

AIR DISTRIBUTION	
SYMBOL	DESCRIPTION
	DUCTWORK
	DROP IN DUCT ELEVATION
	RISE IN DUCT ELEVATION
	VOLUME DAMPER (VD)
	SUPPLY CEILING DIFFUSER (CD)
	SUPPLY SIDEWALL REGISTER (SR)
	ACCESS DOOR (AD)/ACCESS PANEL (AP)
	VANED ELBOW
	NON-VANED ELBOW
	FLEXIBLE CONNECTION (FC)
	BRANCH DUCT TAKE-OFF
	90DEG. SPURT (TEE)
	DUCT UP (45DEG)
	DUCT DOWN
	UNDERCUT DOOR
	TRANSITION (RECTANGULAR)
	FIRE DAMPER /F.D.
	THERMOSTAT
	SMOKE DETECTOR
	FIRESTAT

ABBREVIATION	
SYMBOL	DESCRIPTION
AF	AIR FILTER
AS	AIR SEPARATOR
BOD	BOTTOM OF DUCT
BOO	BOTTOM OF OPENING
BOP	BOTTOM OF PIPE
BOU	BOTTOM OF UNIT
CC	COILING COIL
CD	CONDENSATE DRAIN
CO	COOLING WATER
CU	CONDENSING UNIT
CFM	CUBIC FEET PER MINUTE
CHWP	CHILLED WATER PUMP
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
DW	DEIONIZED WATER
DDC	DIRECT DIGITAL CONTROL
DMS	DEIONIZED WATER SUPPLY
DWR	DEIONIZED WATER RETURN
EHC	ELECTRIC HEATING COIL
ET	EXPANSION TANK
EU	EVAPORATING UNIT
FFL	FINSHD FLOOR LEVEL
HX	HEAT EXCHANGER
O.A	OUTSIDE AIR
RA	RETURN AIR
RL	REFRIGERANT LIQUID LINE
RS	REFRIGERANT SUCTION LINE
RG	RETURN AIR GRILLE
RR	RETURN AIR REGISTER
SA	SUPPLY AIR
SG	SUPPLY AIR GRILLE
SR	SUPPLY AIR REGISTER
TG	TRANSFER GRILLE
THX	TRANSFER HEAT EXCHANGER
WMS	WIRE MESH SCREEN

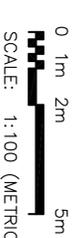
H.V.A.C PIPING	
SYMBOL	DESCRIPTION
	DIRECTION OF FLOW
	DIRECTION OF PITCH
	ECCENTRIC REDUCER OR INCREASER
	CONCENTRIC REDUCER OR INCREASER
	GATE VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	BALL VALVE
	CIRCUIT BALANCING VALVE
	LIFT CHECK VALVE
	SWING CHECK VALVE
	AUTOMATIC CONTROL VALVE (2-WAY)
	AUTOMATIC CONTROL VALVE (3-WAY)
	STRAINER
	PIPE RISING UP
	PIPE DROPPING DOWN
	UNION - SCREWED OR FLANGED
	GAUGE W/GAUGE COCK AND SNUBBER (WATER)
	THERMOMETER
	AIR SEPARATOR
	FLEXIBLE CONNECTION
	CHILLED WATER PIPE WITH INSULATION

PLUMBING	
SYMBOL	DESCRIPTION
	SOIL OR WASTE PIPE (BELOW GROUND)
	SOIL OR WASTE PIPE (ABOVE GROUND)
	VENT PIPE (V)
	COLD WATER PIPE (CW)
	DIONIZED WATER PIPE (DW)
	FLOOR DRAIN
	CLEAN-OUT(FLOOR)
	CLEAN-OUT(WALL)
	GATE VALVE
	CHECK VALVE
	TEMP./PRESS. RELIEF VALVE
	FIXTURE ISOLATION VALVE
	VACUUM BREAKER
	VENT THROUGH ROOF
	ACCESS DOOR
	HOSE BIB (HB)
	ROOF DRAIN
	URINAL
	Y CLEAN-OUT
	CONDENSATE

FIRE PROTECTION	
SYMBOL	DESCRIPTION
	STANDPIPE
	PORTABLE FIRE EXTINGUISHER
	HOSE CABINET

AS BUILT
11-03-04

GRAPHIC SCALE: SEAL.



REV.	DESCRIPTIONS	DATE	APPD
0	AS BUILT DRAWING	11-03-04	AFA

REVISIONS

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APPROVALS		PROJECT: SHORTWAVE EXPANSION PROJECT KUWAIT	
PROJ. MANAGER	TITLE	MECHANICAL SYMBOLS AND ABBREVIATIONS	
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TASK No.	ABD-AC-06	0	MO1
PROJ. No. 03NCO80	SCALE: NTS	SHEET OF	
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