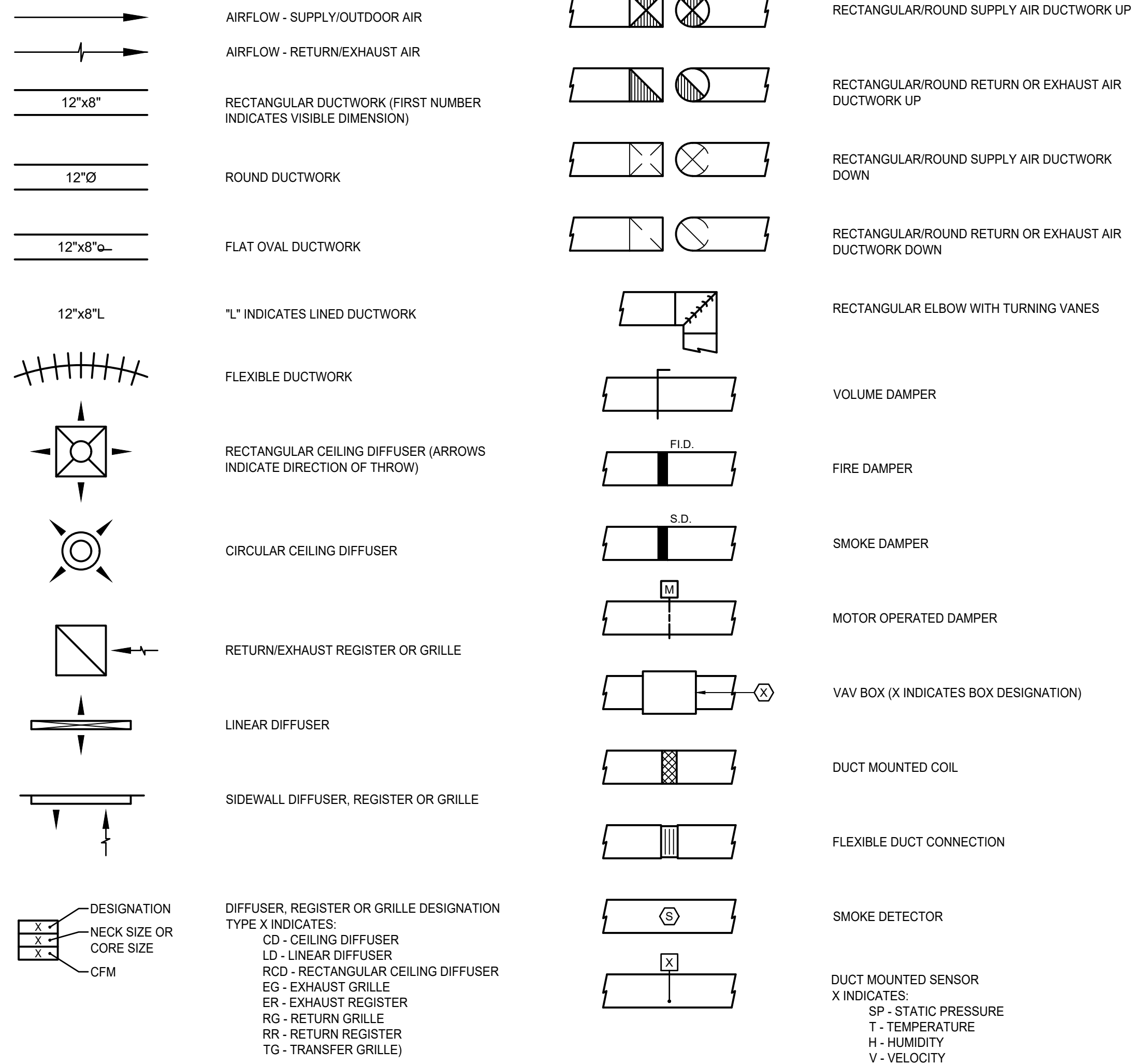


### HVAC ABBREVIATIONS

|         |                                       |         |                                  |
|---------|---------------------------------------|---------|----------------------------------|
| AAV     | AUTOMATIC AIR VENT                    | GTV     | GATE VALVE                       |
| AC      | AIR COMPRESSOR                        | GVTR    | GAS VENT THROUGH ROOF            |
| ACCU    | AIR COOLED CONDENSING UNIT            | H       | HUMIDIFIER                       |
| ACS DR  | ACCESS DOOR                           | HC      | HEATING COIL                     |
| ACS PNL | ACCESS PANEL                          | HEX     | HEAT EXCHANGER                   |
| ACV     | AUTOMATIC CONTROL VALVE               | HP      | HORSEPOWER                       |
| AFF     | ABOVE FINISHED FLOOR                  | HRU     | HEAT RECOVERY UNIT               |
| AFG     | ABOVE FINISHED GRADE                  | HSTAT   | HUMIDISTAT                       |
| AFS     | AIR FLOW STATION                      | HV      | HEATING AND VENTILATING UNIT     |
| AHU     | AIR HANDLING UNIT                     | HWB     | HOT WATER BOILER                 |
| ALUM    | ALUMINUM                              | HWCP    | HOT WATER CIRCULATING PUMP       |
| AS      | AIR SEPARATOR                         | LAT     | LEAVING AIR TEMPERATURE          |
| ASC     | ABOVE SUSPENDED CEILING               | LRI     | LOUVERED ROOF INTAKE             |
| AVG     | AVERAGE                               | LRV     | LOUVERED ROOF VENT               |
| BAV     | BALANCING VALVE                       | LWT     | LEAVING WATER TEMPERATURE        |
| BC      | BOILER CIRCULATOR                     | MAU     | MAKE-UP AIR UNIT                 |
| BB-E    | BASEBOARD - ELECTRIC                  | MAV     | MANUAL AIR VENT                  |
| BFP     | BACKFLOW PREVENTER                    | MC      | MECHANICAL CONTRACTOR            |
| BFV     | BUTTERFLY VALVE                       | NC      | NORMALLY CLOSED                  |
| BFWP    | BOILER FEED WATER PUMP                | NIC     | NOT IN CONTRACT                  |
| BHP     | BRAKE HORSEPOWER                      | NO      | NORMALLY OPEN                    |
| BV      | BALL VALVE                            | NTS     | NOT TO SCALE                     |
| CA      | COMPRESSED AIR                        | O       | OPEN                             |
| CA      | COMBUSTION AIR                        | OA      | OUTSIDE AIR                      |
| CEB     | CONCRETE EQUIPMENT BASE               | OC      | ON CENTER                        |
| CFM     | CUBIC FEET PER MINUTE                 | OED     | OPEN ENDED DUCT                  |
| CHKV    | CHECK VALVE                           | PC      | PLUMBING CONTRACTOR              |
| CHWP    | CHILLED WATER CIRCULATING PUMP        | PLV     | PLUG VALVE                       |
