	DIFFUSER/GRILLE SCHEDULE										
SYMBOL	MANUFACTURER & MODEL NUMBER	SIZE	TYPE	NOTES							
A SIZE CFM	SHOEMAKER 701-MA	AS NOTED	T-BAR LAY-IN MODULAR CORE DIFFUSER								
B SIZE CFM	M-M METAL EGGCRATE	12/24	RETURN/EXH								
C SIZE CFM	M-M METAL EGGCRATE	24/24	RETURN/EXH								

		E	XHAUST	FAN SC	HEDU	JLE						
UNIT NO.	AREA SERVED	MFG & MODEL NO.	TYPE	CFM	ESP	RPM	FLA	НР	VOLT/PH/HZ	BDD	WT LBS	NOTES
EF-R03	IT/STORAGE	GREENHECK SP A-1250-VG	CEILING	1020	0.25	1530	6	1/2	115/1/60	N	60	new, 1,2,3,4
NOTES:												

UNIT		INLET	FAN	VALVE	CFM			HEA	TER			FAN		
NO.	MFG & MODEL NO.	SIZE	CFM	MAX	MIN	KW	DT	CFM	VOLT/PH	STGS	HP	VOLT/PH	SPD	NOTES
VAV-S-201	NAILOR D35SE-5	12	900	900	325	12	41.9	900	460/3	3	3/4	277/1		13, existin
VAV-S-202	NAILOR D35SE-5	12	1365	1365	325	12	27.7	1365	460/3	3	3/4	277/1		12, existir
VAV-S-203	NAILOR D35SE-5	14	1640	1640	400	13	24.9	1640	460/3	3	3/4	277/1		12, existir
VAV-S-204	NAILOR D35SE-5	12	1050	1050	325	9	27.0	1050	460/3	2	3/4	277/1		12, existir
VAV-S-205	NAILOR D35SE-5	14	1520	1520	400	13	26.9	1520	460/3	3	3/4	277/1		12, existir
VAV-S-206	NAILOR D35SE-5	14	1700	1700	400	14	25.9	1700	460/3	3	3/4	277/1		13, existir
VAV-S-207	NAILOR D35SE-5	12	1230	1230	325	10	25.6	1230	460/3	2	3/4	277/1		12, existir
VAV-S-208	NAILOR D35SE-3	8	275	275	150	3	34.3	275	460/3	1	1/2	277/1		14, existiı
VAV-S-209	NAILOR D35SE-3	8	420	420	150	3	22.5	420	460/3	1	1/2	277/1		13, existir
VAV-S-210	NAILOR D35SE-3	8	440	440	150	5	35.7	440	460/3	1	1/2	277/1		13, existir
VAV-S-211	NAILOR D35SE-5	14	1625	1625	400	14	27.1	1625	460/3	3	3/4	277/1		13, existir
VAV-S-212	NAILOR D35SE-5	14	1700	1700	400	14	25.9	1700	460/3	3	3/4	277/1		12, existir
VAV-S-213	NAILOR D35SE-5	14	1700	1700	400	14	25.9	1700	460/3	3	3/4	277/1		12, existir
VAV-S-214	NAILOR D35SE-5	14	1710	1710	400	14	25.8	1710	460/3	3	3/4	277/1		13, existir
VAV-S-215	NAILOR D35SE-4	12	1100	1100	550	8	22.9	1100	460/3	3	3/4	277/1		new, 1,2,4,5,6
VAV-S-216	NAILOR D35SE-2	8	450	450	320	3	21.0	450	460/3	1	1/2	277/1		new, 1,2,4,5,6

VAV-S-207	NAILOR D35SE-5	12	1230	1230	325	10	25.6	1230	460/3	2	3/4	277/1	 12, exi
VAV-S-208	NAILOR D35SE-3	8	275	275	150	3	34.3	275	460/3	1	1/2	277/1	 14, exi
VAV-S-209	NAILOR D35SE-3	8	420	420	150	3	22.5	420	460/3	1	1/2	277/1	 13, exi
VAV-S-210	NAILOR D35SE-3	8	440	440	150	5	35.7	440	460/3	1	1/2	277/1	 13, exi
VAV-S-211	NAILOR D35SE-5	14	1625	1625	400	14	27.1	1625	460/3	3	3/4	277/1	 13, exi
VAV-S-212	NAILOR D35SE-5	14	1700	1700	400	14	25.9	1700	460/3	3	3/4	277/1	 12, exi
VAV-S-213	NAILOR D35SE-5	14	1700	1700	400	14	25.9	1700	460/3	3	3/4	277/1	 12, exi
VAV-S-214	NAILOR D35SE-5	14	1710	1710	400	14	25.8	1710	460/3	3	3/4	277/1	 13, exi
VAV-S-215	NAILOR D35SE-4	12	1100	1100	550	8	22.9	1100	460/3	3	3/4	277/1	new, 1,2,4
VAV-S-216	NAILOR D35SE-2	8	450	450	320	3	21.0	450	460/3	1	1/2	277/1	new, 1,2,4
	CT BY ELECTRICAL. N POWERED TERMINAL UNIT WITH		D FOM MO	TOD 0175	- 40 10	-D DD-	.00UDE	INDEDE	UDENT FACT	CODY ODT	IONIC INICI	UDF.	

- VARIABLE SPEED ECM MOTOR - 24V TRANSFORMER, 50 VA MIN RATING - HEAT STAGING & FAN CONTROL THROUGH FACTORY WIRED RELAYS - AUTO RESET 120°F HIGH LIMIT T'STAT

- NON MAGNETIC QUIET ACTING HEATER CONTACTOR SERIES FAN POWERED TERMINAL UNIT W/O HEAT AND WITH ECM MOTOR -, SIZE AS LISTED, PRESSURE INDEPENDENT, FACTORY OPTIONS INCLUDE: LISTED, PRESSURE INDEPENDENT, CONTROLS BY OTHERS. FACTORY OPTIONS INCLUDE:

- EXTENDED DAMPER 1/2" DIAM. SHAFT - FACTORY INSTALLED 1" THROW-AWAY FILTERS

- CONTROLS BY OTHERS - FACTORY PROVIDE WIRING HARNESS WITH LOW VOLTAGE INTERLOCK CONDUCTORS EXTENDED FROM HIGH VOLTAGE CABINET TO LOW VOLTAGE CONTROLS CABINET.

- 1" MATT-FACED UNIT INSULATION - VARIABLE SPEED FAN CONTROL - 24V TRANSFORMER, 50 VA MIN RATING

. FACTORY MOUNTED 2" RACK FOR MERV 8 FILTERS AT THE RETURN. . INTERFACE WITH BLDG EMS BY C.C. . FACTORY PROVIDE FN2 OPTION (42" NEC REQUIRED JUMP-BACK PARALLEL TO LENGTH OF VAV UNIT).

SMOKE DETECTOR REQUIRED. SMOKE DETECTOR PROVIDED BY AND INSTALLED BY FIRE LIFE SAFETY CONTRACTOR.

. TERMINAL UNIT MIN CFM SHALL BE OPTIMIZED THROUGH DEMAND CONTROL VENTILATION PROTOCOL. CO2 DETECTOR PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.). EXISTING BOX WITH 12KW HEATER, DISABLE ONE STAGE OF ELECTRIC HEATER.

