SUPPLY AIR DIFFUSER

SMOKE DAMPER (RETURN)

SMOKE DAMPER (SUPPLY)

SMOKE DAMPER

SENSIBLE HEAT

SUPPLY AIR GRILLE

STEAM HUMIDIFIER

SQUARE INCHES

STATIC PRESSURE

SPECIFIC GRAVITY

STEAM HEATING COIL

SUPPLY FAN

SCHEMATIC DESIGN (SUBMISSION1)

SCHEMATIC DESIGN (SUBMISSION2)

SUPPLY PROCESS AND DISTRIBUTION

STEAM TO STEAM HEAT EXCHANGER

STEAM PRESSURE REDUCING VALVE

STEAM TO WATER HEAT EXCHANGER

T & PCV TEMPERATURE AND PRESSURE CONTROL VALVE

TESTING, ADJUSTING, BALANCE

TEMPERATURE DIFFERENCE

TOTAL DYNAMIC HEAD

TRANSFER GRILLE

TOP REGISTER

THERMOSTAT

TERMINAL UNIT

THRU-WALL UNIT

TRAP

TOTAL DISSOLVED SOLIDS

TOTAL STATIC PRESSURE

STEAM PRESSURE REDUCING VALVE

STATIC PRESSURE SENSOR

SQUARE FOOT (FEET)

STAINLESS STEEL

SOLID SEPARATOR

STEAM UNIT HEATER

STEAM VENT SILENCER

STEAM TRAP

SUPPLY AIR REGISTER

SD-1

SD-2

SDPR

SDR

SDS

SP GR

SPRV

SPS

SSR

SVS

TSP

TSTAT

SQ FT

ARCHITECT / ENGINEER	СМ	CARBON MONOXIDE	FPM	FEET PER MINUTE
AIR TO AIR HEAT EXCHANGER	CM	CUBIC METER	FPS	FEET PER SECOND
AIR BLENDER	CM/S	CUBIC METER PER SECOND	FRP	FIBER REINFORCED POLYESTER
AUTOMATIC AIR VENT	co [′]	CLEAN OUT	FS	FLOW SWITCH
AIR COOLED CONDENSER	CO2	CARBON DIOXIDE	FSTAT	FREEZESTAT
AIR COOLED CHILLER	COMP	COMPRESSOR UNIT	FT	FEET
AIR-COOLED CONDENSING UNIT	COP	COEFFICIENT OF PERFORMANCE	FT-LB	FOOT-POUND
AIR CONDITIONING UNIT	CP	CONDENSATE PUMP		
AUTOMATIC CONTROL DAMPER, MODULATING	CR	CEILING REGISTER	GA	GAUGE
AUTOMATIC CONTROL DAMPER, TWO POSITION	CS	CONDENSATE STORAGE TANK	GAL	GALLONS
ACCESS DOOR	CSG	CLEAN STEAM GENERATOR	GH	GRAVITY HOOD
AFTER FILTER	CT	COOLING TOWER	GPD	GALLONS PER DAY
AIR FLOW CONTROL VALVE	CU	CONDENSING UNIT	GPH	GALLONS PER HOUR
ABOVE FINISHED FLOOR	CUH	CABINET UNIT HEATER	GPM	GALLONS PER MINUTE
AIR FLOW MEASURING DEVICE	CV	CONSTANT VOLUME	GPR	GAS PRESSURE REGULATOR
AIR FOIL WHEEL (FAN)	CW	COLD WATER (POTABLE)	GS	GALVANIZED STEEL
AIR—HANDLING UNIT	CWCC	CHILLED WATER COOLING COIL		
AMPERAGE	CWP	CONDENSER WATER PUMP	L	LITER
			1 /1	LITEDO DED LIQUE (OD LITEDO (LIQUE

EXHAUST AIR

EXHAUST FAN

EXHAUST GRILLE

EXHAUST HOOD

EXPANSION JOINT

EXHAUST REGISTER

EXPANSION TANK

ETHYLENE OXIDE

FAHRENHEIT

FREE AREA

FLOOR DRAIN

FIRE DAMPER

FINAL FILTER

FLOW METER

ELECTRIC REHEAT COIL

ELECTRIC UNIT HEATER

ELECTRIC RADIANT PANEL

EXTERNAL STATIC PRESSURE

EVAPORATIVE WATER COOLER

FLOAT AND THERMOSTATIC

F/SDPR COMBINATION FIRE SMOKE DAMPER

FLEXIBLE CONNECTION

FAN COIL UNIT (4 PIPE)

