SECTION 210553 - IDENTIFICATION FOR FIRE-SUPPRESSION PIPING AND EQUIPMENT

Revise this Section by deleting and inserting text to meet Project-specific requirements.

1. GENERAL
	* + 1. RELATED DOCUMENTS
				1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			2. SUMMARY
				1. Section Includes:

Equipment labels.

Warning signs and labels.

Pipe labels.

Stencils.

Valve tags.

Warning tags.

Valve service identification chart frames.

* + - 1. SUBMITTALS

Only request submittals needed to verify compliance with Project requirements.

* + - * 1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the

General Conditions.

* + - * 1. Manufacturer’s installation instructions shall be provided along with product data.
				2. Submittals shall be provided in the order in which they are specified and tabbed (for

combined submittals).

* + - * 1. Product Data: For each type of product.
				2. Samples: For color, letter style, and graphic representation required for each identification material and device.
				3. Equipment-Label Schedule: Include a listing of all equipment to be labeled and the proposed content for each label.
				4. Valve Schedules: Valve numbering scheme.
1. PRODUCTS

See Editing Instruction No. 1 in the Evaluations for cautions about named manufacturers and products.

* + - 1. EQUIPMENT LABELS

Copy paragraphs below and re-edit for each product.

* + - * 1. Metal Labels for Equipment:

[Manufacturers:](http://www.specagent.com/Lookup?ulid=9462) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Brady Corporation](http://www.specagent.com/Lookup?uid=123456934653).

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934654).

[Carlton Industries, LP](http://www.specagent.com/Lookup?uid=123456934660).

[Champion America](http://www.specagent.com/Lookup?uid=123456934655).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934656).

[emedco](http://www.specagent.com/Lookup?uid=123456934661).

[Kolbi Pipe Marker Co](http://www.specagent.com/Lookup?uid=123456934657).

[LEM Products Inc](http://www.specagent.com/Lookup?uid=123456934662).

[Marking Services, Inc](http://www.specagent.com/Lookup?uid=123456934658).

[Seton Identification Products; a Brady Corporation company](http://www.specagent.com/Lookup?uid=123456934659).

Approved equivalent.

Retain multiple material options in "Material and Thickness" Subparagraph below to allow Contractor to select the most cost-effective material.

Material and Thickness: [**Brass, 0.032 inch**] [**stainless steel, 0.025 inch**] [**aluminum, 0.032 inch**] [**or**] [**anodized aluminum, 0.032 inch**] thick, with predrilled holes for attachment hardware.

Letter Color: [**Black**] [**Blue**] [**Red**] [**White**] [**Yellow**] <**Insert color**>.

Background Color: [**Black**] [**Blue**] [**Red**] [**White**] [**Yellow**] <**Insert color**>.

Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.

Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.

Fasteners: Stainless-steel [**rivets**] [**or**] [**self-tapping screws**].

Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

* + - * 1. Plastic Labels for Equipment:

[Manufacturers:](http://www.specagent.com/Lookup?ulid=9463) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Brady Corporation](http://www.specagent.com/Lookup?uid=123456934663).

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934664).

[Carlton Industries, LP](http://www.specagent.com/Lookup?uid=123456934665).

[Champion America](http://www.specagent.com/Lookup?uid=123456934666).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934667).

[emedco](http://www.specagent.com/Lookup?uid=123456934668).

[Kolbi Pipe Marker Co](http://www.specagent.com/Lookup?uid=123456934669).

[LEM Products Inc](http://www.specagent.com/Lookup?uid=123456934670).

[Marking Services, Inc](http://www.specagent.com/Lookup?uid=123456934671).

[Seton Identification Products; a Brady Corporation company](http://www.specagent.com/Lookup?uid=123456934672).

Approved equivalent.

Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, [**1/16 inch**] [**1/8 inch**] <**Insert dimension**> thick, with predrilled holes for attachment hardware.

Letter Color: [**Black**] [**Blue**] [**Red**] [**White**] [**Yellow**] <**Insert color**>.

Background Color: [**Black**] [**Blue**] [**Red**] [**White**] [**Yellow**] <**Insert color**>.

Maximum Temperature: Able to withstand temperatures up to 160 deg F.

Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.

Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.

Fasteners: Stainless-steel [**rivets**] [**or**] [**self-tapping screws**].

Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

In "Label Content" Paragraph below, the purpose of labeling equipment is to coordinate it with Drawings, including plans, details, and schedules. This allows other information, such as capacities and operating characteristics, to be obtained.

