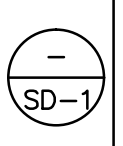
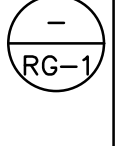
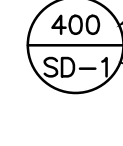



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one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
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one eighth inch = one foot

AIR DISTRIBUTION SCHEDULE									
SYM.	MFR. & MODEL #	NECK SIZE	CFM RANGE	MAX. NECK VELOCITY	MAX. N.C.	S.P. DROP	TYPE	DAMPER	REMARKS
	PRICE SMX	6"x6" 9"x9" 12"x12" 15"x15" 18"x18"	0-130 131-235 236-360 361-495 496-675	400	30	.06	LAY-IN OFFWHITE	SEE NOTE	FRAME TYPE T-BAR SQUARE TO ROUND ADAPTER
	PRICE 535	8"x8" 10"x10" 12"x12" 14"x14" 16"x16" 20"x20"	0-170 171-270 271-390 391-540 541-700 701-910	400	30	.03	LAY-IN OFFWHITE	SEE NOTE	FRAME TYPE FOR GYP. BOARD CEILING

LEGEND

CFM

AIR DISTRIBUTION DEVICE

SD

RG

TG

EG

SR

SUPPLY DIFFUSER






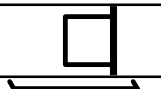


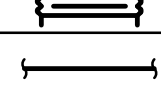
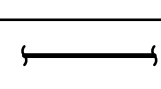
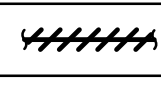
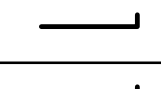
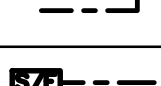
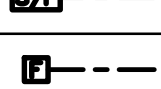

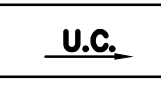
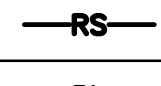




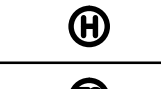



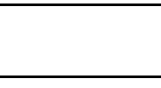
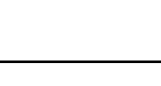
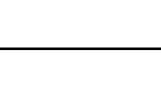
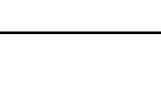
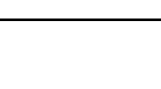
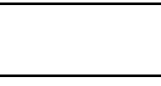
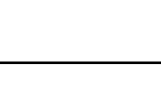
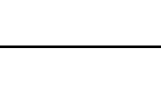
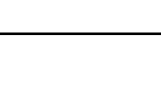
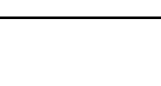
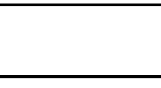

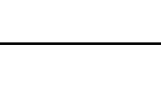


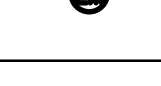


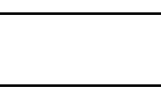






RETURN GRILLE

TRANSFER GRILLE

EXHAUST GRILLE

SUPPLY REGISTER

NOTE: MANUAL VOLUME DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES TO INDIVIDUAL DIFFUSERS, GRILLES, AND REGISTERS, AS WELL AS FRESH AIR INTAKE DUCTS. DAMPERS SHALL BE LOCATED AT THE BRANCH DUCT LOCATIONS. THE MECHANICAL CONTRACTOR SHALL COORDINATE LOCATIONS OF DAMPERS WITH THE AIR BALANCE CONTRACTOR PRIOR TO BID, SO THEY ARE ACCESSIBLE PRIOR TO INSTALLATION. IN LOCATIONS WHERE THESE DAMPERS ARE INACCESSIBLE, CABLE OPERATED ADJUSTMENT CONTROLS SHALL BE PROVIDED AT NO ADDITIONAL COST. OPPOSED BLADE DAMPERS SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE.

