SUPPLY DIFFUSER

RETURN REGISTER

→ AIR FLOW DIRECTION ARROW

S VERTICAL ROUND DUCT

ROUND DUCT BREAK

VERTICAL SUPPLY DUCT
VERTICAL RETURN/EXHAUST DUCT

SHEET METAL DUCT

ACOUST, LINED DUCT

ELBOW WITH TURNING VANES

P 12" ROUND DUCT (12" DIA.)

12X8 DUCT SIZE (WIDTH × HGHT)

FLEX. DUCT CONNECTION

ROUND BRANCH DUCT
(SUPPLY OR RETURN)

FLEXIBLE ROUND DUCT (TO CEILING GRILLE OR DIFFUSER)

SQUARE TO ROUND TRANSITION

Y□H V□LUME DAMPER RD=16 GA BLADE W/L□CKING QUADRANT RECT= □PP□SED BLADE TYPE

VERTICAL FIRE/SMOKE DAMPER
W/ ACCESS DOOR

BACKDRAFT DAMPER

HUMIDISTAT OR HUMIDITY SENSOR

THERMOSTAT OR TEMPERATURE SENSOR

## PROJECT SPECIFICATIONS

### **MECHANICAL**

BASIC MECHANICAL REQUIREMENTS

#### 1,00 GENERAL

A. THIS SECTION APPLIES SPECIFICALLY TO ALL OTHER SECTIONS OF DIVISION 15

### 1.01 SCOPE OF WORK

- A. PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS THAT ARE REQUIRED TO PROVIDE A COMPLETE INSTALLATION AS INDICATED ON THE DRAWINGS AND AS DESCRIBED IN THESE SPECIFICATIONS INCLUDING THAT REASONABLY INFERRED FOR PROPER EXECUTION OF WORK AND SYSTEM OPERATION.
- B. PROVIDE CUTTING AND PATCHING AS REQUIRED FOR EXECUTION OF WORK PERFORMED UNDER THIS SECTION UNLESS SPECIFICALLY PROVIDED FOR UNDER OTHER SECTIONS.
- C. COORDINATE WITH WORK PERFORMED BY OTHER SECTIONS IN ORDER TO ACCOMMODATE THE REQUIREMENTS OF THIS SECTION AND TO ENSURE ADEQUATE SPACE AND PROPER LOCATION FOR ALL NECESSARY WORK ON THIS PROJECT WHETHER OR NOT WORK IS UNDER THIS SECTION, PROVIDE COORDINATION DRAWINGS AS NECESSARY.
- PROVIDE ALL NECESSARY RIGGING, EQUIPMENT AND MANPOWER TO SET EQUIPMENT AND MATERIALS IN PLACE AND TO REMOVE D. DEMOLISHED EQUIPMENT AND MATERIALS FROM THE SITE.
- PROVIDE ALL SEISMIC RESTRAINTS REQUIRED BY CODE AND THIS SPECIFICATION FOR ALL EQUIPMENT, DUCT, PIPE, AND MATERIALS E. FURNISHED UNDER THIS SECTION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE RESTRAINTS AND FOR PROOF OF ADEQUACY OF THE RESTRAINTS AND SHALL SUBMIT SEISMIC CALCULATIONS PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER.

### 1.03 CODES AND STANDARDS

- A. THE WORK INSTALLED UNDER THIS SECTION SHALL CONFORM TO ALL APPLICABLE CITY CODES, REGULATIONS AND STANDARDS AND THOSE APPLICABLE STATE AND FEDERAL CODES, REGULATIONS AND STANDARDS.
- B. DO NOT CONSTRUE ANYTHING CONTAINED IN THESE SPECIFICATIONS OR DRAWINGS TO PERMIT WORK TO BE INSTALLED THAT DOES NOT CONFORM TO CODE. THE CODES SHALL GOVERN WHERE THEY REQUIRE HIGHER STANDARDS OR ARE VIOLATED BY THE DRAWINGS AND SPECIFICATIONS.

### 1.04 DRAWINGS AND SPECIFICATIONS

A, COMPLETE ACCURACY OF THE DRAWINGS AND SPECIFICATIONS CAN NOT BE GUARANTEED. WHILE REASONABLE EFFORT HAS BEEN MADE TO COORDINATE THE LOCATION OF EQUIPMENT AND MATERIALS WITH THE STRUCTURE AND OTHER TRADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE EXACT REQUIREMENTS AND LOCATIONS AS GOVERNED BY ACTUAL JOB CONDITIONS. CHECK ALL INFORMATION AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE FABRICATION AND IN TIME TO AVOID ANY UNNECESSARY WORK.

