PART 1 – GENERAL

1.01 WORK INCLUDED

Identification of Mechanical Products Installed Under Section 22, Plumbing and Section 23, HVAC.

1.02 RELATED WORK

1. Section 22 05 10 Basic Plumbing Requirements
2. Section 22 07 19 Plumbing Piping Insulation
3. Section 22 07 16 Plumbing Equipment Insulation
4. Section 23 07 00 Ductwork Insulation
5. Section 22 10 00 Plumbing Piping
6. Section 23 20 00…… HVAC Piping
7. Section 23 11 23…… Facility Natural-Gas Piping
8. Section 22 30 00 Plumbing Equipment
9. Section 23 21 00 Hydronic Piping
10. Section [Various References]…. Hydronic Specialties
11. Section 23 21 23 HVAC Pumps
12. Section 23 62 00 Air Cooled Condensing Unit
13. Section 23 64 16 Centrifugal Water Chiller
14. Section 23 64 26 Water Cooled Rotary Screw Water Chiller
15. Section 23 18 26 Split System Air Handler
16. Section 23 73 00 Air Handling Units with Coils
17. Section 23 34 23 Power Ventilators
18. Section 23 34 23 Power Roof Ventilators
19. Section 23 36 00 Air Terminal Units (VAV)

1.03 REFERENCES

ANSI/ASME A13.1—Scheme for the Identification of Piping Systems.

1.04 SUBMITTALS

A. Submit product data under provisions of the PCSB Contract requirements and Sections 22 05 10 Basic Requirements for Plumbing Systems, 23 05 10 Basic Requirements for HVAC Systems, and Division 01.

B. Submit list of wording, symbols, letter size, and color coding for mechanical identification.

C. Submit valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number. Refer to Section 22 05 10, Basic Requirements for Plumbing Systems or 23 05 10, Basic Requirements for HVAC Systems, Paragraph 1.14.

D. Submit manufacturer's installation instructions under provisions of Division 01.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

1. Brady
2. Seton
3. MSI

2.02 MATERIALS

A. Color: Color: Unless specified otherwise, conform with ANSI/ASME A13.1. Exact colors, which are used in combination with legends, are contained in the ANSI Z535.1 Safety Color Code.

B. Metal Tags: 18 gauge brass with stamped letters; tag size minimum 1-1/2 inch diameter with smooth edges.

C. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings. Colors shall comply with ANSI/ASME A13.1. Size markers and letters as follows:

|  |  |  |
| --- | --- | --- |
| Outside Diameter Of | Length Of | Size Of |
| Insulation Or Pipe | Color Field | Letters |
| ¾" - 2"  | 1" x 8" | ¾" |
| 2½" - 6" | 2¼" x 13" | 1¾" |
| 8" - 10" | 4" x 24" | 2½" |
| Over 10" | 4" x 32" | 3½" |
| Ductwork and Equipment | All | 3½" |

D. Plastic Flagging Tape: 1-3/16” wide, bright orange.

E. Plastic Equipment Markers: 2" x 4", minimum 1/8" thick, corrosive and chemical resistant, black with white letters. Minimum size letter shall be 1/4". Air handler shall include quantity and sizes of filters required for a complete filter change. Fasten with stainless steel hardware.

F. Equipment Locator Tacks: 7/8" diameter color coded with push tack and writable surface.

PART 3 - EXECUTION

3.01 PREPARATION

Degrease and clean surfaces to receive adhesive for identification materials.

3.02 INSTALLATION

A. Metal Tags: Install with heavy brass hook or chain.

B. Plastic Tape Pipe Markers: Install complete around pipe in accordance with manufacturer's instructions.

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

D. Controls: Identify control panels and major control components outside panels with plastic equipment tags.

E. Valves: Identify valves in main and branch piping with tags.

F. Piping: Identify piping, concealed or exposed, with plastic pipe markers. Tags may be used on small diameter piping. 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 "T", at each side of penetration of structure or enclosure, and at each obstruction.

G. Ductwork: Identify ductwork with plastic equipment markers. Identify as to air handling unit number and service (supply air, return air, exhaust, outside air, etc.). Locate identification at air handling unit, at each side of penetration of structure or enclosure, and at each obstruction.

H. Provide signage for gas vents to indicate the following: "Warning: Flammable Gas Vent".

I. Equipment Located Above Ceiling (i.e., VAV boxes, fans, air handlers, fire dampers, smoke dampers, etc.): Provide equipment self-adhesive locator stickers (‘dots”), located on the ceiling directly below the equipment, to be spot marked and so mark is easily visible from the floor. Use a permanent marker and label each tag with the name of the equipment. Color code equipment by type as follows:

|  |  |
| --- | --- |
| Equipment Above Ceiling | Color |
| Air Handlers/Fan Coil Units | Light Blue |
| Exhaust Fans | Green |
| VAV Boxes | Yellow |
| Duct Heaters | Orange |
| Fire Dampers | Red |
| Smoke Dampers | Red |
| Valves | Blue |

J. Ductwork Volume Dampers Above the Ceiling: Tie an orange tape flag, minimum 18” long, from each volume damper. Let tape hang down vertically.

3.03 VALVE CHART AND SCHEDULE

Provide valve chart and schedule in aluminum frame with clear plastic shield. Install at location as directed.

**END OF SECTION**