

## GLOSSARY OF TERMS

**3D (three-dimensional) engraving** – A routing procedure where the tool bit can be moved independently along the up-and-down z-axis while still traveling an x/y-axis tool path. 3D engraving can create relieves and hand-chiseled looks while removing material from a substrate.

**abatement** – Related to signage, it is the removal or correction of a sign that violates local community code or standards.

**abrasion resistance** – The ability of a given surface to resist scratching or scuffing due to contact or friction with another material. It is one measure of durability.

**access door** – A hinged or removable panel that when opened provides access to the interior of a sign allowing for the inspection and servicing of its internal components. (Also called access panel.)

**access panel** – A hinged or removable panel that when opened provides access to the interior of a sign allowing for the inspection and servicing of its internal components. (Also called access door.)

**acetate** – A thin, clear plastic material that is both flexible and strong. Available in both glossy and matte finishes, it is receptive to ink, and is popular as a substrate for point-of-purchase advertising signs.

**achromatic** – Literally means without color. Black, white and grays are achromatic.

**acid etching** – A method of marking or decorating a surface. In acid etching an acid resistant stencil of the artwork or text is applied to the chosen surface. A corrosive compound such as hydrofluoric acid is then applied to the remaining exposed areas. After a specified length of time during which the acid mixture is allowed to eat away at the exposed material, the entire surface is washed and the stencil removed, leaving behind an etched impression of the artwork. (See also etching and sandblasting.)

**acrylic** – Generic term for a type of durable plastic commonly used in sign making. Noted for its excellent clarity, acrylic can also be manufactured in a wide range of transparent and opaque colors. Its ability to be easily machined, shaped and painted explains acrylic's popularity. Plexiglas® and Acrylite® are well-known commercial brands of the material.

**acrylic paint** – Any water-based paint having its pigments or dyes bound in an acrylic resin emulsion. Once dry, acrylic paint forms a tough, flexible film that is resistant to water. These types of paints are often used for silkscreening and screen printing and for hand painted signs.

**ADA (Americans with Disabilities Act)** – Legislation enacted by the U.S. federal government in 1991 with the goal of removing barriers that limit a disabled individual's ability to engage in normal daily activity in the physical, public environment. Title III of the ADA deals with related signage and wayfinding issues.

**ADAA (Americans with Disabilities Accessibility Guidelines)** – A set of U.S. standards enacted in 1990 with the goal of ensuring equal access to public places and facilities for all persons. For signage and wayfinding, the ADAA defines proper letter forms and letter heights for best legibility, proper Braille and tactile lettering forms, and also appropriate signage materials and finishes.

**additive colors** – Red, green and blue are the three additive colors of light. All other colors of light are created by combinations of these three. If the three additive colors come together in equal proportions, the resulting light is white. (Also called additive primaries. See also primary colors.)

**additive primaries** – Red, green and blue are the three additive colors of light. All other colors of light are created by combinations of these three. If the three additive colors come together in equal proportions, the resulting light is white. (Also called additive colors. See also primary colors.)

**adhesion** – The force that holds the surface of one material to another. The strength of adhesion is affected by the type and condition of the surfaces in question and the adhesive used. Generally the surfaces need to be clean and porous enough to allow for a certain amount of penetration by the adhesive.

**adhesive** – A material or substance able to bind and hold two surfaces together. Examples include glue, epoxy and tape.

**Adobe Acrobat®** – Popular software package used for viewing and printing Portable Document Format (PDF) files. The advantage of a PDF file is that it allows anyone to view and print a document as it was originally intended without having to install the program or fonts used to create the file. Adobe Acrobat is a product of Adobe Systems®, Inc.

**advance notice sign** – A sign indicating the approach of a specific destination such

as a highway, street intersection or building entrance. Different to a directional sign in that it announces a single destination. (Also called an approach sign.)

