

MECHANICAL SYMBOL LIST

(NOTE: ALL OF THE SYMBOLS INDICATED BELOW MAY NOT APPEAR ON THIS PROJECT)

	DUCT W/ SIZE INDICATED (FIRST FIG. IS SIDE SHOWN)		MPS	MEDIUM PRESSURE STEAM SUPPLY		P.D.	PIPING TEE DOWN		F.B.	FROM BELOW
	V.D.		RD	REFRIGERANT DISCHARGE PIPING		P.U.	PIPING TEE UP		FT.	FEET
	DUCT WITH ACOUSTIC LINING		RL	REFRIGERANT LIQUID PIPING		P.U.	PIPING ELBOW UP		GA	GAUGE
	F.D.R.		RS	REFRIGERANT SUCTION PIPING		P.D.	PIPING ELBOW DOWN		GAL	GALLON
	S.D.		RF	REFRIGERANT FILTER			BRANCH - TOP CONNECTION BRANCH - BOTTOM CONNECTION BRANCH - SIDE CONNECTION		GPH	GALLONS PER HOUR
	F.S.D.		RS	REFRIGERANT STRAINER		P.T.	PLUGGED TEE		GPM	GALLONS PER MINUTE
	EX.		RFD	REFRIGERANT FILTER AND DRIER		P.T.T.	PRESSURE & TEMPERATURE TAP		HD	HEAD
	SQUARE TO ROUND DUCT TRANSITION		RD	REFRIGERANT DRIER		P.T.	PLUGGED TEE		HP	HORSEPOWER
	TR		RI	REFRIGERANT VIBRATION ISOLATOR		P.T.T.	PRESSURE & TEMPERATURE TAP		HR	HOUR
	FLEX		ROS	REFRIGERANT OIL SEPARATOR		C.O.P.	CAP ON END OF PIPE		KW	KILOWATTS
	SD		G.V.	GATE VALVE		F.L.X.	FLEXIBLE COUPLING		LAT	LEAVING AIR TEMPERATURE
	T.V.'S		GLV	GLOBE VALVE			ARROW INDICATES DIRECTION OF FLOW		LWT	LEAVING WATER TEMPERATURE
	S.A.		ANV	ANGLE VALVE		L.W.C.O.	LOW WATER CUT-OFF		MAX	MAXIMUM
	S.A.		B.L.V.	BALL VALVE		P.O.C.	POINT OF CONNECTION - NEW ITEMS TO EXISTING ITEMS		MBH	BRITISH THERMAL UNITS PER HOUR (THOUSANDS)
	R.A.		B.F.V.	BUTTERFLY VALVE		A.P.	ACCESS PANEL		MIN	MINIMUM
	R.A.		C.H.V.	CHECK VALVE		R.M.	DUCTWORK / PIPING / EQUIPMENT TO BE REMOVED		MUA	MAKE-UP AIR
	E.A.		TDV	TRIPLE DUTY VALVE			EXISTING DUCTWORK / PIPING / EQUIPMENT TO REMAIN		(N)	NEW
	E.A.		B.V.	BALANCING VALVE			MECHANICAL EQUIPMENT INDICATED (SEE SCHEDULE)		NC	NORMALLY CLOSED
	D.D.		H.V.	3/4" HOSE END DRAIN VALVE			DIFFUSER OR GRILLE INDICATED (SEE SCHEDULE)		NO	NORMALLY OPEN
	S.A.D.		S.O.V.	SHUT-OFF VALVE IN RISER		T.	THERMOSTAT		NOM	NOMINAL
	S.A.D.		C.C.	CIRCUIT SETTER BALANCE VALVE		H.	HUMIDISTAT		OA	OUTSIDE AIR
	R.A.G.		B.P.	BACKFLOW PREVENTOR		T.2	THERMOSTAT WITH ZONE INDICATED		OC	ON CENTER
	S.A.D.		R.P.B.P.	REDUCED PRESSURE BACKFLOW PREVENTOR		P.	PONTENTIOMETER		OSA	OUTSIDE AIR
	R.A.G.		S.V.	SOLENOID VALVE		S.	SENSOR		PD	PRESSURE DROP
	S.A.D.		F.S.	FLOW SWITCH		S.D.	SMOKE DETECTOR		RAG	RETURN AIR GRILLE
	R.A.G.		P.S.	PRESSURE SWITCH		T.C.P.	TEMPERATURE CONTROL PANEL		RH	RELATIVE HUMIDITY
	M.D.		P.R.V.	PRESSURE REDUCING VALVE		AFF	ABOVE FINISHED FLOOR		RPM	REVOLUTION PER MINUTE
	O.B.D.		AFG	ABOVE FINISHED GRADE		BDD	BACKDRAFT DAMPER		SAD	SUPPLY AIR DIFFUSER
	V.D.		S.T.R.	STRAINER WITH 3/4" HOSE END DRAIN VALVE		S.E.E.R.	SEASONAL ENERGY EFFICIENCY RATIO		SF	SQUARE FEET
	HHWS		P.T.R.	PRESSURE - TEMPERATURE RELIEF VALVE		S.M.	SHEET METAL		SP	STATIC PRESSURE
	HHWR		RV	PRESSURE RELIEF VALVE		ST	MANUAL TIMER SWITCH		STD	STANDARD
	CHWS		2VAL	2-WAY CONTROL VALVE		T	TEMPERATURE		T.A.	TO ABOVE
	CHWR		3VAL	3-WAY CONTROL VALVE		T.O.D.	TOP OF DUCT		TAG	TRANSFER AIR GRILLE
	HPWS		U	UNION		T.O.G.(L)	TOP OF GRILLE (LOUVER)		T.B.	TO BELOW
	HPWR		F	FLANGE		T.O.R.	TOP OF REGISTER		TYP	TYPICAL
	CWS		FL	FLEXIBLE PIPING CONNECTOR		U.C.	UNDERCUT DOOR		U.F.	UNDER FLOOR
	CWR		CR	CONCENTRIC REDUCER		WB	WET BULB TEMPERATURE		WC	WATER COLUMN
	IWS		ER	ECCENTRIC REDUCER		WG	WATER GAUGE		W.P.D.	WATER PRESSURE DROP
	HPR		P.R.G.	PRESSURE GAUGE WITH GAUGE COCK		DB	DRY BULB TEMPERATURE			
	HPS		TH	THERMOMETER		DL	DOOR LOUVER			
	LPR		A.A.V.	AUTOMATIC AIR VENT		DN	DOWN			
	LPS		M.A.V.	MANUAL AIR VENT		EAT	ENTERING AIR TEMPERATURE			
	MPR		V.B.	VACUUM BREAKER		EDB	ENTERING DRY BULB			
			P.A.	PIPE ANCHOR		ESP	EXTERNAL STATIC PRESSURE			
			P.G.	PIPE ALIGNMENT GUIDE		EWT	ENTERING WATER TEMPERATURE			
			E.J.	PIPE EXPANSION JOINT		F.A.	FROM ABOVE			
				NORTH ARROW						

