

three eighths inch = one foot
one eighth inch = one foot
one quarter inch = one foot
one half inch = one foot
three quarters inch = one foot
one inch = one foot
one and one half inches = one foot
two inches = one foot
three inches = one foot
four inches = one foot
five inches = one foot
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sixteen inches = one foot
seventeen inches = one foot
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eighty three inches = one foot
eighty four inches = one foot
eighty five inches = one foot
eighty six inches = one foot
eighty seven inches = one foot
eighty eight inches = one foot
eighty nine inches = one foot
ninety inches = one foot
ninety one inches = one foot
ninety two inches = one foot
ninety three inches = one foot
ninety four inches = one foot
ninety five inches = one foot
ninety six inches = one foot
ninety seven inches = one foot
ninety eight inches = one foot
ninety nine inches = one foot
one hundred inches = one foot

AIR HANDLING UNIT																																												
UNIT NO. (AHU)	LOCATION	AREA SERVED	TYPE OF SYSTEM	FAN					FAN MOTOR					MAX SOUND POWER LEVELS—dB, RE: 10 ⁻¹⁴ W OCTAVE BANDS 1 2 3 4 5 6 7 8	CHILLED WATER COOLING COIL										HEATING COIL								FILTER PRESSURE DROP IN W.G.											
				CFM				STATIC PRESS. IN W.G.	MAX. RPM	WHEEL TYPE	MIN. DIA.	VOLUME CONTROL	DRIVE		MIN. HP	VOLTS/PHASE	MAX. CFM	MAX. FACE VEL. (FPM)	MAX. FINS/INCH	MAX. S.P. LOSS IN W.G.	ENT. AIR Db/Wb	LVG. AIR Db/Wb	GPM	TEMP IN/OUT	MAX. LOSS FT. WTR.	MIN. ROWS	POSTION	MAX. CFM	MAX. FACE VEL. (FPM)	MAX. S.P. LOSS IN W.G.	EAT/ LAT	CFM AT MAX HTG.	STEAM			PRE-FILTER	AFTER FILTER							
				MAX. SUPPLY	MIN. SUPPLY	MAX. O.A.	MIN. O.A.																										COIL PSIG	COIL LB/H	TRAP LB/H									
11-AHU1	BASEMENT	BASEMENT, LEVEL1, LEVEL 2	DRAW THROUGH, VAV	6000	---	1450	---	5.0	2100	2174	15"	VAR. FREQ.	BELT	7.5E	460/3	1	2	3	4	5	6	7	8	6000	500	14	1.0	82/67.2	55/53.8	48.6	44/54	9.17	4	PREHEAT	6000	600	0.1	35/55	2000	2	151	151	0.70	1.00

VIBRATION ISOLATION SCHEDULE			
EQUIPMENT	BASE	ISOLATOR	DEFLECTION
AIR HANDLER	6" I	INTERNALLY ISOLATED FAN BY MANUFACTURER	AS SELECTED BY MANUFACTURER
ROOF MOUNTED EXHAUST FANS	-	HN	AS SELECTED BY MANUFACTURER

HVAC DESIGN DATA DESIGN ALTITUDE - 500 FT.							
DESIGN AREA	SUMMER				WINTER		
	OUTSIDE		INSIDE		OUTSIDE		INSIDE
	Db	Wb	Db	%HUMIDITY	Db	Db	%HUMIDITY
BED ROOMS	101	76	76	50	22	78	-
ALL ROOMS (1)	101	78	78	-	22	72	-
	CHILLED WATER				HEATING HOT WATER		
	IN °F		OUT °F		IN °F		OUT °F
	44		54		170		145

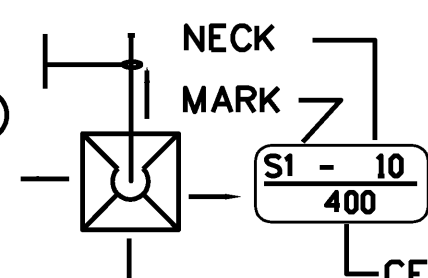
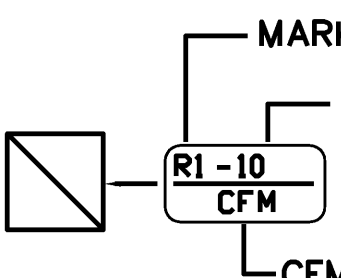
① NOT INCLUDED: STORAGE, TRASH, HAC AND SIMILAR ROOMS THAT HAVE NO CRITERIA.