**aesthetics** – The general perception of a sign's artistic merit or beauty, both on its own and in relation to its surroundings. The design, construction, materials and colors of a sign all factor into its aesthetic appeal.

**age in** – The initial time a new neon light must be on before it is able to achieve full brightness thereafter. The amount of time this takes can vary widely. (Also called burn-in. See also initial lumens.)

**airbrush** – A handheld painting device that uses compressed air to generate a fine spray of paint. The pressurized air passes through the airbrush nozzle creating a vacuum that siphons paint from an attached container. Airbrushes come in a variety of sizes for different applications, and can be fitted with a variety of nozzles for different effects and levels of detail.

**aluminum** – A lightweight metal material used in sign panels, poles and frames. It is strong and durable in relation to its weight, and resistant to rust and corrosion.

**ambient light** – The sum of all non-directional light in a given area emitted by all sources at a given time. A high level of ambient light can have an impact on a sign's readability, and can be a consideration in a sign's design. Outdoor sunlight creates a high level of ambient light.

**American National Standards Institute (ANSI)** – A private, nonprofit organization in the U.S. that works to develop manufacturing and quality standards across multiple industries. The organization also works with the committees of other nations to develop standards that facilitate international trade and telecommunications.

**Americans with Disabilities Act (ADA)** – Legislation enacted by the U.S. federal government in 1991 with the goal of removing barriers that limit a disabled individual's ability to engage in normal daily activity in the physical, public environment. Title III of the ADA deals with related signage and wayfinding issues.

**amortization** – When a previously conforming sign is subsequently deemed to be non-conforming, the owner of the sign is notified and given a grace period during which he may continue to keep and use the sign. At the end of the grace period the sign must be removed. This process is referred to as amortization. The legality and enforceability of amortization depends state and local law, and other possible conditions.

**anchor** – In general, any device that connects and secures one object to another. An example would be the devices used to secure awnings and fascia signs to facades. (See also expansion anchor and J-bolt.)

**animated sign** – A sign that uses the sequential switching on and off of graphically arranged fluorescent lamps, cathode tubes, LEDs or incandescents so as to provide the illusion of movement. (See also chase [2].)

**annual ADT (annual average daily traffic)** – The average number of vehicles passing a given location each day over the course of a year. This statistic can usually be obtained from your state or local roads department.

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**anodized finish** – A thin aluminum oxide coating applied electrochemically to the surface of a metal object. The coating hardens, protects and enhances the appearance of the object. An anodized finish can be created in a variety of colors.

**ANSI (American National Standards Institute)** – A private, nonprofit organization in the U.S. that works to develop manufacturing and quality standards across multiple industries. The organization also works with the committees of other nations to develop standards that facilitate international trade and telecommunications.

**applique** – A graphic element made separately then affixed to a cloth or fabric covering such as an awning.

**approach** – The distance at which a sign becomes readable to a viewer to the point where the sign is no longer readable as the viewer passes by.

**approach sign** – A sign indicating the approach of a specific destination such as a highway, street intersection, or building entrance. Different to a directional sign in that it announces a single destination. (Also called an advance notice sign.)

**architectural signage** – A term used to describe signage in a built environment having the purpose of providing wayfinding or other site specific information.

## GLOSSARY OF TERMS cont.

**argon** – An inert gas used in fluorescent lamps and neon tubes. By itself, argon generates pale lavender light. Combined with mercury, it can generate a blue or ultra-violet light.

**artwork** – Any and all logos, graphics and images used in creating a sign.

**aspect ratio** – The width-to-height ratio of an image. For example, a high definition television image has an aspect ratio of 1.78:1 (commonly referenced as 16:9), meaning that for every 1.78 inches of image width the image extends 1 inch in height.

**awning cord** – Most commonly a small diameter, cotton braid cord manufactured for stretch resistance and used for tying down awning covers.