LEGEND		
SYMBOL	ABBR.	DESCRIPTION
	-	SUPPLY AIR RISER
	-	RETURN AIR RISER
	-	EXHAUST AIR RISER
	SAG	SUPPLY AIR GRILLE
	RAG	RETURN AIR GRILLE
	EAG	EXHAUST AIR GRILLE
	SWR	SIDEWALL REGISTER
	(L)	LINED DUCTWORK
	-	FLEXIBLE CONNECTION
	FC	FLEXIBLE CONNECTION
	-	NEW DUCT (SEE PLAN)
	-	EXISTING DUCT (SEE PLAN)
	-	DEMO DUCT (SEE PLAN)
	MVD	MANUAL VOLUME DAMPER
	BDD	BACKDRAFT DAMPER
	SFD	SMOKE / FIRE DAMPER
	FD	FIRE DAMPER
	DL	DOOR LOUVER
	UC	UNDERCUT DOOR 3/4"
	RS	REFRIGERANT SUCTION LINE
	RL	REFRIGERANT LIQUID LINE
	CD	CONDENSATE DRAIN
	S.D.	SMOKE DETECTOR
	P.O.C.	POINT OF CONNECTION
	T-STAT	THERMOSTAT @ 48" MAX. A.F.F.
	H	HUMIDISTAT @ 48" MAX. A.F.F.
	TS	TEMPERATURE SENSOR @ 48" MAX. A.F.F.
	OS	OVERRIDE SWITCH@ 48" MAX. A.F.F.
	PD	PRESSURE DIFFERENTIAL SWITCH
	S	SWITCH @ 48" MAX. A.F.F.
	O.C.	ON CENTER
	HWR	HOT-WATER RETURN
	HWS	HOT-WATER SUPPLY
	I.D.	INSIDE DIAMETER
	O.D.	OUTSIDE DIAMETER
	W/	WITH
	S/M	SHEET METAL
	S/S	STAINLESS STEEL
	G.C.	GENERAL CONTRACTOR
	VTR	VENT THRU ROOF
	EMS	ENERGY MANAGEMENT SYSTEM
	OBD	OPPOSED BLADE DAMPER
	FSC	FAN SPEED CONTROL
	E	ITEMS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AS SPECIFIED ON THE ELECTRICAL CONTRACT DOCUMENTS
	M	ITEMS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR AS SPECIFIED ON THE MECHANICAL CONTRACT DOCUMENTS
	EM	ITEMS FURNISHED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR.
	ME	ITEMS FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
	C.C.	CONTROLS CONTRACTOR
	CBD	COUNTER-BALANCE DAMPER
	D.S.	DOOR SWITCH


GENERAL NOTES	
1. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.	
2. SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED.	
3. ASBESTOS OR HAZARDOUS WASTE: IT IS UNDERSTOOD AND AGREED THAT THIS CONTRACT DOES NOT CONTEMPLATE THE HANDLING OF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL. IF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL IS ENCOUNTERED, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY. DO NOT DISTURB, HANDLE, OR ATTEMPT TO REMOVE.	
4. THE PREMISES AND EXISTING BUILDING AT THE SITE WILL BE IN USE AT THE TIME THE WORK OF THIS CONTRACT IS IN PROGRESS. CONDUCT WORK SO AS TO CAUSE NO INCONVENIENCE OR DANGER TO THE PERSONNEL ON THE PREMISES. MAINTAIN CONTINUITY OF SERVICE TO THE EXISTING MEP SYSTEMS, EXCEPT FOR DESIGNATED INTERVALS DURING WHICH DISCONNECTIONS CAN BE MADE. SHUT DOWN PERIOD SHALL BE COORDINATED WITH VA REPRESENTATIVE PRIOR TO PROCEED.	
5. CONTRACTOR SHALL OBTAIN PERMIT FROM VA BEFORE CONDUCTING INSPECTION OF THE EXISTING FACILITY.	
6. CONTRACTOR TO PROVIDE COMPLETE SEISMIC ANCHORAGE AND BRACING FOR ALL PIPING AND EQUIPMENT TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION AS SHOWN ON THE DRAWINGS.	
7. THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.	
8. PROJECT IMPLEMENTATION SHALL BE CARRIED OUT IN PHASES TO ENSURE OPERATION WILL NOT BE DISRUPTED. THE CONTRACTOR SHALL SUBMIT PHASING PLAN FOR VA'S APPROVAL PRIOR TO CONSTRUCTION.	
9. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH IN THE UNITED STATES DEPARTMENT OF VETERAN AFFAIRS TIL MASTER CONSTRUCTION SPECIFICATIONS. CONTRACTOR SHALL VISIT THE VA WEBSITE AND DOWNLOAD ALL APPLICABLE SPECIFICATION SECTIONS PRIOR TO BID. WHERE CONFLICT OCCUR BETWEEN THESE DRAWINGS AND THE DOWNLOADED MASTER SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT SHALL APPLY. (TYPICAL ALL SHEETS)	


