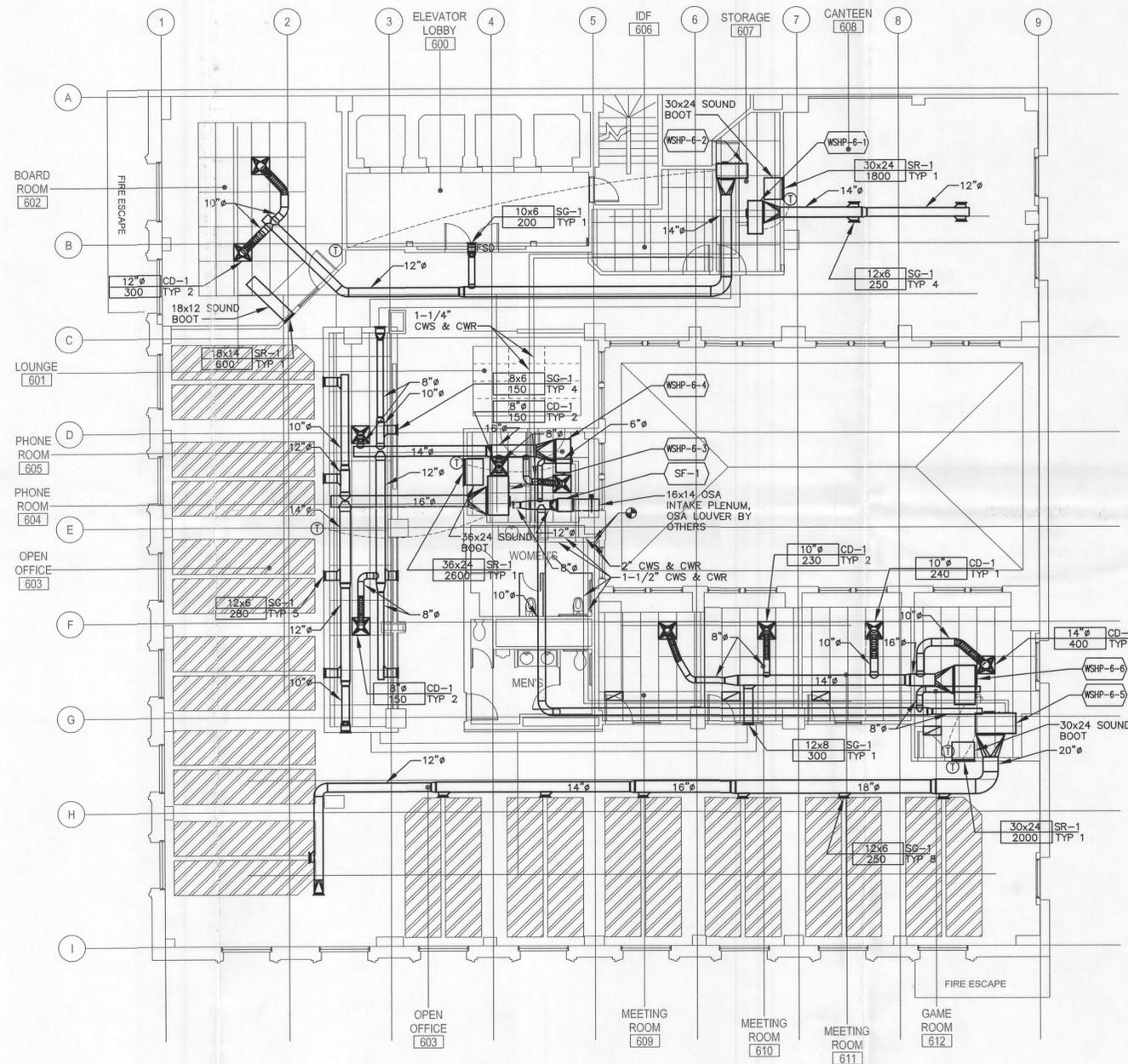


**WATER SOURCE HEAT PUMP SCHEDULE**

SYMBOL	QTY	MANUFACTURER	MODEL	AREA SERVED	CFM	TONS	COOLING CAPACITY MBH	HEATING CAPACITY MBH	FLOWRATE GPM	EFFICIENCY		ELECTRICAL			WATER CONNECTIONS			WEIGHT	NOTES
										EER	COP	VOLTS / PHASE	MCA	MOCP	SUPPLY	RETURN	CONDENSATE		
WSHP-6-1	1	CARRIER	50PCH030	CANTEEN 608	1000	2.5	20.8	42.6	7.5	13.4	4.91	208/3	14.1	20	3/4"	3/4"	3/4"	197	1
WSHP-6-2	1	CARRIER	50PCH024	BOARD ROOM 602	800	2	17.6	33.5	4.5	12.2	4.89	208/3	11.1	15	3/4"	3/4"	3/4"	189	1
WSHP-6-3	1	CARRIER	50PCH042	OPEN OFFICE 603	1400	3.5	31.2	62.7	10.5	13.6	4.68	208/3	19.9	30	3/4"	3/4"	3/4"	218	2
WSHP-6-4	1	CARRIER	50PCH036	OPEN OFFICE 603	1200	3	24.4	50.0	4.5	10.8	4.45	208/3	14.8	25	3/4"	3/4"	3/4"	203	1
WSHP-6-5	1	CARRIER	50PCH060	OPEN OFFICE 603	2000	5	41.6	91.8	15.0	13.1	4.66	208/3	24.4	40	1"	1"	3/4"	278	2
WSHP-6-6	1	CARRIER	50PCH042	MTG RMS & GAME RM	1400	3.5	30.7	58.6	5.3	11.6	4.49	208/3	19.9	30	3/4"	3/4"	3/4"	218	1