| CIR     | CAST IRON RADIATOR                    | PRV     | PRESSURE REDUCING VALVE          |
| COM     | COMMON                                | PTAC    | PACKAGE TERMINAL AIR CONDITIONER |
| CRP     | CONDENSATE RETURN PUMP                | RA      | RETURN AIR                       |
| CT      | COOLING TOWER                         | RAF     | RETURN AIR FAN                   |
| CUH     | CABINET UNIT HEATER                   | RH      | RELATIVE HUMIDITY                |
| CUV     | CLASSROOM UNIT VENTILATOR             | RHC     | REHEAT COIL                      |
| CV      | CONTROL VALVE                         | RLL     | REFRIGERANT LIQUID LINE          |
| DB      | DRY BULB                              | RSL     | REFRIGERANT SUCTION LINE         |
| DCI     | DUCT COVERING INSULATION              | RTU     | ROOF TOP UNIT                    |
| DF      | DESTRATIFICATION FAN                  | RV      | ROOF VENT                        |
| DLI     | DUCT LINING INSULATION                | SA      | SUPPLY AIR                       |
| DSS     | DUCTLESS SPLIT SYSTEM AIR CONDITIONER | SD      | SMOKE DAMPER                     |
| DX      | DIRECT EXPANSION                      | SF      | SUPPLY FAN                       |
| EA      | EXHAUST AIR                           | SP      | STATIC PRESSURE                  |
| EAT     | ENTERING AIR TEMPERATURE              | STN     | STRAINER                         |
| EC      | ELECTRICAL CONTRACTOR                 | SUH     | SUSPENDED UNIT HEATER            |
| EDR     | EQUIVALENT DIRECT RADIATION           | TFA     | TO FLOOR ABOVE                   |
| ET      | EXPANSION TANK                        | TFB     | TO FLOOR BELOW                   |
| EWT     | ENTERING WATER TEMPERATURE            | UH      | UNIT HEATER                      |
| F       | DEGREES FAHRENHEIT                    | UTR     | UP THROUGH ROOF                  |
| FBO     | FURNISHED BY OTHERS                   | UV      | UNIT VENTILATOR                  |
| FCU     | FAN COIL UNIT                         | VAV     | VARIABLE AIR VOLUME              |
| FFA     | FROM FLOOR ABOVE                      | VD      | VOLUME DAMPER                    |
| FFB     | FROM FLOOR BELOW                      | VIB ISO | VIBRATION ISOLATOR               |
| FID     | FIRE DAMPER                           | WB      | WET BULB                         |
| FSD     | FIRE/SMOKE DAMPER                     | WC      | WATER COLUMN                     |
| FTR     | FINNED TUBE RADIATOR                  | WCHRU   | WATER CHILLER                    |
| FURN    | FURNACE                               | WIV     | WATER INLET VALVE                |
| GC      | GENERAL CONTRACTOR                    | WPD     | WATER PRESSURE DROP              |
| GLV     | GLOBE VALVE                           |         |                                  |
| GPM     | GALLONS PER MINUTE                    |         |                                  |