ENERGY EFFICIENT MOTORS		
SCHEDULED HP	NOMINAL NEMA EFF.	
3 E	84	
5 E	84	
7 1/2 E	88	
10 E	89	

FAN SCHEDULE

MARK	11	EF-1	EF-2
TYPE		ROOF MOUNTED CENTRIFUGAL	ROOF MOUNTED CENTRIFUGAL
SERVICE		EXHAUST	EXHAUST
CFM		610	500
E.S.P. IN. WG.		0.75	0.75
DRIVE		BELT	BELT
RPM		1727	1691
MIN. H.P.		1/6	1/6
V/PH/CYC		120/1/60	120/1/60
LOCATION		ATTIC	ATTIC
INTERLOCK WITH		RUNS CONTINUOUSLY	KITCHEN HOODS LEVELS 1-2
MAKE		COOK 100C4B ACE-B	COOK 100 ACRU-B
REMARKS		①②	①②③

- ① PROVIDE HANGER BRACKETS, MOTOR SIDE GUARD & BACK DRAFT DAMPER.
② PROVIDE WITH INSULATED HOUSING.
③ PROVIDE GREASE TERMINATOR.

AIR DEVICE KEY			
<div><p>(SAME AS DIFFUSER NECK SIZE)</p></div>		<div><p>REG; GRILLES; LOUVERS</p></div>	
TYPE	DESCRIPTION	MAKE & MODEL	REMARKS
S-1	CEILING SUPPLY DIFFUSER	TITUS TMS-AA	24" x 24" FACE, 3 CONE SUPPLY DIFFUSER ALUMINUM CONSTR. WITH O.B.D. IN NECK, FRAME FOR LAY-IN CEILING AND ROUND NECK. INSULATED BACK. PROVIDE SECTORIZING, AS REQUIRED, TO DIRECT AIRFLOW AS INDICATED.
S-2	CEILING SUPPLY DIFFUSER	TITUS TMS-AA	12" x 12" CONE SUPPLY DIFFUSER, ALUMINUM CONSTR. WITH O.B.D. IN NECK, FRAME FOR SURFACE MTG. AND ROUND NECK. INSULATED BACK.
S-3	SIDEWALL SUPPLY DIFFUSER	TITUS 272RL	3/4" SPACING LOUVERED FACE SUPPLY DIFFUSER. PROVIDE FRAME FOR SURFACE MOUNTING. ALUMINUM.
R-1	CEILING RETURN REGISTER	TITUS 50F	24" x 24" PANEL. 1/2" x 1/2" x 1/2" OFF-WHITE ALUMINUM, CORE. PROVIDE FRAME FOR LAY-IN MOUNTING AND OBD ROUND DUCT ADAPTOR.
R-2	SIDEWALL RETURN REGISTER	TITUS 23RL	3/4" SPACING LOUVERED FACE RETURN GRILLE. PROVIDE FRAME FOR SURFACE MOUNTING. ALUMINUM.
E-1	CEILING EXHAUST REGISTER	TITUS 50F	12" x 12" PANEL. 1/2" x 1/2" x 1/2" OFF-WHITE ALUMINUM, CORE FOR SURFACE MOUNTING. PROVIDE OBD ROUND DUCT ADAPTOR.
E-2	SIDEWALL EXHAUST REGISTER	TITUS 23RL	3/4" SPACING LOUVERED FACE EXHAUST GRILLE. PROVIDE FRAME FOR SURFACE MOUNTING. ALUMINUM, WITH OBD.

NOTES: ① REF: FLOOR PLANS FOR NECK SIZES.

AIR FLOW MEASURING DEVICE

MARK AFM	LOCATION		DUCT SIZE		DUCT TYPE	CFM		FAN SYSTEM
	FLOOR	DUCT	W.	H.		MIN.	MAX.	
11-S	MECH. ROOM	S/A	SIZE OF SA OPENING		SUPPLY	---	6,000	11-AHU1
11-R	MECH. ROOM	R/A	SIZE OF RA OPENING		RETURN	---	4,550	11-AHU1
11-OA	MECH. ROOM	O/A	16	16	OUTSIDE AIR	1,450	1,450	11-AHU1

