

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

EQUIPMENT SCHEDULE:

- NOTE: ALL MECHANICAL EQUIPMENT TO BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR.
- NEW 1/2 TON HIGH EFFICIENCY PACKAGED A/C UNITS W/ ELECTRIC HEAT, TRANE MODEL NO. TGD51C3, ARI NET COOLING CAPACITY OF 154 MBH @ 95° AMBIENT, 80° ENT, D.B., 67° ENT, H.B., 11.5 E.E.R., 10 KW ELECT. HT. MODEL NO. AY08TRF51A, 208-230V/1/3P, SINGLE POINT POWER CONNECTION, PROVIDE WITH FACTORY ROOF CURB, 25% O.A. DAMPER TO HAVE BIRD SCREEN.
 - COOLER EVAPORATOR, RUSSELL MODEL NO. AA56-245B, 5 AMPS @ 230 V / 1Ø LOCATED INSIDE OF WALK-IN BEVERAGE COOLER, PROVIDE WITH 3/8" ALL THREAD 4 NEOPRENE VIBRATION ISOLATORS 4 PLACES EA. UNIT FURNISH DOWN VALVES & T-STAYS INSTALLED @ EACH EVAP. TO TURN OFF UNITS ON ROOF, PROVIDE W/ THERMOSTAT, JOHNSON CONTROLS MFG# A188C-2.
 - REMOTE CONDENSING UNIT, RUSSELL MODEL NO. M1830H22, 1/2 AMPS @ 208 / 230 V / 3Ø UNIT TO BE MTD. ON ROOF STAND, REFER TO STRUCTURAL DWGS. AND ROOF PLAN FOR EXACT LOCATION AND ADDITIONAL INFORMATION.
 - FUJITSU DUCTLESS SPLIT SYSTEM A/C UNIT MODEL NO. ASU-12, DUCTLESS EVAPORATOR 115V, 300 CFM, INSTALLED PER MANUF. RECOMMENDATIONS.
 - FUJITSU CONDENSER MODEL NO. AOU-12, 115V, 15 AMP W/ EVAPORATOR, COOLING CAP. 11.5 MBH, SEER 10.5, 15 MCA.
 - HUMIDIFIER, NORTEC MODEL "RESDELUX" W/BLOWER PACK, LOCATED IN CIGAR HUMIDOR, TO BE INSTALLED BY M.C. ALL ASSOC. PIPING BY P.C.
 - EXHAUST FAN, FRAN MODEL NO. 4C101, 150 CFM, 120V 1-PH. FOR TOILET ROOM VENTILATION.
 - EXHAUST FAN ROOF MOUNTED, DAYTON MODEL NO. 4YC86, 300 CFM, 115V 1-PH, 1/30 HP, FOR ELECTRICAL ROOM VENTILATION, PROVIDE WITH REMOTE THERMOSTAT SET TO ACTIVATE FAN WHEN TEMP. EXCEEDS 90° F. PROVIDE BIRD SCREEN, BACK-DRAFT DAMPER, AND LOCAL DISCONNECT, THERMOSTAT, SUNNE MFG# TF15-004.
 - DUCT BOOSTER, GRANAGER ITEM 5C463 MFR. TERLUND MODEL REF-6 AXIAL, IN-LINE, FITS DUCT DIA 6 IN, CFM @ 0.000-IN SP 180, MAX INLET TEMP 150 DEG F, VOLTAGE 115, 60 HZ, SINGLE PHASE, MAX AMPS 0.40, BEARING TYPE SLEEVE, HOUSING DIA 6 IN, LENGTH 6 1/2 IN, MOUNTING POSITION HORIZONTAL OR VERTICAL, INCLUDES EXTERNAL JUNCTION BOX FOR EASY WIRING.

OUTDOOR AIR CALCULATION:

A/C-1: 5/A = 5750 CFM
A/C-2: 5/A = 4350 CFM
A/C-3: 5/A = 4350 CFM
TOTAL 5/A = 14,450 CFM

TOTAL O/A @ 25% = 3,612.5 CFM O/A PROVIDED

TOTAL COND. FLR. AREA = 2,122 SQ. FT.