D. COOLING ONLY TERMINAL UNIT W/ HEAT - SIZE AS LISTED, PRESSURE INDEPENDENT, FACTORY OPTIONS INCLUDE: - EXTENDED DAMPER 1/2" DIAM. SHAFT

- 1" MATT-FACED UNIT INSULATION - MULTI-POINT AVERAGING FLOW SENSOR - 24V TRANSFORMER, 50 VA MIN RATING

- RIGHT HAND CONTROLS LOCATIONS - HEAT STAGING THROUGH FACTORY WIRED RELAYS - NON MAGNETIC QUIET ACTING HEATER CONTACTOR

. TERMINAL UNIT TO HAVE A HEATING CFM SETPOINT TO OPTIMIZE DISCHARGE AIR TEMPERATURE OF 85 DEGREES AND A SECOND CFM SETPOINT FOR COOLING MINIMUM. 2. EXISTING TERMINAL UNIT TO REMAIN. DATA SOURCE: DRAWING SET DATED 7-18-2011

3. EXISTING TERMINAL UNIT, DUCTWORK MODIFIED. DATA SOURCE: DRAWING SET DATED 7-18-2011 4. RELOCATE EXISTING TERMINAL UNIT. DATA SOURCE: DRAWING SET DATED 7-18-2011

5. NEW TERMINAL UNIT.

NOTE TO ELECTRICAL: - 460V/3PH TERMINAL UNITS REQUIRE A FOUR WIRE POWER FEED IN ORDER TO SUPPLY 277V/1PH POWER TO THE FAN MOTOR.

DUCTWORK SCHEDULE										
SERVICE / USAGE	LOCATION	MATERIAL	WORKING PRESSURE (IN. WC)	SMACNA PRESSURE CLASS (IN. WC)	SMACNA SEAL CLASS	NOTES				
MEDIUM PRESSURE SUPPLY AIR	BETWEEN AHU AND TERMINAL UNITS	GALV. STEEL	2.5	+4	Α	1				
LOW PRESSURE SUPPLY AIR	FROM TERMINAL UNITS TO GRD'S	GALV. STEEL	1	+1	Α	1				
FLEXIBLE DUCT	CONN TO GRD'S	PREINSUL. FLEX	0.5	RATED +6", -1"	NA	2, 3				
TRANSFER AIR	FROM GRD TO GRD	GALV. STEEL	0.05	+1	В	1				
GENERAL EXHAUST	FROM GRD TO FAN AND AMBIENT	GALV. STEEL	1	-1	В	1				

SHEET METAL GAUGES AND FITTINGS PER SMACNA AND MACDONALD-MILLER DUCT CONSTRUCTION STANDARDS. THERMAFLEX "GKM" OR EQUAL, WITH 12 FOOT MAXIMUM LENGTH. INSTALL PER MFG. GUIDELINES AND INSTRUCTIONS.

	AIR HANDLING UNIT SCHEDULE																	
	UNIT INFO FAN SECTIONS CHILLED WATER COIL																	
UNIT			SUP	PLY AIF	2		TOTAL	SENS	EAT	EAT	LAT	LAT		UNIT EI	_EC		OPER WT	
NO.	MFG & MODEL NO.	CFM	ESP	TSP	MIN OSA	HP EA	MBH	MBH	DB	WB	DB	WB	GPM	V0LT/PH	FLA	MCA	LBS	NOTES
AHU-B01	YORK SOLUTIONS 90X102	24,800	3.5	NA	3,400	2X 20	746	731	NA	NA	53.1	51.4	NA	460	62	69.8	6,620	EXISTING AHU
NOTES	// 7/18/2011 DRAWING SET, FOR RI	EFERENCE	E ONLY.															

THE APPROVED CONSTRUCTION PLANS, DOCUMENTS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITEE ON SITE FOR INSPECTION

Approval of submitted plans is not an approval of omissions or oversights by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

ABBV	FULL NAME	ABBV	FULL NAME	ABBV	FULL NAME
AC	AIR CONDITIONING UNIT	FCU	FAN COIL UNIT	NOM	NOMINAL
\FF	ABOVE FINISHED FLOOR	FD	FIRE DAMPER	NTS	NOT TO SCALE
ΛHU	AIR HANDLING UNIT	FLA	FULL LOAD AMPS	OBD	OPPOSED BLADE DAMPER
.L	ALUMINUM	FOB	FLAT ON BOTTOM	OD	OUTSIDE DIMENSION
AS	BUILDING AUTOMATION SYSTEM	FOT	FLAT ON TOP	POC	POINT OF CONNECTION
DD	BACK DRAFT DAMPER	FSD	FIRE SMOKE DAMPER	PRV	PRESSURE REDUCING VALVE
	BLACK IRON	GALV	GALVANIZED	PVC	POLYVINYL CHLORIDE
OD	BOTTOM OF DUCT	GC	GENERAL CONTRACTOR	REQ'D	REQUIRED
OTT	BOTTOM	GENX	GENERATOR EXHAUST	RPBA	REDUCED PRESSURE BACKFLOW ASS
TU	BRITISH THERMAL UNITS	GLVNL	GALVANNEAL	RTU	ROOFTOP UNIT
TUH	BRITISH THERMAL UNITS PER HOUR	GPM	GALLONS PER MINUTE	SA	SUPPLY AIR
AT1	CATEGORY ONE VENT	GREASE	GREASE DUCT	SD	SMOKE DAMPER
AT4	CATEGORY FOUR VENT	GWB	GYPSUM WALL BOARD	SL	SOUND LINED
FΜ	CUBIC FEET PER MINUTE	HP	HORSE POWER, HEAT PUMP	SM	SHEET METAL
PVC	CPVC MATERIAL	HVAC	HEATING, VENTILATION AND AIR COND.	SP	STATIC PRESSURE
В	DUCTBOARD	HX	HEAT EXCHANGER	SS	STAINLESS STEEL
DC	DIRECT DIGITAL CONTROLS	ID	INSIDE DIMENSION	SUSP	SUSPENDED
EMO	DEMOLISH	LAT	LEAVING AIR TEMPERATURE	Т	THERMOSTAT
IFF	DIFFUSER	LBS	POUNDS	TOD	TOP OF DUCT
MPR	DAMPER	LWT	LEAVING WATER TEMPERATURE	TV	TURNING VANES
N	DOWN	MAT	MIXED AIR TEMPERATURE	TYP	TYPICAL
	EXISTING	MBH	ONE THOUSAND BTUH	UNO	UNLESS NOTED OTHERWISE
AT	ENTERING AIR TEMPERATURE	MCA	MINIMUM CIRCUIT AMPACITY	VAV	VARIABLE AIR VOLUME
C	EGGCRATE	MD	MOTORIZED DAMPER	VD	VOLUME DAMPER
ER	ENERGY EFFICIENCY RATIO	MIN	MINIMUM	VFD	VARIABLE FREQUENCY DRIVE
F	EXHAUST FAN	M-M	MACDONALD-MILLER	W	DUCT INSULATION WRAP
LEV	ELEVATION	NC	NORMALLY CLOSED	W/	WITH
SP	EXTERNAL STATIC PRESSURE	NIC	NOT IN CONTRACT	WELD	WELDED
WT	ENTERING WATER TEMPERATURE	NO	NORMALLY OPEN	Ø	VOLTAGE PHASE & DUCT DIAMETER