**awning sign** – A projecting sign made of non rigid material such as heavy canvas supported by a framework that is attached to a building's substrate. The awning sign extends outward from the building and so provides shaded cover and protection from weather for customers and pedestrians. An awning sign will have lettering and/or graphics painted or screen printed on its exterior surface. It may or not be illuminated. (See also backlit awning and canopy sign.)

**back-to-back sign** – A sign having two faces mounted in opposite directions. Pole signs typically have back-to-back faces. (Also called a double-faced sign.)

**background panel** – A sign panel to which text or graphical elements are affixed.

**backlighted letter** – An illuminated reverse channel letter where the light from the letter is directed against and reflected off the surface behind the letter thereby producing a glowing effect around the letter. (Also referred to as halo lighting.)

**backlit awning** – An awning sign that is lit from underneath by fluorescent or other high output lighting. The light shines through the awning fabric, illuminating whatever text or graphics are on it and providing effective nighttime readability. The light emanating from underneath the awning also provides light to the sidewalk or street below. (Also called illuminated awning. See also awning sign and canopy sign.)

**backlit sign** – A sign where the sign face is illuminated from behind. (Also called illuminated sign. See also internally illuminated sign and exterior illuminated sign.)

**ballast** – A fluorescent light fixture component, the primary function of which is to provide sufficient starting voltage for the lamp. A ballast may also serve to heat the fluorescent lamp electrodes, and control the amount of power to the lamp once it is operating.

**ballpoint Braille** – Small plastic or metal beads that can be placed in the face of a sign to create informational Braille text as required by the ADA. (Also known as Braille bullets or Braille beads.)

**banding** – The appearance of solid bands or patterns of visibly distinct colors within what should otherwise be a continuous and seamless color gradation. Banding can be caused by several factors, including low resolution artwork, a poor quality scan of the original artwork or improper calibration of the printer used.

**banner** – A sign made of non rigid material such as canvas or vinyl, and typically having no enclosing or supporting framework. Often intended for temporary use, a banner sign can be screen printed or painted, and is commonly hung from a pole or mounted to the facade of a building. (See also flag and pennant.)

**base plate** – A flat, thick piece of metal, usually steel and square or rectangular in shape, welded to the bottom of a sign support structure and then anchored with bolts to a concrete foundation or other substructure.

**bench sign** – A sign mounted onto, or incorporated into a seat in a public area such as a bus stop bench. (See also street furniture.)

**bevel** – 1. A slant or angle on a surface. 2. A cut made at the edge of a material to form an angle that is not 90

**bid package** – Documents from a prospective customer that state for the contractor the requirements and conditions of the project under bid. These documents communicate such details as design intent, desired materials, installation criteria and other project specifics. They also include standardized bidding forms and bidding instructions. (Also called front end documents.)

**billboard** – A large (15 square feet in area or larger) outdoor sign used for advertising and typically seen along highways, main streets and other high traffic areas. An advertiser will rent a billboard and display their advertisement on it for a set length

of time.

**blackout** – A specially formulated paint or coating for use on electric signs to block light emission where needed, for example between letters in a neon sign. It adheres well to glass, and resists weather, heat and electrical discharge. (Also called blackout.)

**blade sign** – A type of projecting sign mounted such that the face of the sign is perpendicular to the normal flow of traffic.

**blank** – An uninstalled sign panel with no lettering or graphics applied. (Also called an insert.)

**bleed** – 1. In screen printing, the term refers to the portion of a printed image or graphic which extends beyond the intended borders of a sign. This excess portion is trimmed away. 2. Sometimes used to describe the halation where sharply contrasting colors meet on an illuminated sign.

**blind fasteners** – Fasteners used to mount signs to walls and others surfaces while remaining hidden from view. (Also called concealed fasteners.)

**blistering** – The appearance of bumps and bubbles on a surface covered in a coating such as paint, or a material such as vinyl. It is the result of the coating or material losing adhesion and separating from the surface underneath.

