





WORK TO BE DONE

- 1) INSTALL 1 1200 CFM ERV TO BRING SPACE UP TO CODE
- 2) NEW EQUIPMENT TO BE INSTALLED INSIDE SPACE.

PROJECT INFORMATION

ADDRESS: 92 STEWART ST SEATTLE, WA 98101

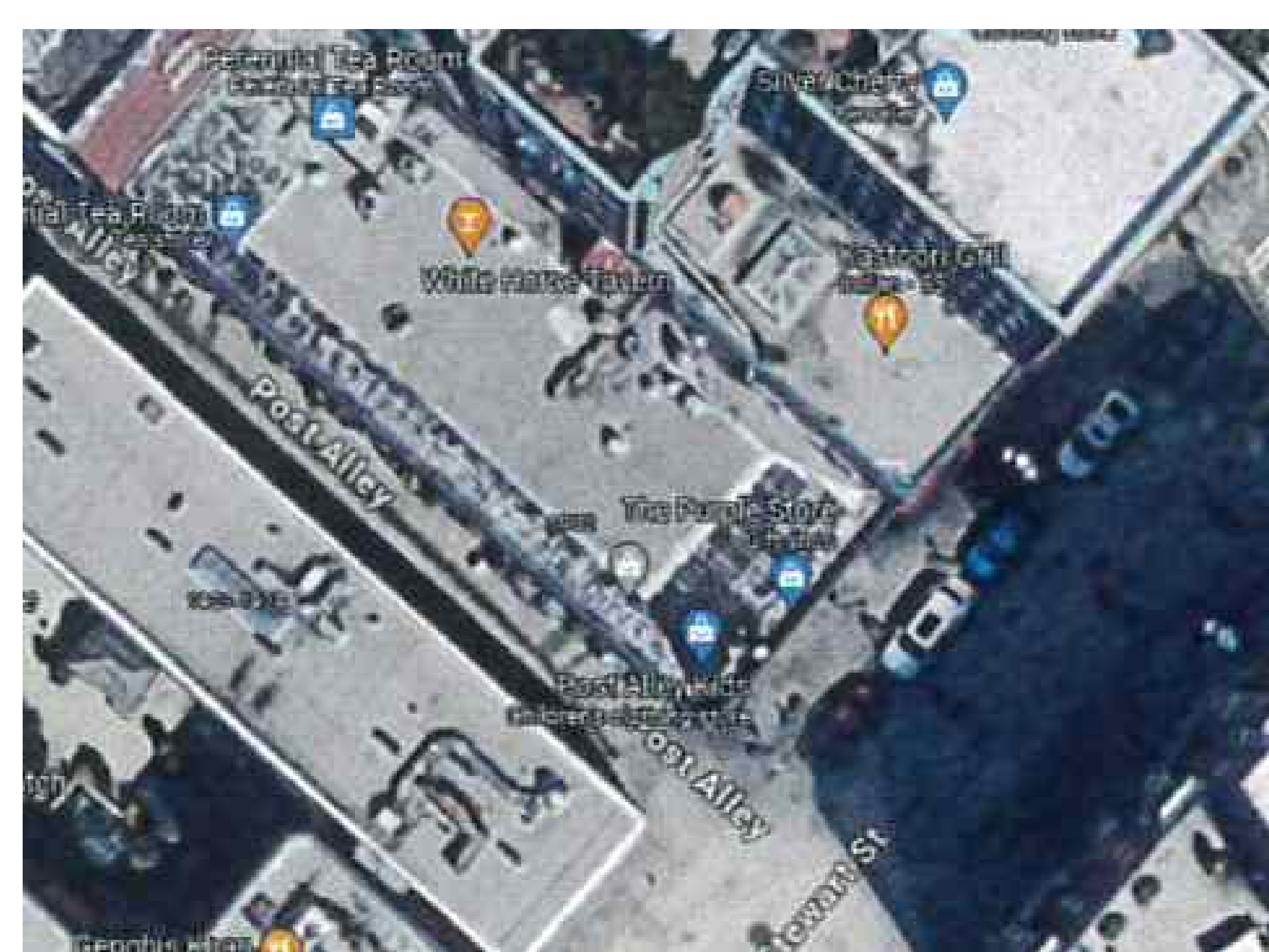
OWNER: INCITY PROPERTIES

PARCEL NUMBER: 197720-0435

LEGAL DISCRITION: DENNYS A A 6TH ADD LESS ST

PLAT BLOCK: 37

PLAT LOT: 10-11



**ALL WORK, ALL EQUIPMENT,
ALL PARTS TO BE INSTALLED,
WILL BE IN FULL COMPLIANCE
WITH ALL CODES BELOW.**

**2018 SEC
2018 SMC
2018 SEC
2018 SFC
2018 SBC**

**ALL EQUIPMENT WILL BE TESTED
WITH COMMISSIONING REPORT PER CODE C408.2 AND
SECTION C403**

**ALL SUPPLY AIR GRILLS WILL AIR
FLOW TESTED AND ADJUSTED WITH
REPORT PER CODE**

**ALL DUCT WORK WILL BE INSULATED
TO CODE PER 2018 SEC AND 2018 SEC
ALL NEW FLEX DUCT WORK WILL BE NO LONGER THAN 7
FEET**