* + - * 1. Label Content: Include equipment's Drawing designation or unique equipment number, Drawing numbers where equipment is indicated (plans, details, and schedules), and the Specification Section number and title where equipment is specified.
				2. Equipment-Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch bond paper. Tabulate equipment identification number and identify Drawing numbers where equipment is indicated (plans, details, and schedules) and the Specification Section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.
			1. WARNING SIGNS AND LABELS

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=9464) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Brady Corporation](http://www.specagent.com/Lookup?uid=123456934673).

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934674).

[Carlton Industries, LP](http://www.specagent.com/Lookup?uid=123456934675).

[Champion America](http://www.specagent.com/Lookup?uid=123456934676).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934677).

[emedco](http://www.specagent.com/Lookup?uid=123456934678).

[LEM Products Inc](http://www.specagent.com/Lookup?uid=123456934679).

[Marking Services Inc](http://www.specagent.com/Lookup?uid=123456934682).

[National Marker Company](http://www.specagent.com/Lookup?uid=123456934683).

[Seton Identification Products; a Brady Corporation company](http://www.specagent.com/Lookup?uid=123456934681).

[Stranco, Inc](http://www.specagent.com/Lookup?uid=123456934684).

Approved equivalent.

* + - * 1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, [**1/16 inch**] [**1/8 inch**] <**Insert dimension**> thick, with predrilled holes for attachment hardware.
				2. Letter Color: [**Black**] [**Blue**] [**Red**] [**White**] [**Yellow**] <**Insert color**>.
				3. Background Color: [**Black**] [**Blue**] [**Red**] [**White**] [**Yellow**] <**Insert color**>.
				4. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
				5. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
				6. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
				7. Fasteners: Stainless-steel [**rivets**] [**or**] [**self-tapping screws**].
				8. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

In "Label Content" Paragraph below, the purpose of labeling equipment is to coordinate it with Drawings, including plans, details, and schedules. This allows other information, such as capacities and operating characteristics, to be obtained.

* + - * 1. Label Content: Include caution and warning information, plus emergency notification instructions.
			1. PIPE LABELS

Retain this article if labeling devices identify some or all piping. Identification of piping by color-coded painting is covered in "Pipe Label Installation" Article.

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=9465) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Actioncraft Products, Inc.; a division of Industrial Test Equipment Co., Inc](http://www.specagent.com/Lookup?uid=123456934716).

[Brady Corporation](http://www.specagent.com/Lookup?uid=123456934706).

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934707).

[Carlton Industries, LP](http://www.specagent.com/Lookup?uid=123456934708).

[Champion America](http://www.specagent.com/Lookup?uid=123456934709).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934710).

[emedco](http://www.specagent.com/Lookup?uid=123456934711).

[Kolbi Pipe Marker Co](http://www.specagent.com/Lookup?uid=123456934712).

[LEM Products Inc](http://www.specagent.com/Lookup?uid=123456934713).

[Marking Services Inc](http://www.specagent.com/Lookup?uid=123456934714).

[Seton Identification Products; a Brady Corporation company](http://www.specagent.com/Lookup?uid=123456934715).

Approved equivalent.

* + - * 1. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service and showing flow direction according to ASME A13.1.
				2. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to [**partially cover**] [**cover full**] circumference of pipe and to attach to pipe without fasteners or adhesive.
				3. Self-adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
				4. Pipe-Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.

Flow-Direction Arrows: Integral with piping-system service lettering to accommodate both directions or as separate unit on each pipe label to indicate flow direction.

Retain second option in "Lettering Size" Subparagraph below if visibility due to distance from piping is an issue.

Lettering Size: [**Size letters according to ASME A13.1 for piping**] [**At least 1/2 inch for viewing distances up to 72 inches and proportionately larger lettering for greater viewing distances**].

* + - * 1. Pipe-Label Colors:

Colors listed in "Background Color" and "Letter Color" subparagraphs below are from ASME A13.1. Note also that all colors listed in ASME A13.1 that are preceded by the word "Safety" are required to comply with ANSI Z535.1.

Background Color: Safety Red.

Letter Color: White.

* + - 1. STENCILS
				1. Stencils for Piping:

[Manufacturers:](http://www.specagent.com/Lookup?ulid=9466) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934717).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934720).

