

three inches = one foot

one and one half inches = one foot

one inch = one foot

three quarters inch = one foot

one half inch = one foot

three eighths inch = one foot

one quarter inch = one foot

one eighth inch = one foot

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	EXISTING
	DEMOLITION/NEW WORK
	FUTURE
	DISCONNECT FROM EXISTING
	CONNECT TO EXISTING
	ANGLE VALVE
	AQUAMATIC VALVE
	BALL VALVE
	BALL VALVE (LOCKABLE)
	BALL VALVE WITH MEMORY STOP
	BALANCING VALVE
	BASKET STRAINER
	BUTTERFLY VALVE
	BALL/BUTTERFLY VALVE IN RISE
	BLOWDOWN VALVE
	BRINE EDUCTOR
	CHECK VALVE
	CONTROL VALVE
	DOUBLE CHECK VALVE
	DUPLEX STRAINER
	FILTER

SYMBOL	DESCRIPTION
	FLOWMETER (ANNUBAR)
	FLOWMETER (MAGNETIC)
	FLOWMETER (MECHANICAL USAGE)
	FLOWMETER (ORIFICE)
	FLOWMETER (VENTURI)
	FLOWMETER (VORTEX)
	EXHAUST HEAD
	GLOBE VALVE
	PLUG VALVE
	PRESSURE REDUCING/REGULATING VALVE
	PRESSURE SAFETY VALVE WITH DRIP PAN ELBOW
	GATE VALVE
	GATE VALVE IN RISE
	MINIMUM FLOW ORIFICE
	MULTI-PORT RELIEF VALVE
	NEEDLE VALVE
	OS&Y GATE VALVE WITH TAMPER SWITCH
	SOLENOID VALVE
	SOLENOID VALVE IN RISE
	SOOT BLOWER VALVE

SYMBOL	DESCRIPTION
	STOP/CHECK (NON-RETURN) VALVE
	STRAINER
	STRAINER W/ BLOWDOWN VALVE
	THREE-WAY VALVE
	UNION
	VACUUM BREAKER
	VENT CAP
	BLANKED OFF
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER (FOB)
	FLANGES
	HOSE END CONNECTION
	HOSE BIBB
	PIGTAIL
	QUICK CONNECTION
	THERMOCOUPLE
	BACKFLOW PREVENTOR
	EXISTING STEAM TRAP ASSEMBLY
	STEAM TRAP ASSEMBLY AND TRAP NUMBER
	PIPE CAP
	PIPE DROP

	PIPE RISE
	VENT THROUGH ROOF
	CAPILLARY TUBE
	ELECTRIC SIGNAL
	MECHANICAL LINKAGE
	PNEUMATIC SIGNAL
	FLEXIBLE HOSE (BRAIDED STEEL)
	FLEXIBLE CONNECTION
	DAMPER
	EXPANSION JOINT
	FAN
	PUMP
	THERMOSTAT
	SECTION DESIGNATION
	DRAWING SECTION IS ON