NOTES: 1. CWS & CWR PIPING RUNOUTS ARE 1"  
2. CWS & CWR PIPING RUNOUTS ARE 1-1/4"



**SUPPLY FANS**

SYMBOL	SYSTEM SERVED	TYPE	DISCHARGE	CFM	MIN SP INCHES	FAN RPM	MOTOR			OPER WEIGHT LBS	DESIGN BASIS/REMARKS
							AMPS	WATTS	RPM		
SF-1	OUTSIDE AIR	INLINE	DUCTED	530	0.2	1069	3.9	216	1325	39	COOK GN-720

NOTES:

**OUTSIDE AIR CALCULATIONS - WATER SOURCE HEAT PUMPS**

Space Type	Floor Area	OSA/SF (cfm/sf)	Occupant Density (#/1000 sf)	Number of Occupants	OSA/Person (cfm/person)	Rp x Pz	Ra x Az	Breathing Zone OSA (cfm)[1]
WSHP-6-1								OPERABLE WINDOWS ARE BEING UTILIZED IN THIS SPACE TO MEET VENTILATION REQUIREMENTS.
WSHP-6-2								OPERABLE WINDOWS ARE BEING UTILIZED IN THIS SPACE TO MEET VENTILATION REQUIREMENTS.
WSHP-6-3	1089	0.06	5	6	5	30	65	95
WSHP-6-4	1369	0.06	5	7	5	35	82	117
WSHP-6-5	1524	0.06	5	8	5	40	91	131
WSHP-6-6	396	0.06	5	2	5	10	24	
	715	0.06	30	22	5	110	43	187