BASIS OF DESIGN CONDITIONS FOR MECHANICAL & PLUMBING SYSTEMS		
Site Elevation Above MSL	4,500 feet	
Peak Summer Outdoor Design Temperature	95°F dry bulb (DB) / 61°F wet bulb (WB) (1 Percent Occurrence)	
Minimum Outdoor Winter Design Temperature	10°F (99.6 percent Occurrence)	
Space	Winter (°F DB)	Summer (°F DB)
Cafeteria, Offices, Restrooms, Shops	72	75
Kitchen Preparation and Cleanup	75	75
Applicable Codes and Standards		
<ul style="list-style-type: none"> International Mechanical Code (IMC) International Building Code (IBC) International Plumbing Code (IPC) National Standard Plumbing Code (NSPC) VA Seismic Design Requirements, H-18-8 NFPA National Fire Codes ASHRAE Standards 90.1, 90.2, and 62 Occupational, Safety and Health Administration (OSHA) Standards Sheet Metal and Air Conditioning Contractors National Association (SMACNA) Energy Policy Act of 2005 (EPAct) DOE Interim Final Rule: Energy Conservation Standards for New Federal, Commercial and Multi-Family High-Rise Residential Buildings and New Low-Rise Residential Buildings, 10 CFR Parts 433, 434 and 435 Sheet Metal and Air Conditioning Contractors National Association (SMACNA) All other Public Laws, Executive Orders, Code of Federal Regulations, City of Reno, Washoe County, and State of Nevada and Federal Standards as applicable. 		

