ELECTRICAL LEGENDS & SYMBOLS

(NOT ALL SYMBOLS INDICATED ARE NECESSARILY USED ON PLANS)

	EMERGENCY HATCHED FIXTURE TYPICAL
X	FLUORESCENT FIXTURE (1x8) LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT FIXTURE (1x4) LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT FIXTURE (2x2) LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT FIXTURE (2x4) LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT WALL MOUNTED FIXTURE (1x4) LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT INDIRECT LIGHT FIXTURE (2') LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT INDIRECT LIGHT FIXTURE (4') LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT INDIRECT LIGHT FIXTURE (8') LETTER INDICATES FIXTURE TYPE.
X	FLUORESCENT INDIRECT LIGHT FIXTURE (12') LETTER INDICATES FIXTURE TYPE.
	LIGHTING TRACK WITH TRACK FIXTURES
	SITE LIGHTING (SINGLE SQUARE OR ROUND LUMINARE) LETTER INDICATES FIXTURE TYPE.
	SITE LIGHTING (TWO SQUARE OR ROUND LUMINARIES) LETTER INDICATES FIXTURE TYPE.
	SITE LIGHTING (THREE SQUARE OR ROUND LUMINARIES) LETTER INDICATES FIXTURE TYPE.
	SITE LIGHTING (FOUR SQUARE OR ROUND LUMINARIES) LETTER INDICATES FIXTURE TYPE.
	FLOOD LIGHTING LETTER INDICATES FIXTURE TYPE.
	BOLLARD LIGHTING LETTER INDICATES FIXTURE TYPE.
	EXIT SIGN (REFER TO PLAN FOR CHEVRON DIRECTION)
	SINGLE POLE TOGGLE SWITCH
P	TOGGLE SWITCH WITH PILOT SWITCH
3	THREE-WAY TOGGLE SWITCH
4	FOUR-WAY TOGGLE SWITCH
R	RELAY CONTROL SWITCH
K	KEY OPERATED SWITCH
OC	OCCUPANCY SENSOR (REFER TO PLAN FOR WALL OR CLG MOUNTED) LEVITON OCCUPANCY SENSOR WALL #6800 CLG #6878-1W
EM	EMERGENCY BATTERY PACK FIXTURE
A	UTILITY STRIP FLUORESCENT FIXTURE. REFER TO PLAN FOR LENGTH. LETTER INDICATES FIXTURE TYPE.
X	DOWNLIGHT FIXTURE LETTER INDICATES FIXTURE TYPE.
X	DOWNLIGHT WALL WASHER LETTER INDICATES FIXTURE TYPE.
X	WALL SCONCE LETTER INDICATES FIXTURE TYPE.
	WALL PACK
	DUPLEX RECEPTACLE
X	DUPLEX RECEPTACLE ABOVE COUNTER
	208V RECEPTACLE
GFI	GROUND FAULT CIRCUIT INTERRUPTER (GFI) RECEPTACLE
X	LEVITON TAMPER - RESISTANT RECEPTACLE PART# 5321-W w/ COVER PLATE # 88002
WP	WEATHER PROOF/GFI RECEPTACLE
	ISOLATED GROUND RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
J	J-BOX
	QUAD RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	SIMPLEX RECEPTACLE
	FLOOR COMBINATION DATA/RECEPT.
	MULTIPLE OUTLET
J	WALL MOUNTED J BOX
	CEILING OUTLET