**block color** – An area of solid color having no gradation.

**blackout** – A specially formulated paint or coating for use on electric signs to block light emission where needed, for example between letters in a neon sign. It adheres well to glass, and resists weather, heat and electrical discharge. (Also called blackout.)

**bombarding** – The process of heating to a high temperature the glass of a neon tube for the purpose of releasing trapped gases and other impurities within it.

**bonderizing** – The process of treating a metal surface with a zinc phosphate coating in preparation for painting or enameling.

**border** – A line or band of color or material that defines that outer edges of a sign and/or elements within the sign.

**box sign** – A sign that is self enclosed in a typically square or rectangular structure with or without internal lighting. Can be single- or double-faced. (See also light box.)

**Braille** – A system of small raised dots that represent the alphabet, punctuation and numbers for the visually impaired. The ADA stipulates the use of Braille on signage in certain instances.

**Braille beads** – Small plastic or metal beads that can be placed in the face of a sign to create informational Braille text as required by the ADA. (Also known as Braille bullets or ballpoint Braille.)

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**brand equity** – The value a customer places on a branded product or service. It is the qualitative sum of everything that a customer thinks, feels and knows about the product or service. The value of brand equity can be determined by comparing the expected future revenue of the branded product/service against the expected future revenue from an equivalent but non-branded product/service. (See also branding.)

**branding** – The process of creating a unique, positive and recognizable identity for a product or service. Along with marketing and advertising, creating a visual identity through signage is an important part of the branding process. (See also brand equity.)

**breakaway foundation** – A type of sign foundation that allows a sign pole or other attached support structure to break away cleanly if struck by a motor vehicle, thereby reducing the force of impact to the occupants inside the vehicle. Required by law in many areas. (Also called a frangible sign mount.)

**breaking strength** – The maximum load a material can withstand before it breaks. (Also called tensile strength.)

**brightness** – 1. The perceived amount of light that a visual target emits or reflects. Its relative luminance. 2. The amount of white in a given color. The greater the amount of white, the brighter the color is said to be. Brightness is one of the three attributes of color along with hue and saturation.

## GLOSSARY OF TERMS cont.

**bronze** – A very strong and durable metal alloy made of copper and tin with traces of other metals such as zinc and nickel. It can be cast for the making of plaques, or fabricated from thin sheets into dimensional letters. Bronze can be finished in a variety of ways including being brushed, polished or lacquered.

**brushed finish** – A textured, non-reflective polished finish applied to metal by lightly brushing the surface with an abrasive material or briefly applying a mildly corrosive chemical.

**buff** – To polish a metal surface by rubbing it with a slightly abrasive compound. (See also burnish.)

**building code** – Regulations issued by state and local governments that establish standards for the construction, modification and repair of buildings and other structures in the interest of public health, safety and general welfare. (See also content neutral time, place and manner regulations.)

**building mounted sign** – Any sign that is applied or attached to a building in some manner.

**built-up letter** – A lettering technique in which the outline of the letter is made first and then filled in.

**bulletin colors** – A type of quick drying, fade resistant enamel paint commonly used by sign painters for hand lettering.

**burn-in** – The initial time a new neon light must be on before it is able to achieve full brightness thereafter. The amount of time this takes can vary widely. (Also called age in. See also initial lumens.)

**burnish** – To polish by friction, i.e. to rub with pressure. No abrasive compound or material is used when burnishing. (See also buff.)

**butt joint** – The type of joint formed when two pieces of material (wood, metal, etc.) come together flush and edge-to-edge.

**CAC (customer acquisition cost)** – The cost of convincing a new customer to buy your product or service. This includes the cost of market research, marketing and advertising.

**CAD (computer aided design) software** – Advanced software used in engineering and manufacturing to create and modify complex 3D technical drawings of a device and its components.

**candela** – A unit of luminosity used to express the intensity of a light source as measured in a specific direction. The higher the number of candela measured, the greater the intensity of the light.