## 1.05 GUARANTEE AND WARRANTIES

A. ALL MATERIALS, PARTS, EQUIPMENT, MODIFICATIONS MADE, AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK. SHOULD SUCH PARTS, MATERIALS, OR WORKMANSHIP BE FOUND TO BE DEFECTIVE DURING THIS PERIOD, THEY WILL BE RECTIFIED AT NO COST TO THE OWNER.

### 1.06 SUBMITTAL DATA

- A, EIGHT (8) SETS OF COMPLETE SUBMITTAL DATA SHALL BE FURNISHED ON ALL ITEMS WHETHER AS SPECIFIED OR PROPOSED AS ALTERNATES. THE SUBMITTALS SHALL BE IN RIGID BINDERS AND SHALL BE TABBED AND INDEXED FOR EASY CHECKING.
- B. EQUIPMENT, MATERIALS, AND PRODUCTS SPECIFICALLY IDENTIFIED, DESCRIBED OR SCHEDULED ON THE DRAWINGS AND NAMED FIRST IN THE SPECIFICATIONS IS THE BASIS OF DESIGN. THE OTHER MANUFACTURERS OR SUPPLIERS WHICH MAY BE NAMED IN THE SPECIFICATION ONLY INDICATE THE GENERAL ACCEPTABILITY OF THE MANUFACTURER OR SUPPLIER AND ARE CONSIDERED SUBSTITUTIONS.
- C. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY THAT ALTERNATIVE ITEMS SUBSTITUTED FOR THE FIRST NAMED MANUFACTURER WILL MEET THE JOB REQUIREMENTS AND IS RESPONSIBLE FOR THE COST OF REDESIGN AND MODIFICATIONS NECESSARY DUE TO THIS SUBSTITUTION.

## 1.07 RECORD DRAWINGS

- A. RECORD OF JOB PROGRESS: KEEP AN ACCURATE DIMENSIONAL RECORD OF THE AS-BUILT LOCATIONS OF ALL WORK.
- B. FINAL AS-BUILT REPRODUCIBLE DRAWINGS SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE.

## 1.08 OPERATING AND MAINTENANCE INSTRUCTIONS

A, FURNISH THREE (3) COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT BOUND IN A HARDBOARD BINDER AND INDEXED.

GRILLES - REGISTERS - DIFFUSERS													
MFR	MODEL NUMBER	TYPE	DAMPER	FRAME	INLET SIZE	FACE SIZE	MATERIAL	FINISH	NOTES				
TITUS	350ZFL	X	OBD	TYPE 1	1	ı	ALUM	#26 WHITE	X				
TITUS	PDS	×	OBD	TYPE 3	1	24X24	ALUM	#26 WHITE	×				
TITUS	MCD	X	OBD	TYPE 1	1	24X24	ALUM	#26 WHITE	×				
TITUS	PDR	×	OBD	TYPE 3	1	24X24	ALUM	#26 WHITE	×				
TITUS	50FF	Х	NONE	TYPE 3	_	_	ALUM	#26 WHITE	Х				
	TITUS TITUS TITUS	MFR NUMBER  TITUS 350ZFL  TITUS PDS  TITUS MCD  TITUS PDR	TITUS 350ZFL X  TITUS PDS X  TITUS MCD X  TITUS PDR X	TITUS 350ZFL X OBD  TITUS PDS X OBD  TITUS MCD X OBD  TITUS PDR X OBD	TITUS 350ZFL X OBD TYPE 1  TITUS PDS X OBD TYPE 3  TITUS MCD X OBD TYPE 1  TITUS PDR X OBD TYPE 3	MFR NUMBER TYPE DAMPER FRAME SIZE   TITUS 350ZFL X OBD TYPE 1 —   TITUS PDS X OBD TYPE 3 —   TITUS MCD X OBD TYPE 1 —   TITUS PDR X OBD TYPE 3 —	MFRNUMBERTYPEDAMPERFRAMESIZESIZETITUS350ZFLXOBDTYPE 1TITUSPDSXOBDTYPE 3-24X24TITUSMCDXOBDTYPE 1-24X24TITUSPDRXOBDTYPE 3-24X24	TITUS SIZE SIZE MATERIAL  TITUS 350ZFL X OBD TYPE 1 — — ALUM  TITUS PDS X OBD TYPE 3 — 24X24 ALUM  TITUS MCD X OBD TYPE 1 — 24X24 ALUM  TITUS PDR X OBD TYPE 3 — 24X24 ALUM	MFR         NUMBER         TYPE         DAMPER         FRAME         SIZE         SIZE         MATERIAL         FINISH           TITUS         350ZFL         X         OBD         TYPE 1         -         -         ALUM         #26 WHITE           TITUS         PDS         X         OBD         TYPE 3         -         24X24         ALUM         #26 WHITE           TITUS         MCD         X         OBD         TYPE 1         -         24X24         ALUM         #26 WHITE           TITUS         PDR         X         OBD         TYPE 3         -         24X24         ALUM         #26 WHITE				

