



































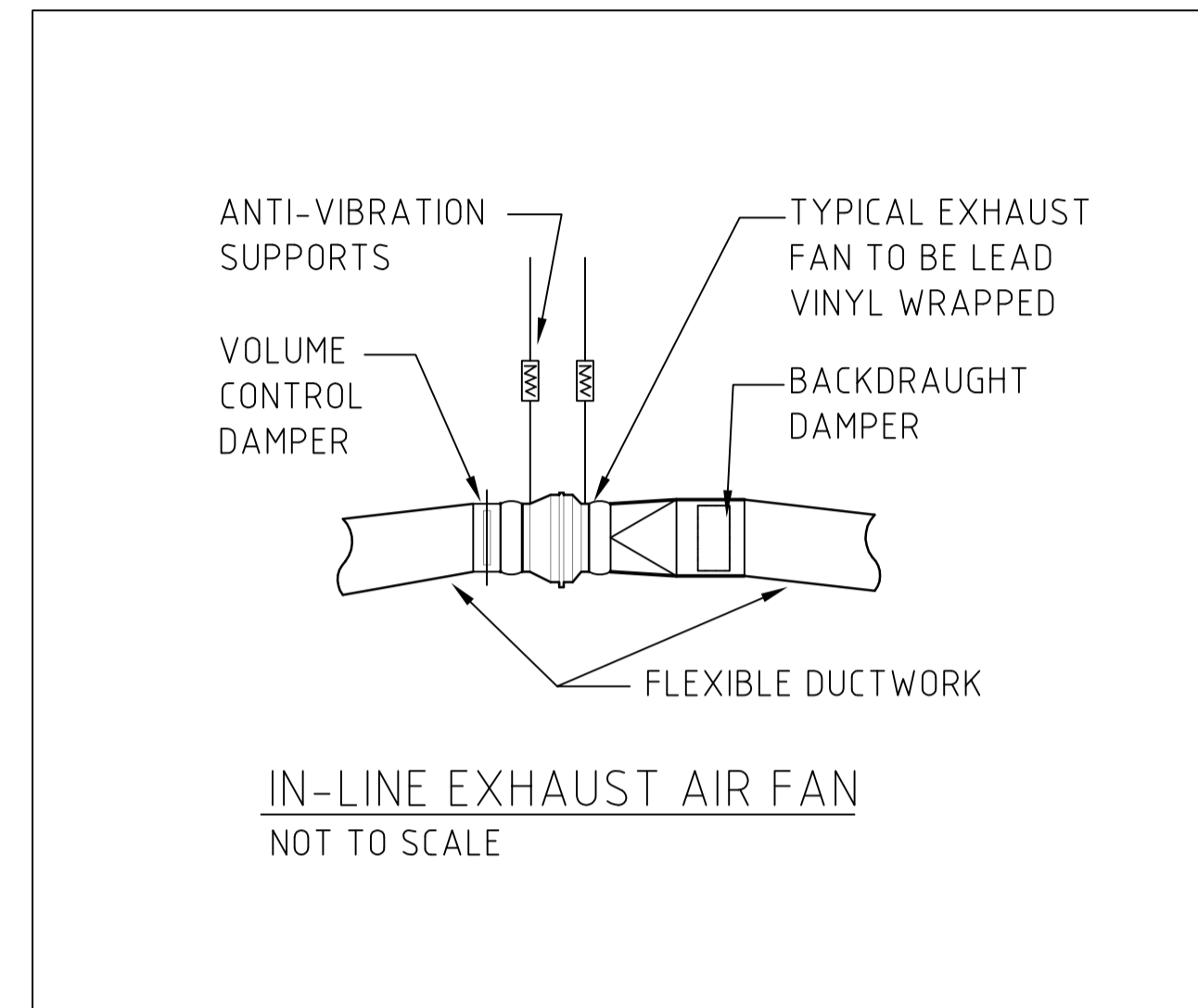
# LEICHHARDT PARK CHILD CARE CENTRE MECHANICAL SERVICES

## LEGEND

-  SHEET METAL DUCTWORK UNINSULATED
-  SHEET METAL DUCTWORK NOMINAL 25mm THICK INTERNAL PERFORATED FOIL FACED INSULATION AS SPECIFIED. (ACOUSTIC ONLY)
-  SHEET METAL DUCTWORK WITH INSULATION MATERIAL MIN. R1.0, NOMINALLY 38mm THICK INTERNAL DUCTLINER AS SPECIFIED. (ACOUSTIC ONLY)
-  SHEET METAL DUCTWORK WITH INSULATION MATERIAL MIN. R2.0, NOMINALLY 50mm THICK INTERNAL DUCTLINER AS SPECIFIED.
-  NEW SUPPLY AIR DIFFUSER
-  DUCT SPIGOT.
-  DUCT SPIGOT WITH DAMPER.
-  WEATHER PROOF EXHAUST AIR LOUVRE
-  NEW FLEXIBLE DUCTWORK AS SPECIFIED FOR HEATING AND COOLING APPLICATIONS USE MINIMUM R1.0 AND AS SPECIFIED. FOR LENGTHS GREATER THAN 3m, THE R VALUE OF THE FLEXIBLE DUCT SHALL BE EQUAL TO R 2.0 (SUPPLY AIR DUCTWORK ONLY)

