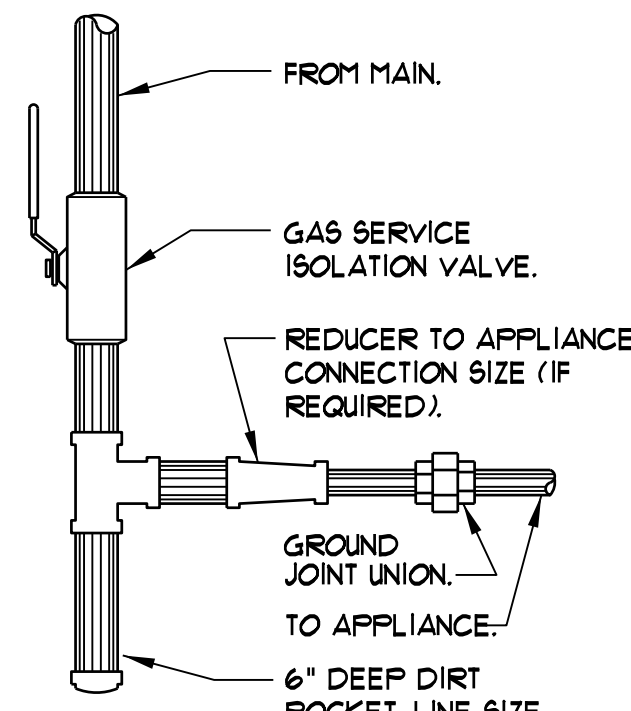


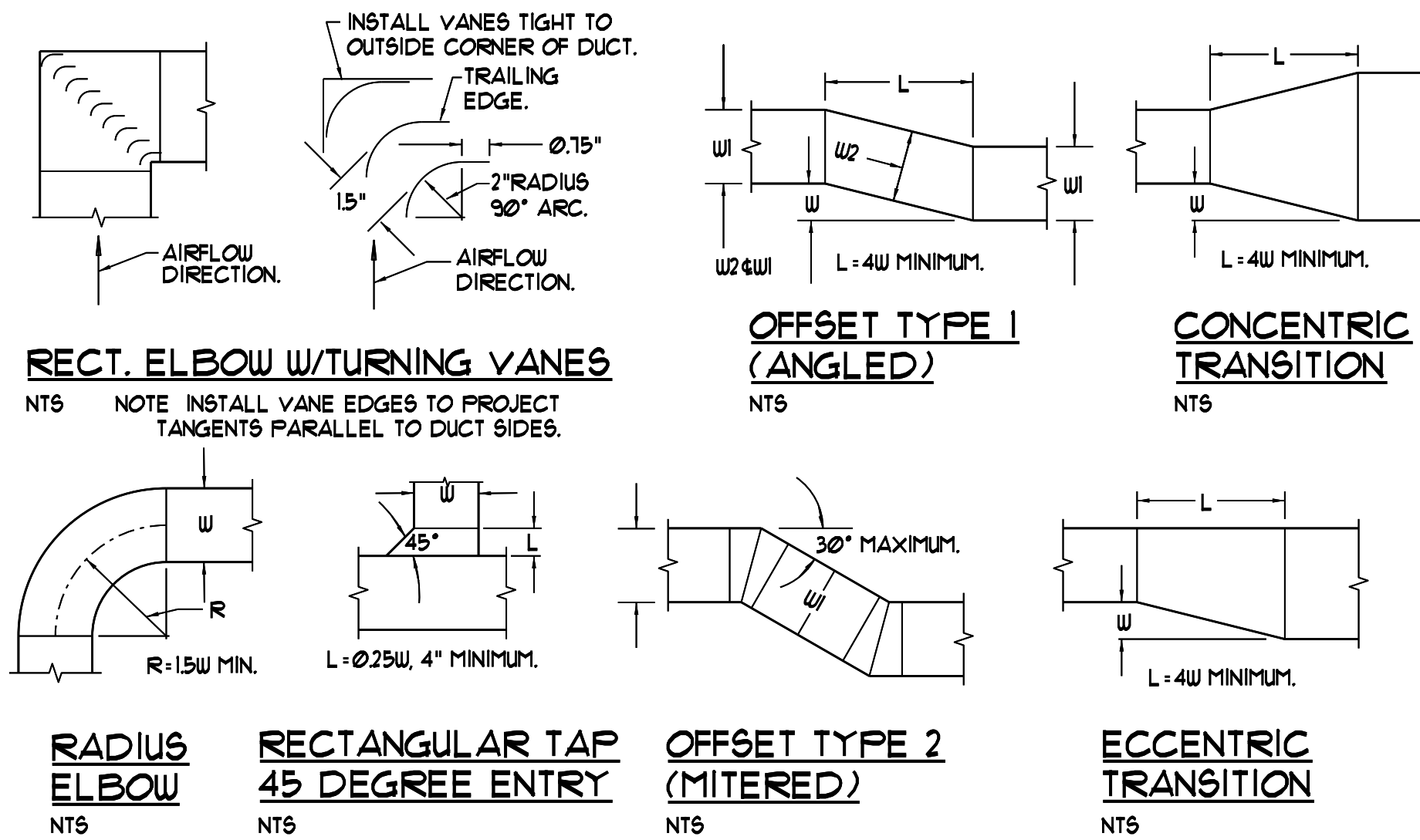
UPFEED GAS PIPING CONNECTION DETAIL
NTS

NOTE APPLIANCES WITH REGULATORS LOCATE PIPING SHOWN HEREIN UPSTREAM OF THE APPLIANCE REGULATOR. PROVIDE A TEST PLUG DOWNSTREAM OF THE APPLIANCE REGULATOR.