	ROOFTOP PACKAGED UNITS															
MARK		R AREA SERVED	CAT. NO.	OPERATING WEIGHT	ELEC	E	VAPORATO	OR BLOW	ER			HEATING		COOLING	WELOUT	NOTEO
NO.	MFR		MODEL		AMPS/V/PH	TOTAL CFM	O. AIR CFM	E.S.P	HP	RPM	FILTER TYPE	TYPE	INTPUT MBH	SEN. MBH	WEIGHT LBS.	NOTES
AC-4	TRANE	LOBBY 101	YSC060	650	29.5/208/3	1800	1000	.4	1	868	1" THROWAWAY	GAS	48	43	700	(1)
AC-5	TRANE	162 MULTIP RM.	YSC060	650	29.5/208/3	1800	1000	.4	1	868	1" THROWAWAY	GAS	48	43	700	(1)(2)
AC-6	TRANE	162 MULTIP RM.	YSC060	650	29.5/208/3	1800	1000	.4	1	868	1" THROWAWAY	GAS	48	43	700	(1)(2)
AC-7	TRANE	162 MULTIP RM.	YSC060	650	29.5/208/3	1800	1000	.4	1	868	1" THROWAWAY	GAS	48	43	700	(1)(2)
AC-8	TRANE	162 MULTIP RM.	YSC060	650	29.5/208/3	1800	1000	.4	1	868	1" THROWAWAY	GAS	48	43	(1)	(1)(2)
AC-9	TRANE	132/136 LOBBY	YSC036	600	21.4/208/3	1200	200	.4	.75	868	1" THROWAWAY	GAS	48	34	(1)	(1)
AC-10	TRANE	162	YSC036	600	21.4/208/3	1200	200	.4	.75	868	1" THROWAWAY	GAS	48	34	(1)	(1)
AC-11	TRANE	162	YSC036	600	21.4/208/3	1200	200	.4	.75	868	1" THROWAWAY	GAS	48	34	(1)	(1)

FURNISH WITH ROOF CURB AND PROGRAMMABLE T—STAT.
FOR FUTURE

(2)

1.09 SEISMIC RESTRAINTS

A, GENERAL: ALL EQUIPMENT, PIPING, DUCTWORK, AND MATERIALS SHALL BE FASTENED TO THE STRUCTURE WITH PROPERLY SIZED AND STRUCTURALLY
ENGINEERED ANCHORS, BOLTS, AND RESTRAINTS TO PREVENT PERMANENT DISPLACEMENT IN ANY DIRECTION CAUSED BY LATERAL MOTION,
OVERTURNING OR UPLIFT.

## 1.10 PIPE HANGERS, SUPPORTS AND PENETRATIONS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SIZING ALL DUCT SUPPORTS, HANGERS, AND ACCESSORIES INCLUDING ALL ATTACHMENTS TO THE STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE GENERAL CONTRACTOR ALL TEMPORARY PIPE SUPPORTS DURING THE DEMOLITION OF THE EXISTING CLEANROOM AND FITUP OF THE NEW CLEANROOM ENVELOPE. PIPESUPPORTS CURRENTLY SUPPORTED FROM THE BOTTOM OF THE ROOF DECK MAY NEED TEMPORARY SUPPORT WHILE THE GENERAL INSTALLS SHEETROCK TO THE BOTTOM OF THE EXISTING ROOF DECK.
- B. USE CADMIUM PLATED OR GALVANIZED HANGERS. ATTACHMENTS, RODS, NUTS, BOLTS, AND OTHER ACCESSORIES.