-  MOTORISED VOLUME CONTROL DAMPER (END VIEW)
-  MOTORISED VOLUME CONTROL DAMPER (TOP VIEW)
-  DOOR GRILLE
-  DOOR GRILLE WITH FIRE DAMPER
-  ACCESS PANEL BY BUILDER 600x600 SQUARE UNO
-  MECHANICAL SERVICES SWITCHBOARD
-  EQUIPMENT REFERENCE
-  ATTENUATOR
-  DIFFUSER/GRILLE REFERENCE (REF/AIRFLOW)
-  UNDER CUT DOOR WITH SIZE INDICATED (e.g. 25mm)
-  DRAIN POINT BY HYDRAULIC CONTRACTOR
-  FLOOR WASTE BY HYDRAULIC CONTRACTOR
-  FLEXIBLE CONNECTION
-  ROOM SENSOR
-  CONTROL STATION (ADJUSTABLE)

-  FIRE FAN CONTROL PANEL
-  CONDENSATE DRAIN (INSULATED COPPER)
-  REFRIGERANT LINE - SINGLE LINE INDICATES BOTH LIQUID AND GAS LINES
-  RETURN AIR GRILLE EGGRATE TYPE
-  EXHAUST AIR GRILLE EGGRATE TYPE
-  SUPPLY AIR DIFFUSER 2 WAY
-  RADIAL SWIRL DIFFUSER
-  FIRE DAMPER
-  VOLUME CONTROL DAMPER (END VIEW)
-  VOLUME CONTROL DAMPER (TOP VIEW)