ADDV	ELILL NAME	A DD\/	EIII I NAME	A D D \/	EIII I NAME
ABBV	FULL NAME	ABBV	FULL NAME	ABBV	FULL NAME
COMB-GALV	COMBUSTION AIR	EA AL	EXHAUST ALUMINUM	OA	OUTSIDE AIR
SA	SUPPLY AIR LP	EA SS	EXHAUST SS 304	OA-KOOL	OUTSIDE AIR KOOLDUCT
SA-KOOL	SUPPLY AIR LP KOOLDUCT	EA AL WELD	EXHAUST ALUMINUM WELDED	RLF	RELIEF AIR
SA AL	SUPPLY AIR LP ALUMINUM	EA GALV WELD	EXHAUST GALV WELDED	RA	RETURN AIR
SA SS	SUPPLY AIR LP SS 304 2B	EA GLVNL WELD	EXHAUST GALVANNEAL WELDED	DB	DUCTBOARD
SA AL WELD	SUPPLY AIR LP ALUMINUM WELDED	EA SS WELD	EXHAUST SS 304 WELDED	FLU-CAT1	FLUE VENT - CATEGORY 1
SA GALV WELD	SUPPLY AIR MP GALV WELDED	EA BI GREASE	EXHAUST GREASE BLACK IRON WELD	FLU-CAT4	FLUE VENT - CATEGORY 4
SA GLVNL WELD	SUPPLY AIR MP GALVANNEAL WELD	EA GALV GREASE	EXHAUST GREASE GALV WELDED	FLU-CPVC	FLUE VENT - CPVC MATERIAL
SA SS WELD	WELDED SUPPLY AIR LP SS 304 2B	EA GALV GREASE	EXHAUST GREASE SS 304 WELDED	FLU-SS	FLUE VENT - SHOP BUILT SS 304
EA	EXHAUST AIR	MUA	MAKE-UP AIR	FLU-GALV	FLUE VENT - SHOP BUILT GALV

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
BARE RECTANGULAR SHEETMETAL	14x12 SA	FLEX DUCT	√140 D 140
SOUNDLINE SHEETMETAL (GENERAL NOTES)	14x12 SA-SL	EQUIPMENT FLEX ROUND CONNECTOR	24ø
SHEETMETAL W/ INSULATION (GENERAL NOTES)	14x12 SA-W	EQUIPMENT FLEX RECTANGULAR CONNECTOR	24x24
BARE ROUND SHEETMETAL	12ø SA	SUPPLY DUCT UP/DOWN	
ROUND SHEETMETAL W/ INSULATION (GENERAL NOTES)	12ø SA-W	EXHAUST DUCT UP/DOWN	
BARE OVAL SHEETMETAL	14x12ø SA	RETURN DUCT UP/DOWN	
OVAL SHEETMETAL W/ INSULATION (GENERAL NOTES)	14x12ø SA-W	SUPPLY AIR TERMINAL RECTANGULAR AND SQUARE	$\bowtie \boxtimes$
EXAMPLE OF EXISTING	14x12 SA	RETURN AIR TERMINAL RECTANGULAR AND SQUARE	
EXAMPLE OF DEMO	<u> </u>	EXHAUST AIR TERMINAL RECTANGULAR AND SQUARE	$\boxtimes \boxtimes$
EXAMPLE OF NEW	14x12 SA	RADIAL AIR TERMINAL	0
EXAMPLE OF FUTURE (N.I.C.)	14x12 SA	SUPPLY AIR SLOT DIFFUSER	
EXPOSED QUALITY SHEETMETAL	14x12 SA-Q	RETURN AIR SLOT DIFFUSER	
CLEANROOM QUALITY DUCTWORK	14x12 SA-C	EXHAUST AIR SLOT DIFFUSER	
DUCTBOARD (1" FIBERGLASS)	14x12 SA-DB	POINT OF CONNECTION	•
CONTINUATIION OF ROUND DUCT	2	CENTER LINE	Ę
CONTINUATION OF RECTANGULAR DUCT		THERMOSTAT	T
AIR FLOW IN SYMBOL	\	CARBON MONOXIDE SENSOR	(0)
AIR FLOW OUT SYMBOL	-\ - ▶	NITROGEN DIOXIDE SENSOR	(NO2)
MECHANICAL EQUIPMENT TAG	AHU-001	OTHER SENSOR	(\$)
KEYED NOTE	1)	ELECTRICAL SWITCH	\$
ACCESS DOORS		MITERED ELBOW WITH TURNING VANES	
RATED ENCLOSURE			

	ROOM			2018 WSMC REQUIREMENTS								NOTES
NO.	NAME	AREA	OCC/1000SF	ОСС	CFM/OCC	CFM/SF	OSA REQ'D	EXH CFM/SF	EXH REQ'D	OSA	EXHAUST	
200	RECEPTION	250	30	8	5	0.06	60			60		3,4,6
201	OFFICE	125	5	1	5	0.06	20			20		3,4,6
202	OFFICE	125	5	1	5	0.06	20			20		3,4,6
203	OFFICE	125	5	1	5	0.06	20			20		3,4,6
204	CONFERENCE ROOM	125	50	6	5	0.06	40			40		3,4,6
205	CONFERENCE ROOM	125	50	6	5	0.06	40			40		3,4,6
206	CONFERENCE ROOM	125	50	6	5	0.06	40			40		3,4,6
207	PHONE ROOM			1	5	0.06	10			10		2,3,4,6
208	OPEN MEETING AREA	190	50	10	5	0.06	70			70		3,4,6
209	PHONE ROOM			1	5	0.06	10			10		2,3,4,6
210	OFFICE	125	5	1	5	0.06	20			20		3,4,5
211	OFFICE	125	5	1	5	0.06	20			20		3,4,5
212	OFFICE	125	5	1	5	0.06	20			20		3,4,5
213	OFFICE	125	5	1	5	0.06	20			20		3,4,5
214	OFFICE	250	5	1	5	0.06	20			20		3,4,5
215	OFFICE	125	5	1	5	0.06	20			20		3,4,5
216	OFFICE	125	5	1	5	0.06	20			20		3,4,5
217	OFFICE	125	5	1	5	0.06	20			20		3,4,5
218	OFFICE	125	5	1	5	0.06	20			20		3,4,5
219	PHONE ROOM			1	5	0.06	10			10		2,3,4,6
220	OPEN MEETING AREA	440	50	22	5	0.06	140			140		3,4,6
221	PHONE ROOM			1	5	0.06	10			10		2,3,4,6
222	OFFICE	125	5	1	5	0.06	20			20		3,4,5
223	OFFICE	125	5	1	5	0.06	20			20		3,4,6
224	OFFICE	125	5	1	5	0.06	20			20		3,4,6
225	BREAK ROOM	650	25	16	5	0.06	120			120	200	3,4,5,7
226	TRAINING ROOM	880	50	44	5	0.06	280			280		3,4,6
227	OFFICE	150	5	1	5	0.06	20			20		3,4,6
228	OFFICE	150	5	1	5	0.06	20			20		3,4,6
229	OFFICE	150	5	1	5	0.06	20			20		3,4,6
230	STORAGE/IT											
231	OFFICE	125	5	1	5	0.06	20			20		3,4,6
232	OFFICE	125	5	1	5	0.06	20			20		3,4,6
233	OFFICE	125	5	1	5	0.06	20			20		3,4,6
234	OFFICE	125	5	1	5	0.06	20			20		3,4,6
235	OFFICE	125	5	1	5	0.06	20			20		3,4,6
236	CONFERENCE ROOM	150	50	8	5	0.06	50			50		3,4,6
237	CONFERENCE ROOM	225	50	11	5	0.06	70			70		3,4,6
238	CONFERENCE ROOM	350	50	18	5	0.06	120			120		3,4,6
239	OPEN OFFICE	6600	5	33	5	0.06	570			570		3,4,5