### HVAC SYMBOLS - DUCTWORK

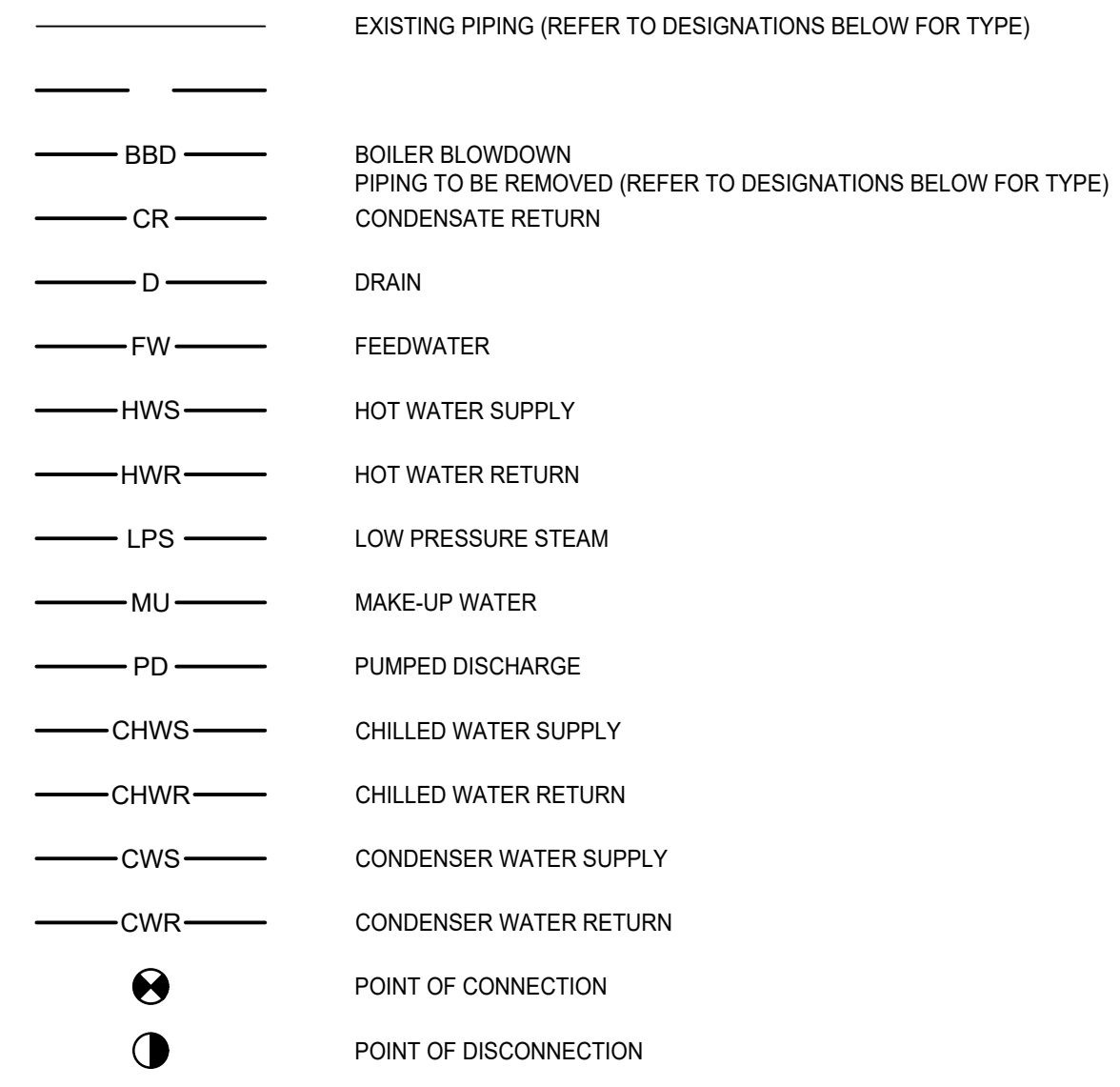


#### SHOP/COORDINATION DRAWINGS:

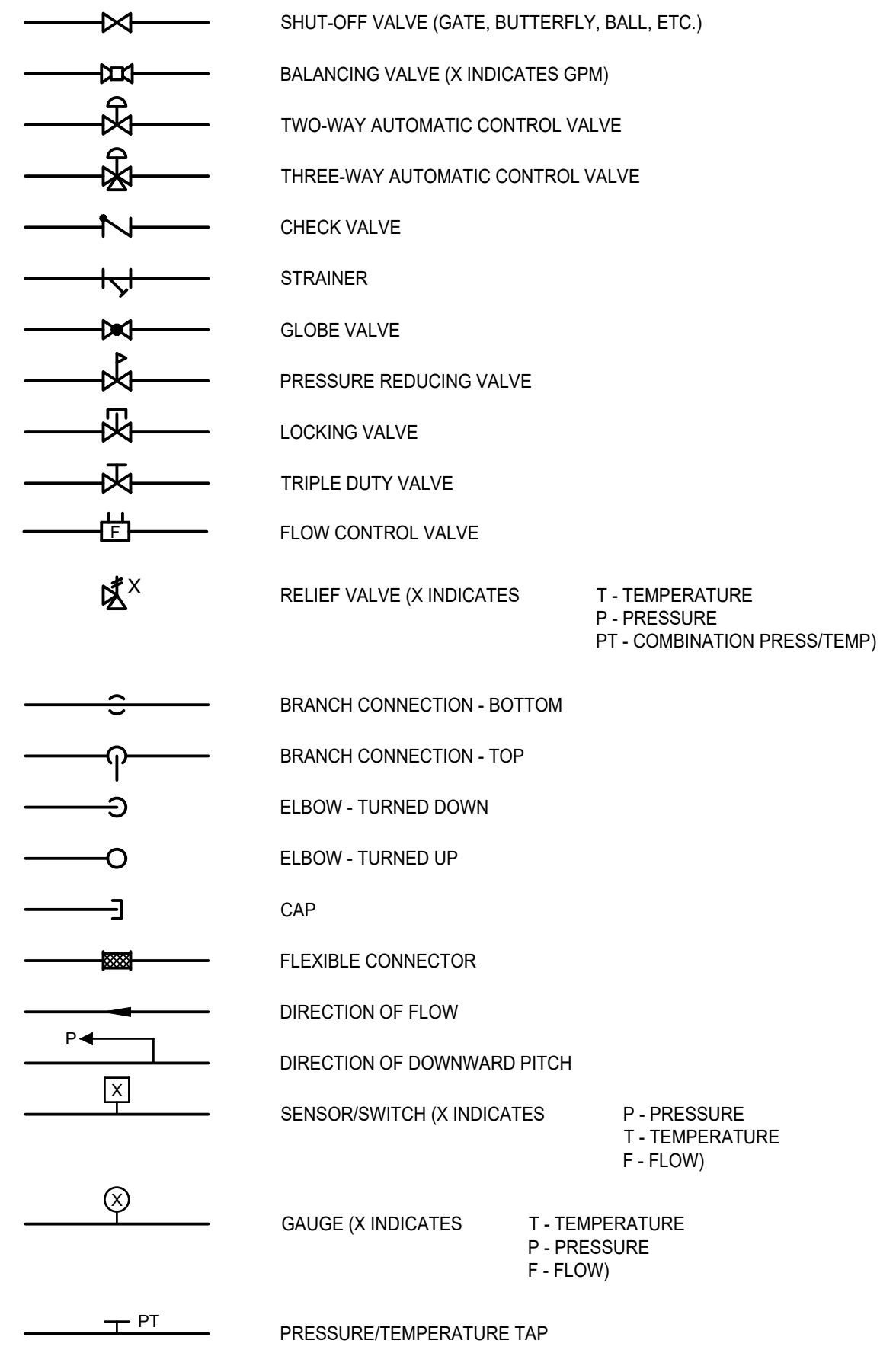
CONTRACTOR SHALL PROVIDE TO THE ENGINEER CAD-GENERATED (AUTOCAD 2013 OR NEWER) COORDINATION DRAWINGS AT 3/8" EQUALS 1 FOOT SCALE.