FAN COIL UNIT COOLING ONLY

FAN COIL UNIT HEATING ONLY

FORWARD CURVED WHEEL (FAN)

FLUE GAS/FEEDWATER HEAT EXCHANGER

ENTERING WATER TEMPERATURE

ENTERING

END OF LIFE

ENTERING AIR TEMPERATURE

ENGINEERING CONTROL CENTER

EVAPORATIVE CONDENSER UNIT

EVAPORATIVE COOLER

ELECTRIC DUCT HEATER

ENERGY EFFICIENCY RATIO

EMERGENCY GAS SHUTOFF

END OF MAIN DRIP (STEAM)

ENTERING GLYCOL TEMPERATURE

CONDENSER WATER RETURN (TO COOLING TOWER)

CONDENSER WATER SUPPLY (FROM COOLING TOWER)

CWR

EAT

EC ECC ECU EDH EER

EGS EGT

EMD ENT

EOL

ERC ERP

ESP

ETO EUH

EWC

FΆ

FCU

FCUC FCUH

FCW

AAHX

ACCH

ACCU ACU

AFCV

AFMD AFW

ASME

BHW

BTUH

CCD

CD-1

CD-2

CENT

CFH

CFM

CHW

ACCESS PANEL

AIR SEPARATOR

AIR WASHER

AXIAL FLOW

AIR PRESSURE DROP

BUTTERFLY DAMPER

BACKDRAFT DAMPER

BASE BOARD RADIATOR

BACKFLOW PREVENTER

BRAKE HORSEPOWER

BEGINNING OF LIFE

BRITISH THERMAL UNIT

CENTIGRADE (CELSIUS)

BOILER PLANT WATER TUBE

BOTTOM REGISTER

BLOWOFF TANK

COOLING COIL

CENTRIFUGAL

CUBIC FEET

CHILLER

CEILING GRILLE

CHILLER WATER

CAST IRON

CEILING DIFFUSER

CUBIC FEET PER HOUR

CHEMICAL FEED PUMP

CHILLED WATER PUMP

CHILLED WATER RETURN

CHILLED WATER SUPPLY

ABSORPTION CHILLER

CUBIC FEET PER MINUTE

BOTTOM GRILLE

BOILER PLANT FIRE TUBE

HOT WATER HEATING BOILER

BIOLOGICAL SAFETY CABINETS

BLOWOFF TANK CONTROL VALVE

BRITISH THERMAL UNIT PER HOUR

COOLING COIL CONDENSATE DRAIN

CONSTRUCTION DOCUMENTS (SUBMISSION1)

CONSTRUCTION DOCUMENTS (SUBMISSION2)

BOILER BLOWDOWN HEAT EXCHANGER

BACKWARD INCLINED WHEEL (FAN)

AIR CONDITIONING AND REFRIGERATION INSTITUTE

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

FPS FRP FS FSTAT FT FT-LB	FEET PER SECOND FIBER REINFORCED POLYESTER FLOW SWITCH FREEZESTAT FEET FOOT-POUND
GA GAL GH GPD GPH GPM GPR GS	GAUGE GALLONS GRAVITY HOOD GALLONS PER DAY GALLONS PER HOUR GALLONS PER MINUTE GAS PRESSURE REGULATOR GALVANIZED STEEL
L L/h L/m L/s	LITER LITERS PER HOUR (OR LITERS/HOUR) LITERS PER MINUTE (OR LITERS/MINUTE) LITERS PER SECOND (OR LITERS/SECOND)

LEAVING AIR TEMPERATURE

LEAVING GLYCÒL TÉMPERATURE

LOW PRESSURE RETURN (STEAM CONDENSATE)

LOW PRESSURE STEAM RETURN (CLEAN)

LIQUID TO LIQUID HEAT EXCHANGER

LOCAL TEMPERATURE CONTROL PANEL

METERS PER SECOND (OR METERS/SECOND)

MINIMUM BRANCH CIRCUIT AMPACITY

MINIMUM EFFICIENCY REPORTING VALUE

MEDIUM PRESSURE RETURN (STEAM CONDENSATE)

MECHANICAL EQUIPMENT ROOM

LOW PRESSURE STEAM (CLEAN)

LEAVING WATER TEMPERATURE

POUNDS PER HOUR

LINEAR FOOT (FEET)