**ALL DUCT WORK TO ADD WILL BE
RATED FOR PLENUM RETURN AIR SYSTEM**

COMMISSIONING PLAN S	
<p>ALL COMMISSIONING OF HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS AS REQUIRED BY SECTION C408 "SYSTEM COMMISSIONING" OF THE 2018 SEATTLE ENERGY CODE (SEC) SHALL BE PERFORMED BY ALLSTAR HEATING AND A/C INC. THE ACTIVITIES TO BE ACCOMPLISHED ARE PER THE SECTIONS LISTED IN THE "COMMISSIONING COMPLIANCE CHECKLIST" SHOWN BELOW. AT THE COMPLETION OF THE ACTIVITIES REQUIRED FOR COMMISSIONING AS DEFINED BY SECTION C408 OF SEC THE "COMMISSIONING COMPLIANCE CHECKLIST" WILL BE REVIEWED WITH THE BUILDING OWNER OR THE OWNER'S REPRESENTATIVE AND THIS CERTIFICATION WILL BE SIGNED AND DATED. THIS WILL SATISFY TO THE CODE OFFICIAL THAT THE REPORT HAS BEEN ACCEPTED AS REQUIRED BY SECTION C408.1.3 OF SEC.</p>	

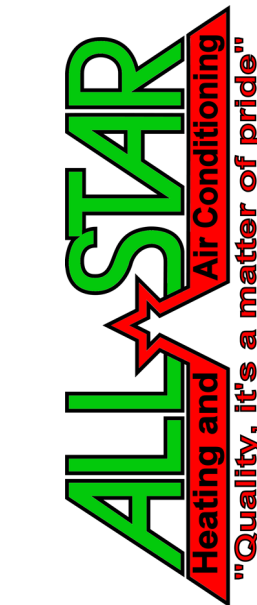
COMMISSIONING COMPLIANCE CHECKLIST	
PROJECT INFORMATION	<p>Project Name: _____</p> <p>Project Address: _____</p> <p>Commissioning Authority: _____</p>
COMMISSIONING PLAN (SECTION C408.1.2)	<p><input checked="" type="checkbox"/> Commissioning Plan was used during construction and included items below</p> <ul style="list-style-type: none"> • A NARRATIVE DESCRIPTION OF ACTIVITIES AND THE PERSONNEL INTENDED TO ACCOMPLISH EACH ONE • MEASURABLE CRITERIA FOR PERFORMANCE • FUNCTIONS TO BE TESTED
SYSTEMS BALANCING (SECTION C408.2.2)	<p><input checked="" type="checkbox"/> Systems Balancing has been completed</p> <ul style="list-style-type: none"> • AIR AND HYDRONIC SYSTEMS ARE PROPORTIONATELY BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES • TEST PORTS ARE PROVIDED ON EACH PUMP FOR MEASURING PRESSURE ACROSS THE PUMP
FUNCTIONAL TESTING (SECTION C408.2.3)	<p><input checked="" type="checkbox"/> HVAC Equipment Functional Testing has been completed (SECTION C408.2.3.1) <small>HVAC EQUIPMENT HAS BEEN TESTED TO DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS, SYSTEMS AND SYSTEM-BY-SYSTEM INTERFACING RELATIONSHIPS IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS</small></p> <p><input checked="" type="checkbox"/> HVAC Controls Functional Testing has been completed (SECTION C408.2.3.2) <small>HVAC CONTROLS HAVE BEEN TESTED TO ENSURE THAT CONTROL DEVICES ARE CALIBRATED, ADJUSTED AND OPERATE PROPERLY; SEQUENCES OF OPERATIONS HAVE BEEN FUNCTIONALLY TESTED TO ENSURE THEY OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS</small></p> <p><input checked="" type="checkbox"/> Economizers Functional Testing has been completed (SECTION C408.2.3.3) <small>ECONOMIZERS OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS</small></p>
SUPPORTING DOCUMENTS (SECTION C103.6)	<p><input checked="" type="checkbox"/> Manuals, record documents and training have been completed or are scheduled</p> <ul style="list-style-type: none"> • SYSTEM DOCUMENTATION HAS BEEN PROVIDED TO THE OWNER OR SCHEDULED DATE: _____ • RECORD DOCUMENTS HAVE BEEN SUBMITTED TO OWNER OR SCHEDULED DATE: _____ • TRAINING HAS BEEN COMPLETED OR SCHEDULED DATE: _____
COMMISSIONING REPORT (SECTION C408.1.4.1)	<p><input checked="" type="checkbox"/> Preliminary Commissioning Report submitted to Owner and includes items below</p> <ul style="list-style-type: none"> • DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION WHICH HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION • DEFERRED TESTS, WHICH CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION DUE TO CLIMATIC CONDITIONS
CERTIFICATION	<p><input checked="" type="checkbox"/> I HEREBY CERTIFY THAT ALL REQUIREMENTS FOR COMMISSIONING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE, INCLUDING ALL THE ITEMS ABOVE.</p> <p style="text-align: right;"> BUILDING OWNER OR OWNER'S REPRESENTATIVE _____ DATE _____ </p>