NOTES: 1. Balance outside air dampers to values shown

- GENERAL NOTES**
- NEW / REMODEL CONSTRUCTION CUTTING & PATCHING BY GENERAL CONTRACTOR.
  - INSTALLATION WILL COMPLY WITH 2010 OREGON MECHANICAL SPECIALTY CODE (OMSC), 2010 OREGON STRUCTURAL SPECIALTY CODE (OSSC), 2010 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEEEC) AND ASHRAE STANDARDS.
  - LOAD CALCULATIONS WERE PERFORMED WITH AN APPROVED EQUIVALENT COMPUTATION PROCEDURE AND EQUIPMENT SIZING AND CAPACITY DOES NOT EXCEED THE LOADS CALCULATED AS PER SECTION 503.2 OF THE OEEEC.
  - NEW DUCTWORK TO BE INSTALLED USING SHEET METAL RUN OUTS IN ACCORDANCE WITH SMACNA STANDARDS.
  - INSULATE & SEAL DUCTS AND PLENUMS PER OEEEC 503.2.7 & OMSC 603.9. TERMINAL CONNECTIONS WILL USE NOT MORE THAN 8' OF FLEXIBLE DUCTWORK. INSTALLATION OF FLEX DUCT WILL BE HUNG PROPERLY TO PROVIDE PROPER AIRFLOW WITHOUT RESTRICTIONS. ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-8 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES (CEILINGS AND ATTICS) AND A MINIMUM OF R-8 INSULATION WHEN LOCATED OUTSIDE THE BUILDING. EXCEPTION: WHEN THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM DOES NOT EXCEED 15 DEG. F. (RETURN DUCTS ABOVE CEILINGS). DUCT RUN OUTS IN A CONDITIONED SPACE & EXHAUST DUCTS SHOULD BE UNINSULATED.
  - VOLUME DAMPERS OR OTHER MEANS OF SUPPLY AIR ADJUSTMENT SHALL BE PROVIDED IN THE BRANCH DUCTS OR AT EACH INDIVIDUAL DUCT REGISTER, GRILLE OR DIFFUSER. IN ADDITION EACH VOLUME DAMPER OR OTHER MEANS OF SUPPLY AIR ADJUSTMENT USED IN BALANCING SHALL BE PROVIDED WITH ACCESS IN ACCORDANCE WITH SECTION 603.17 OF THE OMSC.
  - NEW LAY-IN CEILING SUPPLY DIFFUSERS TO BE TITUS PCS (PERFORATED, ADJUSTABLE CURVED BLADE CORE) OR EQUAL.
  - PROGRAMMABLE ROOM THERMOSTATS TO BE MOUNTED 48" ABOVE FINISHED FLOOR. PER SECTION 503.2.4 OF THE OEEEC THERMOSTATS SHALL BE CAPABLE OF CONTROLLING THE TEMPERATURE BETWEEN 55°F AND 85°F WITH A DEADBAND OF 5°F. OFF-HOUR CONTROLS SHALL BE ACCOMPLISHED USING A PROGRAMMABLE THERMOSTAT OR TIMECLOCK. OPTIMUM START CONTROLS SHALL BE ABLE TO VARY THE START UP TIME OF THE SYSTEM TO JUST MEET THE TEMPERATURE SET POINT AT THE TIME OF OCCUPANCY. PROVIDE A HANDLE PROOF GUARD FOR THERMOSTATS LOCATED IN PUBLIC AREAS AS REQUIRED.
  - PROVIDE MOTORIZED DAMPERS FOR OUTDOOR AIR SUPPLY AND EXHAUST SYSTEMS IN EXCESS OF 300 CFM PER OEEEC 503.2.4.5. EXCEPTIONS INCLUDE COMBUSTION AIR INTAKES, TYPE 1 KITCHEN HOODS, COOLING EQUIPMENT RATED LESS THAN 54,000 BTU/HR AND HOOD VENTS WITH GRAVITY DAMPERS IN BUILDINGS LESS THAN 3 STORIES IN HEIGHT.
  - OUTSIDE AIR DAMPERS SHALL HAVE A MAXIMUM LEAKAGE RATE OF 20 CFM/SQ.FT. @ 1.0" W.G.
  - OPERATION AND MAINTENANCE MANUAL(S) SHALL BE PROVIDED TO THE BUILDING OWNER BY THE MECHANICAL CONTRACTOR IN ACCORDANCE WITH SECTION 503.2.9.3 OF THE OEEEC.

City of Portland  
REVIEWED FOR CODE  
625 PLUMBING  
OCT 31 2013  
3-210630-FA  
Permit Number

**KIXEYE PORTLAND**  
522 SW FIFTH AVENUE  
PORTLAND, OR 97204

REVISIONS

DATE	FILE	JOB	DWN	CHK	DMC
09/13/2013	M1.06		TLS		DMC

1 SIXTH FLOOR PLAN - HVAC  
M1.06 1/8" = 1'-0"

USE OF HUNTER-DAVISSON, INC. DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS  
These Drawings, Specifications and other documents are prepared by Hunter-Davison, Inc. for this Project and unless otherwise provided, Hunter-Davison, Inc. shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including the copyright. The Owner shall be permitted to retain copies of the Hunter-Davison, Inc. Drawings, Specifications or other documents for information and reference in connection with the Owner's use and occupancy of the Project. The Hunter-Davison, Inc. Drawings, Specifications or other documents shall not be used by the Owner or others on other projects, for addition to this Project or for completion of this Agreement, except by agreement in writing and with appropriate compensation to Hunter-Davison, Inc.

M1.06  
1 OF 1 SHEETS

2

13-210630-FA

B-2