**canopy sign** – A projecting sign made of non-rigid material such as heavy canvas supported by a framework that at one end is attached to a building's substrate and at the other end supported by one or more poles. The canopy sign extends outward from the building and acts as a roof over the area it covers, providing weather protection for customers, pedestrians and possibly even vehicles. A canopy sign will have lettering and/or graphics painted or screen printed on its exterior surface. It may or not be illuminated. (See also awning sign and backlit awning.)

**canvas** – a tightly woven heavy and durable fabric made of cotton, linen or synthetic material.

**carved letters** – Lettering that is chiseled, routed, engraved or sandblasted into the substrate of a sign face either by hand or by computer controlled machinery.

**carved signs** – Any sign made by the routing, engraving, sandblasting or chiseling of lettering, shapes and/or patterns into the substrate of a sign face either by hand or by computer controlled machinery.

**CAS (computer-aided sign making)** – General term for the use of design software and computer controlled manufacturing equipment in the sign-making process.

**cast metal sign** – Any metal sign that is made through a casting process. Aluminum and bronze are commonly used for cast metal signs such as plaques.

**casting** – The process by which a material such as metal or plastic is poured into a mold while in a liquid state and then allowed to solidify, thereby taking the shape of the mold and creating a copy of the original object from which the mold was made. (See also die-casting.)

**changeable copy panel** – A panel of a sign that allows for changeable copy. (See also changeable copy sign.)

**changeable copy sign** – A sign where the copy on the face can be changed at will either manually using attachable letters, mechanically using a rotating panel or electronically via computer-controlled bulbs, LEDs or LCD screen, etc.

**channel** – Term for a length of plastic or metal that has been extruded into the shape of a U.

**channel letter** – A three-dimensional letter formed out of channel into which a light source such as a neon tube may be placed.

**chase** – 1. To decorate or modify a metal surface by engraving, etching or cutting. 2. The illusion of movement created by the sequential turning on and off of lights in an illuminated sign. (See also animated sign.)

**chisel** – 1. A tool made of hardened steel and used to shape wood or stone. It has a handle at one end and a cutting edge at the other, and is worked by hitting the top of the handle with a mallet. 2. The process of using a chisel tool to shape or carve into a piece of wood or stone.

**chrome plating** – A thin protective and decorative finish made of chromium that is applied to a surface using an electrochemical process. It provides a bright, mirror-like finish.

**cladding** – A cover added to conceal or decorate the base or supporting structure of a sign.

**clearance** – The measured distance between the lowest portion of a sign and the highest point of the grade underneath. (Also called height above grade.)

**CMYK** – Abbreviation for the ink colors cyan (blue), magenta (red), yellow and black. Combinations of these four colors of inks are used in printing to create all other colors.

**coat-out** – Painting the substrate of a sign with a coat of primer prior to applying the lettering and graphics.

**coated fabric** – Any fabric that has been treated or coated with a substance such as plastics, rubber or oils in order to make it stronger and/or more durable.

**coated tubing** – A type of glass tubing used in neon signs that is coated on the inside surface with a phosphorus compound. The color a coated tube will produce depends on the specific compound used.

**cold cathode** – The technical name for a neon lamp, in particular those with tubing diameter greater than 15mm and operating between 60mA and 240mA.

**color contrast** – The subjective degree of difference in hue, intensity and saturation of two colors when seen next to each other.

**color separation** – The process of decomposing and separating a color graphic or image into its four constituent CMYK ink colors such that each color ends up with its own printing plate. The plates are then used in a printing press to reproduce the image on paper.

**colored tubing** – A term for colored glass tubing used in neon signs to achieve a greater level of color saturated light not possible with typical clear glass neon tubes.

**concealed fasteners** – Fasteners used to mount signs to walls and others surfaces while remaining hidden from view. (Also called blind fasteners.)