GENERAL NOTES S	
DUCTWORK	
<p>1.1 ALL DUCT DIMENSIONS ON PLAN ARE CLEAR INSIDE DIMENSIONS, ADD 2" TO EACH DIMENSION TO OBTAIN OUTSIDE DIMENSION. ADD 4" TO EACH DIMENSION IF THE DUCTWORK IS ON THE INTERIOR OF THE BUILDING.</p> <p>1.2 THE FIRST NUMBER ON ALL DUCT DIMENSIONS IS THE WIDTH AND THE SECOND IS THE HEIGHT.</p> <p>1.3 MATERIALS WITHIN DUCTS OR PLENUMS SHALL HAVE A FLAME SPREAD RATING LESS THAN 25 AND A FLAME SMOKE DEVELOPMENT LESS THAN 50, PER SMC602.2.1.</p> <p>1.4 SEAL ALL TRANSVERSE JOINTS FOR DUCTWORK WITH STATIC PRESSURE BETWEEN 1/2 INCHES AND 2 INCHES. DUCTWORK WHICH IS DESIGNED TO OPERATE AT PRESSURES ABOVE 1/2 WATER COLUMN SHALL BE SEALED IN ACCORDANCE WITH STANDARD RS-7.</p> <p>1.5 ALL DUCT GAUGES PER SMACNA, SMC 603-4.</p> <p>1.6 ALL DUCT SUPPORTS PER SMACNA, SMC 603-10.</p> <p>1.7 ATTACH DIFFUSERS AND GRILLES TO T-BAR PER</p> <p>1.8 BALANCING DAMPERS ARE TO BE INSTALLED ON ALL BRANCH DUCTS OR DIFFUSERS.</p>	
INSULATION	
<p>2.1 INSULATE OR LINE DUCTWORK PER SEATTLE ENERGY AND MECHANICAL CODES.</p> <p>2.2 INSULATE REFRIGERANT & CONDENSATE PIPING PER SEATTLE ENERGY CODES.</p>	
GENERAL CONTRACTOR	
<p>3.1 GENERAL CONTRACTOR TO PROVIDE AND CUT OPENINGS FOR ALL ROOFTOP, CEILING, FLOOR, AND WALL PENETRATIONS, INCLUDING WEATHERPROOF SEALING AND FIRE PROOF LININGS PER SEC AND SBC</p> <p>3.2 GENERAL CONTRACTOR TO VERIFY PENETRATION LOCATION AND DIMENSIONS WITH ERL BEFORE FRAMING OPENINGS.</p> <p>3.3 GENERAL CONTRACTOR TO PROVIDE ALL DEMOLITION, PATCHING, AND PAINTING AS REQUIRED FOR MECHANICAL WORK.</p> <p>3.4 GENERAL CONTRACTOR TO PROVIDE ADEQUATE STRUCTURAL SUPPORT AS REQUIRED FOR MECHANICAL WORK.</p> <p>3.5 GENERAL CONTRACTOR TO PROVIDE SERVICE ACCESS PER CODE TO ALL MECHANICAL EQUIPMENT.</p> <p>3.6 GENERAL CONTRACTOR TO LEVEL ALL FACTORY CURBS PROVIDED BY ERL PROVIDE ALL CANT STRIPS AND CURB INSULATION, AND SEAL AGAINST LEAKS.</p> <p>3.7 GENERAL CONTRACTOR TO PROVIDE ALL CUTTING AND PATCHING OR T-BAR CEILING AS REQUIRED FOR HVAC INSTALLATION.</p> <p>3.8 GENERAL CONTRACTOR TO PROTECT ALL OPENINGS THROUGH FLOORS PROVIDED FOR DUCTWORK INSTALLATION IN ACCORDANCE WITH TABLE 601 OF SEATTLE BUILDING CODE, WHERE REQUIRED BY SECTION 707 OF SBC</p>	
ELECTRICAL	
<p>4.1 ASH TO INSTALL ALL LOW VOLTAGE CONTROL WIRING, CONDUIT WILL BE PROVIDED BY ELECTRICAL CONTRACTOR.</p> <p>4.2 ELECTRICAL CONTRACTOR TO PROVIDE ALL ELECTRICAL CONNECTIONS, DISCONNECTS, AND STARTERS FOR MECHANICAL EQUIPMENT.</p> <p>4.3 ELECTRICAL CONTRACTOR TO VERIFY EQUIPMENT SIZES, LOADS AND LOCATIONS, WITH ASH MECHANICAL PLAN AND WITH FIELD LOCATIONS.</p> <p>4.4 ELECTRICAL CONTRACTOR TO INTERLOCK BATHROOM EXHAUST FANS WITH LIGHT SWITCH.</p> <p>4.5 ASH TO PROVIDE 7-DAY NIGHT SETBACK, PROGRAMMABLE TYPE T-STAT WITH CAPABILITY OF 5°F DEADBAND.</p> <p>4.6 ASH TO VERIFY FINAL LOCATION OF THERMOSTAT WITH CUSTOMER.</p> <p>4.7 ELECTRICAL CONTRACTOR TO PROVIDE ELECTRICAL GCFI OUTLET WITHIN 25 FT OF EACH PIECE OF MECHANICAL EQUIPMENT.</p>	
PLUMBING	
<p>5.1 PLUMBING CONTRACTOR OFFSETS VENTS 10 FEET MINIMUM FROM ALL HVAC FRESH AIR INTAKES OR 3' ABOVE HIGHEST POINT OF INTAKE, SMC 401.4.1</p> <p>5.2 CONDENSATE DRAINS FROM RTU BY ASH TO DRAIN WITHIN 12" OF UNIT. CONDENSATE DRAINS FOR AIR HANDLERS BY PLUMBER.</p>	
ENERGY CODE COMPLIANCE	
<p>6.1 THE SUPPLY HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. AT MINIMUM, EACH FLOOR SHALL BE CONSIDERED A ZONE.</p> <p>6.2 OUTDOOR AIR SUPPLY, EXHAUST OPENINGS AND RELIEF OUTLETS SHALL BE PROVIDED WITH CLASS 1A MOTORIZED DAMPERS WHICH CLOSE AUTOMATICALLY WHEN THE SYSTEM IS OFF PER SMC SECTION C403.2.4.3.</p>	
MECHANICAL CODE COMPLIANCE	
<p>7.1 WHERE REQUIRED PROVIDE AUTOMATIC SHUTOFF ACTIVATED BY SMOKE DETECTORS IN EACH SYSTEM DELIVERING HEATING OR COOLING AIR IN EXCESS OF 2000 CFM. DETECTORS SHALL BE LOCATED IN THE MAIN RETURN AIR PER SMC 606.</p>	