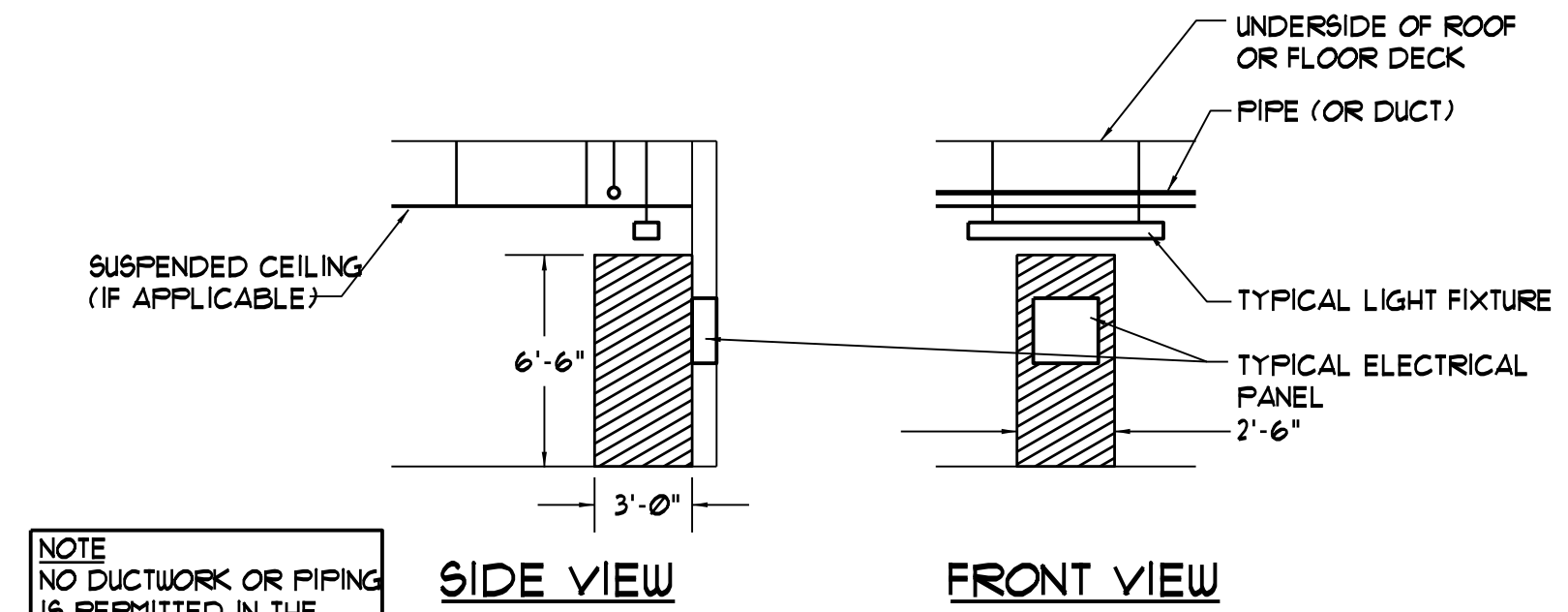


DOWNFEED GAS PIPING CONNECTION DETAIL
NTS

NOTE APPLIANCES WITH REGULATORS LOCATE PIPING SHOWN HEREIN UPSTREAM OF THE APPLIANCE REGULATOR. PROVIDE A TEST PLUG DOWNSTREAM OF THE APPLIANCE REGULATOR.