MECHANICAL ABBREVIATIONS

5C	5 PSIG CONDENSATE	D	DEPTH	GI)	NATURAL GAS (IGNITOR)	N/A	NOT APPLICABLE	V	VENT
5S	5 PSIG STEAM	DA	DEAERATOR	GA	GAUGE	NAT	NATURAL	V	VOLTS
15C	15 PSIG CONDENSATE	DA	DEALKALIZED WATER	GAL	GALLON	N.C.	NORMALLY CLOSED	VAC	VACUUM
15S	15 PSIG STEAM	Db	DRY BULB	GALV	GALVANIZED	NG	NATURAL GAS	VB	VACUUM BREAKER
100C	100 PSIG CONDENSATE	DC	DIRECT CURRENT	GD	GRAVITY DAMPER	NO	NUMBER	VEL	VELOCITY
100S	100 PSIG STEAM	DCS	DATA COLLECTION SYSTEM	GPH	GALLONS PER HOUR	NOX	NITROGEN MONOXIDE/NITROGEN DIOXIDE	VFD	VARIABLE FREQUENCY DRIVE
		DESIGN.	DESIGNATION	GPM	GALLONS PER MINUTE	NP	NON-POTABLE COLD WATER	VTR	VENT THROUGH ROOF
AAV	AUTOMATIC AIR VENT	DI	DIGITAL INPUT	GRD	GROUND				
ABV	ABOVE	DI	DEIONIZED WATER	GWR	GLYCOL WATER RETURN	OA	OUTSIDE AIR	W	WIDE/WIDTH
AC	ALTERNATING CURRENT	DIA.	DIAMETER	GWS	GLYCOL WATER SUPPLY	OC	ON CENTER	WI	WITH
AF	ABOVE FINISHED FLOOR	DIFF.	DIFFERENTIAL			O.D.	OUTSIDE DIAMETER	Wb	WET BULB
AI	ANALOG INPUT	DISCH	DISCHARGE	H	HIGH/HEIGHT	OPER.	OPERATING	W.C.	WATER COLUMN
AIR	NON-COMPRESSED AIR	DISTRIB	DISTRIBUTION	HB	HOSE BIBB			WG	WATER GAUGE
APPROX.	APPROXIMATELY	DM	DEMINERALIZED WATER	H.E.D.	HOSE END DRAIN	PA	PLANT AIR	WOL	WELDOLET
AR	AUTOMATIC RESET	DN	DOWN	H.O.A.	HAND-OFF-AUTOMATIC	PC	PUMPED CONDENSATE		
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	DO	FUEL OIL	HP	HORSEPOWER	PD	PRESSURE DROP	@	AT
ASSY.	ASSEMBLY	DOM	DOMESTIC	HPR	HIGH PRESSURE CONDENSATE RETURN	PCS	PUMPED CONDENSATE PUMP SUCTION	&	AND
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	DOP	FUEL OIL PUMP	HPS	HIGH PRESSURE STEAM	PMCP	PLANT MASTER CONTROL PANEL	CL	CENTER LINE
ATOM	ATOMIZING	DOPS	FUEL OIL PUMP SUCTION	HR	HOUR	PO	PNEUMATIC OUTPUT	CO2	CARBON DIOXIDE
AUX.	AUXILIARY	DOR	FUEL OIL RETURN	H.R.S.	HOT ROLLED STEEL	PPH	POUNDS PER HOUR	°F	DEGREES FAHRENHEIT
AHU	AIR HANDLING UNIT	DOS	FUEL OIL SUPPLY	HWR	HEATING WATER RETURN	PPM	PARTS PER MILLION	Ø	DIAMETER
BAS	BUILDING AUTOMATION SYSTEM	DR	DRAIN	HWS	HEATING WATER SUPPLY	PRESS.	PRESSURE	H2O	WATER
BBD	BOTTOM BLOWDOWN	DW	DISTILLED WATER	HTHWR	HIGH TEMPERATURE HEATING WATER RETURN	PSI	POUNDS PER SQUARE INCH	N2	NITROGEN
BC	BURNER FLAME CONTROL	DWG.	DRAWING	HTHWS	HIGH TEMPERATURE HEATING WATER SUPPLY	PSIG	POUNDS PER SQUARE INCH GAUGE	N2O	NITROUS OXIDE
BCP	BOILER CONTROL PANEL			HW	HOT WATER (POTABLE DOMESTIC)			O2	OXYGEN
BCW	BEARING COOLING WATER	EAT	ENTERING AIR TEMPERATURE	HWR	HOT WATER RECIRCULATION (POTABLE DOMESTIC)	RA	RETURN AIR	%	PERCENT
BD	BLOWDOWN	ECON	ECONOMIZER	H.X.	HEAT EXCHANGER	R.D.R.	ROOF DRAIN	#	POUND(S)
BFEC	BOILER FEEDWATER FROM ECONOMIZER	ED	EQUIPMENT DRAIN	HZ	HERTZ	RECIRC.	RECIRCULATION		
BFPS	BOILER FEEDWATER PUMP SUCTION	ED(OF)	EQUIPMENT DRAIN (OVERFLOW)			REL.	RELOCATE, RELOCATED		
BFW	BOILER FEEDWATER (PUMPED)	EF	EXHAUST FAN	IA	INSTRUMENT AIR	REQ'D.	REQUIRED		
BHP	BRAKE/BOILER HORSEPOWER	EFF	EFFICIENCY	ID	INDUCED DRAFT	RF	RETURN FAN		
BLDG.	BUILDING	EL	ELEVATION	I.D.	INSIDE DIAMETER	RHG	REFRIGERANT HOT GAS		
BUL	BOILER	ELEV	ELEVATION	IN.	INCHES	RL	REFRIGERANT LIQUID		
BMS	BURNER MANAGEMENT SYSTEM	EMER.	EMERGENCY	INV.	INVERT	RM	ROOM		
BO	BLOWOFF	ENTR.	ENTERING	IN.W.C.	INCHES OF WATER COLUMN	RPM	REVOLUTIONS PER MINUTE		