- ### GENERAL NOTES:
1. DRAWINGS ARE DIAGRAMMATIC ONLY. FOR DIMENSIONAL & CONSTRUCTIONAL DETAILS OF BUILDING SEE ARCHITECTS DRAWINGS & SITE.
  2. DRAWINGS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION.
  3. DUCT SIZES ARE CLEAR AIRWAY DIMENSIONS IN mm.
  4. ALL AIR QUANTITIES IN LITRES/SECOND.
  5. ESTIMATED SYSTEM RESISTANCES FOR TENDER PURPOSES ONLY. FANS, AND MOTORS TO BE SELECTED BY MECHANICAL TRADE TO MEET EQUIPMENT SELECTION AND INSTALLED SYSTEM.
  6. CHECK ALL DIMENSIONS AND LOCATIONS ON SITE PRIOR TO MANUFACTURE.
  7. PROVIDE AND UNDERTAKE ALL NECESSARY ADJUSTMENTS, MODIFICATIONS & ADDITIONS TO ACHIEVE THE INTENT INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATION.
  8. THE SERVICES INDICATED ON THE DRAWINGS SHOW THE GENERAL DESIGN INTENT AND SCHEMATIC ROUTES. THE CONTRACTOR WILL DETERMINE THE EXACT ROUTING OF THE SERVICES ON SITE, CO-ORDINATING WITH ALL TRADES.
  9. VOLUME CONTROLS TO BE PROVIDED ON ALL DUCTWORK BRANCH CONNECTIONS.
  10. CONFIRM DUCTWORK SIZES ON SITE FOR CO-ORDINATED FIT PRIOR TO ORDERING EQUIPMENT OR MANUFACTURE.
  11. ALL FLEXIBLE DUCTWORK SHALL BE INSULATED WITH PERFORATED ISODEC 4 ZERO.
  12. ALL NEW FLEXIBLE DUCTWORK SHALL BE LIMITED TO A MAXIMUM LENGTH OF 3.0 METRES BETWEEN SPIGOT AND OUTLET. FOR LENGTHS EXCEEDING 3.0 METRES PROVIDE INSULATED CIRCULAR SHEET METAL DUCTWORK OF EQUIVALENT SIZE TO REDUCE FLEXIBLE DUCT LENGTH OR INSULATE FLEXIBLE DUCTWORK TO R 2.0
  13. CONDENSATE DRAINS FROM A/C UNITS SHALL RUN TO NEAREST TUNDISH AS INDICATED ON DRAWINGS.
  14. MECHANICAL SERVICES CONTRACTOR TO PROVIDE AN INLINE CONDENSATE PUMP WHERE THERE IS INSUFFICIENT CEILING HEIGHT TO GRADE CONDENSATE LINE TO TUNDISH PROVIDED. CONDENSATE PUMP SHALL BE ACCESSIBLE VIA ACCESS PANEL LOCATED ADJACENT UNIT
  15. ALL CONDENSATE DRAINS TO BE Ø32 COPPER UNLESS OTHERWISE INDICATED.
  16. PROVIDE ALL NECESSARY STRUCTURAL SUPPORTS FOR MECHANICAL EQUIPMENT, PIPE WORK, DUCTWORK & WIRING.
  17. REFER TO SPECIFICATION FOR DETAILED DESCRIPTION OF CONTROLS OPERATION.
  18. ALL WIRING TO AS 3000
  19. ALL EQUIPMENT TO BE PROVIDED WITH LOCAL ELECTRICAL ISOLATORS.
  20. CONTRACTOR TO PROVIDE AS SOON AS PRACTICAL THE CONNECTED AND DIVERSIFIED ELECTRICAL LOADS FOR VERIFICATION OF SUBMANS.
  21. ALL FINAL PAINT FINISH COLOURS ARE TO BE IN ACCORDANCE WITH ARCHITECTURAL REQUIREMENTS.
  22. CONFIRM CEILING VOID REQUIREMENTS ARE ADEQUATE PRIOR TO MANUFACTURE AND INSTALLATION. ALLOW SERVICES ZONES FOR OTHER TRADES. ANY ABORTIVE INSTALLATION OR MANUFACTURE SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
  23. ALL FLOOR, CEILING AND WALL PENETRATIONS AND MAKING GOOD SHALL BE BY THE BUILDER.
  24. ALL METAL COMPONENTS EXPOSED TO WEATHER SHALL BE GALVANISED. ALL DUCTWORK EXPOSED TO WEATHER SHALL BE CROWNED ON TOP TO ENSURE WATER DOES NOT LIE ON THE DUCTWORK.
  25. FIRE RATE ALL MECHANICAL SERVICES IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA

REF	NECK SIZE (mm)	AIRFLOW (L/s)
S1	150ø	0-55
S2	200ø	56-100
S3	250ø	101-150
S4	300ø	151-200

