AIR DEVICE SCHEDULE

MARK	MANUF. & MODEL	TYPE	REMARKS
⊠	TITUS TMS	CEILING SUPPLY	24x24, 12X12 LOUVER FACE SUPPLY AIR DIFFUSER. FACE SHALL BE STEEL WITH A STEEL BACK PAN. FACE AND FRAME SHALL HAVE AN OFF-WHITE ENAMEL FINISH. COORDINATE CEILING MOUNTING TYPE WITH ARCHITECTURAL CEILING TYPE. PROVIDE REMOTE DAMPER OPERATORS IN AREAS WITH INACCESSIBLE CEILINGS.
⊘	TITUS PAR	CEILING RETURN/EXHAUST	24x24, 12x12 PERFORATED FACE. FACE SHALL BE ALUMINUM WITH A STEEL BACK PAN. FACE AND FRAME SHALL HAVE AN OFF-WHITE ENAMEL FINISH. COORDINATE CEILING MOUNTING TYPE WITH ARCHITECTURAL CEILING TYPE.
▣	TITUS CSR-P	CONCENTRIC SUPPLY & RETURN	60" X 60" FOR RTU-1 & 2; 48" X 48" FOR RTU-3. CONCENTRICSUPPLY/RETURN DIFFUSER WITH PLENUM, EXTRUDED ALUMINUM, COORDINATE MOUNTING WITH STRUCTURE.

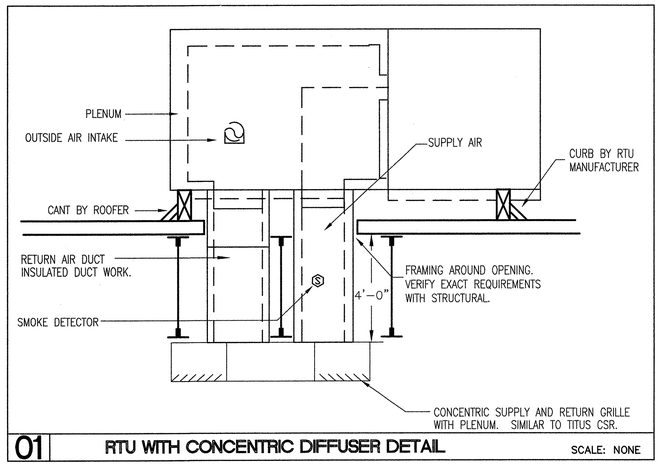
NOTE: SEE SPECIFICATIONS AND PLAN SHEETS FOR LOCATION, TYPE OF DIFFUSERS AND VARIANCES OF STYLE.

AIR CONDITIONING UNIT SCHEDULE

MARK	AHU-1	
SERVES	IT/ELEC.	
TYPE	DX/FCU	
FAN SECTION CFM	300	
OUTSIDE AIR	--	
EXT. SP. (IN. WG)	--	
FAN HP	--	
VOLTS/PH/HZ	460/3/60	
MCA	.5	
MOCP	15	
HEATING COIL CFM		
KILOWATTS		
COOLING COIL CFM	300	
COIL VEL. FPM (MAX.)	500	
EAT DB / WB	77.6/64.9	
LAT DB/WB	55	
OUTSIDE CONDENSER TEMP (F)	105	
TOTAL SENSIBLE (NET)	--	
GRAND TOTAL (NET)	8,500	
EER	13	
FILTER TYPE SPEC	2" STD	
MANUFACTURER	TRANE	
SERIES NO.	MS09TW	
CONDENSING UNIT	CU-1	
MANUFACTURER	TRANE	
SERIES NO.	MU09TW	
MCA/MOCP	11/15	
NOTES	1,2,3,4	

NOTES:

1. UNIT SHALL BE PROVIDED WITH EXTERNAL DISCONNECT SWITCH.
2. PROVIDE SINGLE POINT POWER CONNECTION.
3. EQUIPMENT SHALL BE ASHRAE 90.1 AND IECC COMPLIANT.
4. PROVIDE IAQ DRAIN PAN.



