1/16"=1' 5 0 10 20 30 40ft 1/8"=1' 5 0 5 10 15 20ft 1/4"=1' 2 0 2 4 6 8 10ft 1/2"=1' 1 0 1 2 3 4 5ft 3/4"=1' 1 0 1 2 3ft 1"=1' 1 0 1 2ft 1 1/2"=1' 0 1 2ft 3"=1' 0 1ft

If this sheet is less than 30"x42" in size, it has been reduced. Graphic scales must be adjusted accordingly.

EXHAUST FAN SCHEDULE

ITEM	MANUFACTURER	MODEL NUMBER	FAN TYPE	CFM	FAN DATA EXT SP	HP	RPM	VOLTS	PHASE	CYCLE	SERVICE	REMARKS
											MECHANICAL ROOM --	
EF-1	GREENHECK	SP-262	CEILING EXHAUST	964	0.25	420W	1095	115	1	60	ELEVATOR MACHINE ROOM	
EF-2	GREENHECK	GB-240-7	ROOF PROPELLER	5,449	0.25	1	660	480	3	60	ELEVATOR LOBBY 102	ROOF CURB, GRAVITY BDD
EF-3	GREENHECK	GB-240-3	ROOF PROPELLER	3,761	0.25	1/2	505	277	1	60	STAIR TOWER 101	ROOF CURB, GRAVITY BDD

LOUVER SCHEDULE

ITEM	TYPE	MFR.	MODEL NUMBER	CFM	DIMENSIONS (INCHES) HEIGHT	WIDTH	DEPTH	MIN FREE AREA (SQ FT)	REMARKS
L-1	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 3	SEE NOTE 3	4"	---	SEE NOTE 1 & 2 HOISTWAY 203
L-2	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 3	SEE NOTE 3	4"	---	SEE NOTE 1 & 2 HOISTWAY 203
L-3	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 3	SEE NOTE 3	4"	---	SEE NOTE 1 & 2 HOISTWAY 203
L-4	INTAKE	GREENHECK	EDJ-430	940	SEE NOTE 4	SEE NOTE 4	4"	1.39	STAIR 101
L-5	INTAKE	GREENHECK	EDJ-430	940	SEE NOTE 4	SEE NOTE 4	4"	1.39	STAIR 101
L-6	INTAKE	GREENHECK	EDJ-430	940	SEE NOTE 4	SEE NOTE 4	4"	1.39	STAIR 101
L-7	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 4	SEE NOTE 4	4"	---	SEE NOTE 2 ELEV. 501 NOTE 1
L-8	INTAKE	GREENHECK	EDJ-430	940	SEE NOTE 4	SEE NOTE 4	4"	1.39	SEE NOTE 2 ELEV. 501
L-9	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 4	SEE NOTE 4	4"	---	SEE NOTE 2 ELEV. 501 NOTE 1
L-10	ARCHITECTURAL	GREENHECK	EDJ-430	1362	14"	124"	4"	6.19	LEVEL 2 ELEVATOR LOBBY 202 NOTE 5
L-11	ARCHITECTURAL	GREENHECK	EDJ-430	1362	14"	124"	4"	6.19	LEVEL 2 ELEVATOR LOBBY 302 NOTE 5
L-12	ARCHITECTURAL	GREENHECK	EDJ-430	1362	14"	124"	4"	6.19	LEVEL 2 ELEVATOR LOBBY 402 NOTE 5
L-13	ARCHITECTURAL	GREENHECK	EDJ-430	---	14"	124"	4"	6.19	LEVEL 2 ELEVATOR LOBBY 502 NOTE 5
L-14	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 3	SEE NOTE 3	4"	---	ELEVATOR HOISTWAY 503 NOTE 1 & 2
L-15	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 3	SEE NOTE 3	4"	---	ELEVATOR HOISTWAY 503 NOTE 1 & 2
L-16	ARCHITECTURAL	GREENHECK	EDJ-430	---	SEE NOTE 3	SEE NOTE 3	4"	---	ELEVATOR HOISTWAY 503 NOTE 1 & 2
L-17	EXHAUST	GREENHECK	EDJ-430	964	18"	24"	4"	1.19	MECHANICAL ROOM 104
L-18	INTAKE	GREENHECK	EDJ-430	964	18"	24"	4"	1.19	MECHANICAL ROOM 104