● 3 CFM / SQ. FT. = 2,616.6 CFM O/A REQUIRED

LEGEND:

- CD-A: 24"x24" SUPPLY DIFFUSER, METALARE SERIES 5800 W/ RADIAL DAMPER OR EQ.
- CD-B: 12"x12" SUPPLY DIFFUSER, METALARE SERIES 5800 W/ RADIAL DAMPER OR EQ.
- 24"x24" FILTER BACK RETURN GRILLE WITH 1/2"x1/2" X1/2" X1/2" METALARE SERIES C25 FB OR EQ.
- A/C SPIRAL SUPPLY DUCT
- A/C FIBERGLASS DUCT BOARD RETURN DUCT
- AIR FLOW DIRECTION
- MECHANICAL UNIT TYPE EQUIPMENT NUMBER
- SMOKE DETECTOR, INSTALLED BY M.C. WIRED BY E.C. ALL SMOKE DETECTORS SHALL BE INTERLOCKED SUCH THAT UPON DETECTION OF SMOKE BY ANY ONE DEVICE, ALL RECIRCULATING AIR FANS SHALL SHUT DOWN UNTIL MANUALLY REACTIVATED.
- 12"x12" S.A. GRILLE, METALARE SERIES 5000A OR EQ. ALUM. CONST. W/ RADIAL DAMPER.
- 12"x12" R.A. TRANSFER GRILLE, METALARE SERIES C25 OR EQ. 1/2"x1/2" ALUM. CONST.
- 6" Ø TRANSFER DUCT
- DETAIL NUMBER SHEET NUMBER
- HUMIDISTAT, JOHNSON CONTROLS NO. W42AA-1C RANGE 10-90% RH, LOW VOLTAGE, PROVIDE WITH LOCKING COVER.
- PUMPDOWN VALVE
- THERMOMETER / HYGROMETER, RADIO SHACK NO. 65-861 OR EQ.
- REMOTE TEST SWITCH, TO BE INSTALLED ON UNDERSIDE OF ACOUSTICAL CEILING TILE.
- 10" Ø SPIRAL DUCT DIAMETER 400 CFM
- DIFFUSER TYPE DIFFUSER NUMBER

MECHANICAL KEY NOTES:

1. 1 HR. FIRE RATED WALL UL# U-465
2. 12"x12" STORM-PROOF LOUVER, ALUM. CONST. AS MANUF. BY RUSKIN OR EQUAL. PAINT TO MATCH WALL COLOR. PROVIDE GALV. MTL. FLASHING / COLLAR AROUND OPS. W/ 2" FLANGE ON INTERIOR.
3. UNIT TO BE INSTALLED W/ TOP MTD. @ 5" BELOW CEILING
4. UNIT TO BE INSTALLED W/ TOP MTD. @ 12" BELOW CEILING
5. REFRIGERANT LINES TYP.

GENERAL MECHANICAL NOTES:

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF AIR DISTRIBUTION DEVICES.
2. REFER TO STRUCTURAL PLANS AND NOTES FOR INSTALLATION AND LOCATION OF ALL ROOF MOUNTED MECHANICAL EQUIPMENT.
3. SIZE AND LOCATION OF EQUIPMENT INSTALLED UNDER DIVISION 15 - MECHANICAL, SHALL BE COORDINATED WITH ALL OTHER TRADES.
4. EXHAUST FAN OUTLETS SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM FRESH AIR INTAKES OR EXTERIOR DOORS.
5. ALL DIFFUSERS SHALL BE 4-WAY THROU UNLESS NOTED OTHERWISE BY DIR. ARROW.
6. ALL CEILING DIFFUSERS AND GRILLES SHALL BE INSULATED.
7. ALL THERMOSTATS SHALL BE MOUNTED 5'-0" ABOVE FINISHED FLOOR. THERMOSTATS SHALL BE FURNISHED WITH A REMOTE TEMPERATURE SENSOR. VOLTAGE SHALL BE 24 VOLT UNLESS OTHERWISE INDICATED.
8. DISCONNECT SWITCHES REQUIRED FOR THE MECHANICAL EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY DIVISION 16 - ELECTRICAL.
9. ALL CONTROL WIRING AND HARDWARE TO COMPLETE THE HVAC CONTROL SYSTEM SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 15 - MECHANICAL, OF THESE CONTRACT DOCUMENTS.
10. ALL CONDENSATE DRAIN LINES SHALL BE INSTALLED WITH A 1" TRAP AT THE UNIT WITH A MINIMUM DRAIN OF 2'.
11. FOR TYPICAL WATER AND REFRIGERANT PIPING CONNECTIONS TO EQUIPMENT SEE STANDARD EQUIPMENT DETAILS.
12. WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
13. FURNISH AND INSTALL COMPLETE MECHANICAL SYSTEM AS INDICATED ON PLANS.
14. AIR DISTRIBUTION DEVICES: FURNISH AND INSTALL ALL AIR DISTRIBUTION DEVICES AND ACCESSORIES AS INDICATED ON DRAWINGS.
15. K.I.B.C. EVAPORATORS TO HAVE ANGLE 4"x4"x1/4" W/ (2) 3/8" DIA. ALL THREAD AND NEOPRENE VIBRATION ISOLATORS.