01 RTU WITH CONCENTRIC DIFFUSER DETAIL SCALE: NONE

ROOFTOP UNIT SCHEDULE

MARK	RTU-1	RTU-2	RTU-3	RTU-4	RTU-5	RTU-6	RTU-7	RTU-8	RTU-9	RTU-10
SERVES	GYM	GYM	TENNIS	TENNIS OFF	RR/BREAK	STAFF/108	NOT USED	CLASS 104/107	NOT USED	ENTRY/ART/STORE
TOTAL CFM	6500	6500	2600	1800	800	2800		3800		3000
O.A. CFM	1200	1200	465	480	180	480		940		480
EXT. S.P. IN. WC	1.0	1.0	1.0	1.0	1.0	1.0		1.0		1.0
MIN. SEER VALUE	10.6	10.6	11.5	11.5	13.0	11.5		12.5		11.5
COOLING										
EAT (DB/WB)	–	–	–	–	–	–		–		–
LAT	–	–	–	–	–	–		–		–
SEN. HT. BTU/HR	164,000	166,000	62,700	39,000	18,000	53,000		80,000		63,000
TOTAL HT. BTU/HR	258,000	258,000	83,900	62,000	27,000	78,000		127,000		86,000
AMB. TEMP.	105	105	105	105	105	105		105		105
HEATING										
TOTAL BTU/HR	95,000	95,000	38,000	34,000	12,000	37,000		65,000		45,000
TOTAL KW	28	28	12	10	4	12		20		13
VOLTS/PHASE/CYCLES	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60		460/3/60		460/3/60
MCA/MOCP	64/70	64/70	31/35	30/35	21/25	31/35		61/70		31/35
MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE		TRANE		TRANE
MODEL NO.	TCD241C4	TCD241C4	THC092A4	THC072A4	THC033A4	THC092A4		TCD151C4		THC102A4
NOTES	1 THRU 9	1 THRU 9	1 THRU 8	1 THRU 8	1 THRU 8	1 THRU 8		1 THRU 9		1 THRU 9

NOTES:

1. UNIT SHALL BE PROVIDED WITH EXTERNAL DISCONNECT SWITCH.
2. PROVIDE SINGLE POINT POWER CONNECTION.
3. REFER TO SPECIFICATIONS FOR CONTROL POINTS AND SENSOR INFORMATION. PROVIDE COLD DECK TEMPERATURE SENSOR, HIGH STATIC PRESSURE SWITCH, SUPPLY AIR TEMPERATURE SENSOR, AND ALL OTHER CONTROLS AS INDICATED IN SPECIFICATIONS.
4. PROVIDE MOTORIZED DAMPER FOR OUTSIDE AIR INTERLOCKED WITH CO SENSOR.
5. EQUIPMENT SHALL BE ASHRAE 90.1 AND IECC COMPLIANT.
6. PROVIDE HAIL GUARDS.
7. PROVIDE CO SENSOR FOR CONTROL OF OUTSIDE AIR DAMPER IN OA DUCT TO AHU.
8. PROVIDE IAQ DRAIN PAN.
9. PROVIDE ECONOMIZER WITH BAROMETRIC RELIEF DAMPER.

FAN SCHEDULE

MARK	EF-1
SERVES	RESTROOMS
CFM	1340
TYPE/DRIVE	CENT
S.P. IN. WG.	0.8"
HORSEPOWER	1/4
RPM MAX.	1725
VOLTS/PHASE/HERTZ	120/1/60
MANUFACTURER	GREENHECK
SERIES NO.	GB-121-4
NOTES	1,2,3

NOTES:

1. FAN SHALL BE INTERLOCKED WITH RTU OPERATION.
2. PROVIDE WITH BACKDRAFT DAMPER, ROOF CURB, AND INTEGRAL DISCONNECT SWITCH.
3. PROVIDE SPEED CONTROLER

NECK SIZE SCHEDULE

CFM RANGE	SQUARE NECK SIZE	ROUND NECK SIZE
0 – 120	6 X 6	6"ø
125 – 220	8 X 8	8"ø
225 – 330	10 X 10	10"ø
335 – 450	12 X 12	12"ø
455 – 530	15 X 15	14"ø
540 – 700	16 X 16	16"ø