REF NO.	SIZE: WdxHT (mm x mm)	NOM. AIR QTY. (L/s)	TYPE
A	600x150	0-115	BRADFLO OR EQUAL
B	600x200	116-150	
C	600x300	151-225	
D	600x450	226-340	(65% MIN. FREE AREA)
E	600x600	341-450	

FACE SIZE (mm)	NOM. AIR QTY.
150x150	1-45 L/s
200x200	46-80 L/s
250x250	81-125 L/s
300x300	126-180 L/s

NOM. AIR FLOW (L/s)	MIN. DIAMETER (mm)
0 - 45	150ø
45 - 80	200ø
81 - 150	250ø
151 - 220	300ø
221 - 330	350ø
331 - 425	400ø
426 - 540	450ø
541 - 650	500ø
651 - 800	550ø
801 - 1000	600ø

NOM. FLOW (L/s)	DIAMETER (mm)
0-50	150
51-100	200
101-180	250
181-300	300
301-440	350
441-620	400
621-850	450
851-1100	500
1101-1450	550
1451-1800	600

- ### ABBREVIATIONS
- AT ATTENUATOR
  - ACU AIR CONDITIONING UNIT
  - AP ACCESS PANEL
  - CU CONDENSING UNIT
  - CWL COWL
  - D INSULATED COPPER DRAIN
  - DG DOOR GRILLE
  - E EXHAUST
  - EAF EXHAUST AIR FAN
  - F FLOW
  - F.A. FROM ABOVE
  - F.B. FROM BELOW
  - FJA FRESH AIR
  - FCU FAN COIL UNIT
  - FD FIRE DAMPER
  - FFCP FIRE FAN CONTROL PANEL
  - FL FILTER
  - FW FLOOR WASTE
  - GEF GARBAGE EXHAUST FAN
  - GSM GALVANISED SHEET METAL
  - H/L HIGH LEVEL
  - K/E KITCHEN EXHAUST
  - KEF KITCHEN EXHAUST FAN
  - L/L LOW LEVEL
  - L LOUVRE
  - ME MECHANICAL EXHAUST (NON SPECIFIC)
  - MVCD MOTORISED VOLUME CONTROL

- ### DAMPER
- N/C NORMALLY CLOSED
  - N/O NORMALLY OPEN
  - NRD NON RETURN DAMPER
  - O/A OUTSIDE AIR
  - OBP OPPOSED BLADE DAMPER
  - ODP OZONE DEPLETING POTENTIAL
  - P PUMP
  - PAC PACKAGED AIR CONDITIONING UNIT
  - R RETURN
  - RG REFRIGERANT GAS
  - RL REFRIGERANT LIQUID
  - S SUPPLY
  - S/A SUPPLY AIR
  - SAF SUPPLY AIR FAN
  - SD SET DOWN
  - SU SET UP
  - T.A. TO ABOVE
  - T.B. TO BELOW
  - T/E TOILET EXHAUST
  - TEF TOILET EXHAUST FAN
  - UNO UNLESS NOTED OTHERWISE
  - VAV VARIABLE AIR VOLUME
  - VCD VOLUME CONTROL DAMPER
  - W WATER
  - WPL WEATHER PROOF LOUVRE

REV	DESCRIPTION	DRAWN	APP'D	DATE
0	FOR CONSTRUCTION	IM	JLH	16.07.15
B	TENDER	HM	JLH	23.03.15
A	90% DOCUMENTATION	HM	JLH	12.02.15

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PROJECT:  
LEICHHARDT PARK CHILD CARE

TITLE:  
MECHANICAL SERVICES  
LEGEND, NOTES  
AND DETAILS

## FOR CONSTRUCTION

DESIGNED : JLH	VERIFIED :
DRAWN : HM	APPROVED FOR TENDER : ---
SCALE : N.T.S	APPROVED FOR CONSTRUCTION : ---
CAD FILE : 26687-M-001.dwg PLOT DATE/TIME: 16.07.15 11:33 AM	

PROJECT No. <b>26687-SYD</b>	DRAWING No. <b>M-001</b>	REVISION <b>0</b>
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