

**MECHANICAL PIPING LEGEND**

| SYMBOLS |   |
|---------|---|
|         | FLOOR DRAIN, W/ TRAP; FD  |
|         | FLOOR DRAIN, WO/ TRAP; FD   |
|         | ROOF DRAIN, WO/ TRAP; RD  |
|         | FIXTURE DRAIN, W/ TRAP  |
|         | SANITARY; SAN   |
|         | SANITARY VENT; V  |
|         | STORM WATER; SW   |
|         | CLEANOUT; LINE, FLUSH; CO   |
|         | RUNNING TRAP  |
|         | PIPE DROP   |
|         | PIPE RISE   |
|         | TEE OUTLET DROP   |
|         | DOMESTIC COLD WATER; CW   |
|         | DOMESTIC HOT WATER; HW (TEMPERATURE AS NOTED UNLESS SINGLE TEMP.)     |
|         | HOT WATER CIRCULATING; HWC (TEMPERATURE AS NOTED UNLESS SINGLE TEMP.) |
|         | HEATING SUPPLY (ZONE AS NOTED); HS                                    |
|         | HEATING RETURN (ZONE AS NOTED); HR                                    |
|         | DUAL TEMPERATURE SUPPLY (CHILLED/HOT WATER SUPPLY); DTS               |
|         | DUAL TEMPERATURE RETURN (CHILLED/HOT WATER RETURN); DTR               |
|         | CHILLED WATER SUPPLY; CWS   |
|         | CHILLED WATER RETURN; CWR   |
|         | CONDENSER WATER SUPPLY; CS  |
|         | CONDENSER WATER RETURN; CR  |
|         | REFRIGERANT LIQUID; RL  |
|         | REFRIGERANT SUCTION (GAS); RS   |
|         | REFRIGERANT HOT GAS; HG   |
|         | HEAT RECOVERY SUPPLY; HRS   |
|         | HEAT RECOVERY RETURN; HRR   |
|         | STEAM, MEDIUM PRESSURE; MPS   |
|         | RETURN, MEDIUM PRESSURE; MPR  |
|         | STEAM, HIGH PRESSURE; HPS   |
|         | RETURN, HIGH PRESSURE; HPR  |
|         | PUMPED CONDENSATE RETURN  |
|         | FINNED RADIATION  |
|         | BALL VALVE  |
|         | FOUNDATION DRAIN  |
|         | STRAINER, Y OR BASKET   |
|         | STRAINER W/BLOW DOWN VALVE  |
|         | CAP   |
|         | GATE VALVE  |
|         | OUTSIDE SCREW AND YOKE VALVE, OS&Y                                    |
|         | BALL VALVE IN VERTICAL  |
|         | GATE VALVE IN VERTICAL  |
|         | GAS SHUT-OFF COCK   |
|         | AUTOMATIC THREE-WAY VALVE (TWO POSITION OR MODULATING AS NOTED)       |
|         | THERMOSTATIC MIXING VALVE (DOMESTIC HOT WATER)                        |
|         | AUTOMATIC STRAIGHT THRU VALVE (TWO POSITION OR MODULATING AS NOTED)   |
|         | SOLENOID VALVE  |
|         | THERMOSTATIC CONTROL VALVE  |
|         | GLOBE VALVE   |
|         | BUTTERFLY VALVE   |
|         | BUTTERFLY VALVE W/TAMPER SWITCH                                       |
|         | BACK FLOW PREVENTER   |
|         | PLUG VALVE; NON-LUBRICATED TYPE                                       |
|         | CHECK VALVE   |
|         | DOUBLE CHECK  |
|         | BALANCING VALVE   |
|         | FLOW MEASURING FITTING; FMF   |
|         | FLEXIBLE PIPE CONNECTOR   |
|         | COMBINATION TEMPERATURE/PRESSURE RELIEF VALVE                         |
|         | AIRTRIL TANK FITTING  |
|         | PRESSURE REDUCING VALVE (PRV)   |
|         | AIR VENT; MANUAL, AUTOMATIC   |
|         | UNION   |
|         | PIPE ANCHOR   |
|         | PIPE GUIDE  |
|         | THERMOMETER   |
|         | PRESSURE GAGE   |
|         | SHOCK ABSORBER/ARRESTOR   |
|         | THERMOSTAT: "N" DENOTES UNOCCUPIED<br>"G" DENOTES GUARD               |
|         | ECCENTRIC PIPE REDUCER  |
|         | CONCENTRIC PIPE REDUCER   |
|         | SPRINKLER HEAD - CLOSED   |
|         | EXPANSION JOINT & PIPE GUIDES   |
|         | HOSE BIBB OR EXTERIOR WALL HYDRANT                                    |
|         | PUMP (PLAN)   |
|         | PUMP (SCHEMATIC)  |
|         | GAS METER   |
|         | WATER METER   |