TABLE C403.10.1.2 SUPPLY, RETURN, EXHAUST, and RELIEF AIR DUCTWORK INSULATION				
Duct system	Duct Location and Use	Climate Zone	Minimum Installed Duct Insulation R-value ^{a,b}	Notes
Supply Air or Return Air	Outside the building (outdoors and exposed to weather)	4C	R-8	See Section C403.10.1.2 for details
Supply Air or Return Air	Outside the building (outdoors and exposed to weather)	5B	R-12	See Section C403.10.1.2 for details
Supply Air or Return Air	Unconditioned space (enclosed but not in the building conditioned envelope)	4C and 5B	R-6	See Section C403.10.1.2 for details
Supply Air or Return Air	Unconditioned space where the duct conveys air that is within 15°F of the air temperature of the surrounding unconditioned space	4C and 5B	R-3.3	See IMC Section 603.12 for additional requirements for condensation control at ductwork
Supply Air or Return Air	Where located in a building envelope assembly	4C and 5B	R-16	Duct or plenum is separated from building envelope assembly with the minimum insulation value
Supply Air	Within conditioned space where the supply duct conveys air that is less than 55°F or greater than 105°F	4C and 5B	R-3.3	See Section C403.10.1.2 for details
Supply Air	Within conditioned space that the duct directly serves where the supply duct conveys air that is less than 55°F or greater than 105°F	4C and 5B	None	See Section C403.10.1.2 for details
Supply Air	Within conditioned space where the supply duct conveys air that is 55°F or greater and 105 °F or less	4C and 5B	None	
Return or Exhaust Air	Within conditioned space, downstream of an energy recovery media, upstream of an automatic shutoff damper	4C	R-8	
Return or Exhaust Air	Within conditioned space, downstream of an energy recovery media, upstream of an automatic shutoff damper	5B	R-12	
Relief or Exhaust Air	Conditioned space and downstream of an automatic shutoff damper	4C and 5B	R-16	