RTU SEQUENCE OF OPERATION

OCCUPIED MODE

A. FAN OPERATION:
FAN MODE IS CONFIGURED TO "ON." THE SYSTEM FAN WILL OPERATE CONTINUOUSLY.

B. COOLING OPERATION STAGING CONTROL:
UPON A RISE IN SPACE TEMPERATURE OF 1.5°F (ADJUSTABLE) ABOVE SETPOINT, THE THERMOSTAT WILL REGISTER A DEMAND FOR COOLING AND ENERGIZE THE COMPRESSOR.

C. HEATING OPERATION STAGING CONTROL:
UPON A DROP IN SPACE TEMPERATURE OF 1.5°F (ADJUSTABLE) BELOW THE HEATING SETPOINT, THE THERMOSTAT WILL REGISTER A DEMAND FOR HEATING AND ENERGIZE THE HEATING STAGE.

D. OUTDOOR AIR DAMPER OPERATION WITH CO2 CONTROL:
WHEN THE SYSTEM IS OCCUPIED, THE OCCUPANCY RELAY IN THE THERMOSTAT WILL ENERGIZE AND MODULATE THE OUTSIDE AIR DAMPER TO THE MINIMUM POSITION OF 0.0 CFM FOR EACH RTU (ADJUSTABLE.) WHEN FULL OUTSIDE AIR QUANTITIES ARE REQUIRED BASED ON CO2 SENSOR INPUT, THE DAMPER SHALL MODULATE TO FULL OPEN, SEE RTU SCHEDULE FOR CFM.

UNOCCUPIED MODE

A. FAN OPERATION:
THE FAN WILL BE BROUGHT ON WITH THE FIRST STAGE COOLING OR HEATING WHEN THE THERMOSTAT IS IN THE UNOCCUPIED MODE. THE SYSTEM FAN WILL BE RELEASED WHEN THE SYSTEM DEMAND HAS BEEN SATISFIED.

ALL CONTROL OF HAVC EQUIPMENT WILL FOLLOW THE SAME OPERATION AS IN THE OCCUPIED MODE WITH THE EXCEPTION OF THE THERMOSTAT UTILIZING THE UNOCCUPIED SETPOINTS INSTEAD OF THE OCCUPIED SETPOINTS.

THERMOSTATS
THERMOSTATS SHALL BE PROGRAMMABLE WITH ON/OFF SWITCHING CAPABILITY AND ADJUSTABLE SET BACK CONTROL. EACH THERMOSTAT SHALL HAVE A 5° DEADBAND RANGE (ADJUSTABLE) BETWEEN HEATING AND COOLING MODE BASED ON IECC SEC. 803.3.3.2)

APPROVED
HVAC PLAN
THIS PLAN MUST BE KEPT ON JOB FOR ALL CITY INSPECTORS. SEPARATE PERMIT IS REQUIRED FOR HVAC.
10-6-06 NO. 393

STATE OF TEXAS CRAIG KOEHN 81132 REGISTERED PROFESSIONAL ENGINEER 08/07/06

E/B/E, Inc.
ELECTRICAL/MECHANICAL CONSULTING ENGINEERS
Firm Registration No: 5638
Tel.: (713) 840-0177
Fax: (713) 840-8677

MECHANICAL DETAILS & SCHEDULES 01

Community Family Centers
Centros Familiares de la Comunidad

John P. McGovern, M.D. Community Sports & Recreation Building
7318 AVENUE F
HOUSTON, TEXAS 77011

THAT'S ARCHITECTURE
2402 COMMONWEALTH #100, HOUSTON, TX 77006
TELEPHONE 713/222-1406 FAX 713/222-1506

ISSUES & REVISIONS
08/07/06 BID AND PERMIT

SHEET TITLE
MECHANICAL DETAILS & SCHEDULES

PROJECT NO. 06120.00
SCALE AS NOTED

SHEET NUMBER
M04.01