**MECHANICAL PIPING LEGEND**

| SYMBOLS (CONTINUED) |   |
|---------------------|---|
|                     | ACID RESISTANT SANITARY; ARS                |
|                     | ACID RESISTANT VENT; ARV                    |
|                     | FIRE; SPRINKLER SUPPLY, STANDPIPE SUPPLY; F |
|                     | GAS; G                                      |
|                     | LIQUEFIED PETROLEUM GAS; LPG                |
|                     | COMPRESSED AIR; A                           |
|                     | DEIONIZED OR DISTILLED WATER; DW            |
|                     | PUMP DISCHARGE; PD                          |
|                     | ATMOSPHERIC OR CONDENSATE DRAIN; D          |
|                     | TEMPERED WATER (TEMP °F)                    |
|                     | FUEL OIL VENT; FOV                          |
|                     | FUEL OIL FILL; FOF                          |
|                     | FUEL OIL SUPPLY; FOS                        |
|                     | FUEL OIL RETURN; FOR                        |
|                     | FUEL OIL GAUGE; FOG                         |
|                     | DIESEL OIL SUPPLY; DOS                      |
|                     | DIESEL OIL RETURN; DOR                      |
|                     | DIESEL OIL VENT; DOV                        |
|                     | DIESEL OIL GAUGE; DOG                       |
|                     | DIESEL OIL FILL; DOF                        |
|                     | PROPANE GAS SUPPLY; PGS                     |
|                     | PROPANE GAS RETURN; PGR                     |
|                     | PROPANE GAS VENT; PGV                       |
|                     | PROPANE GAS GAUGE; PGG                      |
|                     | PROPANE GAS FILL; PGF                       |

**MECHANICAL H.V.A.C. LEGEND**

| SYMBOLS |  |
|---------|--|
|         | STOPPING POINT OF DEMOLITION   |
|         | POINT OF CONNECTION; NEW TO EXISTING                                     |
|         | SUPPLY AIR DUCT (UP/DOWN)  |
|         | EXHAUST AIR DUCT (UP/DOWN)   |
|         | RETURN AIR DUCT (UP/DOWN)  |
|         | FLEXIBLE CONNECTION  |
|         | VOLUME DAMPER  |
|         | FIRE DAMPER; FDR   |
|         | SMOKE DAMPER; SD   |
|         | COMBINATION FIRE/SMOKE DAMPER; FDR/SD                                    |
|         | 90° BEND WITH TURNING VANES  |
|         | SUPPLY AIR DIFFUSER  |
|         | EXHAUST AIR GRILLE   |
|         | RETURN AIR GRILLE  |
|         | ACOUSTICALLY LINED SINGLE LINE DUCTWORK: A/L                             |
|         | MOTOR OPERATED DAMPER  |
|         | ACOUSTICALLY LINED DUCTWORK: A/L   |
|         | FLEXIBLE DUCTWORK W/ AIR TITE FITTING AND VOLUME DAMPER, FLEX 5"-0" MAX. |
|         | DUCT HEATING COIL  |
|         | EXISTING EQUIPMENT TO REMAIN; (UNLESS OTHERWISE NOTED)                   |
|         | NEW EQUIPMENT; (UNLESS OTHERWISE NOTED)                                  |
|         | REMOVE EXISTING EQUIPMENT; (UNLESS OTHERWISE NOTED)                      |
|         | RELOCATED EQUIPMENT; (UNLESS OTHERWISE NOTED)                            |
|         | SECTION NUMBER<br>DRAWING WHERE SECTION IS SHOWN                         |
|         | SECTION NUMBER<br>DRAWING WHERE SECTION IS TAKEN                         |