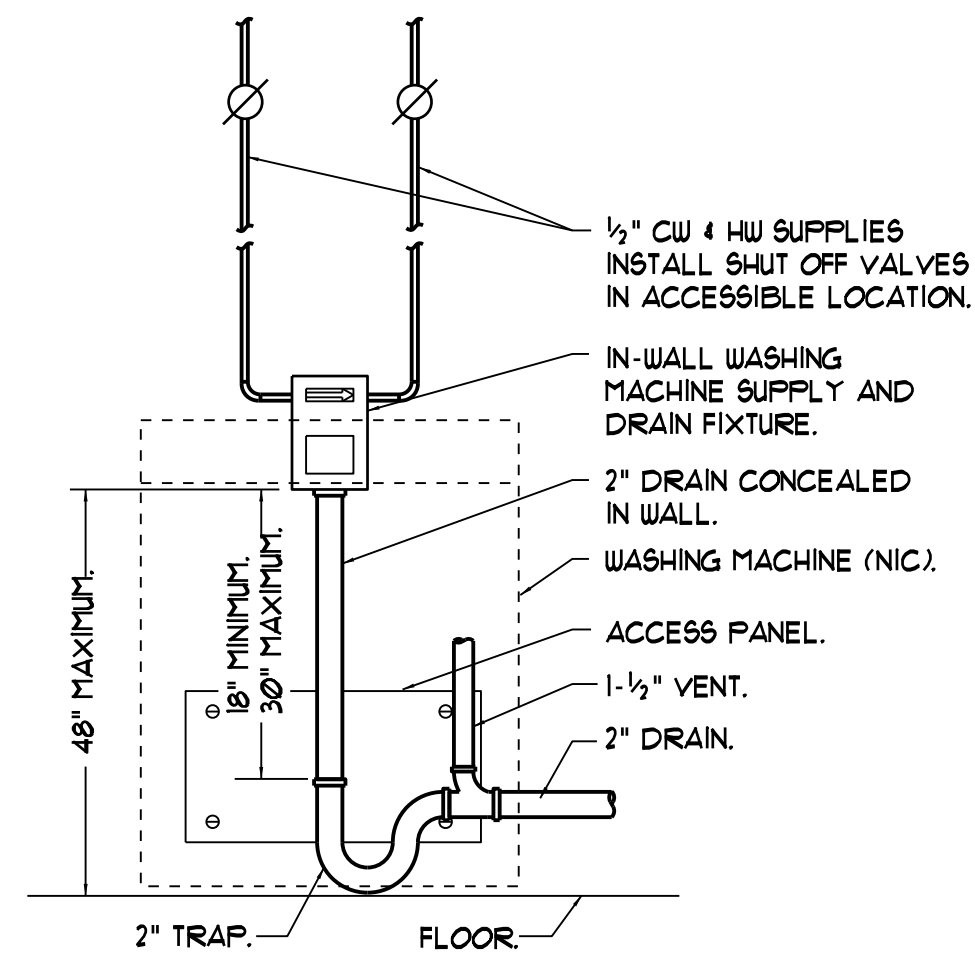
LOW PRESSURE DUCT CONSTRUCTION DETAILS - TYPICAL
NTS



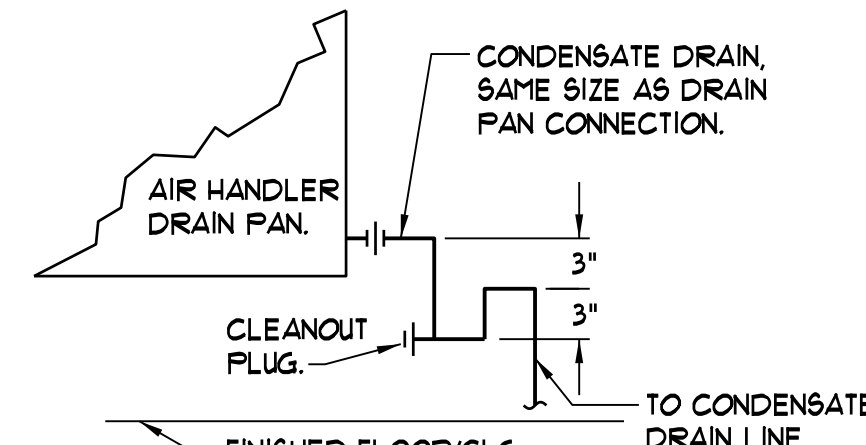
NOTE NO DUCTWORK OR PIPING IS PERMITTED IN THE HATCHED AREAS.