. UNOCCUPIED STORAGE/IT ROOM

. OCCUPANT DENSITY AND SPECIFIC OSA BASED ON ACTUAL OCCUPANCY IN SPACE . REQUIRED OSA BASED ON 2018 WSMC TABLE 403.3.1.1

NOTE: SIZE REFLECTS ACTUAL SHEET METAL DIMENSION AND DOES NOT ACCOUNT FOR INSULATION OR LINING

. SUPPLY AIR MINIMUM BASED ON AHU MININUM OSA FRACTION = 0.14 5. EXISTING ROOM OUTSIDE OF PROJECT HVAC SCOPE

. NEW OR RECONFIGURED ROOM WITHIN PROJECT HVAC SCOPE

7. EXISTING EXHAUST, NOT CODE REQUIRED

HVAC GENERAL NOTES - 2018 WA STATE

- THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET WHICH MAY BE REQUIRED. THE HVAC CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES AND IS TO VERIFY ALL CLEARANCES BEFORE COMMENCING WORK MATERIALS, METHODS, AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF THE 2018 EDITIONS OF THE INTERNATIONAL MECHANICAL CODE, INTERNATIONAL BUILDING CODE, INTERNATIONAL
- FIRE CODE 2018 WSEC, AND LOCAL CODES AND ORDINANCES. DUCT CONSTRUCTION AND HANGING SHALL COMPLY WITH CHAPTER 6 OF THE 2018 IMC AND WITH CURRENT SMACNA STANDARDS, EARTHQUAKE BRACE ALL DUCTS 28" DIA AND LARGER WHICH
- ARE SUSPENDED MORE THAN 12" BELOW STRUCTURAL SYSTEM. JOINTS OF MEDIUM AND HIGH VELOCITY DUCT SYSTEMS SHALL BE SEALED WITH GASKETS OR LISTED MASTIC TYPE DUCT SEALANT.
- DUCTS SHALL BE INSULATED AS INDICATED ON PLANS, PER 2018 WASHINGTON STATE ENERGY CODE, COMMERCIAL PROVISIONS
- DUCT WRAP, WHERE INDICATED, SHALL BE 0.75 LB/CU FT FIBERGLASS DUCT INSULATION WITH A FACTORY APPLIED REINFORCED ALUM. FOIL VAPOR BARRIER.
- SOUND LINING, WHERE INDICATED, SHALL BE 1" 1.5 LB/CU FT FIBERGLASS DUCT LINING COATED TO PREVENT FIBER EROSION AT VELOCITIES UP TO 6000 FPM.
- DUCT BOARD, WHERE INDICATED, SHALL BE 1" RIGID FRK FACED EI 475 FIBERGLASS DUCT BOARD SYSTEM, UL 181 LISTED AS A CLASS 1 AIR DUCT. - SUPPLY DUCT WHICH CONVEYS SUPPLY AIR AT TEMPERATURES LESS THAN 55 DEG F OR GREATER THAN 105 DEG F WHEN LOCATED IN CONDITIONED SPACE SHALL BE INSULATED WITH A MINIMUM OF R-3.3. WHEN LOCATED IN UNCONDITIONED SPACE R-6 AND WHEN LOCATED OUTSIDE THE BUILDING R-8 (CLIMATE ZONE 4) OR R-12 (CLIMATE ZONE 5) PER WSEC C403.10.1 AND TABLE C403.10.1.2.
- OUTSIDE AIR DUCT INSULATION INSIDE THE BUILDING SHALL BE INSULATED PER C403.10.1 AND TABLE C403.10.1.1 AS FOLLOWS: IF >= 2800 CFM INSULATE TO R-16 UPSTREAM OF AUTOMATIC SHUTOFF DAMPERS AND R-8 (CLIMATE ZONE 4C) OR R-12 (CLIMATE ZONE 5B) DOWNSTREAM OF AUTOMATIC SHUTOFF DAMPERS.
- IF < 2800 CFM INSULATE TO R-7.
- FLEX DUCTS SHALL CONSIST OF A REINFORCED VAPOR BARRIER, 1 1/2" FIBERGLASS INSULATION, AND NON-PERFORATED INTERIOR LINER WITH WIRE HELIX. DUCT SHALL BE A UL 181 LISTED CLASS 1 AIR DUCT. FLEX DUCTS SHALL ONLY BE USED WHERE SHOWN AND SHALL NOT EXCEED 12' IN LENGTH UNLESS NOTED OTHERWISE.
- PROVIDE EARTHQUAKE RESTRAINT FOR HVAC EQUIPMENT IN ACCORDANCE WITH SECTION 1613 OF THE 2018 IBC.

DUCTWORK EXPOSED TO VIEW WITHIN A ZONE THAT SERVES THAT ZONE IS NOT REQUIRED TO BE INSULATED.

- PROVIDE FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE INDICATED ON PLANS AND AS REQUIRED BY SECTION 717.5 OF THE 2018 IBC. PROVIDE CEILING FIRE DAMPERS WHERE INDICATED ON PLANS AND AS REQUIRED BY SECTION 717.6.2.1 OF THE 2018 IBC. INSTALL FIRE DAMPERS SMOKE DAMPERS AND FIRE/SMOKE DAMPERS IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS, THE TERMS OF THEIR LISTING, AND THE REQUIREMENTS OF THE CODE.
- PIPING PENETRATIONS OF FIRE RATED WALLS OR FLOORS SHALL BE SLEEVED AND FIRE STOPPED WITH LISTED MATERIALS SO AS TO MAINTAIN THE INTEGRITY AND RATING OF THE FLOOR OR
- PROVIDE RETURN DUCT SMOKE DETECTOR AUTOMATIC SHUT DOWN OF ALL NEW HEATING, COOLING, OR VENTILATION EQUIPMENT MOVING IN EXCESS OF 2000 CFM IN ACCORDANCE WITH SECTION 606 OF THE 2018 IMC. POWER AND INTERLOCK WIRING WITH THE BUILDING FIRE ALARM SYSTEM IS BY THE ELECTRICAL CONTRACTOR. BAS TO MONITOR FIRE ALARM CONTROL PANEL AND SHUT DOWN ALL FAN TERMINAL UNITS DURING ANY BUILDING FIRE ALARM EVENT, IN ACCORDANCE WITH 2018 IMC 606.2.2.
- 1. HVAC EQUIPMENT, VALVES AND DAMPERS SHALL BE LOCATED IN EASILY ACCESSIBLE LOCATIONS. UNLESS SHOWN ON ARCHITECTURAL DRAWINGS, REQUIRED ACCESS PANELS SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR. MINIMUM ACCESS DOOR SIZE FOR VALVES AND DAMPERS TO BE 18" X 18".
- 12. HEAT TRACING OF PIPING, WHERE INDICATED, SHALL BE PROVIDED AND INSTALLED BY THE HVAC CONTRACTOR. THE HVAC CONTRACTOR IS TO COORDINATE THE HEAT TRACE POWER WIRING

A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM, INCLUDING SIZES, AND THE TERMINAL