#### 2,00 MATERIALS

- 2.01 VOLUME DAMPERS
- A. DAMPERS SHALL CONFORM TO SMACNA STANDARDS. DAMPERS SHALL BE OPPOSED BLADE TYPE, ALUMINUM OR GALVANIZED STEEL 2 GAUGE HEAVIER THAN DUCTS IN WHICH INSTALLED.
- 2.02 FIRE AND SMOKE DAMPERS
  - A. CONFORM TO NFPA-90A AND UL 555. FUSIBLE LINKS SHALL COMPLY WITH UL 33, AND SHALL SEPARATE AT 212F. ACCEPTABLE MANUFACTURER: RUSKIN OR APPROVED EQUAL.
- 2.03 DUCTWORK
- A. FABRICATE DUCTS TO SIZE INDICATED ON THE DRAWING. ALL DUCT SHALL BE RIGID EXCEPT THE CONNECTING DUCT TO DIFFUSER OR RETURN GRILLES WILL BE FLEXIBLE DUCT.
- B. CONSTRUCTION MATERIAL AND REINFORCEMENT SHALL CONFORM TO SMACNA (CURRENT EDITION) LOW PRESSUREDUCT CONSTRUCTION STANDARDS, AND NFPA-90A.
- C. DUCTWORK SHALL BE OF GALVANIZED STEEL CONSTRUCTION, ALL FACTORY MADE AIR DUCTS, IF USED SHALL BE CLASS 1.
- D. FLEXIBLE DUCT SHALL BE THERMAFLEX TYPE M-KC OR APPROVED EQUAL AND SHALL NOT EXCEED 6'-0" IN LENGTH, FLEXIBLE DUCT SHALL BE LISTED BY UL 181 WITH A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50.

### 2.04 DUCTWORK INSULATION

- A. INSULATE SUPPLY AND RETURN DUCT.
- B. INSULATION SHALL 2" THICK, 1 PCF FLEXIBLE FIBERGLASS WITH FACTORY APPLIED FOIL KRAFT (FRK) JACKET, OWENS CORNING TYPE 100 AND FRK TAPE JOINT SEAL.INSULATION SHALL BE TESTED AS PER ASTM WITH A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50. INSULATION SHALL COMPLY WITH CALIFORNIA TITLE 24 REQUIREMENTS.

#### 3.00 EXECUTION

- 3.01 START- UP SERVICES
  - A, CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER OPERATION OF ALL SYSTEMS, MINOR SUBSYSTEMS, AND SERVICES PROVIDED UNDER THIS DIVISION, CONTRACTOR SHALL COORDINATE START-UP PROCEDURES CALIBRATION. AND SYSTEM CHECKOUT WITH ALL SUBCONTRACTORS AND TRADES INVOLVED. ANY SYSTEM OPERATIONAL PROBLEMS SHALL BE DIAGNOSED AND ALL CORRECTIONAL PROCEDURES SHALL BE INITIATED WITH THE VARIOUS SUBCONTRACTORS AS REQUIRED TO BRING THE SYSTEM INTO COMPLIANCE WITH THE DESIGN INTENT.
  - B, THE CONTRACTOR SHALL CHECK ALL EXISTING EQUIPMENT DURING THE INITIAL START-UP TO ENSURE CORRECT OPERATION, ADEQUATE FLUIDS OR AIRFLOWS, NON-OVERLOADING ELECTRICAL CHARACTERISTICS, PROPER ALIGNMENT, AND VIBRATION ISOLATION, SYSTEMS SHALL BE CHECKED FOR AIR AND/OR WATER FLOWS THROUGHOUT WITHOUT BLOCKAGES, AIR HANDLING SYSTEMS SHALL BE CHECKED FOR PROPER DAMPER CONNECTIONS AND POSITIONS, ALIGNED AND ADJUSTED BELT DRIVES, PROPER LUBRICATION, AIR FILTERS INSTALLED, NONEXCESSIVE ELECTRICAL CHARACTERISTICS AND MINIMAL VIBRATION, OTHER MISCELLANEOUS EQUIPMENT SHALL BE STARTED AND OPERATED AS DESCRIBED ABOVE AS APPLICABLE.
  - C. A FINAL AND COMPLETE START-UP AND BALANCE REPORT SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE AND PAYMENT, THIS REPORT SHALL BE SIGNED BY EACH PERSON DOING THE START-UP TASK AND BY THE RESPONSIBLE FIELD PERSON, REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO DATE OF TEST: INSTRU14ENT USED: DATE OF LAST CALIBRATION: TEMPERATURES HUMIDITIES: SET POINTS; RPM; VOLTAGE, AMPERAGE: PRESSURES: STABILITY; ETC.