DUCTWORK NOTES:

ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NFPA 90A AND 90B.

- A. AIR DISTRIBUTION DROP FROM A/C UNIT SHALL BE FIBERGLASS CONSTRUCTION, INSTALLED IN ACCORDANCE WITH SMACNA MANUAL FOR FIBERGLASS DUCTWORK.
- B. DUCTWORK INSIDE BUILDING SHALL BE INSULATED SPIRAL DUCTWORK WITH METAL FITTING AS PER THE MECHANICAL PLAN LAYOUT.
- C. FURNISH AND INSTALL AIR SCOPES, EXTRACTORS, AND SPLITTER DAMPERS WITH OPERATORS AND LOCKING QUADRANTS AT ALL SPLITS, BRANCH CONNECTIONS AND REGISTER OR DIFFUSER CONNECTIONS TO DUCTWORK AND AS OTHERWISE INDICATED ON PLANS.

FIBERGLASS DUCT BOARD:

1. DUCT SIZES SHOWN ARE MINIMUM INSIDE DIMENSIONS.
2. CONTRACTOR TO PROVIDE AND INSTALL 1" X 3" X 22GA. FORMED SHT. MTL. CHANNEL REINF. MIN. 24" O.C. PER N.I.A.M.A. STANDARDS FOR FIBROUS GLASS DUCT CONSTRUCTION OF OVER 1/2" THRU 1" W.G. POSITIVE PRESSURE FOR DUCTS 3" - 36" INSIDE DIM.
3. ALL FIBROUS GLASS DUCT BOARD JOINTS, SEAMS AND CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE W/ SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS, LATEST EDITION. ALL DUCTWORK SHALL BE CLASS 1 (UL-18) AND ALL CLOSURES SHALL MAINTAIN THIS RATING.
4. DUCT WORK SHALL BE 1/2" TYPE 800 FIBROUS GLASS DUCT, R-6.5 AS MANUF. BY OWENS CORNING OR EQUAL. FLEXIBLE DUCT CONNECTIONS R-6.0
5. ALL FIBERGLASS DUCTWORK SHALL BE SEALED WITH GLASS FAB. AND MASTIC.
6. ALL RIGID DUCTWORK SHALL BE SUPPORTED WITH 22 GA. 3X2 CHANNEL, MAX. 8'-0" O.C. W/MIN. 12 GA. WIRE PER S.M.A.C.N.A. STD'S.

INSULATED FLEXIBLE DUCT:

1. ALL FLEXIBLE DUCT CONNECTIONS TO TRUNK DUCTS SHALL BE MADE WITH GALVANIZED STEEL CONICAL SPIN-IN FITTINGS WITH DAMPER AND LOCKING QUADRANT. DUCT CONNECTION TO THE SPIN-IN OR AIR DISTRIBUTION DEVICE SHALL BE MADE WITH STAINLESS STEEL BANDS OR PANDUIT STRAPS. THE USE OF TAPE TO SECURE FLEXIBLE DUCT TO SPIN-INS OR AIR DISTRIBUTION DEVICES IS STRICTLY PROHIBITED.
2. ALL FLEXIBLE DUCT SHALL BE SUPPORTED WITH MIN. 1 1/2" W. 22 GA. MTL. STRAPS.

