

## MECHANICAL LEGEND

## MECHANICAL NOTES

## A. AIR DISTRIBUTION

DUCT SIZES ARE SHEET METAL SIZES. NO DUCTWORK SHALL RUN PARALLEL WITH AND OVER WALLS.

VERIFY COLLAR SIZES ON ALL AIR TERMINALS AND EQUIPMENT INLETS AND OUTLETS. TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE TRANSITIONS AT EQUIPMENT CONNECTIONS.

SEE REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING OUTLETS AND INLETS.

CONTRACTOR SHALL VERIFY CLEARANCE SPACE AVAILABLE, OFFSETS REQUIRED, STRUCTURAL OPENINGS, AND WORK BY OTHER TRADES PRIOR TO FABRICATION OF DUCTWORK. SUBMIT SHOP DRAWINGS ON DUCTWORK LAYOUT. COORDINATE WITH ROOF TRUSSES/STRUCTURE. PRESSURE TEST ALL DUCTWORK FOR LEAKS. SEE SPECIFICATIONS. RETURN AND EXHAUST DUCT SHALL BE TESTED UNDER NEGATIVE PRESSURE.

PROVIDE FLEXIBLE DUCT CONNECTIONS FOR ALL UNITS. EXTERNALLY INSULATE FLEXIBLE CONNECTIONS.

## B. EQUIPMENT

PROVIDE FULL SIZE INSULATED COPPER CONDENSATE DRAINS FROM ALL UNITS TO DISPOSAL POINT INDICATED ON THE DRAWINGS.

PROVIDE A TRAP ON ALL CONDENSATE DRAIN OUTLETS. SLOPE ALL CONDENSATE DRAIN PIPING 1/8" INCH PER FOOT.

CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PIPING AND DUCTWORK SUCH THAT MANUFACTURER'S RECOMMENDED CLEARANCES ARE MET FOR ALL ACCESS PANELS, MOTORS, FANS, BELTS, FILTERS AND AIR INTAKES.

PROVIDE VIBRATION ISOLATORS FOR ALL UNITS. SEE SPECIFICATIONS.

FLOOR MOUNTED AHUs AND OTHER EQUIPMENT SHALL BE INSTALLED ON 4 INCH HIGH CONCRETE HOUSEKEEPING BASES, 6 INCHES LARGER IN EACH DIRECTION.

PROVIDE ACCESS PANELS IN ALL NON-ACCESSIBLE CONSTRUCTIONS (INCLUDING CEILING, WALLS, ETC) SIZED AND LOCATED AS REQUIRED TO PROVIDE PROPER SERVICE ACCESS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION FOR ALL HVAC EQUIPMENT INCLUDING DAMPERS AND VALVES.

## 100% OUTSIDE AIR UNIT SCHEDULE

AIR HANDLER MARK	AHU-0A1
MANUFACTURER	ADDISON
MODEL	VCA101
UNIT TYPE	SPLIT SYSTEM
CONDENSING UNIT MARK	CU-0A1
CONDENSING UNIT MODEL	RCA101
EER	10.6
ELECTRICAL CHAR (V-Ø)	208-3
TYPE SUPPORT	SLAB

DESIGN CONDITIONS	
WINTER OUTDOOR-INDOOR (°F)	25-70
SUMMER OUTDOOR DB/WB (°F)	96/80
SUMMER INDOOR DB/WB (°F)	75/63
SUPPLY AIR (CFM)	1150
OUTSIDE AIR (CFM)	1150
SUMMER TOTAL HEAT GAIN (BTUH)	105,400
SUMMER SENSIBLE HEAT GAIN (BTUH)	53,000
WINTER HEAT LOSS (BTUH)	64,200
AIR ENT COOLING COIL DB/WB (°F)	96/80
AIR LVG COOLING COIL DB/WB (°F)	55.3/55.3
HOT GAS REHEAT ENT (°F)	55.3
HOT GAS REHEAT LVG (°F)	90

CONDENSING SECTION	
COMPRESSOR ELEC CHAR (V-Ø)	208-3
SUCTION LINE SIZE (IN.)	-- (1)
LIQUID LINE SIZE (IN.)	-- (1)
HOT GAS BYPASS LINE SIZE (IN.)	-- (1)
HOT GAS REHEAT LINE SIZE (IN.)	-- (1)

EVAPORATOR SECTION	
EXTERNAL STATIC PRESSURE (IN. H2O)	0.5
FAN ELECTRICAL CHAR (V-Ø)	208-3
FAN MOTOR (HP)	3/4

HEAT SECTION (SUPPLEMENTARY)	
TYPE	ELECTRIC
LOCATION	UNIT
CAPACITY (KW)	18.8

(1) REFRIGERANT PIPE SIZING PER MANUFACTURER'S RECOMMENDATION.