- CONTRACTOR SHALL BE RESPONSIBLE TO:
  - FIELD VERIFY EXISTING CONDITIONS
  - PROVIDE LAYOUT OF ALL NEW EQUIPMENT, DUCTWORK (DOUBLE LINED) AND PIPING.
  - PROVIDE ELEVATIONS OF ALL DUCTWORK (TOP AND BOTTOM).
  - PROVIDE DIMENSIONS OF MAIN PIPE RUNS FROM BUILDING GRID LINES OR WALLS.
  - PENETRATIONS THROUGH FIRE-RATED AND OTHER PARTITIONS.
  - EQUIPMENT INSTALLATION BASED ON EQUIPMENT PURCHASED FOR PROJECT.

### HVAC SYMBOLS - PIPING DESIGNATIONS



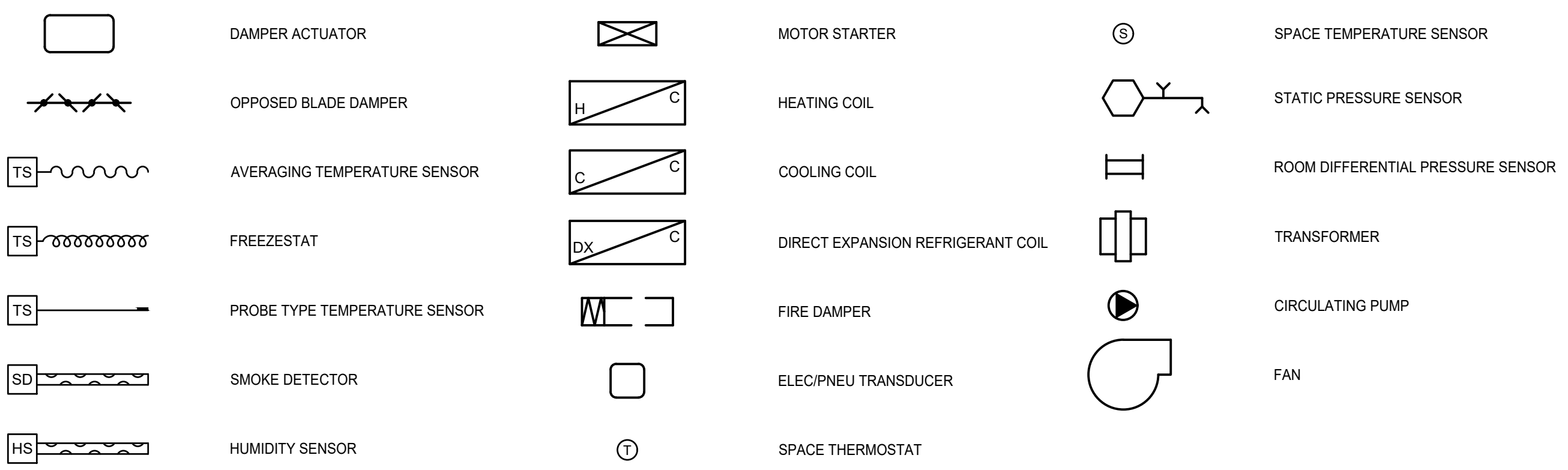
### HVAC SYMBOLS - VALVES & SPECIALTIES



### GENERAL NOTES

- THIS LEGEND SHEET IS FOR THE HVAC CONTRACTOR REFERENCE ONLY. NOT ALL SYMBOLS AND/OR ABBREVIATIONS MAY APPLY TO THIS PARTICULAR PROJECT. ANY ADDITIONS OR OMISSIONS FROM THIS LEGEND SHEET DOES NOT IMPLY INCLUSION AND/OR EXCLUSION OF ANY PARTICULAR ITEM FROM THE PROJECT.
- THE PLANS ARE DIAGRAMMATIC AND INDICATE ONLY THE SIZE AND GENERAL ARRANGEMENT OF PIPING AND EQUIPMENT. EXACT LOCATION OF ALL ELEMENTS SHALL BE DETERMINED AS WORK PROGRESSES, IN COOPERATION AND COORDINATION WITH THE WORK OF ALL OTHER TRADES. IT IS NOT INTENDED TO SHOW EVERY ITEM OF WORK OR MINOR PIECE OF EQUIPMENT, BUT THE CONTRACTOR SHALL FURNISH AND INSTALL WITHOUT ADDITIONAL REMUNERATION ANY COMPONENT NECESSARY TO COMPLETE THE SYSTEM IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE.
- ITEMS OF WORK OR EQUIPMENT SHOWN ON THE DRAWINGS ONLY, OR CALLED FOR IN THE SPECIFICATIONS ONLY, SHALL BE FURNISHED AND INSTALLED IN THE SAME MANNER AS IF THEY APPEARED ON BOTH THE DRAWINGS AND SPECIFICATIONS.
- DRAWINGS DO NOT INDICATE ALL OFFSETS, CHANGES IN ELEVATIONS, ETC. WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL MAKE SUCH CHANGES IN PIPING AND LOCATION OF EQUIPMENT, ETC. TO ACCOMMODATE WORK WITH THAT OF OTHER CONTRACTORS.
- INSTALL EQUIPMENT, DUCTWORK, AND PIPING TO AVOID INTERFERENCE WITH THE OPERATION OR SERVICING AND MAINTENANCE OF EQUIPMENT.
