JHN MASTER: JHN2436LDWG (3/08)

AIR BALANCE ANALYSIS

MARK	SUPPLY AIR	OSA INTAKE	RETURN AIR	EXHAUST AIR	BLG.PRESS.
AHU-2 (EXISTING-5TON)	2,000	464	1,536	–	–
AHU-3 (EXISTING-3.5TON)	830	350	480	–	–
AHU-4 (EXISTING-4TON)	1,600	375	1,225	–	–
AHU-5 (NEW-4TON)	1,600	375	1,225	–	–
EF-1	–	–	–	150	–
EF-2	–	–	–	150	–
EF-3	–	–	–	50	–
TOTAL	6,030	1,564	4,466	350	+1,214

NOTES:

1. OSA CALCULATION PER FBC-TABLE M403.3

OUTSIDE AIR OCCUPANCY LOAD

SPACE	CFM/PERSON	CFM/SQ.FT.	NO.PEOPLE	SPACE SQ.FT.	CFM REQUIRED
OFFICE	20	–	2	–	40
SALES	–	.3	–	4,950	1,485
STORAGE	–	.05	–	470	24
LOUNGE	15	–	1	–	15
TOTAL	–	–	–	–	1,564

FBC:TABLE 403.3 HAS BEEN USED TO DETERMINE THE AMOUNT OF OUTSIDE AIR FOR THIS PROJECT.

AIR HANDLING UNIT SCHEDULE

SYMBOL	TOTAL CFM	O.A. CFM	E.S.P. (IN. W.C.)	FAN H.P.	COOLING CAP.(MBH)		ELECTRICAL		AUX. HEAT		ELECTRICAL	YORK OR EQUAL
					TOTAL	SENSIBLE	MCA	MOCP	KW	STAGE	VOLTS/PH./HZ.	
AHU-5	1,600	REFER TO PLANS	.5	.75	47.00	32.7	38.1	40	7.5	1	208/1/60	AHP48
–	–	–	–	–	–	–	– –	– –	– –	– –	–	–
–	–	–	–	–	–	–	– –	– –	– –	– –	–	–

*PROVIDE AHU WITH A SINGLE POINT WIRING CONNECTION FOR MOTOR AND ELECTRIC HEATER.

1. PROVIDE UNIT WITH EXPANSION VALVE AND REFRIGERANT LINE PACKAGE.
2. PROVIDE FILTER RACK WITH 2" 30-35% FILTERS.
3. PROVIDE AHU W/ELECTRIC HEATER & ALL CONTROLS FOR A COMPLETE FUNCTIONAL SYSTEM
4. PROVIDE 7 DAY VENSTAR PROGRAMMABLE T/STAT W/BATTERY BACKUP, AUTO CHANGE OVER FEATURE.

OUTDOOR AIR COOLED UNIT SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NO. EQUAL TO	TOTAL COOLING CAPACITY MBH	RATED EFFICIENCY SEER	SUCTION TEMP (°F)	AMBIENT TEMP (°F)	ELECTRICAL			REMARKS
						VOLTS/PH/HZ	UNIT MCA	UNIT MOCP	
CU-5	YORK /THCGD048	48	13	45	95	208/1/60	21.1	35	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NOTES

1. PROVIDE 5 MINUTE SOLID STATE DELAY CONTROL TO PREVENT COMPRESSOR FROM SHORT CYCLING
2. PROVIDE ALL ELECTRICAL & REFRIGERATION ACCESSORIES PER MANUFACTURER'S SPECIFICATIONS FOR A COMPLETE FUNCTIONAL SYSTEM
3. INSTALL UNITS PER MANUFACTURER'S SPECIFICATIONS AND GUIDELINES

AIR DISTRIBUTION DEVICE SCHEDULE

SYMBOL	SIZE	SERVICE	MOUNTING	ACCESSORIES	MANUFACTURER MODEL NO.	COLOR	REMARKS
CD-1	REFER TO PLANS	CEILING SUPPLY DIFFUSER	LAY-IN CEILING	OPPOSED BLADE	PRICE MODEL ASCD	–	24"x24" FACE-PROVIDE TRIMS FOR HARD CEILING
RR-1	REFER TO PLANS	RETURN REGISTER	LAY-IN CEILING	45° FIXED LOUVER	PRICE MODEL 630	–	–
SR-1	REFER TO PLANS	SUPPLY REGISTER	DUCT SIDEWALL	45° FIXED LOUVER	PRICE MODEL 620FL	–	DOUBLE DEFLECTION-STEEL
DG-1	REFER TO PLANS	DOOR GRILLE	DOOR	77° FIXED LOUVER	PRICE MODEL ATG	–	INVERTED V-BLADES WITH 77° DEFLECTION

NOTES:

1. SUPPLY AIR DIFFUSERS ARE FOUR WAY AIR PATTERN UNLESS INDICATED OTHERWISE ON PLAN BY ARROWS.
2. MAXIMUM PRESSURE DROP OF .04 IN W.C.
3. TRANSITION ROUND FLEXIBLE OR RECTANGULAR RIGID DUCTWORK TO DIFFUSER NECK AS REQUIRED.
4. INSULATE BACK OF CEILING DIFFUSERS AND RETURN GRILLES.
5. PROVIDE SQUARE TO ROUND TRANSITIONS AS REQUIRED.
6. REFER TO PLANS FOR NECK SIZES AND AIR QUANTITIES.