## SPLIT SYSTEM ACU SCHEDULE

MANUFACTURER	LENNOX	LENNOX	LENNOX	LENNOX	LENNOX	LENNOX	EMI
UNIT TYPE	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
CONDENSING UNIT MARK	HP-1	HP-2	HP-3	HP-4	HP-5	HP-6	HP-7
CONDENSING UNIT MODEL	XP14-036	XP14-030	XP14-030	XP14-036	XP14-048	XP14-018	S1HA4
AIR HANDLER MARK	AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-6	AHU-7
AIR HANDLER MODEL	CBX27UH-036	CBX27UH-030	CBX27UH-030	CBX27UH-036	CBX27UH-048	CBX27UH-018	WLHA24
AIR HANDLER UNIT TYPE	VERTICAL DRAW-THRU	VERTICAL DRAW-THRU	VERTICAL DRAW-THRU	VERTICAL DRAW-THRU	VERTICAL DRAW-THRU	VERTICAL DRAW-THRU	DUCTLESS SPLIT

DESIGN CONDITIONS							
WINTER OUTDOOR-INDOOR (°F)	25-70	25-70	25-70	25-70	25-70	25-70	25-70
SUMMER OUTDOOR DB/WB (°F)	96/80	96/80	96/80	96/80	96/80	96/80	96/80
SUMMER INDOOR DB/WB (°F)	75/63	75/63	75/63	75/63	75/63	75/63	75/63
TOTAL AIR (CFM)	1165	985	940	1240	1630	630	750
OUTSIDE AIR (CFM) (PRECONDITIONED)	150	120	240	150	410	80	0
TOTAL COOLING CAPACITY (BTUH)	34,800	28,600	28,600	34,800	48,500	19,400	23,000
SENSIBLE COOLING CAPACITY (BTUH)	27,800	22,900	22,900	27,800	38,800	15,500	16,800
HEATING CAPACITY (BTUH)	35,000	27,800	27,800	35,000	47,000	16,700	20,600
AIR ENT COOLING COIL DB/WB (°F)	75/63	75/63	75/63	75/63	75/63	75/63	75/63
AIR ENT HEATING COIL (°F)	70	70	70	70	70	70	70

CONDENSING SECTION							
COMPRESSOR ELEC CHAR (V-Ø)	208-1	208-1	208-1	208-1	208-1	208-1	208-1
SUCTION LINE SIZE (IN.)	7/8 (1)	3/4 (1)	3/4 (1)	7/8 (1)	7/8 (1)	3/4 (1)	5/8 (1)
LIQUID LINE SIZE (IN.)	3/8 (1)	3/8 (1)	3/8 (1)	3/8 (1)	3/8 (1)	3/8 (1)	3/8 (1)

EVAPORATOR SECTION							
EXTERNAL STATIC PRESSURE (IN. H2O)	0.4	0.4	0.4	0.4	0.4	0.4	--
FAN ELECTRICAL CHAR (V-Ø)	208-1	208-1	208-1	208-1	208-1	208-1	208-1
FAN MOTOR (HP)	1/2	1/2	1/2	1/2	1	1/2	0.7 MCA

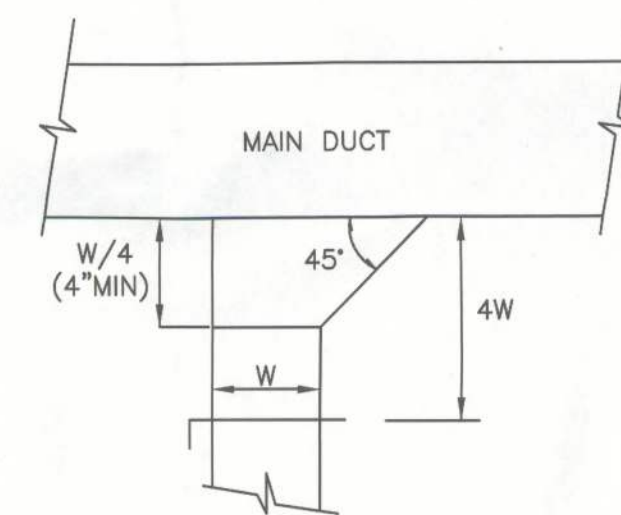
HEAT SECTION (SUPPLEMENTARY)							
TYPE	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	--
LOCATION	UNIT	UNIT	UNIT	UNIT	UNIT	UNIT	--
ELECTRICAL CHAR (V-Ø)	208-1	208-1	208-1	208-1	208-1	208-1	--
CAPACITY (KW)	5	5	5	5	6	2.5	--
STAGES	1	1	1	1	1	1	--

(1) REFRIGERANT PIPE SIZING PER MANUFACTURER'S RECOMMENDATION.