**MECHANICAL ABBREVIATIONS**

| ABBREVIATIONS |  |
|---------------|--|
| ABV           | ABOVE  |
| AD            | ACCESS DOOR                                    |
| AFF           | ABOVE FINISHED FLOOR                           |
| AFG           | ABOVE FINISHED GRADE                           |
| AL            | ACOUSTICALLY LINED                             |
| AP            | ACCESS PANEL                                   |
| APD           | AIR PRESSURE DROP                              |
| AREA D        | AREA DRAIN                                     |
| ARS           | ACID RESISTANT SANITARY                        |
| ARV           | ACID RESISTANT VENT                            |
| ARVTR         | ACID RESISTANT VENT THRU ROOF                  |
| ATC           | AUTOMATIC TEMPERATURE CONTROL                  |
| ATV           | ADJUSTABLE TURNING VANES                       |
| BDD           | BACK DRAFT DAMPER                              |
| BEL           | BELOW  |
| BFF           | BELOW FINISHED FLOOR                           |
| BFG           | BELOW FINISHED GRADE                           |
| BFP           | BACKFLOW PREVENTER                             |
| BOO           | BOTTOM OF DUCT                                 |
| BOJ           | BOTTOM OF JOIST                                |
| BOP           | BOTTOM OF PIPE                                 |
| BOS           | BOTTOM OF STEEL                                |
| BT            | BATHTUB  |
| BTU           | BRITISH THERMAL UNITS                          |
| BTUH          | BRITISH THERMAL UNITS PER HOUR                 |
| BWV           | BACKWATER VALVE                                |
| CB            | CATCH BASIN                                    |
| CD            | CANOPY DRAIN                                   |
| CFM           | CUBIC FEET PER MINUTE                          |
| CFH           | CUBIC FEET PER HOUR                            |
| CI            | CAST IRON                                      |
| CLG           | CEILING  |
| CO            | CLEAN OUT                                      |
| CONC          | CONCRETE                                       |
| CONN          | CONNECT  |
| CONT          | CONTINUATION                                   |
| CS            | COUNTERTOP SINK                                |
| CUH           | CABINET UNIT HEATER                            |
| CW            | DOMESTIC COLD WATER                            |
| D             | DOWN SLOPE (DUCTWORK)                          |
| DEPT          | DEPARTMENT                                     |
| DF            | DRINKING FOUNTAIN                              |
| DFU           | DRAINAGE FIXTURE UNIT                          |
| DIA           | DIAMETER                                       |
| DIFF          | DIFFUSER                                       |
| DN            | DOWN   |
| EA            | EXHAUST AIR                                    |
| EAT           | ENTERING AIR TEMPERATURE                       |
| EXH           | EXHAUST  |
| EC            | EXPANSION COMPENSATOR OR ELECTRICAL CONTRACTOR |
| EF            | EXHAUST FAN                                    |
| EH            | EXTRA HEAVY                                    |
| ESP           | EXTERNAL STATIC PRESSURE                       |
| EWC           | ELECTRIC WATER COOLER                          |
| EWT           | ENTERING WATER TEMPERATURE                     |
| EX            | EXISTING                                       |
| EXIST         | EXISTING                                       |
| FC            | FLEX CONNECTION                                |
| FOO           | FLOOR CLEANOUT                                 |
| FCU           | FAN COIL UNIT                                  |
| FD            | FLOOR DRAIN                                    |
| FDR           | FIRE DAMPER                                    |
| FE            | FIRE EXTINGUISHER                              |
| FHC           | FIRE HOSE CABINET                              |
| FOB           | FLAT ON BOTTOM                                 |
| FL            | FLOOR  |
| FM            | FLOW MONITOR                                   |
| FMF           | FLOW METER FITTING                             |
| F&T           | FLOOT & THERMOSTATIC                           |
| GC            | GENERAL CONTRACTOR                             |
| GPM           | GALLONS PER MINUTE                             |
| GR            | GRILLE   |
| H             | HUMIDISTAT                                     |
| HB            | HOSE BIBB                                      |
| HE            | HOSE END                                       |
| HD            | HEAD   |
| HW            | DOMESTIC HOT WATER                             |
| ID            | INSIDE DIAMETER                                |
| INV           | INVERT   |
| IW            | INDIRECT WASTE                                 |