[Kolbi Pipe Marker Co](http://www.specagent.com/Lookup?uid=123456934721).

[Marking Services Inc](http://www.specagent.com/Lookup?uid=123456934722).

Approved equivalent.

Retain second option in "Lettering Size" Subparagraph below if visibility is an issue because of distance from piping.

Lettering Size: [**Size letters according to ASME A13.1 for piping**] [**At least 1/2 inch for viewing distances up to 72 inches and proportionately larger lettering for greater viewing distances**].

Stencil Material: [**Aluminum**] [**Brass**] [**Fiberboard**] [**Fiberboard or metal**] <**Insert material**>.

Colors listed in "Stencil Paint" and "Identification Paint" subparagraphs below comply with color designation according to ASME A13.1. Note also that all colors listed in ASME A13.1 that are preceded by the word "Safety" are required to comply with ANSI Z535.1.

Stencil Paint: Safety Red, exterior, gloss, [**alkyd enamel**] [**acrylic enamel**] <**Insert paint type**>. Paint may be in pressurized spray-can form.

Identification Paint: White, exterior, [**alkyd enamel**] [**acrylic enamel**] <**Insert paint type**>. Paint may be in pressurized spray-can form.

* + - 1. VALVE TAGS

Retain requirement in "Action Submittals" Article to submit numbering scheme for approval.

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=9467) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Actioncraft Products, Inc.; a division of Industrial Test Equipment Co., Inc](http://www.specagent.com/Lookup?uid=123456934723).

[Brady Corporation](http://www.specagent.com/Lookup?uid=123456934724).

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934725).

[Carlton Industries, LP](http://www.specagent.com/Lookup?uid=123456934726).

[Champion America](http://www.specagent.com/Lookup?uid=123456934727).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934728).

[emedco](http://www.specagent.com/Lookup?uid=123456934729).

[Kolbi Pipe Marker Co](http://www.specagent.com/Lookup?uid=123456934730).

[LEM Products Inc](http://www.specagent.com/Lookup?uid=123456934731).

[Marking Services Inc](http://www.specagent.com/Lookup?uid=123456934732).

[Seton Identification Products; a Brady Corporation company](http://www.specagent.com/Lookup?uid=123456934733).

Approved equivalent.

* + - * 1. Description: Stamped or engraved with 1/4-inch letters for piping-system abbreviation and 1/2-inch numbers.

Tag Material: [**Brass, 0.032 inch**] [**stainless steel, 0.025 inch**] [**aluminum, 0.032 inch**] [**or**] [**anodized aluminum, 0.032 inch**] thick, with predrilled holes for attachment hardware.

Fasteners: Brass [**wire-link chain**] [**beaded chain**] [**or**] [**S-hook**].

Colors listed in "Valve-Tag Color" and "Letter Color" subparagraphs below comply with color designation according to ASME A13.1. Note also that all colors listed in ASME A13.1 that are preceded by the word "Safety" are required to comply with ANSI Z535.1.

Valve-Tag Color: Safety Red.

Letter Color: White.

* + - * 1. Valve Schedules: For each piping system, on 8-1/2-by-11-inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.

Valve-tag schedule shall be included in operation and maintenance data.

* + - 1. WARNING TAGS

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=9468) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Brady Corporation](http://www.specagent.com/Lookup?uid=123456934753).

[Brimar Industries, Inc](http://www.specagent.com/Lookup?uid=123456934754).

[Champion America](http://www.specagent.com/Lookup?uid=123456934756).

[Craftmark Pipe Markers](http://www.specagent.com/Lookup?uid=123456934757).

[emedco](http://www.specagent.com/Lookup?uid=123456934758).

[Kolbi Pipe Marker Co](http://www.specagent.com/Lookup?uid=123456934759).

[LEM Products Inc](http://www.specagent.com/Lookup?uid=123456934760).

[Marking Services Inc](http://www.specagent.com/Lookup?uid=123456934761).

[Seton Identification Products; a Brady Corporation company](http://www.specagent.com/Lookup?uid=123456934762).

Approved equivalent.

* + - * 1. Description: Preprinted or partially preprinted, accident-prevention tags, of plasticized card stock with matte finish suitable for writing.

Size: [**3 by 5-1/4 inches minimum**] [**Approximately 4 by 7 inches**] <**Insert dimensions**>.

Fasteners: [**Brass grommet and wire**] [**Reinforced grommet and wire or string**].