SEE NEC SECTIONS 110.26 AND 400.18 (2011 EDITION)

CLEARANCES AT ELECTRICAL PANELS
NTS



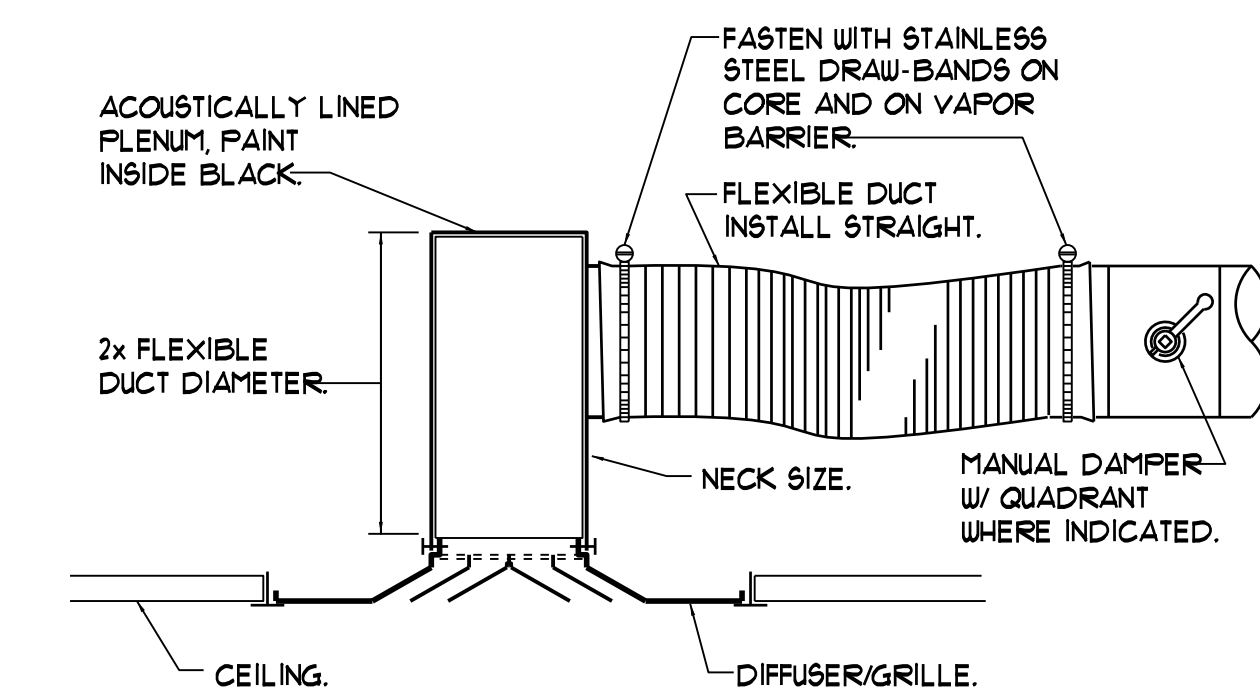
WASHING MACHINE HOOK-UP DETAIL
NTS



CONDENSATE TRAP DETAIL
NTS

NOTE - CAP UNUSED DRAIN PAN CONNECTIONS.

Item	Specifications and Comments
Underground Drainage and Vent	Schedule 40 PVC
Underground Storm	Schedule 40 PVC
Aboveground Drainage Waste and Vent	Schedule 40 PVC
Aboveground Storm Drainage Piping	Schedule 40 PVC
Below Grade Trap Primer Piping	Watts Water Pex with 1/2" Armaflex Insulation
Floor Cleanouts	Watts CO-200 Series
Floor Drains	Watts FD-100 Series
Water Piping 2 1/2" & Larger	Corzan Pipe and Fittings
Water Piping 2" & Smaller	Flowguard Gold CPVC pipe and fittings
Hangers	Band Style Hangers, not oversized
Cold Water Insulation	Insulate all metallic connections at equipment with 1/2" wall Armaflex Insulation, Insulate all cold water mains
Hot Water & Hot Water Recirculation Insulation	Insulation (2" for pipes 2" and larger)
Condensate Drains	CPVC Pipe
Roof Drains	Leave System that is currently in place
Refrigerations Piping	ACR Copper Tubing and Fittings with Armaflex insulation



DIFFUSER/RETURN CONNECTION DETAIL
NTS

NOTE DETAIL TYPICAL FOR CEILING GRILLES, REGISTERS AND LINEAR DIFFUSERS. FOR SURFACE-MOUNT DEVICES, SUPPORT PLENUM FROM CEILING GRID WITH STEEL ANGLES FASTENED TO PLENUM.