EXHAUST FAN SCHEDULE													
TAG	MANUFACTURER	AREA SERVED	MODEL NUMBER	FAN TYPE	CFM	S.P. "H20	RPM	MO <sup>-</sup>	FOR POWER	WEIGHT (POUNDS)	NOTES		
EF-1	GREENHECK	WOMEN RR 132	G-120	CENTRIFUGAL ROOF	900	0.25	1140	1/6	120/1ø	40	(1)		
EF-2	GREENHECK	MEN RR 133	G-120	CENTRIFUGAL ROOF	900	0.25	1140	1/6	120/1ø	40	(1)		
EF-3	GREENHECK	WOMEN RR XXX	SP-A250	CENTRIFUGAL ROOF	246	0.125	1000	83 WATTS	120/1ø	25	(1)(2)		
EF-4	GREENHECK	MEN RR XXX	SP-A250	CENTRIFUGAL ROOF	246	0.125	1000	B3 WATTS	120/1ø	25	(1)(2)		
EF-5	GREENHECK	RESTROOM 109	SP-A110	CENTRIFUGAL ROOF	107	0.125	950	49 WATTS	120/1ø	20	(1)(3)		
EF-6	GREENHECK	SHOWER 108	SP-A110	CENTRIFUGAL ROOF	107	0.25	950	49 WATTS	120/1ø	20	(1)(3)		
EF-7	GREENHECK	SHOWER 110	SP-A110	CENTRIFUGAL ROOF	107	0.25	950	49 WATTS	120/1ø	20	(1)(3)		
EF-8	GREENHECK	RESTROOM 111	SP-A110	CENTRIFUGAL ROOF	107с с	0.25	950	49 WATTS	120/1ø	20	(1)(3)		
EF-9	GREENHECK	STORAGE 152	GB-120	CENTRIFUGAL ROOF	1500	0.25	1350	1/4	120/1ø	40	(1)(2)		
EF-10	GREENHECK	STORAGE 158	GB-120	CENTRIFUGAL ROOF	1500	0.25	1350	1/4	120/1ø	40	(1)		
EF-11	GREENHECK	HOOD K-22	CUBE 360XP-30	CENTRIFUGAL ROOF	4100	2.0	960	3	120/1ø	40	(1)		
EF-12	GREENHECK	HOOD K-23	CUBE 360XP-30	CENTRIFUGAL ROOF	4500	2.0	990	3	120/1ø	40	(1)		
EF-13	GREENHECK	HOOD K-24	CUBE 360XP-15	CENTRIFUGAL ROOF	2400	2.0	1110	1-1/2	120/1ø	40	(1)		
EF-14	GREENHECK	HOOD K-20	CUBE 360XP-30	CENTRIFUGAL ROOF	4500	2.0	990	3	120/1ø	40	(1)		
EF-15	GREENHECK	WASH ROOM 126	GB-80	CENTRIFUGAL ROOF	300	0.25	1350	1/4	120/1ø	40	(1)		
EF-16	GREENHECK	STORAGE 137	GB-90	ROOF	900	0.25	1410	1/4	120/1ø	40	(1)		
EF-17	GREENHECK	STORAGE 112	GB-80	ROOF	300	0.25	1350	1/4	120/1ø	40	(1)		
EF-18	GREENHECK	STORAGE 135	GB-80	ROOF	300	0.25	1350	1/4	120/1ø	40	(1)		

(1) FURNISH WITH BACK DRAFT DAMPER

(3) CEILING MOUNTED

(2) FOR FUTURE

COMMUNITY and CULTURAL C

REVISIONS

05-24-10 ISSUED FOR PLAN CHECK

MECHANICAL SPECIFICATIONS AN EQUIPMENT SCHEDULE

DATE
8/12/09
SCALE:
AS NOTED
DRAWN BY:
RL/ssm
PROJECT:
ARROWHEAD

M-0

HANGER STRAP SECURE
TO STRUCTURE AS REQ'D
LOCATE WITHIN 2 FT. OF
DIFFUSER CENTERLINE.

FLEX DUCT. SEE
PLAN FOR SIZE

PROVIDE SMOOTH RADUIS
CONNECTION. PROPERLY
SUPPORT FLEX DUCT
FOR SMOOTH AIR FLOW
TO DIFFUSER.