NOTES:
1. PROVIDE INSULATED BLANK-OFF PANELS PRODUCED BY LOUVER MANUFACTURER FOR END PORTIONS OF OF LOUVER NOT CONNECTED TO MOTORIZED DAMPER

2. LOUVER PROVIDED FOR ARCHITECTURAL UNIFORMITY. PROVIDE INSULATED BLANK-OFF PANEL PRODUCED BY LOUVER MANUFACTURER

3. SIZE LOUVER TO MOUNT WITHIN ALUMINUM FRAMEWORK OF CURTAIN WALL SYSTEM FOR CONTINUOUS APPEARANCE. APPROXIMATE OPENING SIZE IS 12" HIGH BY 87" WIDE. VERIFY OPENING SIZE PRIOR TO ORDERING. SEE LOUVER DETAIL ON ARCHITECTURAL DRAWINGS.

4. SIZE LOUVER TO MOUNT WITHIN ALUMINUM FRAMEWORK OF CURTAIN WALL SYSTEM FOR CONTINUOUS APPEARANCE. APPROXIMATE OPENING SIZE IS 12" HIGH BY 60" WIDE. VERIFY OPENING SIZE PRIOR TO ORDERING. SEE LOUVER DETAIL ON ARCHITECTURAL DRAWINGS.

5. SIZE LOUVER TO MOUNT WITHIN ALUMINUM FRAMEWORK OF CURTAIN WALL SYSTEM FOR CONTINUOUS APPEARANCE. APPROXIMATE OPENING SIZE IS 18" HIGH BY 124" WIDE. VERIFY OPENING SIZE PRIOR TO ORDERING. SEE LOUVER DETAIL ON ARCHITECTURAL DRAWINGS.

6. ALL OPERABLE LOUVERS EQUIPED WITH INSECT SCREENS

GRILLES, REGISTERS AND DIFFUSER SCHEDULE

ITEM	MANUFACTURER	MODEL	TYPE	AIR PATTERN	MAX NECK VELOCITY	PANEL SIZE (INCHES)	NECK SIZE (INCHES)	CFM RANGE	MOUNTING	REMARKS
S-4	METALAIRE	6000 23-SM	LINEAR	---	---	---	---	36-42 CFM/LF	CEILING	SEE NOTE 4
R-2	METALAIRE	RHD	RETURN	---	400	---	12x6	81-190	CEILING	SEE NOTES 1 & 2

NOTES:
1. THREE 1/2" SLOTS, 45 CFM/LF AT 750 FPM OUTLET VELOCITY. PROVIDE BOOT PLENUM. STANDARD OFF-WHITE FINISH. SURFACE MOUNT. 3/4" BORDERS. SEE DRAWINGS FOR GRILLE LENGTHS.

PIPE AND FITTING SCHEDULE

SERVICE	SIZE	TEST PSI	PIPE TYPE	PIPE SCHEDULE	FITTINGS TYPE	FITTINGS SCHEDULE	REMARKS
GAS PIPING INSIDE PARKING GARAGE	ALL	CODE	S1	40	ML	STD	EXTERIOR PIPING GALVANIZED
GAS PIPING TO SNOWMELT SYSTEM	ALL	CODE	S1	40	ML	STD	EXTERIOR PIPING GALVANIZED

HVAC EQUIPMENT SCHEDULE

GRH-1 GAS FIRED RADIANT HEATER (PARKING OPERATORS GARAGE): RE-VERBER-RAY MODEL DTHS-20-50 N-2 NATURAL GAS, SEPARATED COMBUSTION, 40,000 BTU/HR INPUT.