BP	BACKFLOW PREVENTOR	EWT	ENTERING WATER TEMPERATURE			R.R.	REMOVE AND RE-INSTALL EXISTING		
BTUH	BRITISH THERMAL UNITS PER HOUR	EX	EXISTING	JT	JOINT	RS	REFRIGERANT SUCTION		
BTUHR	BRITISH THERMAL UNITS PER HOUR	EXP.	EXPANSION			RX	REMOVE EXISTING		
		ETC	ETC/ETERAS	L	LONG/LENGTH	SA	SUPPLY AIR		
CA	COMPRESSED AIR	F	FIRE/SPRINKLER PIPING	LAT	LEAVING AIR TEMPERATURE	SAN	SANITARY		
CBD	CONTINUOUS BLOWDOWN	F	FILTER	LB(S)	POUND(S)	SCFH	CUBIC FEET PER HOUR AT STANDARD CONDITIONS		
CC	CAMPUS CONDENSATE	F&T	FLOAT AND THERMOSTATIC	LBS/HR	POUNDS PER HOUR	SCH.	SCHEDULE		
CD	CONDENSATE DRAIN	FCU	FAN COIL UNIT	LCP	LOCAL CONTROL PANEL	SD	STORM DRAIN		
CF	CHEMICAL FEED	FD	FORCED DRAFT	LO	LUBRICATION OIL	SENS	SENISBLE		
CFH	CUBIC FEET PER HOUR	F.D.R.	FLOOR DRAIN	LOR	LUBRICATION OIL RETURN	SF	SAFETY FACTOR		
CFM	CUBIC FEET PER MINUTE	F.F.	FINISHED FLOOR	LOS	LUBRICATION OIL SUPPLY	SQL	SOCKOLET		
CH	CHILLER	FFP	FILTERED FUEL PUMP	LPE	LOW PRESSURE EXHAUST	SQ.FT.	SQUARE FEET		
CHR	CHILLED WATER RETURN	FFR	FILTERED FUEL RETURN	LPG	LIQUEFIED PETROLEUM GAS (PROPANE)	S.S.	STAINLESS STEEL		
CHS	CHILLED WATER SUPPLY	FFS	FILTERED FUEL SUPPLY	LPR	LOW PRESSURE CONDENSATE RETURN	STM	STEAM		
CMU	CONCRETE MASONRY UNIT	FGR	FLUE GAS RECIRCULATION	LPS	LOW PRESSURE STEAM	SW	SOFTWATER		
CO.	CLEANOUT	FIN.	FINISHED	LWT	LEAVING WATER TEMPERATURE				
COMP	COMPRESSOR	FLA	FULL LOAD AMPS	mA	MILLIAMPERE	TEMP.	TEMPERATURE		
CONC.	CONCRETE	FLEX	FLEXIBLE	MANUF.	MANUFACTURER	THK	THICK		
COND.	CONDENSATE	FLR.	FLOOR	MAV	MANUAL AIR VENT	TOL	THREADOLET		
CONFIG.	CONFIGURATION	FO	FUEL OIL	MAX.	MAXIMUM	TOS	TOP OF STEEL		
CONN.	CONNECTION	FOB	FLAT ON BOTTOM	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR	TSP	TOTAL STATIC PRESSURE		
CONT.	CONTINUATION	FOF	FUEL OIL FILL	MCC	MOTOR CONTROL CENTER	TW	TREATED WATER		
CPLG	COUPLING	FOP	FUEL OIL PUMP	MEZZ	MEZZANINE	TYP	TYPICAL		
CR	CONDENSER WATER RETURN	FOP	FUEL OIL PUMP	MIN.	MINIMUM				
CS	CONDENSER WATER SUPPLY	FOPS	FUEL OIL PUMP SUCTION	MISC.	MISCELLANEOUS				
CT	CONDENSATE TRANSFER	FOR	FUEL OIL RETURN	MISC.	MISCELLANEOUS				
CT	COOLER TOWER	FOS	FUEL OIL SUPPLY	MISC.	MISCELLANEOUS				
CS	CENTISTONE (VISCOSITY)	FOT	FLAT ON TOP	MISC.	MISCELLANEOUS				
CU.FT.	CUBIC FEET	FPM	FEET PER MINUTE	MISC.	MISCELLANEOUS				
CW	COLD WATER (POTABLE DOMESTIC)	FT	FEET/FOOT	MISC.	MISCELLANEOUS				
CX	CONNECT TO EXISTING	FV	FIELD VERIFY	MISC.	MISCELLANEOUS				

Revisions:

Date

CONSULTANTS:

AEI

Affiliated Engineers

Affiliated Engineers SE, Inc.

Trioga Town Center

12921 SW 1st Road Ste 205

Gainesville, Florida 32669

Tel 352.376.5500 Fax 352.375.3479

CA-5140

ENGINEER-OF-RECORD

JACK STEWART NEALE

FL P.E. NO. 42678

ARCHITECT/ENGINEERS:

AKEA

INC.

3603 NW 98th Street, Suite B

Gainesville, FL 32606

Phone: (352) 474-6124

Fax: (352) 553-4437

COA: FL #26693

AKEA Project No. 083-14

Drawing Title

MECHANICAL LEGEND AND ABBREVIATIONS

Approved: Project Director

Project Title

REPLACE BOILERS - FCA D, ENERGY AT THE MALCOM RANDALL VAMC

Location

GAINESVILLE, FLORIDA

Date

JULY 8, 2016

Checked

JSN

Drawn

RWD

Project Number

573-14-600

Building Number

Drawing Number

MP001

Office of Construction and Facilities Management