- 13. MOTORS STARTERS NOT LISTED AS BEING PROVIDED IN THE HVAC EQUIPMENT SCHEDULES ARE TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION TO BE PROVIDED TO THE BUILDING OWNER, RECORD DRAWINGS SHALL INCLUDE AS
- OPERATING AND MAINTENANCE MANUALS TO BE PROVIDED TO THE BUILDING OWNER THAT INCLUDE: SUBMITTAL DATA, NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY, HVAC
- CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION AND A COMPLETE OPERATIONAL NARRATIVE FOR EACH SYSTEM.
- 16. COMMISSIONING IS REQUIRED ON THIS PROJECT IN ACCORD WITH 2018 WASHINGTON STATE ENERGY CODE (WSEC), COMMERCIAL PROVISIONS AND SECTION C408. 17. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER
- 18. SHAFT WALLS CONSTRUCTED TO SUPPORT AIR MOVEMENT FOR RETURN AIR SYSTEMS AND STAIR & ELEVATOR PRESSSURIZATION SYSTEMS SHALL BE CONSTRUCTED TO THE FOLLOWING
- A. SHAFTS (RATED FOR MAXIMIUM 2" WC) SHALL BE CONSTRUCTED TO WITHSTAND 15 PSF LOADING WITH A DEFLECTION OF L/360 (UNO).
- B. SHAFTS SHALL BE SEALED SUBSTANTIALLY AIR-TIGHT USING THE CRITERIA FROM THE 2018 INTERNATIONAL BUILDING CODE:
- 1. SECTION 715.6 FIRE RESISTANT JOINT SYSTEMS IN SMOKE BARRIERS: LEAKAGE SHALL NOT EXCEED 5 CFM PER LINEAR FOOT OF JOINT AT 0.3" WC. 2. SECTION 909.5 SMOKE BARRIER CONSTRUCTION FOR INTERIOR EXIT STAIRWAYS AND EXIT PASSAGEWAYS: MAXIMUM ALLOWABLE LEAKAGE AREA PER SHAFT SHALL NOT EXCEED
- C. STAIR AND ELEVATOR PRESSURIZATION SHAFTS SHALL BE PRESSURE TESTED DURING COMMISIONING. CONTRACTOR SHALL MAKE MODIFCATIONS TO INSTALLATION UNTIL SHAFT IS IN
- DAMPERS USED FOR OUTDOOR AIR INTAKE, EXHAUST, OR RELIEF SHALL HAVE THE FOLLOWING MAXIMUM LEAKAGE RATES AT 1" W.G. (PER AMCA STANDARD 500D): MOTORIZED DAMPERS: 4 CFM/S.F. GRAVITY DAMPERS: 20CFM/S.F. (40 CFM/S.F. FOR DAMPERS SMALLER THAN 24" IN EITHER DIMENSION) PER 2018 WSEC C403.7.8.3.
- OUTSIDE AIR INTAKE, EXHAUST, AND RELIEF DAMPERS SERVING CONDITIONED SPACES MUST BE MOTORIZED (FAIL CLOSED) PER WSEC, COMMERCIAL PROVISIONS, 2018 WSEC SECTION C403.7.8. EXCEPT AS ALLOWED BY WSEC.
- MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, EXCEPT AS NOTED IN SECTION 602.2.1 OF THE 2018 IMC.

LEGAL DESCRIPTION

PARCEL NUMBER: 0419034036

NAME: WESTWOOD SHIPPING LLC SITE ADDRESS: WEST BUILDING, SUITE 250, 1019 39TH AVE SE, PUYALLUP, WA

LEGAL DESCRIPTION: Section 03 Township 19 Range 04 Quarter 42 LOT 1 OF BLA 2019-05-22-5002 DESC AS FOLL COM AT STONE MON AT S QTR COR OF SEC 3 WHICH MON IS N 86 DEG 31 MIN 42 SEC W 2621.06 FT FROM SE COR OF SD SEC TH S 86 DEG 31 MIN 42 SEC E 1310.53 FT TH N 00 DEG 13 MIN 45 SEC E 53.05 FT TO POB ON NLY R/W OF 39TH AVENUE SE TH N 87 DEG 01 MIN 38 SEC W ALG SD NLY MAR 580.68 FT TH N 00 DEG 52 MIN 42 SEC E 677.52 FT TH N 89 DEG 59 MIN 36 MIN W 125.03 FT TH S 45 DEG 04 MIN 35 SEC W 283.07 FT TO PT OF CURVE OF A NON-TANG C TO R OF WHICH RAD PT LIES N 87 DEG 53 MIN 38 SEC W A RADIAL DIST OF 205 FT TH SLY ALG ARC THRU A C/A OF 33 DEG 00 MIN 39 SEC 118,11 FT TH S 32 DEG 19 MIN 16 SEC W 41,17 FT TH S 45 DEG 04 MIN 35 SEC W 113,76 FT TO A PT OF C TO L HAVING A RAD OF 254 F & A C/A OF 18 DEG 36 MIN 33 TH SWLY ALG ARC 82.50 FT TH S 25 DEG 10 MIN 59 SEC W 11.39 FT TH S 19 DEG 13 MIN 48 SEC W 41.03 FT TH S 13 DEG 32 MIN 58 SEC W 10.80 FT TO PT OF CURVE OF A NON-TANG C FO L OF WHICH RAD PT LIES S 77 DEG 48 DEG 15 SEC A RADIAL DIST 254 FT TH SLY ALG ARC THRU A C/A OF 06 DEG 43 MIN 28 SEC 29.81 FT TH S 87 DEG 01 MIN 38 SEC E 27.68 FT TH S 02 MIN 58 MIN 22 SEC W

33.74 FT TH N 87 DEG 01 DEG 38 SEC W 28.12 FT TH S 03 DEG 27 MIN 46 DEG W 10.16 FT TH N 87 DEG 01 MIN 38 SEC W 59.99 FT TH S 47 DEG 58 MIN 22 SEC W 29.08 FT TH N 86 DEG 31 MIN 42 SEC W 12.85 FT TH N 00 DEG 00 MIN 24 SEC E 69.13 FT TH N 86 DEG 31 MIN 42 SEC W 58.60 FT TH S 45 DEG 04 MIN 35 SEC W 23.32 FT TH S 00 DEG 00 MIN 24 SEC W 55.66 FT TH N 86 DEG 31 MIN 42 SEC W 28.05 FT TO A PT ON W LI OF SE QTR OF SD SEC 3 TH N 00 DEG 00 MIN 24 SEC E ALG SD W LI 2556.43 FT TO A PT WHICH LIES S 00 DEG 00 MIN 24 SEC W 30.21 FT FROM CENT OF SD SEC 3 TH S 87 DEG 44 MIN 17 SEC E 515.29 FT TH S 00 DEG 00 MIN 36 SEC W 494.13 FT TH S 52 DEG 49 MIN 01 SEC E 202.91 FT TH S 37 DEG 10 MIN 59 SEC W 186.48 FT TH S 00 DEG 15 MIN 12 SEC E 225.75 FT TH S 89 DEG 59 MIN W 80.33 FT TH S 00 DEG 00 MIN 36 SEC W 489.96 TTHN 89 MIN 59 MIN 00 SEC E 547.26 FT THN 00 DEG 00 MIN 36 SEC E 815.64 FT THN 89 DEG 59 MIN 00 SEC E 579.05 FT THS 00 MIN 13 MIN 45 SEC W 1625.81 FT THN 86 DEG 31 MIN 42 SEC W 295.47 FT TO SD N-S CENT LI OF SE QTR OF SD SEC 3 TH S 00 DEG 13 MIN 45 SEC W ALG SD N-S CENT LI 332.49 FT TO POB EASE OF REC OUT OF 04-19-03-4-031, 4-032 & 4-034 SEG 2019-0472 JP 05/30/19 JP