DUCT LEAKAGE CLASSIFICATION AND ALLOWABLE LEAKAGE				
DUCT PRESSURE CLASS, W.G.	SEAL CLASS	APPLICABLE SEALING	SMACNA LEAKAGE CLASS	
			RECTANGULAR DUCT	ROUND DUCT
2"	C	TRAVERSE JOINTS ONLY	24	12
3"	B	TRAVERSE JOINTS AND SEALS	12	6
4", 6", 10"	A	JOINTS, SEAMS AND ALL WALL PENETRATIONS	6	3

SINGLE DUCT TERMINAL SCHEDULE

MARK	MAX. CFM	MIN. CFM	MIN. PRESS. DROP IN. W.G.	SOUND POWER @ 1.0" Ps							INLET SIZE	MAKE & MODEL
				OCTAVE BANDS:								
				2	3	4	5	6	7			
A	225	45	0.038"	68	65	58	53	51	45	4"ø	TITUS DESV SIZE 4	
B	500	80	0.177"	67	66	61	57	53	48	6"ø	TITUS DESV SIZE 6	
C	900	145	0.114"	70	68	60	56	53	48	8"ø	TITUS DESV SIZE 8	
D	1400	230	0.124"	73	68	63	61	57	52	10"ø	TITUS DESV SIZE 10	
E	2000	325	0.211"	74	71	67	63	60	58	12"ø	TITUS DESV SIZE 12	

NOTES:

1. ALL UNITS SHALL HAVE FACTORY INSTALLED CONTROL TRANSFORMER.
2. PROVIDE HOT WATER HEATING COIL FOR UNIT WHERE INDICATED ON DRAWING.
3. PROVIDE UNIT WITH FACTORY INSTALLED DIGITAL CONTROLLER TO MATCH WITH EXISTING BUILDING ENERGY MANAGEMENT SYSTEM. UNIT SHALL BE MONITORED BY EXISTING BUILDING ENERGY MANAGEMENT SYSTEM.
4. PROVIDE FIBRE FREE LINER FOR UNIT.
5. REFER TO FLOOR PLAN FOR UNIT CONTROL BOX LOCATION.
6. REFER TO TERMINAL SETTING SCHEDULE FOR AIR AND HEATING WATER FLOW SETTINGS.

SINGLE DUCT TERMINAL BOX SETTING SCHEDULE

MARK 10	PRIMARY AIR		HEATING COIL		UNIT TAG	REMARKS
	MAX. CFM	MIN. CFM	BTUH	GPM PIPE		
11-TU-B-1	405	145	14,500	1.2 3/4"	C	①
11-TU-B-2	540	145	19,340	1.6 3/4"	C	①
11-TU-B-3	370	80	13,250	1.1 3/4"	B	①
11-TU-B-4	150	45	5,370	0.5 3/4"	A	①
11-TU-1-1	810	145	29,000	2.4 3/4"	C	①
11-TU-1-2	470	145	16,830	1.4 3/4"	C	①
11-TU-1-3	405	145	14,500	1.2 3/4"	C	①
11-TU-1-4	980	230	35,080	2.8 3/4"	D	①
11-TU-2-1	810	145	29,000	2.4 3/4"	C	①
11-TU-2-2	470	145	16,830	1.4 3/4"	C	①
11-TU-2-3	405	145	14,500	1.2 3/4"	C	①
11-TU-2-4	980	230	35,080	2.8 3/4"	D	①

NOTE: ① REFER TO SINGLE DUCT TERMINAL SCHEDULE FOR UNIT SIZE

"ISSUED FOR BIDS"- FULLY SPRINKLERED

SCHEMATIC DESIGN SUBMISSION	08/02/10
DESIGN DEVELOPMENT SUBMISSION	09/03/10
CONSTRUCTION DOCUMENT SUBMISSION	11/22/10
ISSUE FOR BIDS	12/19/11
Revisions:	Date:

CONSULTANTS:



12/16/11
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MEP ENGINEERS
STRUCTURAL ENGINEERS
FIRE PROTECTION ENGINEERS
CIVIL ENGINEERS

BURNS DeLATTÉ AND McCoy, INC.
PINNACLE STRUCTURAL
PROTECTION DEVELOPMENT INC.
BREWER AND ESCALANTE

Drawing Title

MECHANICAL
SCHEDULES

Approved Project Director

Project Title

BUILDING 11 ADDITION AND
INTERIOR RENOVATIONS

Location

WACO, TEXAS

Date

19 DEC 2011

Checked

JDM

Drawn

PHJ

Project Number

674A4-CSI-516

Building Number

11

Drawing Number

11

MH601

Dwg. of

Office of
Construction
and Facilities
Management