	DISCONNECT SWITCH
F	FUSED DISCONNECT SWITCH
C	COMBINATION STARTER AND DISCONNECT SWITCH (NF INDICATES NOT FUSED)
M	MAGNETIC MOTOR STARTER
	FIREMAN'S PHONE JACK
S	SMOKE DETECTOR
H	HEAT DETECTOR
S	SPEAKER FIRE ALARM
F	FIRE ALARM VISUAL SIGNAL
F	FIRE ALARM AUDIBLE VISUAL SIGNAL
F S	FIRE ALARM SPEAKER/HORN/WITH VISUAL ASSEMBLY
F	FIRE ALARM HORN ONLY
F H	FIRE ALARM MAGNETIC HOLD OPEN
F	FIRE ALARM PULL STATION
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNICATOR PANEL
FS FFS	FIRE ALARM FLOW/TAMPER SWITCH
C	FIRE ALARM JACK
FCP	FIRE PANEL
ES	ELEVATOR FIRE SIGN
D	DUCT SMOKE DETECTOR
CR	CARD READER
	PANELBOARD
T	TRANSFORMER
	WIREWAY
	MOTOR
	DISTRIBUTION PANEL/SWITCHBOARD
H - 1,3,5	THREE (3) ONE-POLE CIRCUIT
H - 1/3/5	ONE (1) THREE-POLE CIRCUIT
	GROUND CONNECTION
	HOMERUN w/ CONDUCTORS (RE: PANEL SCHED.)
	(3) PHASE CONDUCTORS, (1) NEUTRAL CONDUCTOR AND (1) GROUNDING CONDUCTOR
X	PHOTOCELL
T	TELEPHONE WALL OUTLET
D	DATA COMMUNICATION WALL OUTLET
TD	COMBINATION TELEPHONE/COMM. OUTLET
T	TELEPHONE CEILING OUTLET
D	DATA CEILING OUTLET
TD	TELEPHONE/DATA CEILING OUTLET
TV	TV OUTLET
TV	TV WALL OUTLET
	CAMERA
	SERVICE BELL

PLUMBING & HVAC PIPING LEGEND

(NOTE: ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS)

SYMBOL	DESCRIPTION
	T&P VALVE
S.D.	SHOWER DRAIN
F.D.	FLOOR DRAIN
A.D.	AREA DRAIN
R.D.	ROOF DRAIN
OD OR OFD	OVERFLOW ROOF DRAIN
P.D.	PLANTER DRAIN
HB HB	HOSE BIBB
V.T.R. V.T.R.	VENT THRU ROOF
	PRESSURE GAUGE - 2-1/2" DIAL, W/ 1/4" VALVE
FS	FLOW SWITCH
	CONSTANT FLOW DEVICE - EQUAL TO GRISWOLD
	POINT OF CONNECTION
AS	AQUASTAT
	THERMOSTATIC TRAP
	COMBINATION FLOAT AND THERMOSTATIC TRAP
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
G	GAS PIPING
D	DRAIN LINE
	FLEXIBLE PIPE CONNECTION
	COLD WATER LINE
	HOT WATER LINE
	HOT WATER RETURN LINE
	SANITARY LINE
GW	GREASE WASTE LINE
	VENT LINE
F	FIRE LINE
	SUB-SURFACE LINE
SD	STORM DRAIN LINE
SPD	SUMP PUMP DISCHARGE
SED	SEWAGE EJECTOR DISCHARGE
PR	PUMPED STEAM CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM
HWR	HOT WATER RETURN
HWSR	HOT WATER SUPPLY
	PITCH DOWN IN DIRECTION OF ARROW
	GAS COCK
	THERMOMETER
	COMBINATION PRESSURE & TEMPERATURE TAP
	STRAINER WITH BLOW OFF
	UNION OR FLANGED CONNECTION
MAV	MANUAL AIR VENT
AAV	AUTOMATIC AIR VENT
B	BUCKET TRAP
C.O.	CLEANOUT IN LINE
	CLEANOUT
W.C.O	WALL CLEANOUT
	OS & Y VALVE
	GATE VALVE
	BUTTERFLY VALVE (WITH (M) = MOTORIZED)
	BALL VALVE (WITH (S) = SOLENOID)
	CHECK VALVE
	SOLENOID VALVE
	PRESSURE RELIEF VALVE
	AUTOMATIC, 2 WAY VALVE
	AUTOMATIC, 3 WAY VALVE

MECHANICAL DUCTWORK LEGEND

(NOTE: ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS)