NOTES FOR SEISMIC BRACING	
GENERAL	
1. NO BRACING IS REQUIRED IF THE TOP OF THE DUCT OR PIPE IS SUSPENDED 12 INCHES OR LESS FROM THE SUPPORTING STRUCTURAL MEMBER.	
2. WALLS, INCLUDING DRYWALL PARTITIONS, MAY REPLACE REQUIRED TRANSVERSE OR VERTICAL BRACING FOR DUCTWORK OR PIPING.	
3. ATTACHMENT TO STRUCTURAL MEMBERS SHALL USE DEVICES INCLUDED IN FEDERAL SPECIFICATION WW-H--171 (MSS SP-58) OR BE BOLTED/WELDED AS APPROVED BY RESIDENT ENGINEER. BRACES SHALL BE CONNECTED TO THE HANGERS/SUPPORTS FOR DUCTS, PIPING AND SUSPENDED EQUIPMENT.	
4. LATERAL SEISMIC FORCE SHALL BE CONSIDERED TO ACT CONCURRENTLY WITH THE DEAD LOAD. THE SLENDERNESS RATIO (l/r) OF BRACES SHALL NOT EXCEED 200, WHERE (l) IS THE LENGTH OF THE BRACE AND (r) IS THE LEAST RADIUS OF GYRATION, BOTH IN INCHES.	
5. SWAY BRACING METHODS SHOWN IN NFPA 13 (SPRINKLER PIPING MAY BE USED IN LIEU OF DETAILS SHOWN ON THE DRAWINGS FOR PIPING AND DUCTWORK.	
DUCTWORK	
1. BRACE ALL RECTANGULAR DUCTS OF 6 SQ. FT. CROSS SECTIONAL AREA AND LARGER AT THE BOTH ENDS OF THE DUCT RUN AND LONGITUDINAL BRACING AT LEAST ONCE PER DUCT RUN. BRACE ALL ROUND/OVAL DUCTS 28 INCHES IN DIAMETER AND LARGER.	
2. TRANSVERSE AND VERTICAL BRACING SHALL OCCUR AT 30 FOOT INTERVALS, MAXIMUM. LONGITUDINAL BRACING SHALL OCCUR AT 60 FOOT INTERVALS, MAXIMUM.	
PIPING	
1. BRACE ALL PIPES 2-1/2" INSIDE DIAMETER & LARGER LOCATED OUTSIDE OF THE MECHANICAL ROOM . BRACE ALL PIPES INSIDE THE MECHANICAL ROOMS FROM 1-1/4 AND LARGER.	
2. TRANSVERSE AND VERTICAL BRACING SHALL OCCUR AT 40 FOOT INTERVALS, MAXIMUM. LONGITUDINAL BRACING SHALL OCCUR AT 80 FOOT INTERVALS, MAXIMUM. REFER TO SMACNA FOR RECOMMENDED DISTANCE BETWEEN BRACING DEPENDING ON THE SIZE OF THE PIPES.	
3. DO NOT FASTEN ONE RIGID PIPING SYSTEM TO TWO DISSIMILAR PARTS OF THE BUILDING THAT MAY RESPOND IN A DIFFERENT MODE DURING AN EARTHQUAKE; FOR EXAMPLE, A WALL AND A ROOF.	
4. DO NOT USE BRANCH LINES TO BRACE MAIN LINES.	