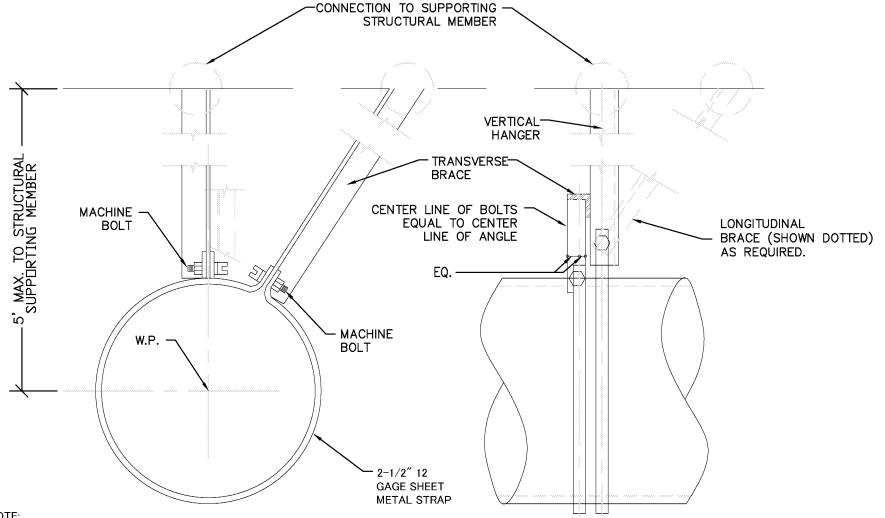
SHARP RADUIS NOT
ACCEPTABLE

SUSPENDED CEILING

REFER TO DIFFUSER SCHEDULE
FOR MAKE, MODEL NUMBER AND SIZE.

NOTE: SEISMICALLY SECURE PER
SMACNA STANDARDS AND UBC
STANDARDS SECTION 47-18.

1 CEILING DIFFUSER CONNECTION
M0.2 SCALE: NONE



1. REFER TO 1998 SEISMIC RESTRAIN MANUAL FOR GENERAL REQUIREMENTS OF VERTICAL HANGERS, BRACE ANGLES, CONNECTION TO SUPPORTING STRUCTURE AND SPACING OF SUPPORTS.

2. SEE 1998 SMACNA "SEISMIC RESTRAINT MANUAL" TABLE 5-6, 6-6, OR 7-6 FOR VERTICAL HANGERS, DIAGONAL AND HORIZONTAL BRACES, BOLT SIZE, CONNECTION TO SUPPORTING STRUCTURE, AND SPACING OF BRACING.

3. AS AN OPTION, CONTRACTOR CAN USE UNISTRUT P-1000 CHANNELS IN LIEU OF ANGLES FOR VERTIICAL HANGERS OR BRACE FRAMES.

2

SCALE: NONE

HANGER CONNECTION TO ROUND DUCT

	ROOFTOP MAKE UP AIR UNITS																
MARK NO. MFR		HOOD SERVED	CAT. NO.	ELEC	FAN					HEATING				COOLING	WELGUT	NOTES	
	MFR		MODEL	AMPS/V/PH	TOTAL CFM	T.S.P	внр/нр	RPM	FILTER TYPE	TYPE	INTPUT MBH	OUTPUT MBH	EFFICIENCY MBH	TYPE	SEN. MBH	WEIGHT LBS.	NOTES
MAU-1	GREENHECK	HOOD K-22	DG-112-H20	40.7/208/1	4090	2"	2.9/5.0	868	2" ALUM. MESH	GAS	384.1	353.38	92%	EVAP.	90	950	(1)
MAU-2	GREENHECK	HOOD K-23	DG-112-H20	40.7/208/1	4500	2"	3.5/5.0	1255	2" ALUM. MESH	GAS	400	368	92%	EVAP.	110	1000	(1)
MAU-3	GREENHECK	HOOD K-24	DG-109-H10	25.6/208/1	2400	2"	2.29/3.0	1742	2" ALUM. MESH	GAS	225	207	92%	EVAP.	55	700	(1)
MAU-4	GREENHECK	HOOD K-20	DG-112-H20	40.7/208/1	4500	2"	3.5/5.0	1255	2" ALUM. MESH	GAS	400	368	92%	EVAP.	110	1000	(1)

(1) FURNISH WITH SELF FLASHING ROOF CURB. INTERLOCK WITH EXHAUST FAN, FIRE PROTECTION SYSTEM AND GAS SHUT-OFF VALVE.