**concrete sign** – A sign for which the substrate is concrete. A concrete sign can be cast or poured in place.

**conduit** – Metal or plastic tubes that channel and protect electric cables.

**conforming sign** – A sign that has been legally installed in accordance with all applicable federal, state and local regulations.

**conspicuity** – The effectiveness of sign in standing out from its surrounding environment and capturing the attention of the passerby.

**construction site sign** – A temporary sign, typically large and freestanding, displayed at construction site to promote and provide information about the company or companies involved in the project. These can include the contractor, architect, developer, etc. (Also called a job site sign.)

**content neutral time, place and manner regulations** – Those sign regulations which specify, without consideration of the sign's content or message, how, when and where a sign can be displayed, including such parameters as height, size and location. (See also building code.)

## GLOSSARY OF TERMS cont.

**contrast** – 1. The amount of difference between the lightest and darkest areas in an image or scene. 2. The visual characteristics of an object such as size, shape and color that make it distinguishable from other objects near it and the background it is set against.

**copy** – As a whole, the written message on a sign. (See also artwork.)

**copy area** – The area on a sign face that contains the copy.

**cordage** – General term for all rope, cord, line and string.

**corona treatment** – A treatment process that alters the static charge of material's surface, making it more receptive to the application of inks, coatings and adhesives.

**corrugated board** – A sign board created by gluing a corrugated piece of material to a flat piece of material, or between two flat pieces. The most common type of corrugated material used in sign making is plastic.

**cost per thousand (CPT)** – The cost of reaching 1,000 viewers with an advertisement in a given medium—print, radio, television and signage. Based on CPT, signage is the least expensive form of advertising available.

**cove lighting** – A type of indirect lighting that emanates upward from a ledge, valance or horizontal recess. Commonly uses a fluorescent, neon or fiber optic light source.

**coverage** – 1. The square surface area that a given amount of paint, glue or other applied substance will cover. 2. The percentage of people in a market that are reached by an advertisement in a given medium, e.g. print, radio, TV and signage.

**CPT (cost per thousand)** – The cost of reaching 1,000 viewers with an advertisement in a given medium—print, radio, television and signage. Based on CPT, signage is the least expensive form of advertising available.

**crazing** – The appearance of fine cracks in the surface of paint, lacquer, plastic or vinyl. Typically the result of prolonged exposure to sunlight (ultraviolet light) and weather.

**crocking** – The rubbing off of color from a fabric as a result of using improper or defective dye.

**crossover** – The connection between two portions of a neon sign, for example where two letters come together. Typically, crossover points are coated with blockout to hide them from view.

**curing** – The process of drying or hardening ink, glue or other substances through the application of heat or ultraviolet light.

**customer acquisition costs (CAC)** – The cost of convincing a new customer to buy your product or service. This includes the cost of market research, marketing and advertising.

**daily effective circulation (DEC)** – The average number of persons per day who see a given sign or group of signs. A "day" equates to a 12-hour period for non-illuminated signs, and an 18-hour period for illuminated signs.

**dead load** – The total weight of the materials used in a sign and its supporting structure. The dead load, including its distribution within the sign structure, must be taken into account when calculating load bearing requirements.

**debossed lettering** – Sign lettering where the lettering has been engraved, carved or otherwise recessed into the sign substrate. (See also embossed lettering.)

**DEC (daily effective circulation)** – The average number of persons per day who see a given sign or group of signs. A "day" equates to a 12-hour period for non-illuminated signs, and an 18-hour period for illuminated signs.

**decals** – Screen printed lettering and graphics that can be transferred and affixed to another surface through the application of water or heat.

**deck cabinet** – A structure that houses the electric components of a sign, but also serves as the background and support structure of the sign. Similar to a raceway except larger.

**delamination** – The separation of the individual plies (layers) in a laminated substrate. Typically caused by the failure of the adhesive between layers.

**denier** – A unit of measure for the weight of fiber. Specifically, it is the weight in grams of 9,000 meters of a given fiber.