**TABLE C403.10.1.1
OUTDOOR AIR DUCTWORK INSULATION**

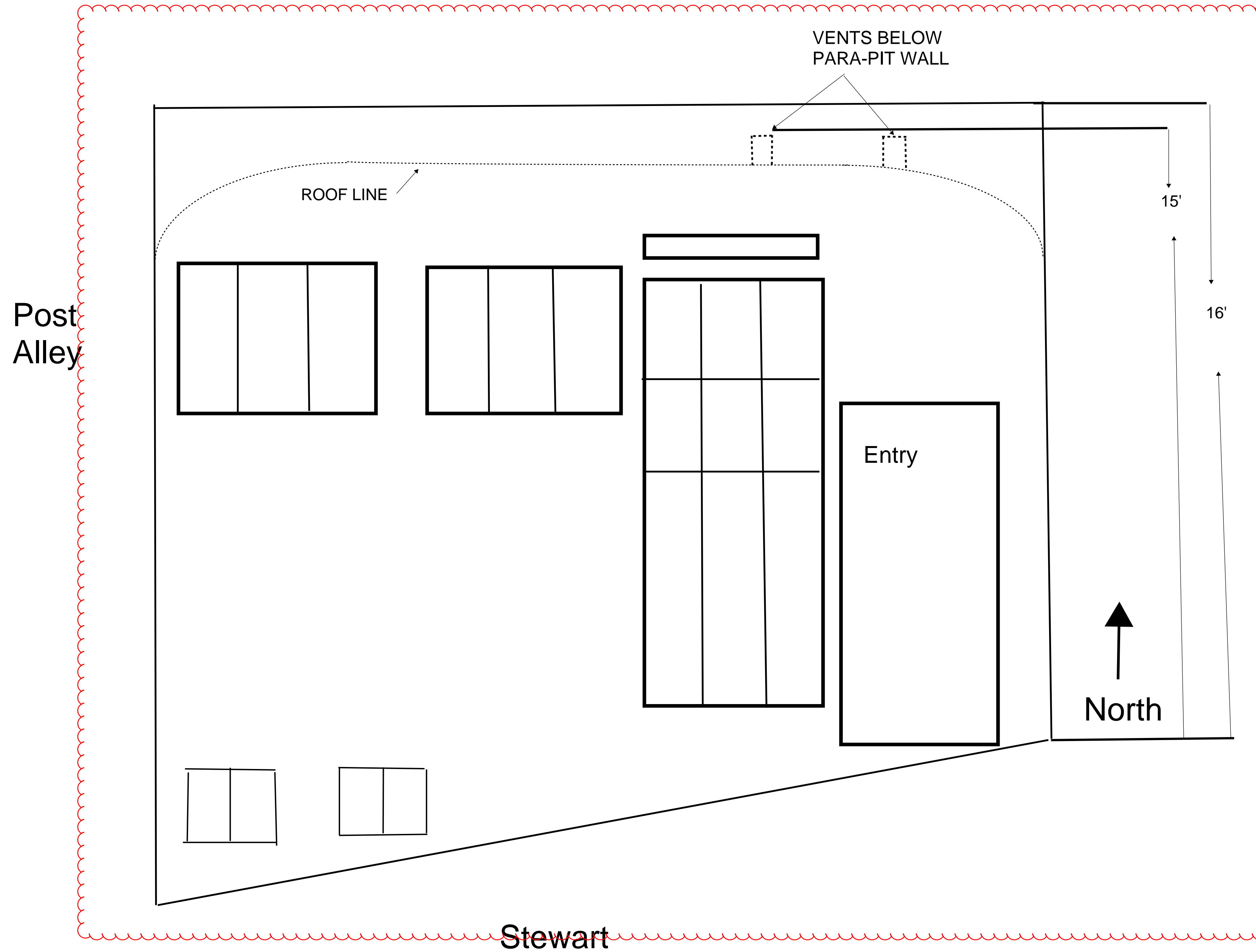
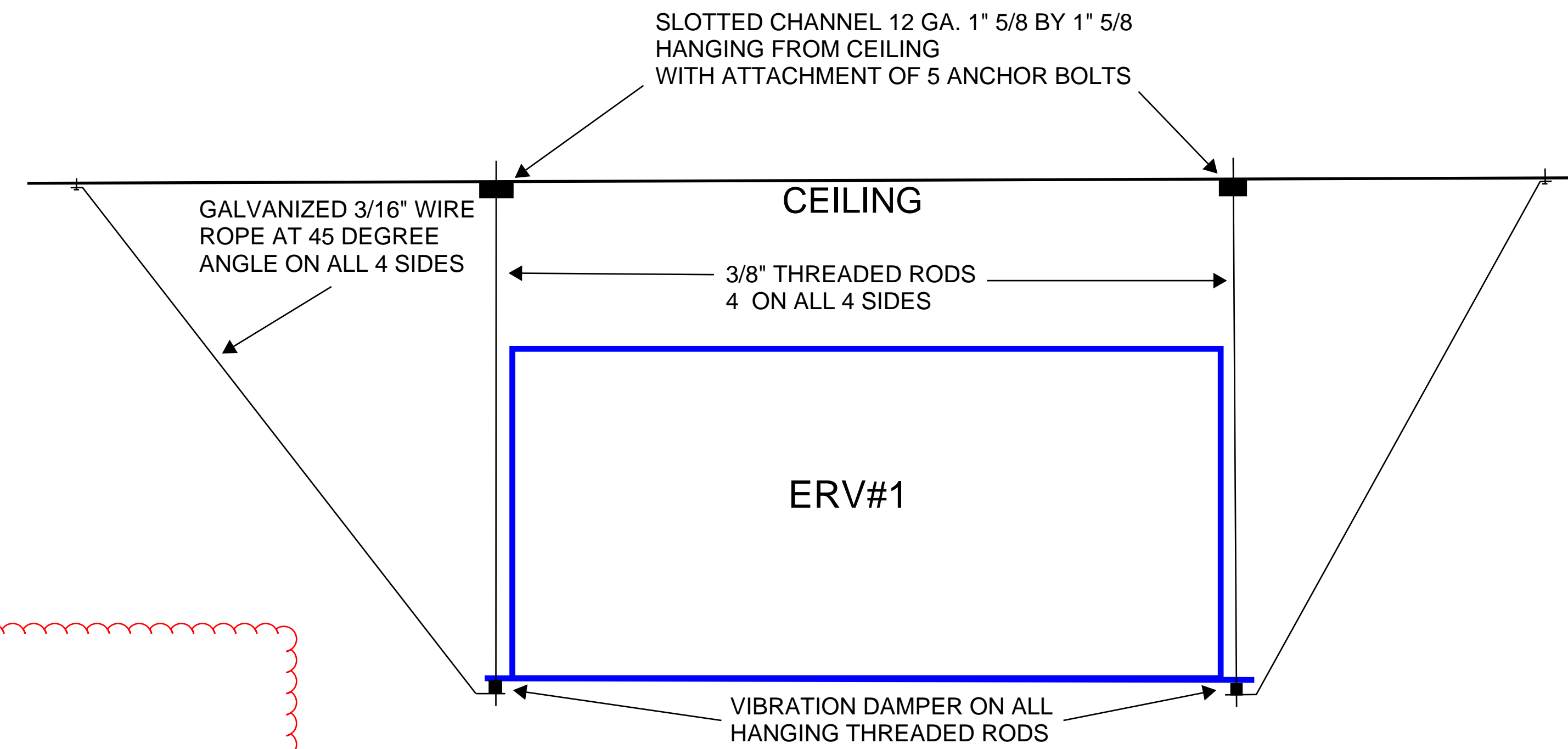
Duct system	Duct Location and Use	Climate Zone	Airflow	Minimum Installed Duct Insulation R-value ^{a,b}	Notes
Outdoor Air	Inside conditioned space and upstream of automatic shutoff damper	4C and 5B	≥ 2800 CFM	R-16	See Section C403.10.1.1 for additional requirements
Outdoor Air	Inside conditioned space and downstream of automatic shutoff damper to HVAC unit or room	4C	≥ 2800 CFM	R-8	
Outdoor Air	Inside conditioned space and downstream of automatic shutoff damper to HVAC unit or room	5B	≥ 2800 CFM	R-12	
Outdoor Air	Inside conditioned space	4C and 5B	< 2800 CFM	R-7	See Exception 1 to Section C403.10.1.1 for additional details