SUPPLY FAN SCHEDULE													
TAG	MANUFACTURER	AREA	MODEL	FAN	CFM	S.P. "H20	RPM		OTOR	WEIGHT	NOTES		
		SERVED	NUMBER	MBER TYPE  CENTRIFUGAL				HP	POWER	(POUNDS)			
SF-1	GREENHECK	STORAGE RM. 152	RSFP-90	ROOF	1000	0.75	980	1/2	120/1ø 	140	(1)		
SF-2	GREENHECK	STORAGE RM. 158	RSFP-100	CENTRIFUGAL ROOF	1600	0.75	900	1	120/1ø	160	(1)		
SF-3	GREENHECK	REST RM. 110	RSFP-90	CENTRIFUGAL ROOF	800	04	700	1/2	120/1ø	140	(1)		
SF-4	GREENHECK	REST RM. 110	RSFP-90	CENTRIFUGAL ROOF	800	0.4	700	1/2	120/1ø	140	(1)		
SF-5	GREENHECK	STORAGE RM 137	RSFP-90	CENTRIFUGAL ROOF	800	0.4	700	1/2	120/1ø	140	(1)		
								_					

(1) FURNISH WITH BACK DRAFT DAMPER

		DUCTLES:	S SPL	IT AIR	COI	NDIT	IONIN	G SYST	ΈM					
	EVAPORATOR UNIT													
MARK NO.			CAPACITY BTUH	ELEC V/PH	FAN FLA	MCA	MAX FUSE	OPERATING	REFRIG. F					
	MFR	CAT. NO. MODEL						WEIGHT LBS.	LIQUID	SUCTION	NOTES			
FC-1	MITSUBISHI	MSZ-A09NA	9000	208V/1ø	0.76	1.0	_	30	1/4"	3/8"	(1)(2)			
FC-2	THERMALRITE	_	_	208V/1ø	1/4HP									

1) PROVIDE WITH CONDENSATE PUMP

2 FACTORY WIRED FOR REMOTE 24V THERMOSTAT.

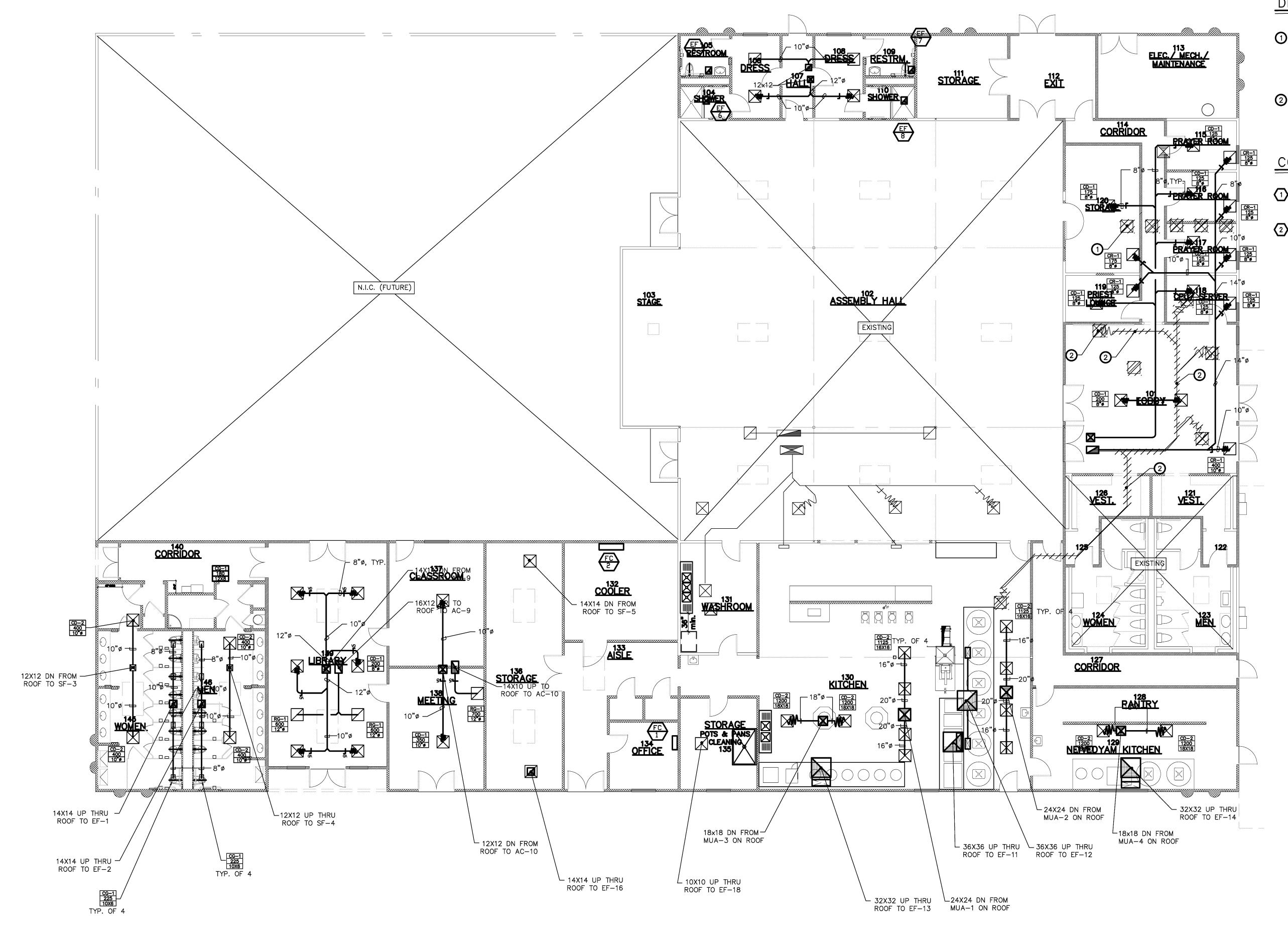
	CONDENSING UNIT														
			COOLING	TITLE 24 IN		ELI	ECTRICA								
IARK NO.	MFR	CAT. NO. MODEL	CAPACITY (TOTAL BTUh)	REQUIRED EFFICIENCY (SEER)	LISTED EFFICIENCY (SEER)	V/PH	МСА	MAX FUSE	FAN HP	FAN FLA	COMP RLA	OPERATING WEIGHT LBS.	NOTES		
CU-1	MITSUBISHI	MUZ-A09NA	9,000	10.0	10.0	208V/1ø	12	15	1/4	.52	7.8	175	(1)		
U-2	THERMALRITE	MOH025	ı	_		208V/1ø	12	_	2-1/2	_	-	_	(1)		