EXHAUST FAN SCHEDULE

UNIT NO.	SERVICE	LOCATION	CFM	E.S.P. (IN W.G.)	ELECTRICAL DATA			R.P.M. HI/LO	SONES	DRIVE	MANUFACTURER MODEL NUMBER (AS STANDARD)	REMARKS
					WATTS	VOLTS	PHASE					
EF-1&2	TOILETS	CLG	150	.375	80	120	1	950	3.8	DIRECT	GREENHECK-SP-B150	1,2,3,4,5,6,7
EF-3	MOP SINK	CLG	50	.375	80	120	1	950	3.8	DIRECT	GREENHECK-SP-B150	1,2,3,4,5,6,7

NOTE:

1. PROVIDE WITH UNIT MOUNTED DISCONNECT.
2. PROVIDE WITH BACKDRAFT DAMPERS.
3. PROVIDE SPEED CONTROLLER
4. PROVIDE INTEGRAL CEILING GRILLE
5. INTERLOCK FAN WITH LIGHT SWITCH
6. FANS TO BE U.L. LISTED & AMCA CERTIFIED
7. PROVIDE WALL CAP

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL	LIST SIZE (WxH)	MIN. FREE AREA	MAX VELOCITY	ACCESSORIES	DESCRIPTION
LV-1	GREENHECK	EVH-602X	30X12	.61SQ. FT.	800 F.P.M.	BIRDSCREEN	STATIONARY LOUVER DRAINABLE BLADE
LV-2	GREENHECK	EVH-602X	18X18	.46SQ. FT.	800 F.P.M.	BIRDSCREEN	STATIONARY LOUVER DRAINABLE BLADE
LV-3	GREENHECK	EVH-602X	36X16	.91SQ. FT.	800 F.P.M.	BIRDSCREEN	STATIONARY LOUVER DRAINABLE BLADE

HVAC SYMBOL LIST

SYMBOL	DESCRIPTION
	SA DUCT, SPIN-IN DAMPER, FLEX DUCT TO AIR DEVICE WITH CFM
	DUCT TRANSITION – MAX SLOPE 15 °
	RETURN AIR (RA) DUCTWORK
	RETURN DUCT RISER
	SUPPLY DUCT RISER
T	THERMOSTAT
—COND—	CONDENSATE DRAIN PIPING
S.A.	SUPPLY AIR
R.A.	RETURN AIR
S	REMOTE SENSOR
SD	SMOKE DETECTOR
BD	BACKDRAFT DAMPER

HVAC EQUIPMENT LABEL SPECS

1. ALL HVAC EQUIPMENT SHALL BE FURNISHED WITH BLACK LAMINATED PLASTIC LABEL W/WHITE ENGRAVED LETTERING & FASTENED MECHANICALLY TO EQUIPMENT.
2. LABEL SHALL HAVE THE FOLLOWING INFORMATION W/1/2" LETTERING :
   EQUIPMENT #
   SUITE/SPACE #