MECHANICAL AND PLUMBING SYMBOLS AND ABBREVIATIONS LEGEND

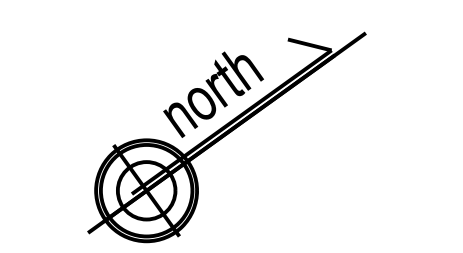
NOTE - USE SYMBOLS AND ABBREVIATIONS AS APPLICABLE FOR THIS MECHANICAL DRAWING SET. SOME SYMBOLS AND ABBREVIATIONS IN THIS LEGEND MAY NOT APPLY.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
	GAS PIPING (G)		PRESSURE GAGE WITH GAGE COCK	AAV	AUTOMATIC AIR VENT	EDB	ENTERING DRY BULB	I-B-R	INSTITUTE OF BOILER AND	RLA	RUNNING LOAD AMPS
	PIPE CAP		THERMOMETER IN WELL	AD	ACCESS DOOR	EDC	ELECTRIC DUCT COIL TAG		RADIATOR MANUFACTURERS	RPM	REVOLUTIONS PER MINUTE
	DIRECTION OF FLUID FLOW		WATER FLOW SWITCH	AF	ABOVE FINISHED FLOOR	EER	ENERGY EFFICIENCY RATIO	IN.	INCHES	RPS	REVOLUTIONS PER SECOND
	ELBOW UP		PRESSURE SWITCH OR SENSOR	AHU	AIR HANDLING UNIT TAG	EF	EXHAUST FAN TAG	L	LOUVER TAG	RPZ	REDUCED PRESSURE ZONE
	ELBOW DOWN		EMULSION TEMPERATURE SENSOR	AMS	AIRFLOW MONITORING STATION	EFF	EFFICIENCY	LAT	LEAVING AIR TEMPERATURE	RTU	ROOM TEMPERATURE SENSOR
	PIPE TEE UP		DUCT MOUNTED SMOKE DETECTOR	AMPS	AMPERES	ESP	EXTERNAL STATIC PRESSURE	LB	POUNDS	RV	RELIEF VALVE
	PIPE TEE DOWN		ROOM TEMPERATURE SENSOR	AP	ACCESS PANEL	ET	EXPANSION TANK TAG	LWS/R	LOOP WATER SUPPLY/RETURN	RUL	RAINWATER LEADER
	PIPE REDUCER		THERMOSTAT OR SENSOR ON WALL	APD	AIR PRESSURE DROP	EWB	ENTERING WET BULB	LRA	LOCKED ROTOR AMPS	SA	SUPPLY AIR
	PIPE WITH GUIDE		TSTAT OR SENSOR W/ TAMPERPROOF GUARD	AR	ACID RESISTANT PIPING	EWH	ELECTRIC WATER HEATER TAG	LUICO	LOW WATER CUTOFF	SAN	SANITARY (DRAIN & WASTE)
	PIPE WITH ANCHOR		MANUAL AIR VENT	AS	AIR SEPARATOR TAG	EWT	ENTERING WATER TEMPERATURE	LUT	LEAVING WATER TEMPERATURE	SD	SMOKE DAMPER
	BUTTERFLY VALVE		NOTE TAG (NUMBER)	ATC	AUTOMATIC TEMPERATURE CONTROL	EXG	EXISTING	MAX	MAXIMUM	SEER	SEASONAL ENERGY EFFICIENCY RATIO
	OS Y GATE VALVE		AIR DEVICE TAG (LETTER) WITH CFM	BFP	BACKFLOW PREVENTER TAG	EXH	EXHAUST	MBH	THOUSANDS OF BTU PER HOUR	SF	SUPPLY FAN
	CHECK VALVE		TURNING VANES	FC	BRAKE HORSEPOWER	FCO	FLEXIBLE CONNECTION	MCA	MINIMUM	SP	STATIC PRESSURE
	BALANCING VALVE (ADJUSTABLE)		DUCT W/MANUAL DAMPER	BTUH	BRITISH THERMAL UNITS PER HOUR	FCO	FLOOR CLEANOUT	MIN	MINIMUM	SQFT	SQUARE FEET
