

## **PIPING IDENTIFICATION AND VALVE TAGGING STANDARD**

### **PURPOSE**

1. The general purpose of the Piping Identification and Valve Tagging Standard is to provide a series of guidelines for contractors, A/E's and FM employees to adhere to or follow when labeling piping and tagging valves which are located on the campus of CMU.
2. This Standard is not to be regarded as a specification but merely as a document providing guidance and uniformity in the completion of labeling and tagging in the field.

### **GENERAL**

1. Piping and valves shall be painted, tagged and stenciled as described herein.
2. Painting of piping or valves shall also be included in the Painting Division of the Specifications.

### **PRODUCTS**

1. All paint shall be suitable for application to the particular type surface in question.
2. Paint for piping and valves shall be approved by CMU project manager.
3. Piping labeling shall be made from temperature sensitive vinyl material and follow the FM Piping Identification Key.
4. Valve tags shall be made from GravoPLY and engraved with information.

### **EXECUTION**

#### **Pipe Service Labeling**

1. All pipes for any service shall be identified as to their service by commercially available, color coded self-sticking vinyl pipe markers.
2. Marking shall include pipe content and direction of fluid flow to include the following minimum requirements:
  - All markers to be in positions that are visible to personnel
  - Marking shall conform to pipe service identification fluid and term
  - Shall conform to the FM Piping Identification Key
  - Shall conform to information as noted on the drawings
  - Shall conform to the FM Terms and Abbreviations Standard
  - Piping both exposed and furred in shall be labeled unless otherwise directed
  - Paint pipe content banding, legend, and flow direction marker near each valve
  - At every point where the pipe or pipe enters and exits through a wall or changes direction
  - On each riser and tee joint
  - At 25 foot intervals on long continuous pipe runs
  - Arrows (flow direction markers) shall point away from content marking, and in direction of flow
  - If flow can be in both directions, apply double-headed arrows.
3. Background Banding (paint) – Refer to ANSI Z535.1 Safety Color Code

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<u>Color Key</u>	<u>Service</u>
Fire Protection Red	Sprinkler
Dangerous Yellow	Natural Gas

**Width of color band** for outside diameter or insulated pipe and or un-insulated pipe

<u>Pipe Diameter</u>	<u>Width of Color Band</u>
¾ inch thru 2 inch	8- inch
2-½ inch thru 6 inch	12-inch
8 inch thru 10 inch	24-inch
Over 10 inches	32-inch

#### 4. Legend

##### **Color of Letters**

Fire Protection	White
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**Outside diameter** of insulated pipe and/or un-insulated pipe and height of labeled letters

<u>Pipe Diameter</u>	<u>Letter Height</u>
¾ inch thru 1 ¼ inch	½ inch
1 ½ inch thru 2 inch	¾ inch
2 ½ inch thru 6 inch	1 ¼ inch
8 inch thru 10 inch	2-½ inch
Over 10 inch	3-½ inch

*\*for pipes < ¾" in diameter a permanently legible tag is required*

5. Waste vent, rainwater piping, and buried lines are not to be labeled
6. The following piping whether concealed or exposed, shall be painted in its entirety. This pertains to outside cover if pipe is insulated.
  - Natural Gas
  - Non-potable Water

## VALVE TAGS

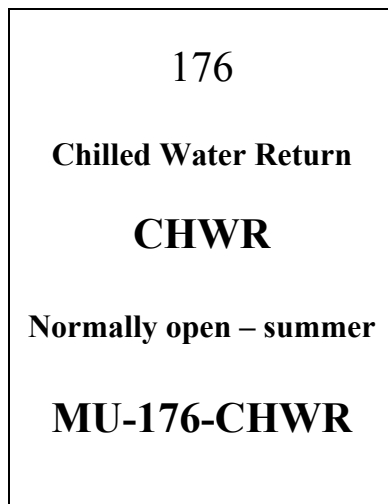
### General Information

- Each tag shall be attached to the valve assembly (do not place tag on valve handle or wheel) by means of steel wire
- Tag Size: 2" x 3" x 1/8" GravoPLY
- Tag Color: Color to adhere to FM Piping Identification Key.