| KW            | KILOWATT                                       |
| LAT           | LEAVING AIR TEMPERATURE                        |
| LAV           | LAVATORY                                       |
| LM            | LAUNDRY MACHINE                                |
| LT            | LAUNDRY TRAY                                   |
| LWT           | LEAVING WATER TEMPERATURE                      |
| MAX           | MAXIMUM  |
| MB            | MOP BASIN                                      |
| MBH           | THOUSAND BTU'S PER HOUR                        |
| MC            | MECHANICAL CONTRACTOR                          |
| MED           | MAIN END DRIP                                  |
| MH            | MANHOLE  |
| MIN           | MINIMUM  |
| MO            | MOTOR OPERATED                                 |
| MOD           | MOTOR OPERATED DAMPER                          |
| MVD           | MANUAL VOLUME DAMPER                           |
| NC            | NORMALLY CLOSED                                |
| NC            | NOT IN CONTRACT                                |
| NO            | NORMALLY OPEN                                  |
| OA            | OUTSIDE AIR                                    |
| OD            | OUTSIDE DIAMETER                               |
| OED           | OPEN END DUCT                                  |
| OS&Y          | OUTSIDE STEM AND YOKE                          |
| PC            | PLUMBING CONTRACTOR                            |
| PD            | PUMPED DISCHARGE LINE                          |
| PE            | PNEUMATIC-ELECTRIC                             |
| PRV           | PRESSURE REDUCING VALVE                        |
| PSI           | PER SQUARE INCH                                |
| R             | RISE (DUCTWORK)                                |
| RA            | RETURN AIR                                     |
| RCP           | REINFORCED CONCRETE PIPE                       |
| RD            | ROOF DRAIN                                     |
| REG           | REGISTER                                       |
| RET           | RETURN   |
| RL            | RAIN WATER LEADER                              |
| RPM           | REVOLUTIONS PER MINUTE                         |
| RV            | RELIEF VALVE                                   |
| RX            | REMOVE EXISTING                                |
| SA            | SUPPLY AIR                                     |
| SAN           | SANITARY                                       |
| SD            | SMOKE DAMPER                                   |
| SFD           | SMOKE-FIRE DAMPER                              |
| SH            | SHOWER   |
| SOV           | SHUT-OFF VALVE                                 |
| SP            | STATIC PRESSURE                                |
| SS            | SANITARY STACK                                 |
| ST            | SOUND TRAP                                     |
| SUP           | SUPPLY   |
| SW            | STORM WATER                                    |
| TEMP          | TEMPERATURE                                    |
| TMV           | THERMOSTATIC MIXING VALVE                      |
| TOP           | TOP OF PIPE                                    |
| TPL           | TRAP PRIMING LINE                              |
| TV            | TURNING VANES                                  |
| TYP           | TYPICAL  |
| UH            | UNIT HEATER                                    |
| UR            | URNAL  |
| V             | VENT   |
| VAC           | VACUUM   |
| VB            | VACUUM BREAKER                                 |
| VCP           | VITRIFIED CLAY PIPE                            |
| VD            | VOLUME DAMPER                                  |
| VS            | VENT STACK                                     |
| VTR           | VENT THRU ROOF                                 |
| W             | WASTE  |
| W/            | WITH   |
| WO/           | WITHOUT  |
| WC            | WATER CLOSET                                   |
| WCO           | WALL CLEANOUT                                  |
| WG            | WATER GAUGE                                    |
| WH            | WALL HYDRANT                                   |
| WPD           | WATER PRESSURE DROP                            |
| WS            | WASTE STACK                                    |
| WSFU          | WATER SUPPLY FIXTURE UNITS                     |
| WMS           | WIRE MESH SCREEN                               |
| YCO           | YARD CLEANOUT                                  |

**NOTE:**  
NOT ALL SYMBOLS AND ABBREVIATIONS APPLY

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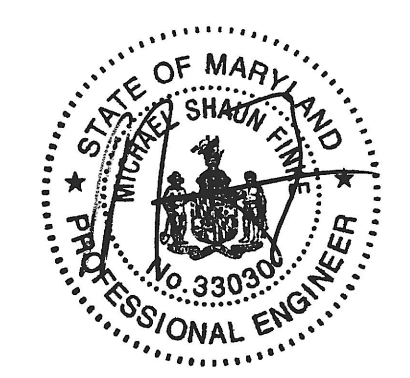
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SHEET TITLE  
**MECH LEGEND,  
SYMBOLS, &  
ABBREVIATIONS**

SCALE  
**AS SHOWN**

SHEET NUMBER  
**M000**



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