**PURPLE STORE
92 STEWART
SEATTLE, WA 98101**

M-2

HANGING OF UNIT FROM CEILING



Roof

Post Alley

120'

Stewart

50'

10' From Edge

10' Apart

Existing CU

Existing CU

Existing CU



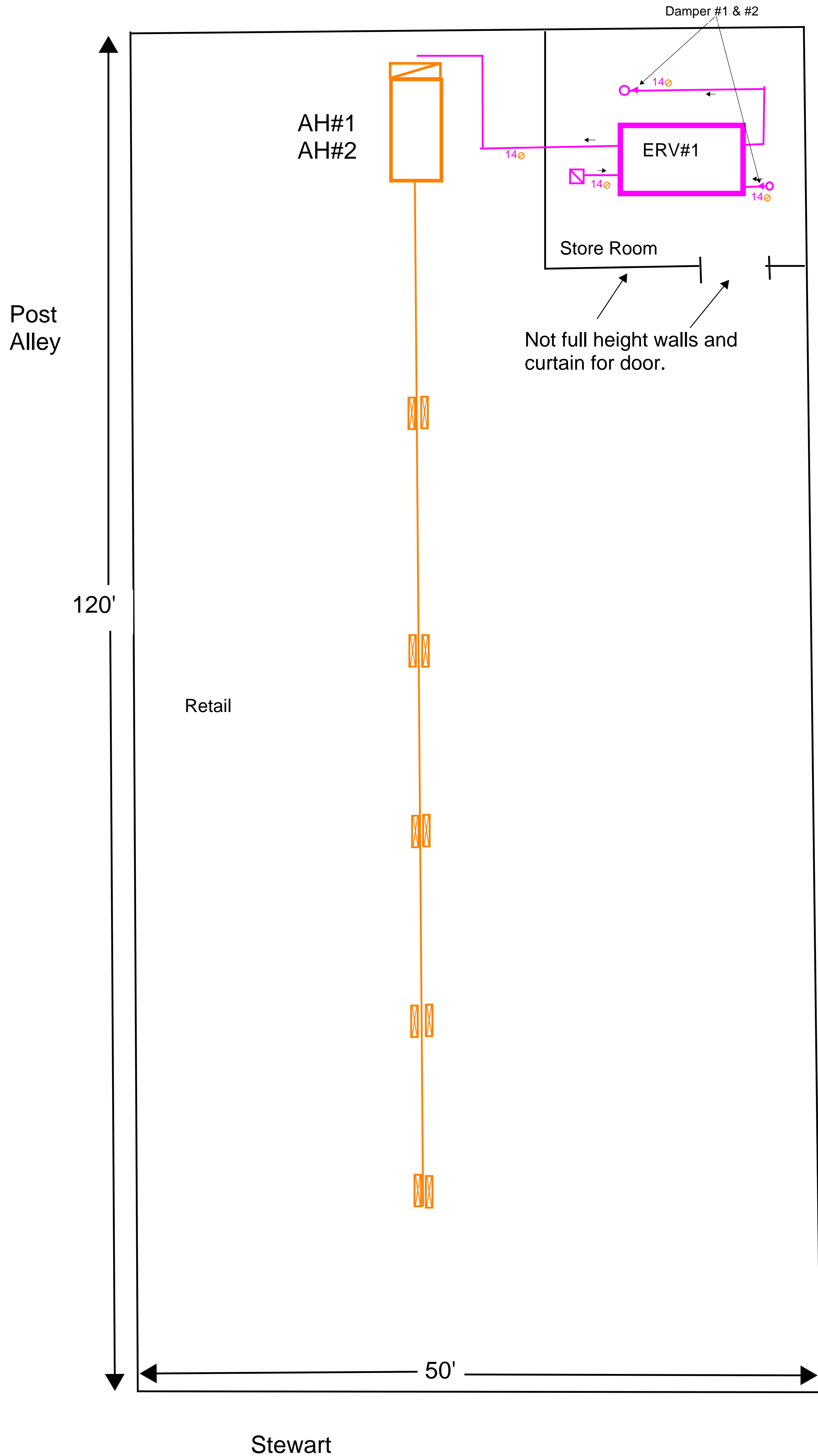
Removal of 2 existing outdoor units and 3 exhaust fans that are not in use, these are not on the plans I sent in for permit as it is basically clean up.

PURPLE STORE
92 STEWART
SEATTLE, WA 98101

M-4



2nd Floor



NEW UNIT TO BE INSTALLED

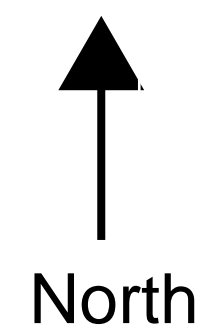
UNIT# ERV-1
 MAKE MITSUBISHI
 MODEL# MHC-TLGHF1200RVX02A
 CFM 1200 CFM
 POWER 208-230V/1PH/15A
 WEIGHT 251 LBS

UNIT# DAMPER #1AND #2
 MAKE EWC
 MODEL# 14 RSD
 POWER 24V

OUTDOOR AIR PER 2018 SMC 403.3.1.1
 TABLE 403.3.1.1 SALES
 $R_p \times P_z + R_a \times A_z = V_{bz}$
 $R_p = 7.5$
 $P_z = 90$
 $R_a = .06$
 $A_z = 6,000$

$7.5 \times 90 + .06 \times 6000 = 1035$ OUTSIDE AIR

1- 1200 CFM ERV will be installed for the store.