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Tag Information shall be engraved on both sides with the following:

- a) **Line # 1 (Top of Tag): Valve Number**  
All valves shall be numbered consecutively (not by system).
  
- b) **Line # 2 (directly below Valve #): Service Term and Abbreviation**  
Refer to FM Piping Key or FM - Terms and Abbreviations Manual for service term and abbreviation information.
  
- c) **Line #3 Operational Information**
  1. always open
  2. normally open – summer
  3. normally closed – summer
  4. normally open – fall
  5. normally closed - fall
  6. normally open – winter
  7. normally closed – winter
  
- d) **Line #4 – Valve location**  
*Bldg Code – valve number – Service Abbr.*  
Example: *MU-176-CHWR*



## **PIPING IDENTIFICATION AND VALVE TAGGING STANDARD**

### **VALVE SCHEDULE**

1. Upon completion of the valve tagging, furnish to the owner a complete schedule of all valves installed, this schedule shall include:
  - a. number of the valve
  - b. service controlled
  - c. location of the valve
  - d. space or area controlled by the valve
  - e. color code
2. Install valve schedule on the wall next to the entry door of the mechanical room. Verify location with the CMU project manager.
3. Provide three (3) copies of schedule in loose-leaf form complete with binder and plastic protective envelope for each sheet. The Owner shall provide a template of the schedule to be utilized by the Contractor.

### **REFERENCES**

ANSI A13.1 - 1981

**PIPING IDENTIFICATION AND VALVE TAGGING STANDARD**

<b>FACILITIES MANAGEMENT</b>			
<b>PIPING IDENTIFICATION KEY</b>			
<i>revised 4.14.06</i>			
<b>SERVICE TERM</b>	<b>SERVICE ABBREVIATION ON PIPE</b>	<b>IDENTIFICATION COLOR</b>	<b>FLOW DIRECTION REQUIRED</b>
CHILLED WATER SUPPLY	CHWS	WHITE on GREEN	X
CHILLED WATER RETURN	CHWR	WHITE on GREEN	X
DOMESTIC WATER COLD	DWC	WHITE on GREEN	
DOMESTIC WATER HOT SUPPLY	DWHS	BLACK on YELLOW	X
DOMESTIC WATER HOT RETURN	DWHR	BLACK on YELLOW	X
HOT WATER HEATING SUPPLY	HWHS	BLACK on YELLOW	X
HOT WATER HEATING RETURN	HWHR	BLACK on YELLOW	X
LOW PRESSURE STEAM	LPS	BLACK on YELLOW	
HIGH PRESSURE STEAM	HPS	BLACK on YELLOW	
CONDENSATE RETURN	CNDR	BLACK on YELLOW	X
NATURAL GAS	G	BLACK on YELLOW	
LOW PRESSURE AIR	LP A	WHITE on GREEN	
HIGH PRESSURE AIR	HP A	BLACK on YELLOW	
FIRE STAND PIPE	FSP	WHITE on RED	
FILTERED WATER RETURN POOL	FWRP	WHITE on GREEN	X
FILTERED WATER SUPPLY POOL	FWRS	WHITE on GREEN	X
WATER BRINE	WTR B	WHITE on GREEN	
WASTE WATER	WW	GREEN on WHITE	
VACUUM	VAC	WHITE on GREEN	
TOWER WATER	TW	WHITE OR GREEN	
WATER CITY	WTR C	WHITE OR GREEN	
SNOW MELT HEAT SYSTEM	SMHS	BLACK OR YELLOW	

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### DOCUMENT CONTROL PAGE:

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### Revision History:

Date	Revision	Approved By: