACTOR SHALL GUARANTEE THE WHOLE OF THE CONTRACT WORKS AGAINST DEFECTIVE WORKMANSHIP AND MATERIALS FOR THE 52 WEEK DEFECTS LIABILITY PERIOD. THE DEFECTS LIABILITY PERIOD COMMENCES AT THE DATE OF PRACTICAL COMPLETION AS CERTIFIED BY THE ENGINEER. DURING THIS PERIOD BE RESPONSIBLE FOR MAKING GOOD WITH ALL POSSIBLE SPEED ANY DEFECTS ARISING FROM DEFECTIVE MATERIALS OR WORKMANSHIP OR FROM ANY ACT OF THE MECHANICAL CONTRACTOR, SERVANTS OR AGENTS.

COMPLETION

- PRIOR TO GRANTING OF PRACTICAL COMPLETION THE CONTRACTOR SHALL PROVIDE:
- COMPLETE TESTING AND COMMISSIONING RESULTS
- CERTIFICATES AS REQUIRED FOR THE WORKS. • OPERATING AND MAINTENANCE MANUALS.

PERFORMANCE TESTS

ALLOW TO CARRY OUT AT APPROPRIATE TIMES PERFORMANCE TESTING TO VERIFY THE CAPACITY OF THE EQUIPMENT INSTALLED. DURING SUCH TESTING THE FOLLOWING IS THE MINIMUM DATA WHICH SHOULD BE RECORDED: • ACTUAL MOTOR CURRENTS OF ALL EQUIPMENT.

• AIRFLOW FROM ALL SYSTEMS.

OPERATING AND MAINTENANCE INSTRUCTIONS

- MANUALS SHALL INCLUDE: DESCRIPTION OF NEW SYSTEMS.
- TECHNICAL LITERATURE FOR INSTALLED EQUIPMENT. • OPERATING AND MAINTENANCE INSTRUCTIONS.
- TESTING AND COMMISSIONING DATA.
- AS—INSTALLED DRAWINGS.
- SUPPLIER INFORMATION.
- PREPARE THE MANUAL AND BIND IN A THREE-RING HARD BACK FOLDER OF A4 SIZE WITH A SUITABLY TYPE SET FACE INSERTED BEHIND A CLEAR PLASTIC POCKET ATTACHED AS PART OF THE FRONT COVER.

ELECTRICAL

THE ELECTRICAL WORKS SHALL COMPLY FULLY WITH ALL RELEVANT ACTS, BYLAWS, CODES, REGULATIONS AND RULES WHICH ARE APPLICABLE. ALL ELECTRICAL WORKS SHALL BE CARRIED OUT BY QUALIFIED ELECTRICIANS, LICENSED IN THE STATE OF VICTORIA.

THE OVERALL VOLTAGE DROP OF ANY PART OF THE INSTALLATION IS NOT TO EXCEED THE REQUIREMENTS OF AS/NZ 3000-2000. BASE ALL VOLTAGE DROP CALCULATIONS ON THE ACTUAL LOAD CONNECTED, PLUS A 25% LOAD MARGIN. ENSURE THAT ALL EQUIPMENT AND APPLIANCES PROVIDED UNDER THIS CONTRACT ARE NOT

CAPABLE OF CAUSING ANY INTERFERENCE WITH ANY ELECTRONIC OR RADIO EQUIPMENT, LOCAL OR OTHERWISE. SHOULD ANY ITEM OF EQUIPMENT CAUSE INTERFERENCE TO ELECTRONIC OR RADIO EQUIPMENT PROVIDE EFFICIENT DEVICES TO ELIMINATE SUCH INTERFERENCE AND INSTALL WITHOU ADDITIONAL COST TO THIS CONTRACT.

EXAMINATIONS AND TESTS WHICH MAY BE REQUIRED BY THE ENGINEER AND/OR STATUTORY AUTHORITY, TO PROVE COMPLIANCE WITH THE SPECIFICATION AND/OR RELEVANT ACTS. BYLAWS CODES, REGULATIONS AND RULES.

EARTH THE ENTIRE ELECTRICAL SYSTEM INCLUDING ALL MOTORS, SWITCHGEAR, CONTROLS AND SIMILAR ITEMS. WHERE EQUIPMENT CONSISTS OF SEVERAL COMPONENTS INTERCONNECTED AND SUPPLIED AS A SINGLE UNIT, PROVIDE EARTHING TERMINALS AND EARTH EACH COMPONENT. RUN ALL EARTH WIRES IN CONDUIT WITH CABLES AND REGARD THEM AS CONDUCTORS FOR THE PURPOSE OF CONDUIT SIZING

PRIOR TO COMMENCING ANY WORK PREPARE AND SUBMIT FOR APPROVAL COMPLETE WIRING DIAGRAMS FOR THE INSTALLATION. INCLUDE ON THESE DIAGRAMS ALL RELAYS, CONTACTORS, FUSES AND SIMILAR COMPONENTS TOGETHER WITH THE METHOD OF WIRING AND THE CONTROL

ARRANGEMENT AT THE COMPLETION OF THE INSTALLATION PROVIDE A WIRING DIAGRAM TO BECOME AN AS-BUILT RECORD DRAWING.

EQUIPMENT

PROVIDE EQUIPMENT SUITABLE FOR THE SPECIFIED DUTIES AND ARRANGEMENTS OF THE PLANT AS INDICATED. ENSURE THAT THE EQUIPMENT MANUFACTURER'S AND/OR SUPPLIERS HAVE RECEIVED DURING THE

ARE FULLY FAMILIAR WITH THE WORK INVOLVED. USE ONLY EQUIPMENT AND ASSOCIATED ACCESSORIES WHICH ARE SUPPLIED BY REPUTABLE MANUFACTURERS WHO REGULARLY PRODUCE SUCH EQUIPMENT AND WHO ISSUE COMPLETE CATALOGUE DATA ON THEIR PRODUCTS.

AS FAR AS POSSIBLE, USE ONLY FIRE RESISTANT MATERIAL IN THE CONSTRUCTION OF EQUIPMENT AND FOR INSTALLATION OF THE PLANT. WHERE SPECIFIED OR OTHERWISE NECESSARY, SUPPLY EQUIPMENT FITTED WITH SAFETY DEVICES TO

PROTECT PEOPLE AGAINST ACCIDENTS AND PLANT AGAINST DAMAGE. PROVIDE SAFETY DEVICES IN THE FORM OF PLANT GUARDS ON EXPOSED MOVING PARTS, ELECTRICAL INTERLOCKING OF MOTOR CIRCUITS AND MACHINE OVERLOAD PROTECTION. ENSURE THAT ALL EQUIPMENT SUPPLIED IS COMPLETE WITH MANUFACTURER'S NAME PLATE SHOWING

DETAILS OF CAPACITY, TYPE, MODEL NUMBER, SERIAL NUMBER AND OPERATING VOLTAGE AND CURRENT. ENSURE THAT THESE IDENTIFICATION PLATES ARE CLEARLY VISIBLE AFTER INSTALLATION AND FINAL PAINTING.

EXHAUST FANS

SUPPLY AND INSTALL EXHAUST FANS AS SCHEDULED. THE FANS SHALL BE FANTECH OR APPROVED EQUAL AND THE MOTOR SHALL HAVE INTEGRAL THERMAL PROTECTION. THE FAN SHALL BE FULLY TESTED TO BS848, PART 1, 1980 AND PART 2 1985 THE ELECTRICAL CONTRACTOR SHALL PROVIDE GPO ADJACENT THE FAN LOCATION. THE MECHANICAL CONTRACTOR SHALL MAKE THE FINAL CONNECTION TO FAN.

CONTROLS

TOILET EXHAUST FANS: FAN SHALL BE OPERATED FROM THE LIGHT SWITCH OF ROOM SERVED.

WORK BY OTHERS

THE FOLLOWING WORKS SHALL BE CARRIED OUT BY OTHER TRADES AT NO COST TO THE MECHANICAL CONTRACTOR PROVIDED SUFFICIENT, DETAILED INSTRUCTIONS ARE INCLUDED ON THE SHOP DRAWINGS OR ON DETAILED DRAWINGS PRIOR TO COMMENCEMENT OF CONSTRUCTION. BE RESPONSIBLE FOR ALL COSTS DUE TO INFORMATION NOT BEING AVAILABLE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ELECTRICAL CONTRACTOR

LIGHT SWITCH. • POWER SUPPLY TERMINATING IN ISOLATOR ADJACENT TO CONDENSING UNIT.

BUILDER:

ALL WALL AND ROOF PENETRATIONS. FLASHING AROUND WALL FANS TO PROVIDE WATERPROOFING

GENERAL NOTES

- DIMENSIONS ARE CLEAR INTERNAL.
- VERIFY SITE CONDITIONS BEFORE COMMENCING WORK. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATIONS. ANY DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH
- THE WORK.
- ON THESE DRAWINGS & SPECIFICATION.
- 5. MANUFACTURERS SPECIFICATIONS.
- ALL SERVICES SHALL BE SUPPORTED FROM THE STRUCTURE WITH ANTI-VIBRATION MOUNTS
- & NOT FROM OTHER ADJACENT SERVICES. CO-ORDINATE DUCTWORK & EQUIPMENT WITH OTHER SERVICES & STRUCTURE.
- DOOR GRILLE LEGEND
- 25 MM UNDERCUT No 150 L/s R ISSUE

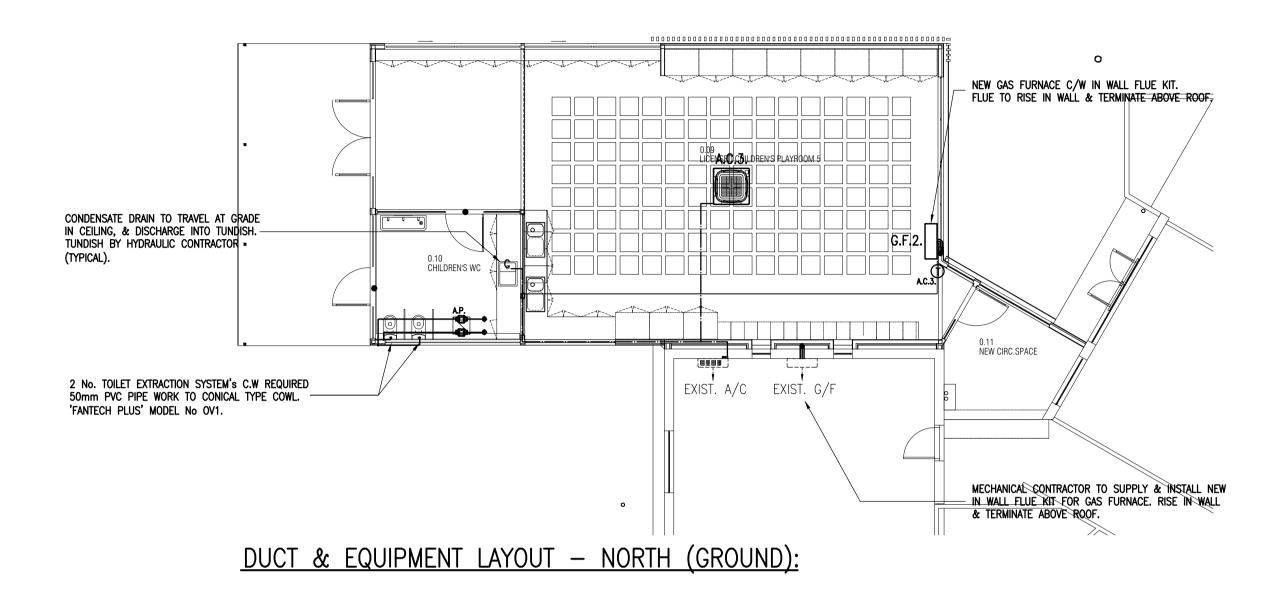
SUPPLY, AT NO EXTRA COST TO THIS CONTRACT, ALL NECESSARY FACILITIES AND INSTRUMENTS FOR TENDERING PERIOD COMPLETE INFORMATION REGARDING THE SPECIFICATION AND DRAWINGS AND COPYRIGHT This Drawing shall remain the property of S.D.P. Consulting (Aust) Pty. Ltd. and shall not be copied in part or whole without written permission. TENDER ISSUE 30-06-15 **Revisions** Date • POWER SUPPLY TERMINATING IN GPO ADJACENT TO EXHAUST FAN. GPO TO BE WIRED VIA Suite 8, 1153 Burke Road, Kew VIC 3101 P (03) 9817 6333 F (03) 9817 6233 www.sdpconsulting.com.au MECHANICAL SERVICES ALL DIMENSIONS & SIZES SHOWN ON DRAWING ARE IN MILLIMETRES. U.N.O. DUCTWORK SITE LAYOUT PROPOSED CHILDCARE REDEVELOPMENT WESTS ROAD. PROVIDE ALL ITEMS & EQUIPMENT NECESSARY FOR A COMPLETE INSTALLATION AS SHOWN MARIBYRNONG, VIC 3032 EQUIPMENT SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE SUPPLIERS & MARIBYRNONG CITY COUNCIL k20 ARCHITECTURE 1:200 @ A1 Project No. Scale 15-1071 Drawn Drawing No. Checked M1 OF 3

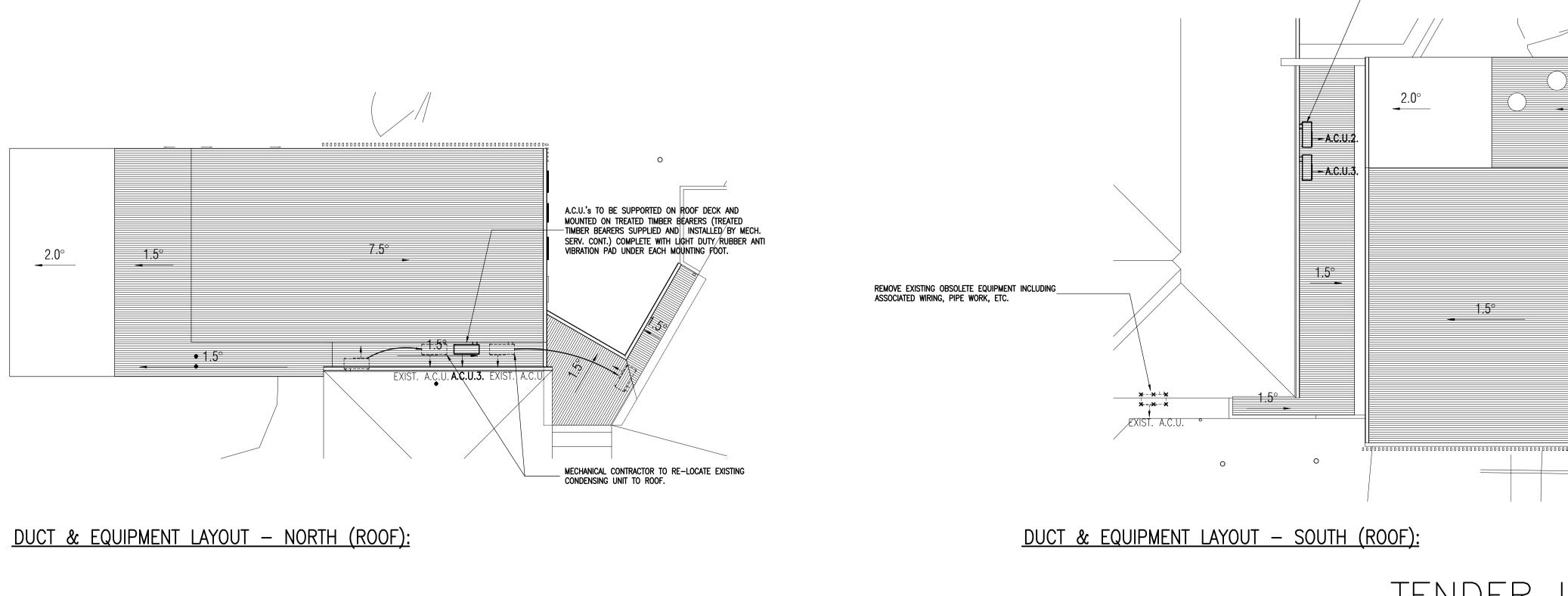
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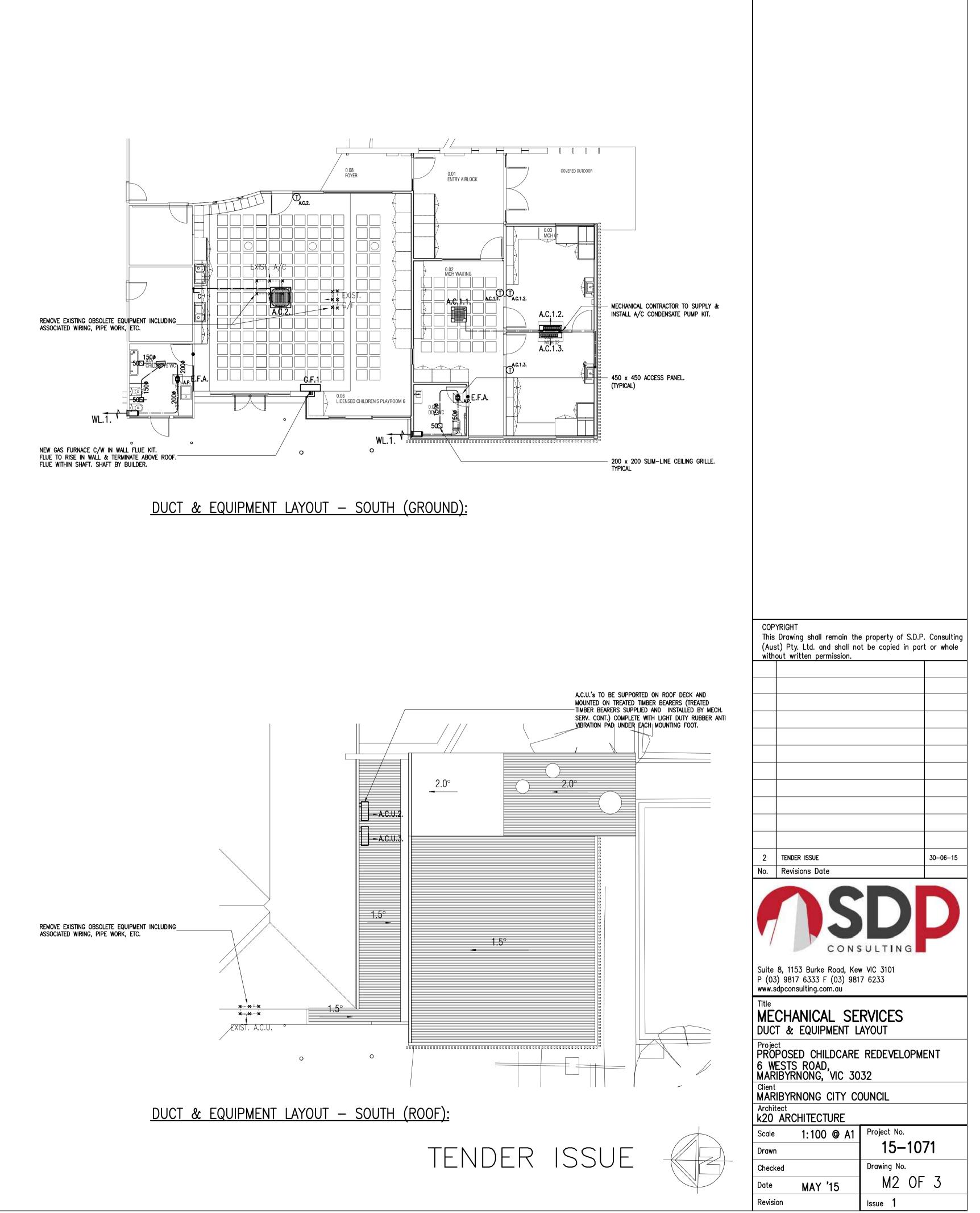
Revision