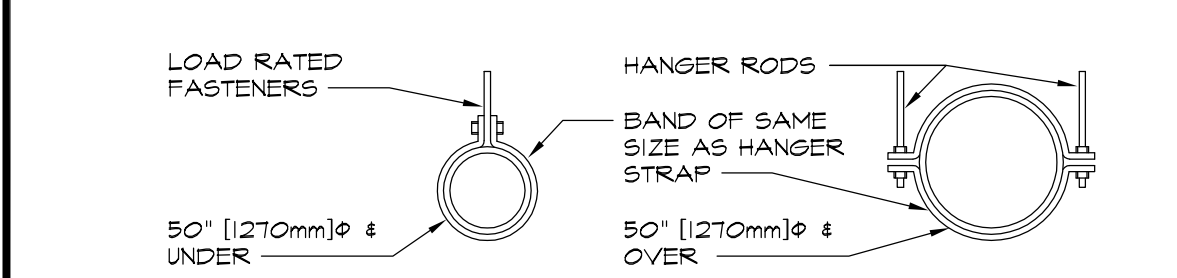
METAL SPIRAL DUCTWORK:

1. DUCT SIZES SHOWN ARE INSIDE WALL DIAMETER DIMENSION.
2. THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
3. ALL ELEVATIONS ARE FROM THE F.F.E. TO THE CENTER OF ROUND DUCT.
4. ALL DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED ABOVE THE CEILING.
5. DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.

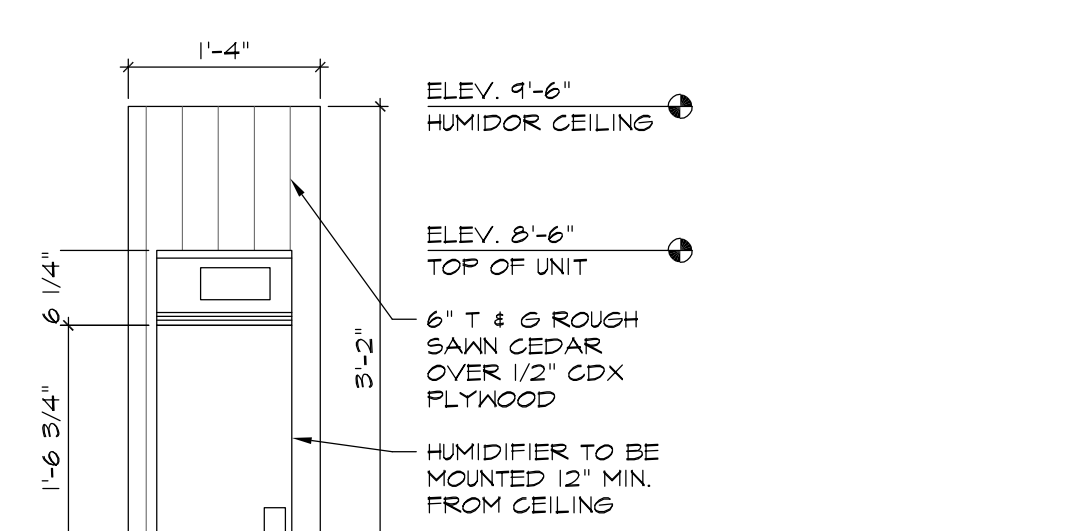
DIFFUSER SCHEDULE					
MK	QTY	TYPE	SIZE (DIA)	CFM	DESCRIPTION
CDA-1	18	CD-A	8"	250	ROUND DIFFUSER
CDA-2	9	CD-A	10"	400	MOUNTED AT 11'-0" A.F.F.
CDA-3	4	CD-A	12"	650	
CDB-1	2	CD-B	6"	100	SQUARE DIFFUSER
CDB-2	2	CD-B	8"	250	MOUNTED AT UNDERSIDE OF CEILING
CDB-3	3	CD-B	10"	400	
RET-1	1	RETURN	18"	1550	FILTERED RETURN GRILLE MOUNTED AT 11'-0" A.F.F.
RET-2	2	RETURN	20"	1800	