SHEET INDEX		
S.NO.	SHEET No.	SHEET TITLE
1	M-001	MECHANICAL LEGEND, GENERAL NOTES AND SCHEDULES
2	M-101	MECHANICAL PACU DEMOLITION FLOOR PLAN
3	M-102	MECHANICAL PACU FLOOR PLAN
4	M-301	MECHANICAL DETAIL

Number	Revisions	Date

CONTRACTOR:	

ARCHITECT/ENGINEERS:	
	

Drawing Title MECHANICAL LEGEND, SCHEDULES AND GENERAL NOTES	Project Title 5W REMODEL OR ROOMS AND PACU UPGRADE VA SAN DIEGO, BUILDING 1			Project Number 664-14-115	Office of Construction and Facilities Management
	Location 3350 LA JOLLA VILLAGE DRIVE SAN DIEGO, CA 92161			Building Number 1	
				Drawing Number M-001	
Approved Project Director	Date 2/12/2014	Checked	Drawn 88	Dwg. of	 Department of Veterans Affairs

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Number	Revisions	Date

CONTRACTOR:

ARCHITECT/ENGINEERS:

San Diego

ENGINEERING SERVICES

Drawing Title
MECHANICAL DETAILS

Approved Project Director

Project Title
SW REMODEL
OR ROOMS AND PACU UPGRADE
VA SAN DIEGO, BUILDING 1

Location
3350 LA JOLLA VILLAGE DRIVE
SAN DIEGO, CA 92161

Date
2.12.2014

Checked

Drawn
88

Project Number
664-14-115

Building Number
1

Drawing Number
M-301

Dwg. of

Office of
Construction
and Facilities
Management

Department of
Veterans Affairs

CONTRACTOR TO VERIFY EXISTING STRUCTURE AND COORDINATE PROPER ANCHORAGE TO STRUCTURE.

AT CONC. METAL DECK
3/8" Ø HILTI KB-TZ AB. WITH
2" EMB., TYP. (ESR-1917)

SUPPORT DUCT EVERY 7'-8"

SUPPORT STRAP

1" X 14 GA. (2) SEISMIC SWAY BRACING STRAPS PER LATEST SMACNA STANDARDS AND 2010 CMC

3/8" BOLT THRU STRAPS

NOTE: SIDE ATTACHMENT AT VERTICAL SUPPORT

SUPPORT STRAP SIZES
1" X 16 GA. FOR DUCTS UP TO 18"
1" X 12 GA. FOR DUCTS UP TO 23"
1-1/4" X 12 GA. FOR DUCTS UP TO 24"

NOTE: INSTALLATION SHALL COMPLY W/ LATEST SMACNA STANDARDS. SUBMIT SHOP DRAWINGS FOR MOUNTING TO ENGINEER. ALL ALTERNATE INSTALLATIONS SHALL BE APPROVED BY ENGINEER.

SCALE
NONE

2

CONTRACTOR TO VERIFY EXISTING STRUCTURE AND COORDINATE PROPER ANCHORAGE TO STRUCTURE.

SECURE TO STRUCTURE ABOVE WITH
3/8" Ø HILTI KB-TZ (ESR-1917)
EMBEDMENT 2-1/2". EDGE DIST 1-1/8" MIN.

2" WIDE x4" LONG x 12GA STEEL STRAP

45°

12 GA WIRE

4" WIDE SHEET METAL STRAP

ROUND TO SQUARE ADAPTOR

SQUARE NECK

SQUARE NECK CEILING DIFFUSER

ACOUSTICAL FLEX DUCT 7'-0" LENGTH MAX

VOLUME DAMPER

12 GAGE 1-1/2" SHEET METAL STRAP ATTACH TO DIFFUSER W/ SHEET SCREW PROVIDE 1/2" SLACK (TYP. 2)

CEILING

SCALE
NONE

1