	AUTOMATIC FLOW CONTROL VALVE		DUCT W/FLEXIBLE CONNECTION (FC)	CC	COOLING COIL TAG	FD	FIRE DAMPER	NC	NOISE CRITERION	ΔT	TEMPERATURE DIFFERENTIAL
	RELIEF VALVE (RV)		DUCT W/ACOUSTIC LINING	CFM	CUBIC FEET PER MINUTE	FD	FLOOR DRAIN TAG	NIC	NOT IN CONTRACT	TEMP.	TEMPERATURE
	BALL VALVE		DUCT W/SQUARE-TO-ROUND TRANSITION	CO	CLEANOUT	FLA	FULL LOAD AMPS	NTS	NOT TO SCALE	TCP	TEMPERATURE CONTROL PANEL
	3/4" BALL VALVE WITH 3/4" HOSE END		FLEXIBLE DUCT	CP	CIRCULATING PUMP TAG	FFHB	FROST PROOF HOSE BIBB	OA	OUTSIDE AIR	TMV	THERMOSTATIC MIXING VALVE TAG
	GATE VALVE		MOTOR OPERATED DAMPER	CV	VALVE COEFFICIENT	FFM	FEET PER MINUTE	ODD	OPPOSED BLADE DAMPER	TSP	TOTAL STATIC PRESSURE
	PRESSURE REDUCING VALVE		COLD WATER	CW	COLD WATER	FSD	COMBINATION FIRE & SMOKE DAMPER	OD.	OUTSIDE DIAMETER	TYP	TYPICAL
	FUSIBLE VALVE		DRY BULB	DB	DRY BULB	FT	FEET	OED	OPEN ENDED DUCT	UH	UNIT HEATER TAG
	STRAINER W/BLOWDOWN BALL VALVE UNION		DECIBELS RELATIVE TO AIRFLOW OUT	dB RE	DECIBELS RELATIVE TO AIRFLOW OUT	GA.	GALLONS	OPD	OVERCURRENT PROTECTIVE DEVICE	VB	VACUUM BREAKER
	PIPE FLANGE		DOUBLE CHECK	DC	DOUBLE CHECK	GAL	GALLONS	P	PLUMBING FIXTURE TAG	VFD	VARIABLE FREQUENCY INVERTER DRIVE
	FLEXIBLE PIPE CONNECTION (FC)		DOUBLE CHECK ATMOSPHERIC	DCA	DOUBLE CHECK ATMOSPHERIC	GPH	GALLONS PER HOUR	PENETN	PENETRATION	VTR	VENT THRU ROOF
	PITCH DOWN		DEGREES FAHRENHEIT	DEG F	DEGREES FAHRENHEIT	GPM	GALLONS PER MINUTE	FF	PADDLE FAN TAG	V/PH/Hz	VOLTS/PHASES/HERTZ
	PETCOCK		ROUND OR FLAT OVAL DUCT DOWN	DIA	DIAMETER	HC	HEATING COIL TAG	FF	POUNDS PER SQUARE INCH ABSOLUTE	WB	WET BULB
			ROUND OR FLAT OVAL DUCT UP	DIA	DIAMETER	HP	HORSEPOWER	PSIG	POUNDS PER SQUARE INCH GAGE	WCO	WALL CLEANOUT
			SUPPLY DIFFUSER	DN	DOWN IN WALL	HRV	HEAT RECOVERY VENTILATOR TAG	UG	UNSATURATED VAPOR PRESSURE	WPG	WATER PRESSURE DROP
			RETURN GRILLE	EA	EXHAUST AIR	HU	HOT WATER	PVC	POLYVINYL CHLORIDE (PIPE)	WSA	WIRE SIZING AMPS
			STEAM TRAP	EAT	ENTERING AIR TEMPERATURE	HUS/R	HOT WATER SUPPLY AND RETURN	RA	RETURN AIR	WTD	WATER TEMPERATURE DROP
			WATER HAMMER ARRESTOR					RD	ROOF DRAIN	W	WITH
								RDE	RECOMMENDED DUAL ELEMENT FUSE AMPS		
								RHW	RECIRCULATED HOT WATER		



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MECHANICAL
DETAILS AND
LEGEND

1/4" = 1'-0"

M 3.1

MARCH 30, 2016