- HVAC CONTRACTOR IS RESPONSIBLE TO PROVIDE ACCESS PANELS AND DOORS WHERE THEY ARE NEEDED TO GAIN ACCESS TO CONCEALED EQUIPMENT.
- ALL COSTS FOR CUTTING, PATCHING AND PAINTING OF EXISTING WALLS, CEILINGS AND FLOORS TO ACCOMMODATE THE INSTALLATION OF HVAC WORK SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR UNLESS INDICATED OTHERWISE. MATERIALS FOR RESTORATION OF EXISTING SURFACES SHALL MATCH THE EXISTING MATERIALS.
- PIPES AND/OR DUCTS PENETRATING FIRE WALLS AND FLOORS SHALL BE FIRESTOPPED AS SPECIFIED. REFER TO THE ARCHITECTURAL DRAWINGS FOR FIRE WALL AND FLOOR LOCATIONS.
- ALL DUCT SIZES SHOWN ON DRAWINGS INDICATE CLEAR INSIDE DIMENSIONS.
- ALL PHYSICAL ATTRIBUTES OF EQUIPMENT AND DEVICES ARE BASED ON THOSE MANUFACTURERS LISTED IN THE SPECIFICATIONS AND/OR THE EQUIPMENT SCHEDULES. THE RESPECTIVE CONTRACTORS ARE RESPONSIBLE FOR ALL CHANGES BROUGHT ABOUT BY USE OF ITEMS BY OTHER MANUFACTURERS. THE ARCHITECT/ENGINEER HAS RESERVED THE RIGHT TO REJECT ITEMS BY OTHER MANUFACTURERS IF THOSE ITEMS DO NOT MATCH THE PHYSICAL ATTRIBUTES OF THE MANUFACTURERS LISTED.
- COMPLY WITH THE 2025 GEORGIA STATE BUILDING CODES, ASHRAE 90.1-2016, AND OTHER APPLICABLE CODES.

### HVAC SYMBOLS - CONTROLS



**Brown AND Caldwell**

BROWN AND CALDWELL  
 900 HAMMOND DRIVE, SUITE 500  
 ATLANTA, GA 30328

**wendel**

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

60% DESIGN DOCUMENTS



NCWSA OFFICE ADDITION

| REVISIONS |      |             |
|-----------|------|-------------|
| REV       | DATE | DESCRIPTION |
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LINE IS 2 INCHES AT FULL SIZE

DESIGNED: CJP  
 DRAWN: CJP  
 CHECKED: NBN  
 CHECKED:  
 APPROVED: RFJ

FILENAME  
 BC PROJECT NUMBER  
 CLIENT PROJECT NUMBER

MECHANICAL SYMBOLS, NOTES, & ABBREVIATIONS

DRAWING NUMBER  
**M001**