**density** – The ratio between the mass (weight) of a substance to the volume of space it occupies. In sign making, the term is commonly applied to foam boards and

is expressed in pounds per cubic foot.

**deposit** – In sign making, this refers to the amount of ink applied to the substrate.

**design** – The clear and complete specifications for the appearance, structure and implementation of a sign. A design may include technical drawings, illustrations and written descriptions of the sign.

**design intent drawings** – Drawings of a sign that show the basic size, profile and parts of it, but provide no further design details. Design intent drawings are typically included as part of the bid package from the customer.

**die-casting** – The process by which molten metal is poured into a hardened metal mold and then allowed to cool and solidify, thereby taking the shape of the mold and creating a precise copy of the original object from which the mold was made or designed. (See also casting.)

**die-cutting** – The process of cutting material such as paper or vinyl using a steel blade (called a die) manufactured to cut a specific shape. The die-cutting process is typically used when a large number of items must be cut to the same shape or size.

**dielectric welding** – The process of joining two pieces of vinyl or other applicable material by heating and melting the seams together using high frequency electrical impulses.

**dimensional letter** – Any letter, logo or symbol that has a raised profile in relation to the sign substrate.

**direct illumination** – Illuminating a sign by means of an external light source directed at the sign face. (See also exterior illuminated sign.)

**directional sign** – A sign providing information, either written or visual, that helps direct a person to a destination.

**directory sign** – A sign that provides an organized list of names of people, offices or facilities located within a given building or area. Usually located at a public access point such as a building lobby, a directory sign may provide simple text listings or also include maps and other wayfinding information.

**DOT (Department of Transportation) symbols** – The set of standardized symbols developed by the U.S. Department of Transportation (DOT) for use in traffic signs.

**double back** – A 180-degree bend in a neon tube.

**double tube** – Two neon tubes running parallel to each other.

**double-faced sign** – A sign having two faces mounted in opposite directions. Pole signs are typically double-faced. (Also called a back-to-back sign.)

**drop shadow** – The visual effect of creating a false shadow behind a letter or object by placing a darker colored but identically shaped copy of it behind it but slightly offset up or down and to one side.

**dye** – Any of a range of soluble compounds used for coloring fabrics. (See also pigment and stain.)

**edge-lit sign** – An illuminated sign where the light source is positioned on the outside of the sign face along one or more of its edges such that the light shines back onto it.

**electric sign** – Any sign that contains and utilizes electrical components.

**electro-mechanical sign** – A type of message center sign where an electrically driven mechanical device rotates or flips between two or more panels with different messages.

**electronic display** – Generic term for any type of electronic programmable display. (See also LCD sign.)

**electronic message center (EMC)** – A variable message sign that utilizes a computer or other electronic controlled means to change and control the message displayed. May use incandescent lamp LCD, LED or other display technologies.

**electrostatic film** – A thin, electrostatically charged material such as PVC used for lettering and graphics on glass and other smooth surfaces. The static charge enables the material to firmly adhere to the smooth surface, yet still be peeled off relatively easily.

**elevation** – A scale drawing of an exterior side of a given structure such as a building or sign.

**embellishment** – In signage, it refers to any element of a sign face that provides a decorative effect.

**emboss** – To create raised lettering or graphics in relief on the substrate of a sign through stamping, hammering or molding.

**embossed plastic sign face** – A plastic sign face that has had three dimensional lettering or graphical elements vacuum molded (embossed) into its surface. (Also called pan face.)

**enamel** – A colored, powdered glass-based compound that is fused to the surface of metal or glass for decoration and protection. An enamel finish is typically opaque.

**engine-turned** – A process of using a tool such as a drill press to create uniform circle or swirl patterns on metal or gold leaf finish.

**engrave** – To incise (cut) a design into the surface of hard material such as metal using a handheld or machine controlled tool called a burin.

**entrance canopy** – A type of canopy or awning that covers and identifies the entrance to a building or place of business.