	CONTACT LIST										
ı	TITLE	NAME	COMPANY	PHONE NUMBER	EMAIL						
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	PLUMBING SUPERINTENDENT	KELLY KING	MACDONALD MILLER	206-768-3962	KELLY.KING@MACMILLER.COM						

	DRAWING SHEET INDEX										
NAME	TITLE	NAME	TITLE								
TM0.01	SCHEDULES - HVAC	TP0.01	SCHEDULES - PLUMBING								
TM0.01S	SITE PLAN	TP2.01	FIRST FLOOR PARTIAL PLAN - PLUMBING								
DM2.02	SECOND FLOOR PARTIAL DEMOLITION PLAN - HVAC	DP2.02	SECOND FLOOR PARTIAL DEMOLITION PLAN - PLUMBING								
TM2.02	SECOND FLOOR PARTIAL PLAN - HVAC	TP2.02	SECOND FLOOR PARTIAL PLAN - PLUMBING								

TP4.01 RISERS AND DIAGRAMS

TP6.01 DETAILS - PLUMBING

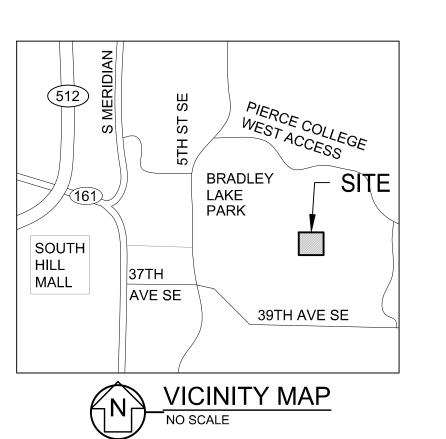
SCOPE OF WORK

REVISE DUCTWORK AT (4) VAV BOXES. PROVIDE (2) NEW VAV BOXES AND ASSOCIATED DUCTWORK. RELOCATE ONE THERMOSTAT, PROVIDE (4) NEW THERMOSTATS BALANCE (16) VAV BOX SYSTEMS. PARTIAL DEMOLITION OF (7) VAV BOX SYSTEMS. RELOCATE (1) EXISTING VAV BOX, REVISE ASSOCIATED DUCTWORK.

PROVIDE (1) NEW EXHAUST FAN AND TRANSFER AIR DUCT.



TM6.01 DETAILS - HVAC



B-21-082







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City of Puyallup **Development & Permitting Services ISSUED PERMIT** Engineering

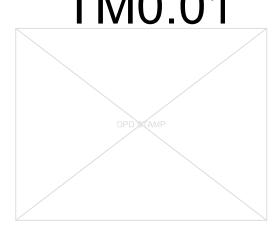


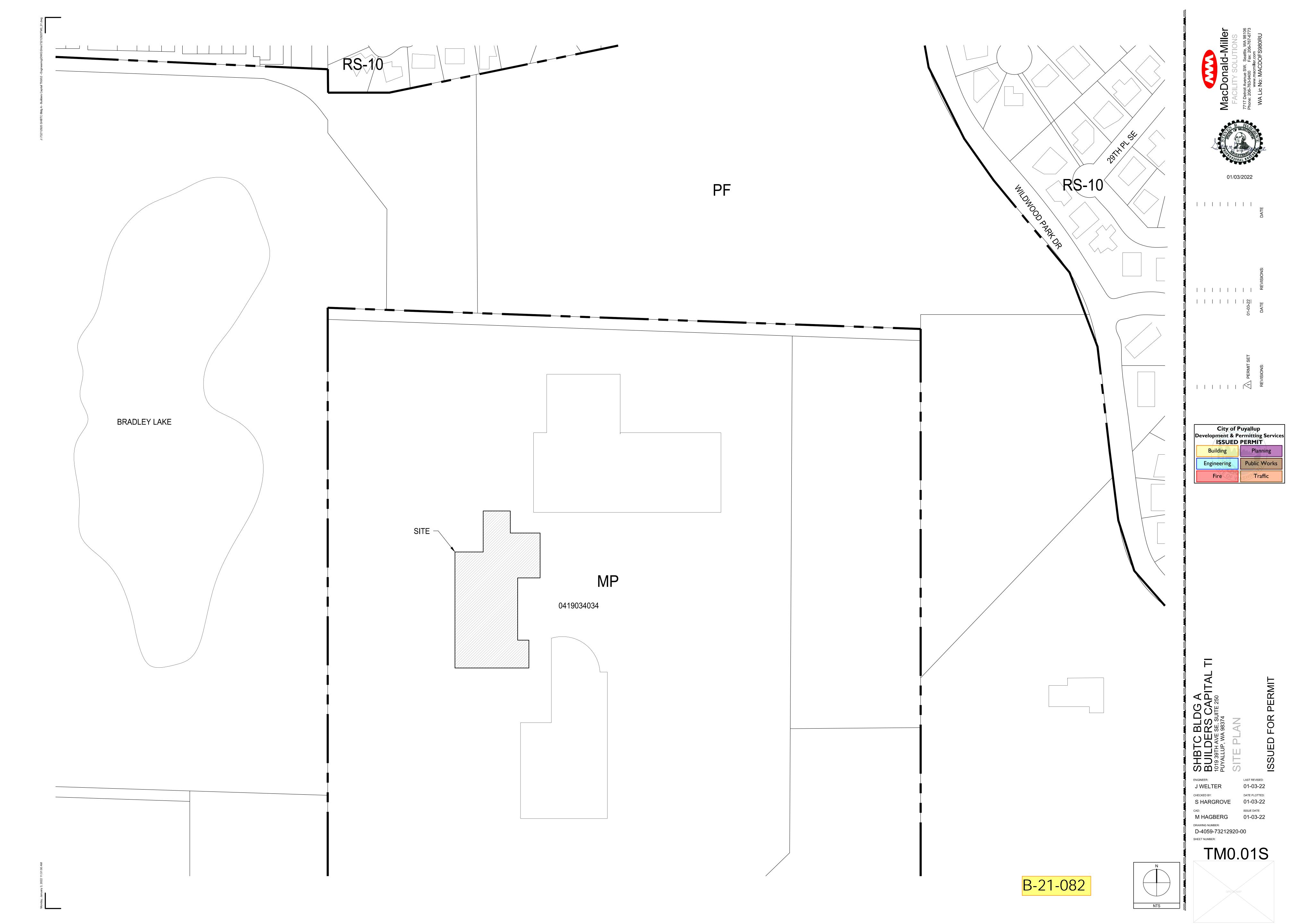
ENGINEER: LAST REVISED: 01-03-22 J WELTER DATE PLOTTED: CHECKED BY: 01-03-22 S HARGROVE

ISSUE DATE: M HAGBERG 01-03-22

DRAWING NUMBER: D-4059-73212920-00 SHEET NUMBER:

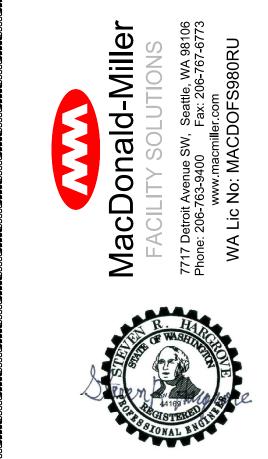
TM0.01





KEY NOTES

- 1) RELOCATE THERMOSTAT, SEE SHEET TM2.02 FOR REVISED LOCATION.
- (2) REMOVE RETURN AIR GRILLE AND SOUND BOOT.
- 3 AC-1 AND REFRIGERANT LINES TO BE REMOVED BY OTHERS.
- 4 RELOCATE VAV BOX, SEE SHEET TM2.02.