RTU-1 ROOFTOP UNIT (PARKING OPERATOR'S BUILDING): TRANE MODEL 4YCC3018, 625 CFM AT 0.5" WC EXTERNAL STATIC PRESSURE, DOWN FLOW UNIT, HIGH EFFICIENCY, CONSTANT VOLUME, 16.4 MBH SENSIBLE COOLING AND 12.6 MBH TOTAL COOLING AT 78.7 EDB/66.6 EWB, 57.7°F LDB/56.5°F LWB, 95°F AMBIENT, 13 SEER. NATURAL GAS-FIRED FURNACE RATED AT 40 MBH INPUT, 31.9 MBH OUTPUT, 58°F EAT, 95°F LAT. EVAPORATOR FAN MOTOR: 1/8 HP, 208V/1ø/60 HZ. COMPRESSOR MOTOR: 6.4A, 208V/1ø /60 HZ. CONDENSER FAN MOTOR: 1/12 HP, 208V/1ø/60 HZ. COMBUSTION BLOWER MOTOR: 1/35 HP, 208V/1ø/60 HZ. PROVIDE 1" DISPOSABLE FILTER, 0-100% ECONOMIZER FOR DOWN FLOW UNIT WITH ENTHALPY CONTROL. TRANE ROOF CURB, MANUAL FRESH AIR DAMPER. FACTORY INSTALLED UNIT CONTROLS SHALL BE COMPATIBLE WITH FACILITY EMS SYSTEM (SIEBE).

SEQUENCE OF OPERATION

EF-1 (MECHANICAL ROOM 104): CONTROLLED BY REVERSE ACTING (COOLING) THERMOSTAT. ON A CALL FOR COOLING, EF-1 STARTS & MOD'S ON LOUVERS L-17 & L-18 OPEN. WHEN SETPOINT IS REACHED EF-1 STOPS & MOD'S ON LOUVERS L-17 & L-18 CLOSE.

EF-2 (ELEVATOR LOBBY): CONTROLLED BY REVERSE ACTING (COOLING) THERMOSTAT. ON A CALL FOR COOLING, EF-2 STARTS & MOD'S ON LOUVERS L-10, L-11, L-12 & L-13 OPEN. WHEN SETPOINT IS REACHED EF-2 STOPS & MOD'S ON LOUVERS L-10, L-11, L-12 & L-13 CLOSE.

EF-3 (STAIR TOWER): CONTROLLED BY REVERSE ACTING (COOLING) THERMOSTAT. ON A CALL FOR COOLING, EF-3 STARTS & MOD'S ON LOUVERS L-4, L-5, L-6 & L-8 OPEN. WHEN SETPOINT IS REACHED EF-3 STOPS & MOD'S ON LOUVERS L-4, L-5, L-6 & L-8 CLOSE.

GRH-1 (PARKING OPERATORS GARAGE): CONTROLLED BY A HEATING THERMOSTAT TO CYCLE GAS BURNER AND FAN TO MAINTAIN ROOM SETPOINT.

RTU-1 (PARKING OPERATOR'S BUILDING): CONTROLLED BY A 7-DAY PROGRAMMABLE HEATING/COOLING THERMOSTAT. DURING OCCUPIED CYCLE UNIT FAN TO RUN CONTINUOUS HEATING: THERMOSTAT TO CYCLE GAS BURNER TO MAINTAIN SETPOINT, OUTSIDE DAMPER OPEN. COOLING: THERMOSTAT TO CYCLE REFRIGERATION VALVE/COMPRESSOR CONDENSOR TO MAINTAIN SETPOINT, OUTSIDE AIR DAMPER OPEN. UNOCCUPIED CYCLE UNIT FAN OFF, OUTSIDE AIR DAMPER CLOSED, RETURN AIR DAMPER OPEN. HEATING: THERMOSTAT TO CYCLE GAS BURNER & FAN TO MAINTAIN SETPOINT. COOLING: UNIT OFF.