LIQUID PROPANE GAS

LOW PRESSURE STEAM

LINEAR SLOT DIFFUSER

MIXED AIR TEMPERATURE

MAKE-UP AIR UNIT

MOTOR HORSEPOWER

MOTOR OPERATED VALVE

MEDIUM PRESSURE STEAM

MANUAL VOLUME DAMPER

MAGNETIC RESONANCE IMAGING

MEAN TEMPERATURE DIFFERENCE

MANUAL AIR VENT

LATENT HEAT

LEAVING

LOUVER

METER, SI UNIT

MIXED AIR

MAXIMUM

MANHOLE

MINIMUM

MILLIMETER

MULTI-ZONE

MIXING BOX

1000 BTUH

LBS/HR

LTCP

MAU

MAV

MAX

MM

MOV

MPR

MPS

MTD

MVD

NA NC NC NG NGFM	NOT APPLICABLE NOISE CRITERIA NORMALLY CLOSED NATURAL GAS NATURAL GAS FLOWMETER
NO NOAA NOM NPLV NPSH NTS	NORMALLY OPEN NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION NOMINAL NON-STANDARD PART LOAD VALUE NET POSITIVE SUCTION HEAD NOT TO SCALE
SA SAD SAT SC SCFM SCI SCR SD	SUPPLY AIR SOUND ATTENUATING DEVICE SUPPLY AIR TEMPERATURE SHADING COEFFICIENT STANDARD CUBIC FEET PER MINUTE SPINAL CODE INJURY SILICON CONTROLLED RECTIFIER SMOKE DETECTOR

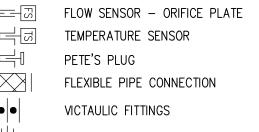
UC UC UH UL URV	UNDER CUT UNIT COOLER UNIT HEATER UNDERWRITERS LABORATORY UPBLAST UNIT VENTILATOR
V VAF VAV VD VFD VHA VI VIV VP	VALVE VANE-AXIAL FAN VARIABLE AIR VOLUME VOLUME DAMPER (MANUAL OPPOSED BLADE) VARIABLE FREQUENCY DRIVE VETERANS HEALTH ADMINISTRATION VIBRATION ISOLATOR VARIABLE INLET VANES VACUUM PUMP VARIABLE PRIMARY SYSTEM
VR VSD	VACUUM (STEAM CONDENSATE) RETURN VARIABLE SPEED DRIVE

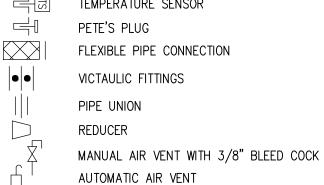
VERTICAL UNIT HEATER

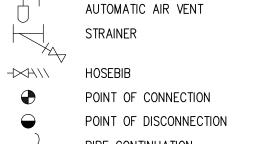
		GLOBE VALVE
		BALL VALVE
	\bowtie	GATE VALVE
	\boxtimes	BALANCING VAL
	/	BUTTERFLY VAL
		SWING CHECK V
	\overline{X}	MOTORIZED 2-V
		MOTORIZED 3-V

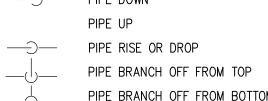
V -	
	BALL VALVE
	GATE VALVE
\boxtimes	BALANCING VALVE
>	BUTTERFLY VALVE
	SWING CHECK VALVE
\overline{X}	MOTORIZED 2-WAY CONTROL VALVE
	MOTORIZED 3-WAY CONTROL VALVE
	MOTORIZED 2-WAY BUTTERFLY CONTROL VALVE
FS	FLOW SENSOR
 FS	FLOW SENSOR - ORIFICE PLATE
	TEMPERATURE SENSOR

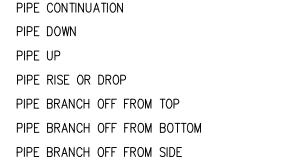
Z —	
<u>Z</u>	MOTORIZED 3-WAY CONTROL VALVE
	MOTORIZED 2-WAY BUTTERFLY CONTROL VALVE
S	FLOW SENSOR
FS -	FLOW SENSOR - ORIFICE PLATE
SI	TEMPERATURE SENSOR











──── DIRECTION OF FLOW PIPE AND CALLOUT (SEE ABBREVIATIONS) SAFETY PRESSURE RELIEF VALVE PIPE END CAP PRESSURE GUAGE WITH SHUTOFF VALVE

SYMBOLS

PRESSURE REDUCING VALVE

TEMPERATURE INDICATOR WITH SHUTOFF VALVE

DRAIN VORTEX FLOW METER EQUIPMENT CALL OUT

END SUCTION, CENTRIFUGAL PUMP

IN-LINE PUMP

SMALL CIRCULATION PUMP

MMOTOR

STR

VARIABLE FREQEUNCY DIRVE.