Nomenclature: Large-size primary caption such as "DANGER," "CAUTION," or "DO NOT OPERATE."

Color: Safety Yellow background with black lettering.

* + - 1. VALVE SERVICE IDENTIFICATION CHART FRAMES
				1. Type: Satin finished extruded aluminum frame with rigid clear plastic glazing, size to fit 8-1/2 x 11 inches valve chart.
1. EXECUTION
	* + 1. PREPARATION
				1. Clean piping and equipment surfaces of incompatible primers, paints, and encapsulants, as well as dirt, oil, grease, release agents, and other substances that could impair bond of identification devices.
			2. GENERAL INSTALLATION REQUIREMENTS
				1. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be installed.
				2. Coordinate installation of identifying devices with locations of access panels and doors.
				3. Install identifying devices before installing acoustical ceilings and similar concealment.
			3. EQUIPMENT LABEL INSTALLATION
				1. Install or permanently fasten labels on each major item of mechanical equipment.
				2. Locate equipment labels where accessible and visible.
			4. PIPE LABEL INSTALLATION

Retain "Piping" Paragraph below to identify piping systems by color-coded painting. Labels are required to identify service, pipe size, and flow direction.

* + - * 1. Piping: Painting of piping is specified in [**Section 099123 "Interior Painting."**] [**Section 099600 "High-Performance Coatings."**]

Retain "Stenciled Pipe-Label Option" Paragraph below only if stenciled labels are permitted.

* + - * 1. Stenciled Pipe-Label Option: Stenciled labels may be provided instead of manufactured pipe labels, at Installer's option. Install stenciled pipe labels, complying with ASME A13.1,[**with painted, color-coded bands or rectangles**] on each piping system.

Identification Paint: Use for contrasting background.

Stencil Paint: Use for pipe marking.

Revise "Pipe-Label Locations" Paragraph below to suit Project.

* + - * 1. Pipe-Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:

Near each valve and control device.

Near each branch connection excluding short takeoffs. Where flow pattern is not obvious, mark each pipe at branch.

Near penetrations and on [**both sides of**] through walls, floors, ceilings, and inaccessible enclosures.

At access doors, manholes, and similar access points that permit a view of concealed piping.

Near major equipment items and other points of origination and termination.

Spaced at maximum intervals of [**50 feet**] <**Insert dimension**> along each run. Reduce intervals to [**25 feet**] <**Insert dimension**> in areas of congested piping and equipment.

On piping above removable acoustical ceilings. Omit intermediately spaced labels.

"Directional Flow Arrows" Paragraph below complies with ASME A13.1.

* + - * 1. Directional Flow Arrows: Arrows shall be used to indicate direction of flow in pipes including pipes where flow is allowed in both directions.
			1. VALVE-TAG INSTALLATION

Revise this article as required to delete an entire piping system from tagging or other changes. A schedule is helpful for complex projects. Retain and revise first paragraph below if a schedule is prepared.

* + - * 1. Install tags on valves and control devices in fire-suppression piping systems. List tagged valves in a valve-tag schedule.
				2. Valve-Tag Application Schedule: Tag valves according to size, shape, and with captions similar to those indicated in "Valve-Tag Size and Shape" Subparagraph below:

Other valve-tag sizes and shapes may be available if required.

Valve-Tag Size and Shape:

Fire-Suppression Standpipe: [**1-1/2 inches**] [**2 inches**], [**round**] [**square**] <**Insert shape**>.

Wet-Pipe Sprinkler System: [**1-1/2 inches**] [**2 inches**], [**round**] [**square**] <**Insert shape**>.

Dry-Pipe Sprinkler System: [**1-1/2 inches**] [**2 inches**], [**round**] [**square**] <**Insert shape**>.

Foam-Water System: [**1-1/2 inches**] [**2 inches**], [**round**] [**square**] <**Insert shape**>.

Clean-Agent Fire-Extinguishing System: [**1-1/2 inches**] [**2 inches**], [**round**] [**square**] <**Insert shape**>.

* + - * 1. Valve service identification charts:

Provide 2 framed valve charts for each piping system specified to be provided with valve identification tags. Type charts on 8-1/2 x 11 inches heavy white bond paper, indicating valve number, service and location.

Hang framed charts at locations as directed.

* + - 1. WARNING-TAG INSTALLATION
				1. Write required message on, and attach warning tags to, equipment and other items where required.

END OF SECTION 210553