## EXHAUST FAN SCHEDULE

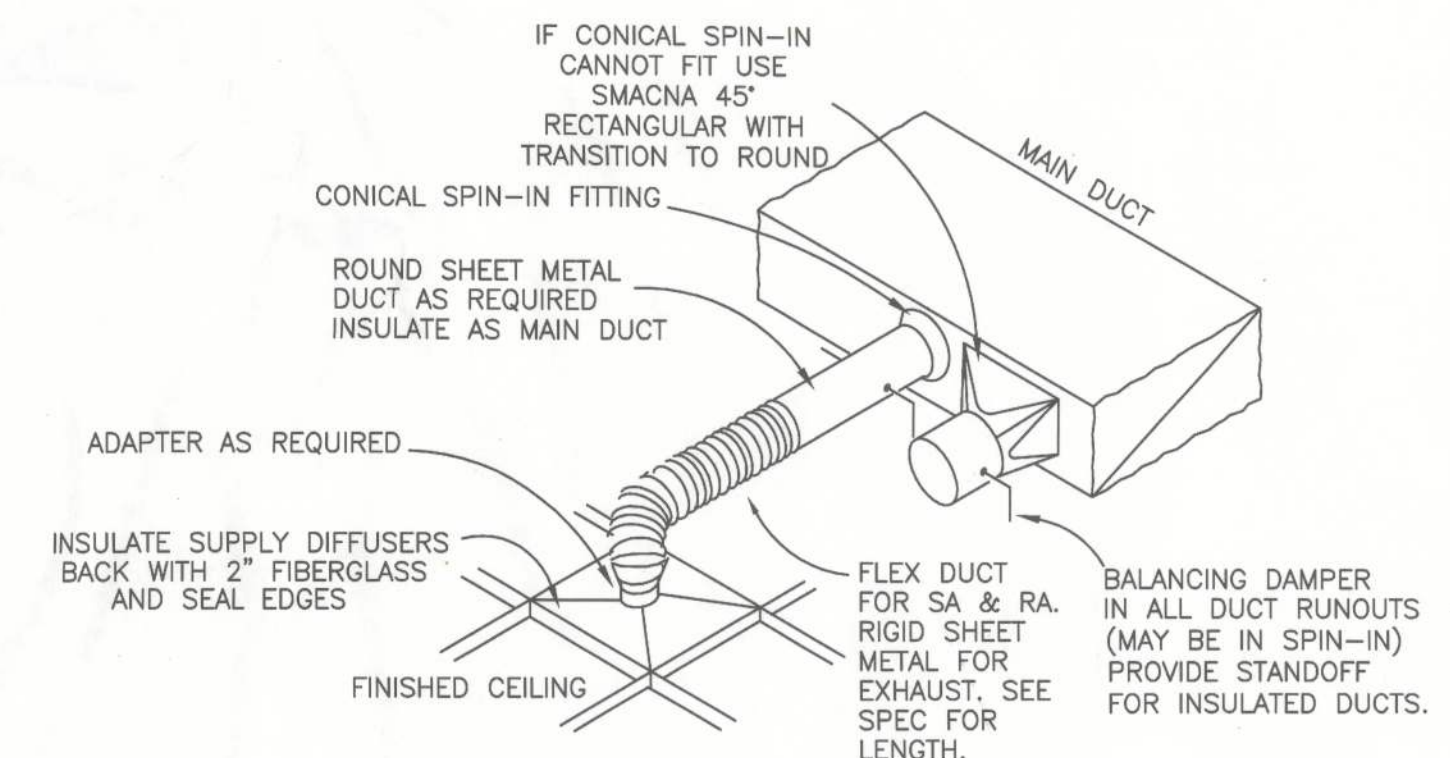
FAN	MANUF	MODEL	TYPE	AIR QUANTITY (CFM)	STATIC PRESSURE IN. H2O	MOTOR (HP)	ELEC CHAR (V-Ø)	REMARKS
EF-1	COOK	100ACEB	ROOF	725	0.25	1/6	120-1	(1) (3) (4) (5) (6) (7) (9)
EF-2	COOK	GC-160	CEILING	100	0.25	1/12	120-1	(1) (4) (6) (8) (9) (10)
EF-3	COOK	GC-160	CEILING	100	0.25	1/12	120-1	(1) (4) (6) (8) (9) (10)

(1) PROVIDE DISCONNECT (4) PROVIDE BACKDRAFT DAMPER (7) BELT DRIVE (10) PROVIDE ROOF CAP WITH CURB  
(2) PROVIDE THERMOSTAT (5) PROVIDE ROOF CURB (8) DIRECT DRIVE  
(3) BIRDSCREEN (6) THERMAL OVERLOAD (9) PROVIDE SPEED CONTROLLER



## BRANCH DUCT TAKEOFF DETAIL

NOT TO SCALE



## DUCT RUNOUT TO AIR OUTLETS AND INLETS

NOT TO SCALE

## NOTES:

- DETAIL IS FOR CONCEALED DUCT. WHERE EXPOSED, DUCT RUNOUTS TO CD'S SHALL BE DOUBLE WALL HARD DUCT.
- EXHAUST SIMILAR, BUT DO NOT USE FLEX DUCT AND DO NOT INSULATE BACK OF GRILLE.
- PROVIDE ADAPTER WITH SIDE CONNECTION WHERE OBSTRUCTIONS DO NOT ALLOW CONNECTION TO TOP.
- IF SIDE ADAPTERS ARE NEEDED AT DIFFUSER/GRILLE, NOTIFY ENGINEER.

## Bid Documents

M&A Project No. 11238

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## MECHANICAL LEGEND, NOTES, ABBREVIATIONS &amp; DETAILS

DRAWN BNH  
CHECKED GRL  
DATE 02/07/12  
CAD 3702060/CD

## REVISIONS

FILE NO. 3702.060  
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