1) PROVIDE WITH LOW AMBIENT CONTROLS.

M - 0.2

OMIN 1232 #

M-1



MECHANICAL FLOOR PLAN-COSTRUCTION

SCALE: 1/8"=1'-0"

DEMOLITION NOTES:

- REMOVE (E) DUCT AND GRILLES ASSOCIATED WITH (E) MAKE-UP AIR UNIT AND EXAUST FAN. SCHEDULE THE REMOVAL WITH CONSTRUCTION MANAGER. PATCH THE ROOF OPENINGS.
- REMOVE (E) DUCT AND ASSOCIATED SUPPLY AND RETURN AIR DIFFUSERS.

# CONSTRUCTION NOTES:

- REMOVE (E) UNIT AND REPLACE WITH (N) UNIT AS SCHEDULED ON DWG, M0.1.
- INSTALL (N) UNIT AS SCHEDULED ON DWG.
  M0.1 AND M0.2. COORDINATE WITH ELECTRICAL
  PLANS FOR POWER AND
  STRUCTURAL/ARCHITECTURAL FOR EXACT
  LOCATION.

REMOVE (E) MAKE-UP AIR UNIT AND EXAUST FAN. SCHEDULE THE REMOVAL WITH CONSTRUCTION MANAGER, PATCH THE ROOF OPENINGS. ② (EF) 17 CONSTRUCTION NOTES: (E) EXISTING (E)
AC
3 1 AC 4 2  $\frac{CU}{2}$ \$F 2 4 2 2 (EF) MUA 2 AC 10 2 2 (CU) 2 MUA 3 

H

2 (EF)

- REMOVE (E) UNIT AND REPLACE WITH (N) UNIT AS SCHEDULED ON DWG. MO.1.
- INSTALL (N) UNIT AS SCHEDULED ON DWG, M0.1 AND M0.2, COORDINATE WITH PLUMBING PLANS FOR CONDENSATE DRAIN, NAT. GAS, DOM. WATER FOR MAKE-UP AIR (MAU) UNITS, ELECTRICAL PLANS FOR POWER AND STRUCTURAL/ARCHITECTURAL DWGS, FOR EXACT LOCATION.

MECHANICAL ROOF PLAN-DEMOLITION AND COSTRUCTION

2 (F) (D)

2) (Z) (EF) (13)

**M-1** SCALE: 1/8"=1'-0"