City of Puyallup
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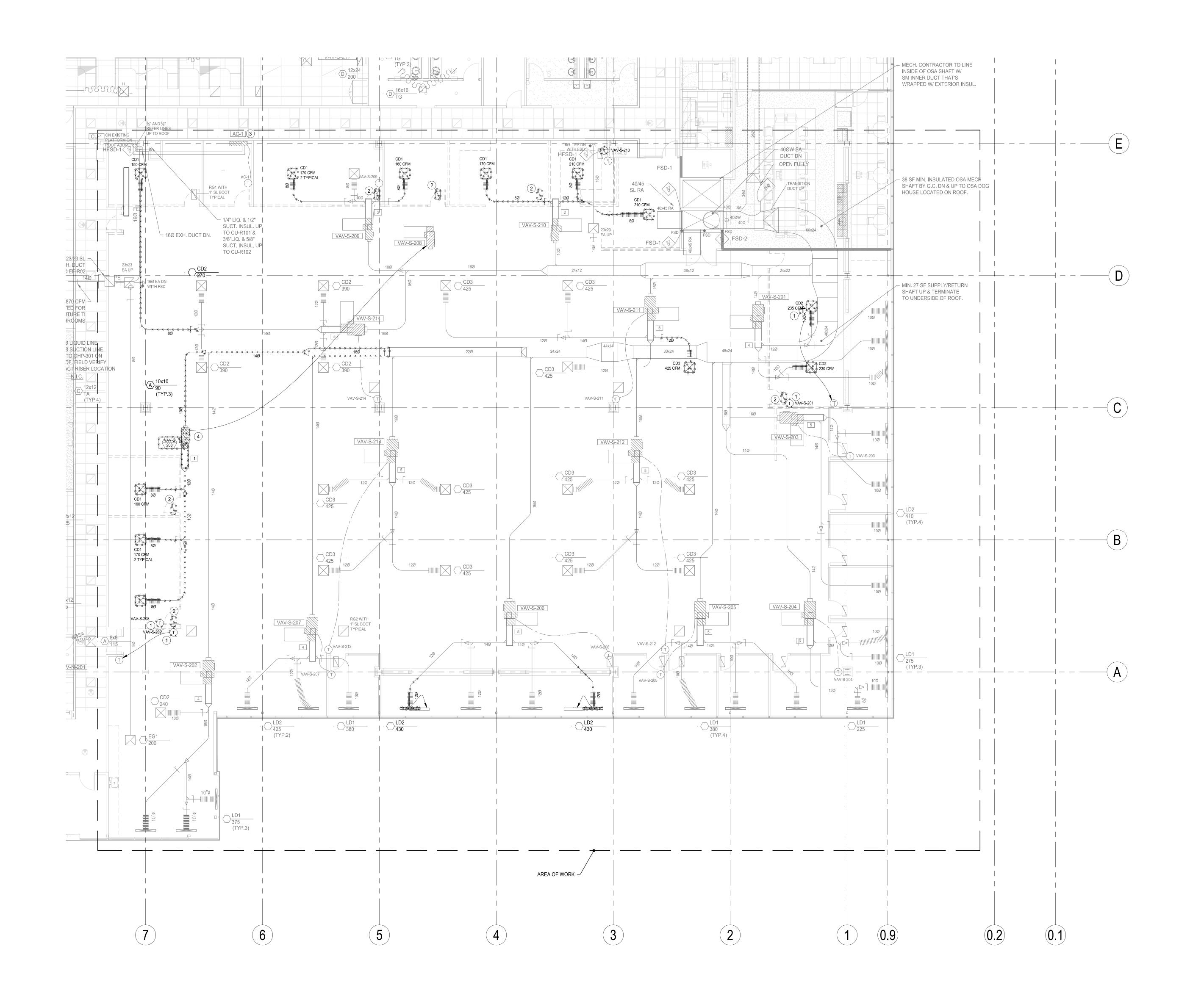
ENGINEER: 01-03-22 DATE PLOTTED: 01-03-22 S HARGROVE

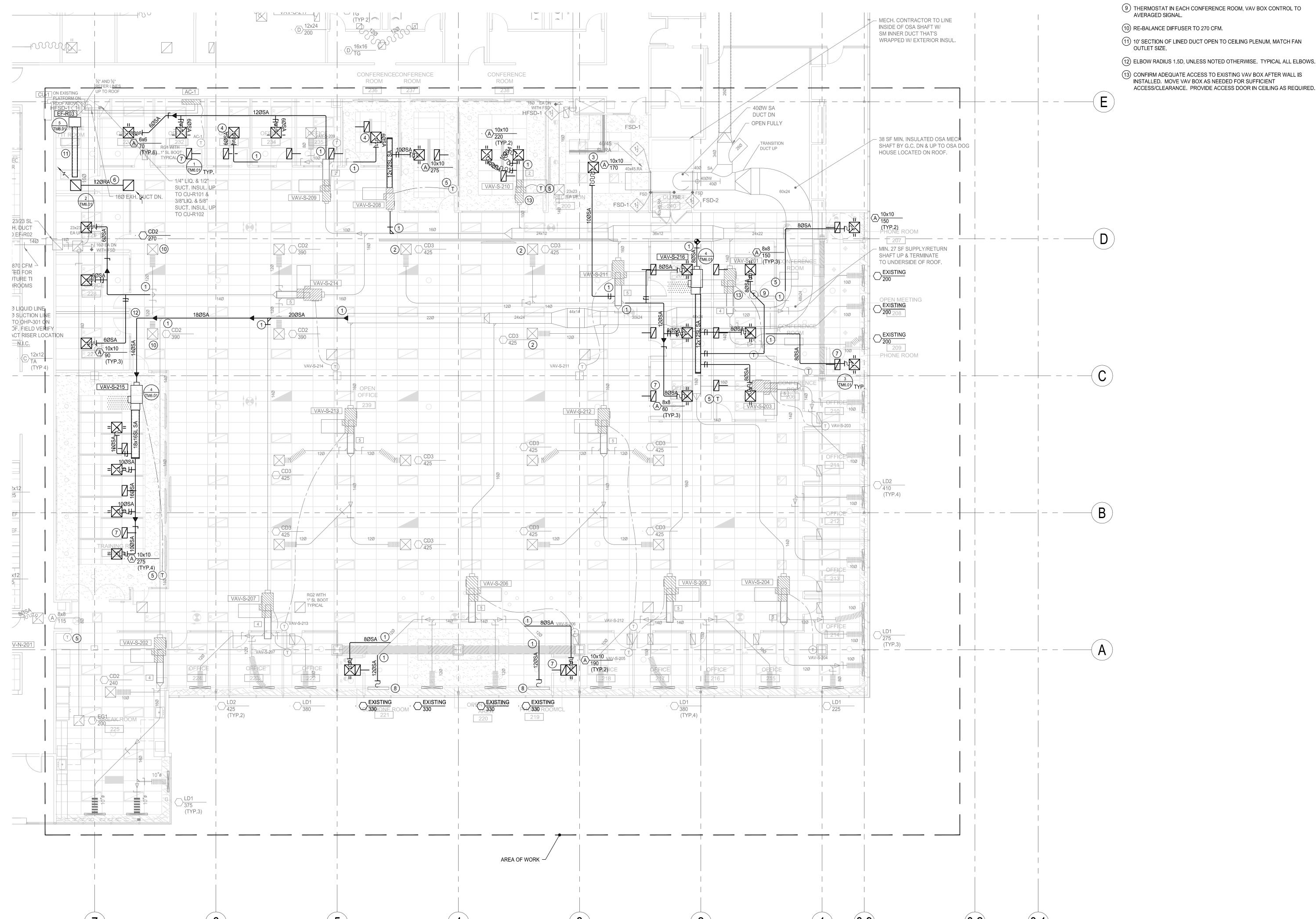
M HAGBERG

D-4059-73212920-00

DM2.02

1/8" = 1'-0"





KEY NOTES

1) CONNECT TO EXISTING.