MAY '15

ssue







'MULTI' AIR CONDITIONING UNITS

UNIT No.		A.C.U.1. OUTDOOR UNIT	A.C.1.1 INDOOR UNIT	A.C.1.2 INDOOR UNIT	A.C.1.3 INDOOR UNIT
COOLING CAPACITY KW (AT 35°C AMBIENT)	TOTAL SENSIBLE	11.2	5.0	3.5	3.5
HEATING CAPACITY	kW	12.5	5.0	3.5	3.5
COMBINATION CAPACITY		100%			
SUPPLY AIR QUANTITIES (TOTAL)	l/s	-	200	165	165
FILTERS		-	AS SUPPLIED BY UNIT MANUFACTURER.	AS SUPPLIED BY UNIT MANUFACTURER.	AS SUPPLIED BY UNIT MANUFACTURER.
AIR ON	(DB/WB)	35/	27/19	27/19	27/19
TYPE		AIR COOLED HEAT PUMP	CEILING CASSETTE TYPE	WALL HUNG TYPE	WALL HUNG TYPE
SELECTION		'DAIKIN' RMXS112LV1A	'DAIKIN' FFQ50BV1B9	'DAIKIN' FTXS25KVMA	'DAIKIN' FTXS25KVMA
APPROX. WEIGHT kg		125	17.5	9	9
APPROX. FULL LOAD	(AMPS.)	27.0 1ø	1.0 1ø	1.0 1ø	1.0 1ø
AREA SERVING		MCH CONSULTING ROOM's	MCH CONSULT WAITING	MCH CONSULT 01	MCH CONSULT 02
REFRIGERANT		R410A			

NOTE : COOLING CAPACITY BASED ON 35°C AMBIENT TEMPERATURE. MECHANICAL CONTRACTOR TO SUPPLY & INSTALL HARD WIRED CONTROLLERS.