GENERAL MECHANICAL NOTES

- DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS IMPOSSIBLE TO SHOW ALL REQUIRED OFFSETS, ELEVATIONS, ETC., IT IS THEREFORE THE CONTRACTORS RESPONSIBILITY TO REVIEW THE PROJECT DRAWINGS AND SPECIFICATIONS THOROUGHLY PRIOR TO SUBMITTING A BID ON THIS PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS AS SHOWN IN THE CONTRACT DOCUMENTS IN ORDER TO MEET THE INTENT OF THE DESIGN.
- CONTRACTOR SHALL COORDINATE EXACT ROUTING OF ALL HVAC SYSTEM EQUIPMENT, DUCTWORK, PIPING, AND ALL ASSOCIATED COMPONENTS IN THE FIELD. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF EQUIPMENT WITH EXISTING FIELD CONDITIONS PRIOR TO STARTING WORK. PROVIDE REQUIRED DUCT AND PIPING OFFSETS, TRANSITIONS, ETC. AS REQUIRED TO MEET THE INTENT OF THE DESIGN. IF ANY SYSTEMS REQUIRE SIGNIFICANT CHANGES, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE PROPOSED CHANGES TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING THE WORK. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO COMPLY WITH THE ABOVE.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL BUILDING PERMITS, WORKING PERMITS REQUIRED FOR THIS PROJECT.
- CONTRACTOR TO GUARANTEE ALL WORK AND MATERIALS TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. CONTRACTOR WILL PROMPTLY REMEDY SUCH DEFECTS AND ANY DAMAGE TO THE PROPERTY DONE DURING THE CONTRACTED WORK AT NO EXPENSE TO THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR THE CUTTING, SAWCUTTING OPENINGS OF WALLS, CEILINGS, SOFFITS AS REQUIRED FOR THE INSTALLATION OF EQUIPMENT AND DUCTWORK AS REQUIRED. SEE STRUCTURAL DRAWINGS FOR INFORMATION RELATING TO ALL NEW PENETRATIONS. ALL PENETRATIONS AND/OR EXISTING DUCTWORK TO BE REUSED SHALL BE SEALED WEATHER TIGHT AND PROTECTED FROM THE OUTDOOR WEATHER CONDITIONS SUCH THAT NO DAMAGE OCCURS TO THE BUILDING.

FULLY SPRINKLERED

<p>CONSULTANTS:</p> <p>DINTER ENGINEERING CONFIDENCE Airfield Electrical Mechanical 385 Gentry Way Reno, NV 89502 Ph: 775.826.4044 Fax: 775.826.4190 www.dinter.com J-4217.6</p>		<p>ARCHITECT/ENGINEERS:</p> <p>vern martin design associates (a Nevada Corporation) Food Facilities Design 760 Robin St., Reno, Nevada 89509 P:(775) 240-2637 F:(775) 201-0066 E:vern@martinreno.com</p>	<p>1400 s. virginia st suite c reno, nevada 89502 p: 775.328.1010 f: 775.328.1020 info@vwarchitects.com</p>	<p>Drawing Title MECHANICAL SYMBOL LIST</p>	<p>Project Title VA SIERRA NEVADA HEALTH CARE SYSTEM - CANTEEN RELOCATION DESIGN - , RENO, NEVADA</p>	<p>Project Number 654-11-227</p>	<p>Office of Construction and Facilities Management</p>	
				<p>Approved Project Director</p>	<p>Location 975 KIRMAN AVE., RENO, NEVADA 89502</p>	<p>Drawing Number M01</p>		
<p>Revisions:</p> <table border="1"> <tr> <th>Date</th> <th>Revisions</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Date	Revisions			<p>Date 06 JAN, 2012</p>	<p>Checked TPF</p>	<p>Drawn EBW</p>	<p>Dwg - of -</p>
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