ROUND DUCT HANGER STRAPS OR RODS

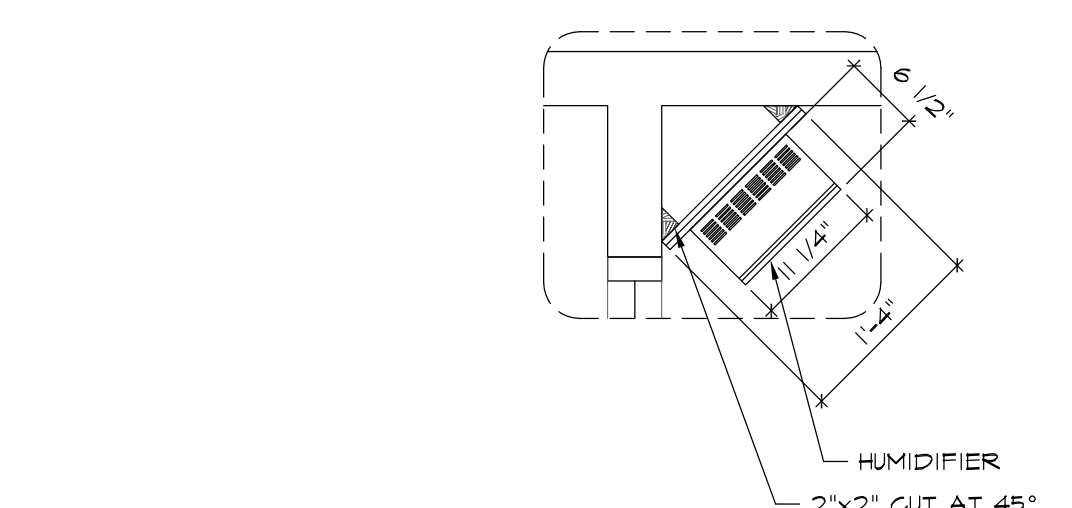
MAXIMUM DUCT SIZE	HANGER QTY. / SIZE	MAX. LOAD LBS.	MAX. SPACING IN.
20"	ONE 1 x 22 GA STRAP	260	12'-0" (144")
26"	ONE 1 x 22 GA STRAP	320	10'-0" (120")
36"	ONE 1 x 18 GA STRAP	420	8'-0" (96")