SINGLE LINE	DESCRIPTION	DOUBLE LINE	
	90° ELBOW DOWN		ROUND (ø)
	90° ELBOW UP		
	ROUND RADIUS ELBOW		
	45° ELBOW		
	90° ELBOW DOWN		RECTANGULAR
	90° ELBOW UP		
	RECTANGULAR RADIUS ELBOW		
	RECTANGULAR ELBOW WITH TURNING VANES		
	SPLIT BRANCH TAKE-OFF WITH VANES ELBOW & SPLITTER DAMPER		
	BRANCH TAKE-OFF WITH RADIUS HEEL & EXTRACTOR		
	SPIN-IN TAP W/DAMPER		
	TEE WITH SPLITTER DAMPER & VANES		
	REDUCER, ECCENTRIC		
	REDUCER, CONCENTRIC		
	NEW SUPPLY AIR DIFFUSER		DIFFUSERS
	EXISTING SUPPLY AIR GRILLE		
R	EXISTING SUPPLY AIR GRILLE TO BE RELOCATED		
	NEW SLOT DIFFUSER		
	EXISTING SLOT DIFFUSER TO REMAIN		
R	EXISTING SLOT DIFFUSER TO BE RELOCATED		
(W"x0")	SIDEWALL DIFFUSER (WIDTH X DEPTH; DUCT CONN. SIZE)		
	SIDEWALL SUPPLY GRILLES OR REGISTER W/AIR EXTRACTOR		
	LINED DUCTWORK		DUCTS
	SUPPLY DUCT		
	RETURN DUCT		
	EXHAUST DUCT		
	ROUND DUCT SIZE		
	OVAL DUCT SIZE		
	ROUND FLEXIBLE DUCT		
	FLEXIBLE DUCT RUNOUT		
	FLEXIBLE DUCT CONNECTION		
W/D	DUCTWORK (SHEETMETAL) (WITH/DEPTH IN VIEW OF PLAN)		
	DUCTWORK, DIRECTION OF SLOPE		
	CONICAL TAP W/DAMPER		DAMPERS
MD	MANUAL VOLUME DAMPER	MD	
FSD	COMBINATION FIRE/SMOKE DAMPER IN DUCT	FSD	
FD	FIRE DAMPER IN DUCT	FD	
SD	SMOKE DAMPER	SD	
M	MOTORIZED VOLUME DAMPER	M	
BD	BACKDRAFT DAMPER	BD	
	DIRECTION OF EXHAUST RELIEF		MISC.
	SUPPLY DIRECTION		
SP	STATIC PRESSURE SENSOR	SP	
T S	THERMOSTAT, REMOTE SENSOR		