HVAC GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE EXISTING FACILITY AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
2. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
3. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
4. BEFORE FABRICATION. VERIFY AND COORDINATE ALL DIMENSIONS IN THE FIELD AND ARCHITECTURAL DRAWINGS.
7. NOT USED
8. DUCT SMOKE DETECTORS SHALL BE FURNISHED BY DIV. 16 CONTRACTOR, INSTALLED BY DIV. 15 CONTRACTOR, WIRED BY DIV. 16 CONTRACTOR.
9. SEAL ALL OPENINGS THROUGH ROOF AND EXTERIOR WALLS WATER TIGHT.
10. ALL SUPPLY AIR FLEX DUCT TAKE-OFFS FROM TRUNK AND BRANCH DUCTWORK SHALL HAVE SPIN-IN FITTING WITH AIR EXTRACTOR AND VOLUME BALANCING DAMPER. THE END OF THE RUN OUT SHALL BE WITH A SNAP-LOCK ELBOW. ALL RUN OUTS SHALL BE INSULATED WITH R-6 WRAP INSULATION.
11. ALL FLEXIBLE DUCTWORK SHALL BE INSULATED, LOW PRESSURE TYPE WITH FIBERGLASS INSULATION AND A .3" WIDE, 24 GA. ALUMINUM SPIRAL MECHANICALLY LOCKED TO INNER CORE. INNER LINER SHALL BE A TRILAMINATE OF ALUMINUM FOIL, FIBERGLASS, AND ALUMINIZED POLYESTER. OUTER JACKET SHALL BE FIRE RETARDANT FIBERGLASS FABRIC COATED WITH A BLACK ELASTOMER COMPOUND AND LAMINATED TO ALUMINUM POLYESTER FILM. MAXIMUM FLEX DUCT LENGTH 10'-0". ALL FLEX DUCTS SHALL BE INSTALLED WITHOUT TIGHT BENDS. ALL FLEX DUCT SHALL CONFORM TO UL-181. FLEXIBLE DUCTWORK TO DIFFUSERS SHALL BE SAME SIZE AS DIFFUSER NECK.
12. REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FIRE RATED PARTITIONS. MAINTAIN FIRE RATING INTEGRITY OF DUCTWORK AND ALL PIPING PENETRATIONS.
13. ALL SEAMS AND CONNECTIONS IN DUCTWORK, DUCTBOARD, AND INSULATION WRAP SHALL BE SEALED WITH TWO LAYERS OF FAB AND MASTIC.
14. ALL EXPOSED SUPPLY AND RETURN AIR DUCTS SHALL BE GALV. SHEET METAL WITH ACOUSTIC LINING FOR THE FIRST 5'. PROVIDE DUCTS WITH CLEAR OPENINGS AS SHOWN. INSTALL DUCTWORK IN ACCORDANCE WITH SMACNA REQUIREMENTS, FBC AND ALL LOCAL CODES. ALL SUPPLY & RETURN DUCT WORK ABOVE IN CEILING SPACE SHALL BE 1-1/2 DUCT BOARD.
15. FURNISH AND INSTALL ALL NECESSARY ACCESSORIES, HARDWARE, AND APPURTENANCES REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM.
16. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD AND DUCT INSULATION R-VALUE SHALL BE IN ACCORDANCE WITH FLORIDA ENERGY CODE REQUIREMENTS, 2007 EDITION. MINIMUM INSTALLED R-6
17. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION OF EXISTING MECHANICAL SYSTEM AS REQUIRED TO PERFORM NEW MECHANICAL WORK. ALL DIFFUSERS, DUCTWORK, AND MISCELLANEOUS DEBRIS SHALL BE REUSED OR TURNED OVER TO THE OWNERS REPRESENTATIVE OR REMOVED FROM SITE AND PROPERLY DISPOSED OFF AT THE DIRECTION OF THE OWNERS REPRESENTATIVE.
18. ALL DUCTS SHALL BE SECURELY SUPPORTED, HUNG OR SUSPENDED BY METAL HANGERS, STRAPS, RODS, LUGS OR BRACKETS COMPLYING WITH DUCT CONSTRUCTION STANDARDS REFERENCED IN 2007 FBC M-603.
19. ALL DUCT REGISTERS, GRILLES, AND DIFFUSERS SHALL HAVE A MIN. FLAME SPREAD RATING OF NOT OVER 25 AND A MIN. SMOKE DEVELOPD RATING OF NOT OVER 50 AND SHALL BE IN COMPLIANCE WITH SECTIONS 603.15 AND 603.15.1.
20. BALANCING AND ADJUSTMENTS PRIOR TO FINAL INSPECTION:

    PROVIDE TEST AND BALANCE BY INDEPENDENT CONTRACTOR. ADJUST THE AIR CONDITIONING SYSTEMS, VENTILATING SYSTEMS, FANS, ETC., TO DELIVER NOT LESS THAN THE REQUIRED AIR QUANTITY WITH DIFFERENT QUANTITIES TO BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

    MAKE FINAL ADJUSTMENTS NECESSARY TO SATISFY OWNER NOISE AND COMFORT LEVEL REQUIREMENTS.

    THIS CONTRACTOR SHALL PROVIDE THREE (5) COPIES OF A TEST AND BALANCE REPORT TO THE ARCHITECT AT TIME OF SUBSTANTIAL COMPLETION INSPECTION.

J. HOWARD NUDELL ARCHITECT

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State of Florida
Registered Architect

Joel Howard Nudell
Reg. No. 7953

project title

David's World Cycle

Suite - #2517
Interior Modification
David's World Cycle
OCCUPANCY:
"M" Mercantile
David's World Cycle
2517 Edgewater Dr Orlando FL 32804

sheet title

HVAC NOTES & SCEDULES

DO NOT SCALE DRAWINGS
USE FIGURED DIMENSIONS ONLY

project number
2010-041

drawn NS
checked RMB
approved RMB

issued for	date
OWNER ISSUE	03-11-10
OWNER ISSUE	03-18-10
PRICEING ISSUE	03-29-10
PERMIT ISSUE	03-29-10

sheet
M100