ABBREVIATIONS

ALL ABBREVIATIONS SHOWN MAY NOT APPLY

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BDD	BACKDRAFT DAMPER
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB
DG	DOOR GRILLE
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
FD	FIRE DAMPER
FPM	FEET PER MINUTE
L	LOUVER
LAT	LEAVING AIR TEMPERATURE
LDB	LEAVING DRY BULB
LF	LINEAR FEET
LG	LINEAR GRILLE
LWB	LEAVING WET BULB
MBH	THOUSAND BTU/HOUR
MOD	MOTOR OPERATED DAMPER
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
R	RETURN
RA	RETURN AIR
S	SUPPLY
SA	SUPPLY AIR
SCFM	STANDARD CFM
SF	SQUARE FEET
TG	TRANSFER GRILLE
VD	VOLUME DAMPER
WB	WET BULB

HVAC LEGEND

SYMBOLS

- THERMOSTAT
- THERMOSTAT (HEATING)
- THERMOSTAT (COOLING)
- TEMPERATURE SENSOR
- STATIC PRESSURE SENSOR
- COMBINATION CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR
- SMOKE DETECTOR
- SWITCH
- SPEED SWITCH
- PIPE DROP
- BOTTOM CONNECTION/TURN AWAY
- TOP CONNECTION/TURN TOWARDS
- DIRECTION OF FLOW
- EXPANSION JOINT
- HEAT TRACED PIPING
- PIPE ALIGNMENT GUIDE
- PIPE ANCHOR
- UNION (SCREWED)
- REDUCER,CONCENTRIC
- CAP OR PLUG
- GATE VALVE
- BALL VALVE
- GLOBE VALVE
- CHECK VALVE
- CONTROL VALVE (2-WAY)
- CONTROL VALVE (3-WAY)
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- TEMPERATURE-PRESSURE RELIEF VALVE
- BALANCING VALVE
- STRAINER
- THERMOMETER
- PRESSURE GAUGE WITH COCK
- AIR VENT
- FINNED TUBE RADIATION ELEMENT
- PUMP
- VOLUME DAMPER
- BDD BACKDRAFT DAMPER
- MOD MOTOR OPERATED DAMPER
- FD FIRE DAMPER
- UNDERCUT DOOR
- SUPPLY/FRESH AIR
- RETURN/EXHAUST AIR
- FLEXIBLE DUCTWORK
- SUPPLY DUCT SECTION
- RETURN DUCT SECTION
- EXHAUST DUCT SECTION
- SUPPLY ROUND DUCT SECTION
- RETURN ROUND DUCT SECTION
- SUPPLY DIFFUSER
- RETURN REGISTER OR GRILLE
- EXHAUST REGISTER OR GRILLE
- 0x0 DUCT DIMENSION (FIRST NUMBER INDICATES WIDTH)
- FLEXIBLE CONNECTION
- RECT. TO ROUND DUCT TRANS.
- LOUVER
- TYPE — EQUIPMENT TYPE; # — EQUIPMENT NUMBER
- TYPE — REGISTER, DIFFUSER OR GRILLE DESIGNATION; CFM — CFM
- CONNECTION TO EXISTING

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PORTLAND, MAINE

DEPARTMENT OF WATERFRONT AND TRANSPORTATION

PORTLAND INTERNATIONAL JETPORT

PHASE II
PARKING GARAGE

1001 WESTBROOK ST.,
PORTLAND, MAINE

No.	Date	Revision

Title
MECHANICAL LEGEND, SCHEDULES & DETAILS

Scale: AS SHOWN
File Name: 1
Drawn By: EJD
Checked By: KES
Job No.: 195210126
Date: 02/25/08

STATE OF MAINE WILLIAM J. SCHLAGETER No. 6246 MECHANICAL ENGINEER

Drawing No.
M0-0

E1-0 GENERAL NOTES.dwg 9-19-01 10:19:13 am EST