MOTOR STARTER

PROGRAMMABLE LOGIC CONTROLLER

---- CONTROL WIRING

AIR SEPARATOR

						CONT	ROL	VALV	E SC	HEDU	JLE						
SYMBOL	SERVICE / LOCATION	MAKE & MODEL NO.	TYPE	FLOW RATE (GPM)	Cv RATING	PRESS. DROP (PSI)	CLOSE OFF PRESS. (PSI)	VALVE SIZE (IN)	PIPE SIZE (IN)	BODY MATL.	INNER MATL.	BODY TYPE	CONTROL INPUT	SPRING RETURN (Y/N)	FAIL POSITION		REMARKS
CV-1	HIGH GRADE WATER FROM FUEL CELL	BELLIMO / B351+ARX24-MFT	3-WAY MIXING	150	67	5	100	2.00	3	CAST IRON	STAINLESS STEEL	GLOBE	2 -10 VDC	Υ	FC A-AB	_	
CV-2	DOMESTIC HOT WATER	BELLIMO / B348+ARX24-MFT	3-WAY MIXING	75	33	5	47	2.00	2 ½	BRONZE	STAINLESS STEEL	GLOBE	2 -10 VDC	Y	FC A-AB	_	

				EXF	PANS	ION T	ANK	SCHE	EDUL	E			
SYMBOL	SERVICE / LOCATION	MAKE & MODEL NO.	TYPE	CHARGE PRESS. (PSI)	TANK VOLUME (GAL)	ACCEPT. VOLUME (GAL)	MAX. OPER. TEMP (°F)	MAX. OPER. PRESS. (PSIG)	DIAM. (IN)	HEIGHT (IN)	CONN. SIZE (IN)	WEIGHT (LBS)	REMARKS
ET-1	HHW / EQUIPMENT ROOM 1D-01	WESSELS CO./ N-90	DIAPHRAGM PRE-CHARGED, ASME	12	13.2	8.2	240	150	15.0	21.1	1/2	23	
ET-2	DHW / EQUIPMENT ROOM 1D-01	WESSELS CO./ N-30	DIAPHRAGM PRE-CHARGED, ASME	12	4.8	3	240	150	10.6	13.7	1/2	9	

			AIR/D	IRT S	SEPAF	RATOR	RSC	HEDULE		
SYMBOL	SERVICE / LOCATION	MAKE & MODEL NO.	TYPE	FLOW RATE (GPM)	VOLUME (GAL)	CONN. SIZE (IN)	PRESS. DROP (FT)	DIMENSIONS (H x DIA.) (IN)	SHIP WT. (LBS)	REMARKS
AS-1	HEATING HOT WATER / LOT B	SPIROVENT / VDN 500	DRAIN MODEL	225	19.8	5	1.1	41.7 X 12.8	325	
AS-2	LOW GRADE HEAT/ MECHANICAL ROOM	SPIROVENT / VDN 300	DRAIN MODEL	75	6.6	3	.85	31.4 X 8.6	202	



TELEVISION CITY INSTALLATION PROJECT CBS CELL

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ENGR: DRWN BY:		MECHANIC SCHEDULE	NICAL SYMBOLS & ABBREVIATOINS AND EQUIPMENT	\ <u>\</u>	LOINS	AND EQUIPMENT
	<u> </u>	DATE	REMARKS	₽	ID DATE	REMARKS
WT KA		7/02/12	PRELIMINARY DESIGN REVIEW	9	11/15/12	6 11/15/12 PLAN CHECK CORRECTIONS
	7	8/20/12	PLAN CHECK	7	12/10/12	7 12/10/12 FIELD CLARIFICATIONS
	2	9/4/12	BID CLARIFICATIONS			
	4	9/19/12	UTC RECOMMENDED CORRECTIONS			
	S	5 9/25/12	UTC COMMENTS/REVISIONS			

AS NOTED