

## 15047 IDENTIFICATION

\*\*\*\*\*

### *SPECIFIER:*

*CSI MasterFormat 2004 number: 230353*

*An optional keynote to the Drawings follows major product titles, for A/Es using National CAD Standard.*

\*\*\*\*\*

## PART 1 GENERAL

### 1.1 SUMMARY

- A. Section Includes: Identification including necessary accessories indicated on Construction Documents and specified in this section or as required for proper identification of equipment and piping.
- B. Related Sections:
  - 1. 02221 -Excavating, Backfilling, and Compaction for Utilities
  - 2. 11600 - Laboratory Equipment.
  - 3. 15410 - Piping (Plumbing).
  - 4. 15330 - Automatic Sprinkler Piping.
  - 5. 15510 - Piping (HVAC)

### 1.2 SUBMITTALS

- A. Submit properly identified product and technical data including printed installation instructions before starting work.

### 1.3 QUALITY ASSURANCE

- A. Regulatory Requirements:
  - 1. Color Coding: ANSI Z535.1 (latest edition) shall take precedence over any discrepancies in determining proper color code identification.
  - 2. Conform to the standards established in ANSI A13.
  - 3. Comply with OSHA standards.

## PART 2 PRODUCTS

### 2.1 EQUIPMENT IDENTIFICATION

- A. Identify equipment served by piping systems by number or legend as shown on Construction Documents.
- B. Engraved Plastic Name Plates: Provide engraved laminated plastic name plates with 1 inch high letters on equipment cabinets.

- C. Valves: Provide all valves with a 1-1/2" diameter brass tag having 1/2" high black filled numbers and 1/4" high letters, as manufactured by Seton or accepted equivalent.
1. Service shall be identified by abbreviations such as: CHW (Chilled Water), CW (Condenser Water), HW (Hot Water), DW (Domestic Water), GAS, etc.
  2. Valve tag fasteners shall consist of No.6 brass beaded chain. The use of color coded one piece nylon ties is acceptable instead of beaded chain fasteners.
  3. Prepare schematic piping diagrams of systems controlled by valves with a schedule identifying all valves. Diagram and Valve Schedule shall be posted in the mechanical room where system depicted is located. All diagrams shall be printed on non-fading media and framed under a plastic laminate surface.

D. Piping Identification:

1. Color Coding: Identify piping with markers and directional arrows according to the following color coding system:

<u>Description</u>	<u>Background</u>	<u>Letters</u>
Hot Water	Yellow	Black
Cold Water	Green	White
Gas	Yellow	Black
Air	Blue	White
Vacuum	Green	White
Steam	Yellow	Black
Nitrogen	Green	White
Oxygen	Yellow	Black
Hydrogen	Yellow	Black
Refrigerant	Yellow	Black
Fire	Red	White

2. Piping Identification Materials:
  - a. Identify contents and flow direction of piping or pipes wrapped with insulation by using:
    - 1) Brady B-946 self-sticking vinyl.
    - 2) Champion America Inc., pressure sensitive vinyl.
    - 3) Seton Opti-Code.
    - 4) Ready Made adhesive pipe markers.
3. Valve Identification:
  - a. Identify location and system under valve control with a color coded thumb tack under valve and lay-in ceiling tile.

E. Underground Tapes:

1. Electrical Warning Tape: 6 mil, 3 inches wide polyethylene.
  - a. BURIED ELECTRICAL LINE BELOW - No.37236 by Seton or accepted equivalent.

2. 2" Metallic Detection Tapes:

- a. BURIED SEWER LINE BELOW - No.37220 by Seton or accepted equivalent.
- b. BURIED WATER LINE BELOW - No.37222 by Seton or accepted equivalent.

PART 3 EXECUTION

3.1 INSPECTION

- A. Do not proceed with the work of this section until conditions detrimental to the proper and timely completion of the work have been corrected in an acceptable manner.
- B. Verify surfaces are clean and dry before application of identification signage.

3.2 INSTALLATION

A. Brass Tags or Engraved Plastic Name Plates:

- 1. Install brass tags or engraved plastic name plates according to manufacturer's instructions.
  - a. Place brass tags or name plates in locations easily visible within the space at normal eye level or as otherwise directed by A/E.

B. Piping Markers and Directional arrows:

1. Location:

- a. Pipes Passing Through Walls: Provide pipe markers and directional arrows on the pipe on each side of the wall.
- b. Pipes Behind Access Doors/Panels: Provide pipe markers and directional arrows within view.
- c. Continuous Run Pipe Lines: Provide pipe markers and directional arrows at intervals not exceeding 50 feet.
- d. Risers and "T" Joints: Provide pipe markers and directional arrows at each riser and "T" joint.
- e. Vertical and Horizontal Change of Direction: Provide pipe markers and directional arrows at each vertical and horizontal change of direction.

2. Special Requirements:

- a. Directional Arrows: When identifying by directional arrows, point arrow head away from pipe markers and in the direction of flow.
  - 1) Direction of Flow: If the flow can be in both directions, identify by using double-headed directional arrows.
- b. Thin Film Pipe Markers and Thin Film Directional Arrows: When using both thin film pipe markers and thin film directional arrows on soft insulation, provide a

spiral wrap of accepted pipe banding tape around the pipe as foundation for both markers and directional arrows.

C. Underground Tapes:

1. Electrical Warning Tape: Install warning tape 8 inches below finish grade on all underground outside electrical lines.
2. 2" Metallic Detection Tapes: Install metallic detection tape 4 inches to 6 inches below finish grade on all underground outside plumbing and air-conditioning lines.

END OF SECTION