SYMBOLS LEGEND

- EXISTING DUCT WORK, GRILLS AND EXISTING UNITS
- NEW SUPPLY AIR DUCT WORK, GRILLS AND NEW UNITS
- NEW RETURN AIR DUCT WORK AND GRILLS
- NEW EXHAUST DUCT WORK, GRILLS AND FANS
- NEW ERV DUCT WORK, GRILLS AND UNITS
- ~ FLEX DUCT WORK SUPPLY OR RETURN
- ⊠ UNIT SUPPLY AIR DUCT DROPS
- ⊠ UNIT RETURN AIR DUCT DROPS
- ⊠ SUPPLY AIR GRILLS
- ▮ SUPPLY AIR GRILLS
- ⊙ SUPPLY AIR GRILLS
- ⊠ SIDEWALL SUPPLY AIR GRILLS
- ⊠ RETURN AIR GRILLS
- ⊠ SIDEWALL RETURN AIR GRILLS
- ⊠ EXIST OR ERV GRILLS
- $\frac{12}{250}$ GRILL COLLAR SIZE CFM AT GRILL
- 20X20 GRILL SIZE
- 12 O DUCT WORK SIZE
- └ HAND DAMPER TO ADJUST CFM
- ⊠ CEILING FAN
- INLINE FAN
- ⊙ THERMOSTAT
- Z-1 NEW ZONE#
- ZD-1 NEW ZONE DAMPER WITH MOTOR
- R/D REDUCT EXISTING GRILL
- M MOVE EXISTING GRILLS, THERMOSTAT AND UNIT
- ⊙ DUCT CONNECTION
- ⋯ MAINTENANCE SPACE
- S/D SMOKE DETECTOR
- F/S/D FIRE SMOKE DAMPER
- C/R/D CEILING RADIATION DAMPER



PURPLE STORE
 92 STEWART
 SEATTLE, WA 98101

Job Name:

System Reference:

Date:



GENERAL FEATURES

- Lossnay® cross-flow energy recovery core
- Minimal cross contamination between entering and leaving air streams
- Stand-alone remote controller (PZ-62DR-EA)
- M-NET Connectivity
- External input bypass damper control
- Stand alone or interlocks connects with all Mitsubishi Electric products
- Four fan speeds
- High efficiency DC Motor
- Standard MERV 7 non-woven fabric filter, washable fiber
- Optional high-efficiency MERV 14 and MERV 16 filters

Specifications		System	
Unit Type		LGH-F1200RVX2-E	
Capacity		CFM [m³/h]	1200 [2039]
Power source		Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption		kW	0.54 - 1.03
Current		A	0.094 - 0.24
Starting Current		A	12.2
MCA		A	10.38
Maximum Overcurrent Protection (MOCP)		A	15
Fan	Air Volume	CFM [m³/h]	300-600-900-1200 [510-1019-1529-2039]
	External Static pressure	in.WG	0.05–0.22–0.48–0.86
Exchange Efficiency	Temperature	%	81-76.5-73-67
	Enthalpy Cooling	%	71.0-64.5- 56.5- 50.0
	Enthalpy Heating	%	80.0-74.5-68.5-64.0
External Finish			Galvanized steel sheet
External Dimensions		In. [mm]	50-1/8 x 49-15/16 x 31-13/16 [1272 x 1267 x 808]
Net weight		Lbs [kg]	251 [114]
Energy Transfer Mechanism			Lossnay® Core
Heat Exchange Material			Partition, spacing plate-cellulose fiber membrane
Heat Exchange System			Air-to-air total heat (sensible heat + latent heat) exchange, no moving parts
Blower Type			9-5/8 In. diameter centrifugal fan
Motor Type			EC Motor
Entering Air Temperature Operation Range		°F [°C]	14 to 104 [-10 to 40]
Sound pressure level		dB(A)	20.0–28.0–37.0-43.0

Purple Store Roof pics

brien clough <refermochanic@yahoo.com>

Thu 4/4/2024 11:22 AM

To:Brien Clough <Brien@allstar-hvac.com>





Remove unit ABOVE
3 Roof Fans
2 Roof Heating cooling unit











Sent from my iPhone

Purple Store pics

brien clough <refermochanic@yahoo.com>

Thu 4/4/2024 11:20 AM

To:Brien Clough <Brien@allstar-hvac.com>











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