SECTION 15075

MECHANICAL IDENTIFICATION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes requirements for nameplates, tags, stencils and pipe markers, and for painting elements of mechanical systems.

1.2 DESCRIPTION

A. Provide identification for all equipment. The identification of each piece of equipment shall be with a unique identifier. The scheme of identification shall coordinated with the tags of the existing equipment in the facility, and shall follow the same naming conventions as the existing equipment.

B. Require the following identification of mechanical systems:

1. Labels and tags for valves and equipment.

2. Labels for piping.

C. Require exposed piping and pipe insulation in utility, baggage handling areas, and mechanical rooms to be painted.

1.3 REFERENCES

A. ASME A13.1 (American Society of Mechanical Engineers) - Scheme for the Identification of Piping Systems.

1.4 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section.

PART 2 - PRODUCTS

2.1 NAMEPLATES

A. Laminated three-layer plastic with engraved black letters on light contrasting background color.

B. FR plastic with lettering permanently bonded to the plastic through a sublimation process

C. Minimum 3/4" high lettering.

2.2 TAGS

A. Plastic Tags:

1. Laminated three-layer plastic with engraved black letters on light contrasting background color. Tag size minimum 1-1/2 inches.

B. Brass with stamped letters; tag size minimum 1-1/2 inches with smooth edges.

C. FR plastic with lettering permanently bonded to the plastic through a sublimation process, Unisub process or equal.

2.3 STENCILS

A. Stencils: With clean cut symbols and letters of following size:

1. Up to two-inch Outside Diameter of Insulation or Pipe: 1/2-inch high letters.

2. 2-1/2 to six-inch Outside Diameter of Insulation or Pipe: one-inch high letters.

3. Over six-inch Outside Diameter of Insulation or Pipe: 1-3/4 inches high letters.

4. Ductwork and Equipment: 1-3/4 high letters.

B. Stencil Paint: As specified in Section 09910 - Paints, semi-gloss enamel, colors and lettering size conforming to ASME A13.1.

2.4 PIPE MARKERS

A. Color and Lettering: Conform to ASME A13.1.

B. Plastic Pipe Markers:

1. Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener.

C. Plastic Tape Pipe Markers:

1. Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

D. Plastic Underground Pipe Markers:

1. Bright colored continuously printed plastic ribbon tape, minimum six inches wide by four mil thick, manufactured for direct burial service.

2.5 CEILING TACKS

A. Description: Steel with 3/4-inch diameter color-coded head.

B. Color code as follows:

1. HVAC equipment: Yellow.

2. Fire dampers/smoke dampers: Red.

3. Plumbing valves: Green.

4. Heating/cooling valves: Blue.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Coordination With Room Numbering

1. Some systems provided under this Division may rely on identification systems that are based on room names or numbers. Require the Contractor to obtain from ANC the final room numbers prior to commencing the numbering of Division 15 systems.

B. Tag all plumbing valves (CW, HW and HWC) and hydronic heating piping (HWS, HWR, GS and GR) main and branch isolation valves indicating valve number. Indicate on the tag whether the valve is normally open or normally closed.

1. Use prefix ‘P’ for plumbing and ‘H’ for heating. Securely fasten to the valve stem or bonnet with a beaded chain.

2. Provide a laminated copy of the complete and approved valve directory, framed and mounted in each mechanical room and fan room.

C. Identify air handling units, pumps, heat transfer equipment, tanks, and water treatment devices with plastic nameplates. Small devices, such as in-line pumps, may be identified with tags.

D. Identify air terminal units and radiator valves with numbered tags.

E. Identify ductwork with plastic nameplates or stenciled painting. Identify with air handling unit identification number and area served. Locate identification at air handling unit, at each side of penetration of structure or enclosure, and at each obstruction.

F. Tag automatic controls, instruments, and relays. Key to control schematic.

G. Label all equipment with heat resistant laminated plastic labels having engraved lettering 1/2 inch high and fastened in place with rivets or screws. The label shall include the equipment type name and the specific symbol or tag indicated on the schedules. Examples “PUMP PMP-X” “WATER HEATER WH-X,” “EXHAUST FAN EF-X,” “SUPPLY FAN SF-X,” etc. Names of all equipment shall match the names on the tenant drawings.

H. Provide ceiling tacks to indicate location of VAV Terminal unit, valves or dampers above acoustical (lay-in) type or linear metal ceilings throughout entire building. Locate in corner of panel closest to equipment.

I. Install identifying devices after completion of coverings and painting.

J. Install tags using corrosion resistant chain. Number tags consecutively by location.

3.2 PIPE IDENTIFICATION

A. Identify piping, concealed or exposed, with plastic pipe markers or stenciled painting. Identify service, flow direction, and pressure. Install in clear view and align with axis of piping. Locate identification not to exceed 20 feet on straight runs including risers and drops, adjacent to each valve and tee, at each side of penetration of structure or enclosure, and at each obstruction.

B. Painting: Paint all piping and piping insulation exposed in utility areas, baggage handling areas, and mechanical rooms. Color: White or light gray.

C. Labeling:

1. Provide factory made adhesive or snap on labels and flow arrows at intervals not exceeding 20 feet and where pipes emerge from walls, floors and ceilings. No labels in public spaces.

D. Identification Scheme:

1. Only commonly used nomenclature is listed. Submit proposed lettering for other services.

Designation	Wording
CW	Cold Water
HW	Hot Water
HWC	Hot Water Circulation

Designation	Wording
HWS	Heating Water Supply
HWR	Heating Water Return
CWS	Cooling Water Supply
CWR	Cooling Water Return
RL, ORL	Rain Leader, Overflow Rain Leader
W	Waste
V	Vent
F	Fire Protection Water
Spkr or Sp	Sprinkler Water

E. Install underground plastic pipe markers six to eight inches below finished grade, directly above buried pipe.

END OF SECTION