WEATHERPROOF DISCHARGE LOUVRE SCHEDULE

DESIGNATION	TYPE	NECK SIZE (mm x mm)	FACE SIZE (mm x mm)	O.B.D. IN FACE
WL.A	WEATHER LOUVER	250 x 250	275 x 275	NO

GAS FURNACE SCHEDULE.

UNIT No.	G.F.1.	G.F.2.	
RATED HEATING CAPACITY OF KW SELECTED UNIT.	8.6	8.6	
ТҮРЕ	SPACE SAVER TYPE C/W FLUE KIT.	SPACE SAVER TYPE C/W FLUE KIT.	
SELECTION GAS FURNACE	'RINNAI' 1005FDT	'RINNAI' 1005FDT	
NATURAL GAS INPUT (MJ/HR)	15.5 / 37.0	15.5 / 37.0	
APPROX. FULL LOAD.(FURNACE) AMPS	15 1ø	15 1ø	
APPROX. WEIGHT kg GAS FURNACE	45.0	45.0	

EXHAUST FANS SCHEDULE:

FAN No.	E.F.A.	E.F.B.
AIR QUANTITY I/s	50	100
RESISTANCE / SPEED Pa/R.P.S.	60/25	80/34
ТҮРЕ	DUCT MOUNTED EXHAUST FAN	DUCT MOUNTED EXHAUST FAN
SELECTION	FANTECH TD-500 / 150 ECO	FANTECH TD-500 / 150 ECO
APPROX. FULL LOAD AMPS (A)	0.35, 1ø	0.35, 1ø
APPROX. WEIGHT kg	2.7	2.7
AREA SERVING	DDA WC	CHILDREN WC
REMARK	INTERLOCK WITH ROOM LIGHT SWITCH	INTERLOCK WITH ROOM LIGHT SWITCH

NOTES: All exhaust fans are to be fitted with backdraft dampers. Spring loaded backdraft dampers shall not be used.

SINGLE SPLIT AIR CONDITIONING UNITS:

UNIT No.	A.C.2. / A.C.D.2.	A.C.3. / A.C.U.3.
TOTAL	4.0	14.0
COOLING CAPACITY KW SENSIBLE		-
HEATING CAPACITY KW	16.0	16.0
SUPPLY AIR QUANTITY I/s	550	550
MAX. SOUND PRESS. LEVEL @ 1.5m dBA	<u>4</u>	44
FILTERS	AS SUPPLIE D B Y UNIT MANUFACT U RER	AS SUPPLIED BY UNIT MANUFACTURER.
AIR ON (DB/WB)	27/19	27/19
ТҮРЕ	CEILING CASSETTE	CEILING CASSETTE TYPE
MAKE / MODEL OR APPROVED EQUIV.	FCQ140KVEA RZQ140KCV4A	'Daikin' FCQ140KVEA / RZQ140KCV4A
INDOOR	729.5	29.5
APPROX. WEIGHT kg OUTDOOR	98	98
APPROX. FULL LOAD (AMPS.)	<u>μ^{28.2,}</u> 1φ	28.2, 1¢
AREA SERVING	CHILDREN'S PLAYROOM 6	CHILDREN'S PLAYROOM 5

NOTE: COOLING CAPACITY BASED ON 35°C AMBIENT TEMPERATURE HEATING CAPACITY BASED ON 4°C AMBIENT TEMPERATURE, 20°C INDOOR TEMPERATURE. MECHANICAL CONTRACTOR TO SUPPLY & INSTALL HARD WIRED CONTROLLERS.

MECHANICAL SERVICES CONTRACTOR SHALL SUPPLY & INSTALL ALL REFRIGERANT PIPING AND ASSOCIATED POWER AND CONTROL WIRING BETWEEN PROPOSED FUTURE A/C UNIT 2.