ABBREVIATIONS

(NOT ALL ABBREVIATIONS INDICATED ARE NECESSARILY USED ON PLANS)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A	AMPS	DP	DISTRIBUTION PANEL
AC	ALTERNATING CURRENT/ABOVE COUNTER	DWG	DRAWING
ADJ	ADJACENT	E	EXISTING TO REMAIN
AFF	ABOVE FINISHED FLOOR	EC	EMPTY CONDUIT
AFG	ABOVE FINISHED GRADE	EL	ELEVATION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	ELEC	ELECTRIC
ARCH	ARCHITECTURAL	ELEV	ELEVATOR
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	EM	ON EMERGENCY CIRCUIT
ASYM	ASYMMETRICAL	EP	EXPLOSION PROOF
ATS	AUTOMATIC TRANSFER SWITCH	EQ	EQUIVALENT
AUX	AUXILLARY	EMT	ELECTRICAL METALLIC TUBING
A/V	AUDIO/VISUAL	EQMT	EQUIPMENT
AWG	AMERICAN WIRE GAUGE	FA	FIRE ALARM
BLDG	BUILDING	FC	FOOT CANDLE
C	CONDUIT	FDR	FEEDER
C/B	CIRCUIT BREAKER	FIXT	FIXTURE
CAT	CATALOG	FL	FLUSH
CKT	CIRCUIT	FLR	FLOOR
CL	CLOCK	FLUOR	FLUIORESCENT
CLG	CEILING	FT	FEET
COL	COLUMN	FWD	FORWARD
CONC	CONCRETE	FU	FUSE
CONT	CONTINUOUS	FLA	FULL LOAD AMPERES
CONV	CONVENIENCE	GA	GUAGE
C/T	CURRENT TRANSFORMER	GALV	GALVANIZED
DC	DIRECT CURRENT	GFI	GROUND FAULT CIRCUIT INTERRUPTER
DIA	DIAMETER	GND	GROUND
DN	DOWN	GRC	GALVANIZED RIGID CONDUIT
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
HGT	HEIGHT	MCC	MOTOR CONTROL CENTER
HOA	HAND OFF AUTOMATIC	MCM	THOUSAND CIRCULAR MILS
HORIZ	HORIZONTAL	MCP	MOTOR CONTROL PANEL
HP	HORSEPOWER	MECH	MECHANICAL
HTG	HEATING	MIC	MICROPHONE
HVAC	HEATING, VENTILATING & AIR CONDITIONING	MISC	MISCELLANEOUS
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS	MLO	MAIN LUGS ONLY
		MTD	MOUNTED
IES	ILLUMINATING ENGINEERING SOCIETY	MTR	MOTOR
IMC	INTERMEDIATE METAL CONDUIT	N	NEUTRAL
IG	ISOLATED GROUND	NC	NORMALLY CLOSED
IN	INCHES	NEC	NATIONAL ELECTRICAL CODE
INCAND	INCANDESCENT	NEMA	NATIONAL ELEC MANUFACTURERS ASSOC.
INSUL	INSULATION	NETA	NATIONAL ELECTRICAL TESTING ASSOC.
INT	INTERCOM	NF	NON-FUSE
J-BOX	JUNCTION BOX	NFPA	NATIONAL FIRE PROTECTION ASSOC.
KCMIL	THOUSAND CIRCULAR MILS	NL	ON NIGHT LIGHTING CIRCUIT
KVA	KILOVOLT AMPERES	NO	NORMALLY OPEN
KW	KILOWATT	O/C	OVERCURRENT
KWH	KILOWATT HOURS	OL	OVERLOAD
LBS	POUNDS	P	POLES
LOC.	LOCATED	PB	PULL BOX
LP	LIGHTING PANEL	PF	POWER FACTOR
LTG	LIGHTING	PH	PHASE
MA	MILLIAMPS	PLB	PLUMBING
MACH	MACHINE	PNL	PANEL
MC	METAL-CLAD CABLE	PP	POWER PANEL
MCB	MAIN CIRCUIT BREAKER	PWR	POWER
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
PVC	POLYVINYL CHLORIDE	UL	UNDERWRITERS LABORATORIES, INC.
P/T	POTENTIAL TRANSFORMER	V	VOLTS
R	REMOVE	VA	VOLT AMPERES
RC	REMOTE CONTROL	VENT	VENTILATING
RECEPT	RECEPTACLE	VERT	VERTICAL
REL	RELOCATE	VP	VAPORPROOF
REQ	REQUIRED	W	WATTS
REV	REVERSE	WG	WIRE GUARD
RM	ROOM	WP	WEATHERPROOF
RMS	ROOT MEAN SQUARE	XTMR	TRANSFORMER
SP	SPARE	YD	YARD
SPECS	SPECIFICATIONS	1/C, 2/C,	1 CONDUCTOR, 2 CONDUCTORS, ETC.
SPKLR	SPRINKLER		
SPKR	SPEAKER		
SQ	SQUARE		
STD	STANDARD		
SURF	SURFACE		
SW	SWITCH		
SWBD	SWITCHBOARD		
SWGR	SWITCHGEAR		
SUSP	SUSPENDED		
SYM	SYMMETRICAL		
TEL	TELEPHONE		
TELCO	TELEPHONE COMPANY		
TV	TELEVISION		
TYP	TYPICAL		
UC	UNDERCOUNTER		
UFD	UNDERFLOOR DUCT		

GENERAL NOTES:

THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE LOCATION OF ALL DEVICES, LIGHTS, GRILLES AND DRAINS LOCATED IN WALLS, CEILING AND FLOORS.

A DEDICATED SHEET LIST IS PROVIDED FOR EACH DISCIPLINE (M/E/P). EACH SHEET LIST IS LOCATED ON THE FIRST SHEET OF A GIVEN DISCIPLINE.

LINETYPE LEGEND	
LINE	DESCRIPTION
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
R	EXISTING TO BE RELOCATED
	NEW

PHASING DURING CONSTRUCTION	
PH1	PHASE 1
PH2	PHASE 2
PH3	PHASE 3

02/18/2010

100% CD'S

Revisions	Date

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