(2) RE-BALANCE DIFFUSER TO ORIGINAL AIRFLOW.

3 4-WAY DIFFUSER BLOW PATTERN, UNLESS INDICATED OTHERWISE, TYPICAL THROUGHOUT SHEET.

(4) RELOCATE EXISTING DIFFUSER AND DUCT. BALANCE TO 200 CFM.

5 RELOCATE THERMOSTAT, SEE DM2.02 FOR INFORMATION.

6 TRANSFER GRILLES AND DUCTWORK.

7 CEILING PLENUM RETURN GRILLE AND BOOT, SEE DETAIL 1/TM6.01. 8 RELOCATE EXISTING LINEAR DIFFUSER.

9 THERMOSTAT IN EACH CONFERENCE ROOM, VAV BOX CONTROL TO AVERAGED SIGNAL.

1) 10' SECTION OF LINED DUCT OPEN TO CEILING PLENUM, MATCH FAN OUTLET SIZE.

(13) CONFIRM ADEQUATE ACCESS TO EXISTING VAV BOX AFTER WALL IS INSTALLED. MOVE VAV BOX AS NEEDED FOR SUFFICIENT ACCESS/CLEARANCE. PROVIDE ACCESS DOOR IN CEILING AS REQUIRED.



01/03/2022

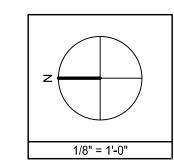
City of Puyallup
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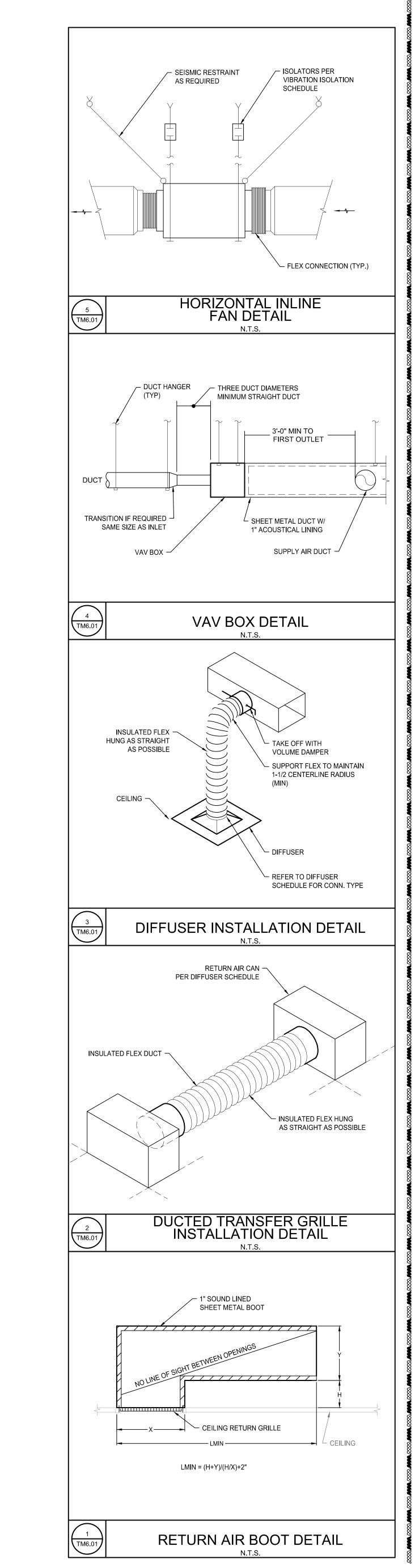


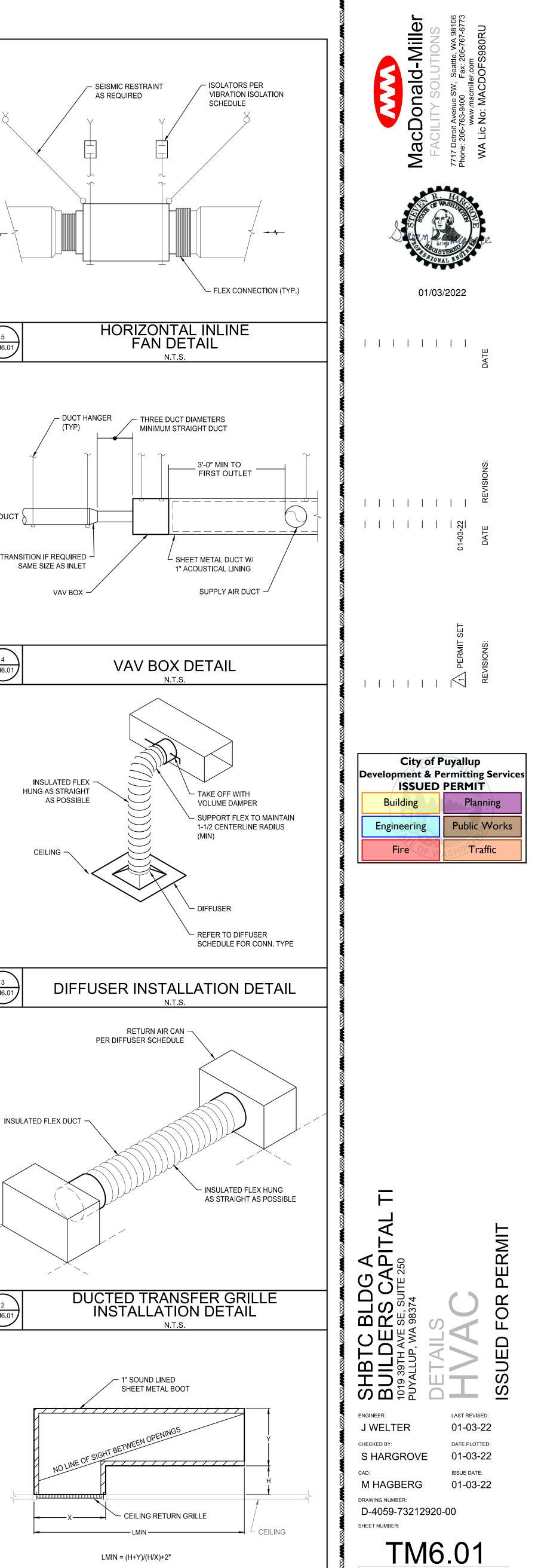
TM2.02

D-4059-73212920-00

M HAGBERG







LAST REVISED: 01-03-22

DATE PLOTTED: 01-03-22

01-03-22