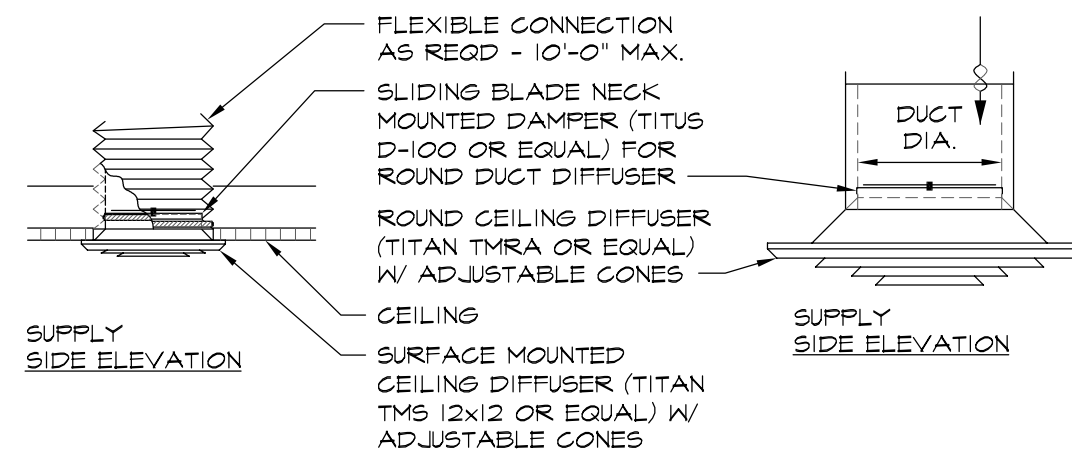
6 ROUND DUCT HANGERS
SCALE: NONE



2 W.I.B.C. EVAP. INSTALLATION DETAIL
SCALE: 3/4" = 1'-0"



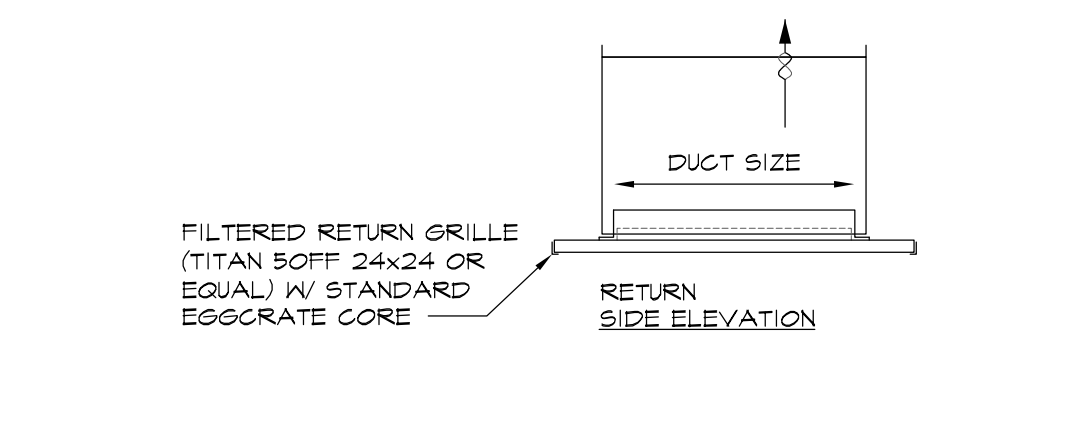
3 HUMIDIFIER DETAIL
SCALE: 3/4" = 1'-0"



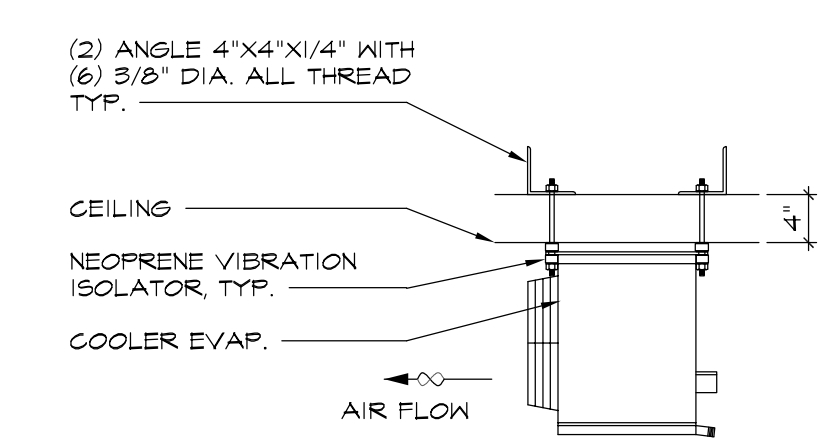
IMPORTANT NOTE:

FLEXIBLE DUCT CONNECTIONS ARE ONLY ALLOWED ABOVE THE TOILET ROOM AND HALLWAY CEILINGS.

ALL OTHER CONNECTIONS TO BE RIGID DUCT CONNECTIONS. NO FLEXIBLE DUCT IS TO BE ALLOWED IN OPEN CEILING CONDITIONS WHERE DUCTWORK IS VISIBLE.



4 RESERVED
SCALE: 3/4" = 1'-0"



NOTES:
1. REFER TO STRUCTURAL DWGS. FOR ADDITIONAL INFO. TYP.

1 W.I.B.C. EVAP. INSTALLATION DETAIL
SCALE: 3/4" = 1'-0"

REVISIONS	BY
OWNER REVISION 1-30-10	MCM

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ABC LIQUORS, INC.
8989 S. ORANGE AVE. - ORLANDO, FLA. 32809
ABC STORE NO. 43
VERO BEACH CENTURY TOWN CENTER

DRAWN:	M. MAISCO
CHECKED:	S. RIVERA
DATE:	5-15-04
SCALE:	AS NOTED
JOB No:	43
SHEET	

M=1