**epoxy** – A very strong, two-part adhesive—resin plus hardening agent—capable of bonding together a wide range of materials, including woods, composites and metals.

**erect** – To construct and install a sign and its supporting structure.

**etching** – The removal of selected portions of a layer of material from a substrate using a chemical or electrolytic process. Typically, a stencil is used to mark the areas to be etched and protect the other areas. (See also acid etching.)

**expansion anchor** – A type of anchor that is designed to expand inside the drilled hole it is placed, thereby securing itself by the resulting pressure and friction against the sides of the hole. Typically used to anchor awnings to concrete or masonry.

**extender** – An additive that increases the volume of ink without lowering its viscosity or one that improves the workability of an ink.

**exterior illuminated sign** – A sign that is illuminated by an external light source directed at the sign face. (See also direct illumination.)

**extrusion** – The process of forcing metal or plastic through a form in order to create a desired shape.

**eyelet** – A small metal or plastic ring that is inserted into a hole made in another piece of material. It prevents fraying of the material around the hole and provides a durable, easily threaded opening for rope or twine. (Also called a grommet.)

**fabricate** – To manufacture a sign or major sign components.

**fabricated letter** – A dimensional letter typically fabricated from sheet metal.

**facade** – The exterior walls of a building, especially the front or the most prominent side of the building.

**face** – Typically refers to the most prominent message area of a sign but may refer generically to any message area. (Also called sign face. See also panel.)

**fascia sign** – A sign mounted to a wall or other vertical surface. A flat sign that is mounted on a wall and the face of which runs parallel to the wall. A fascia sign does not typically project from the wall.

**fasteners** – General term for nuts, bolts, clips and any other mechanical device that helps hold a sign together.

**fiber optics** – Thin strands of specially manufactured plastic or glass used to transport and direct light from a source to a given destination.

**fiber-optic display** – A sign that utilizes fiber optics to create or illuminate the sign's message.

**fiberglass** – A strong, lightweight material created from tiny glass threads woven into a fabric and then hardened using a special polyester resin. Fiberglass can be used to create sign faces and cabinets of varying sizes and shapes. (See also spun glass.)

**filament lamp sign** – An illuminated sign using tungsten filament lamps.

**fill pressure** – A measure of the amount of inert gas pumped into a neon lamp.

**fingerpost sign** – A post-mounted directional sign having one or more panels each of which point in the direction of a particular destination.

**fire proof** – A term used to describe a fabric or substance that is impervious to

damage by fire, and that will not ever support a flame. (See also fire retardant.)

**fire retardant** – A chemical compound applied to a material that reduces the material's flammability and retards the ability of fire to spread across its surface. Fire retardant does not make the material fire proof.

**first surface** – That element or layer that comprises the outermost surface of a sign.

**flag** – A sign made of non rigid material such as canvas or vinyl, and having no enclosing or supporting framework. A flag is usually rectangular or triangular in shape, and is attached at one end to a pole. Often intended for temporary use, a flag can be screen printed or painted. (See also banner and pennant.)

**flammability** – The relative ability of a material or substance to support combustion.

**flange** – On a sign, it typically refers to the 90

**flashing sign** – An illuminated sign having an intermittent or flashing light source as a means of drawing attention to its message.

**flat cutout letter** – A non-illuminated letter cut from a metal sheet or plate stock.

**flat screen** – Generic term for an LCD display.

**flex face** – A sign face made of a flexible material stretched over a supporting frame. (See also flexible face material.)

**flexible face material** – Generic term for reinforced, translucent fabric made of PVC or polyester typically used for awnings, canopies and other types of signage.

**fluorescent lamp** – A light source consisting of a glass tube lined with a phosphor coating and filled with mercury vapor. When an electric current is applied, the gas emits ultraviolet radiation that in turn excites the phosphor coating causing it to radiate visible light. Fluorescent lamps are more energy efficient than incandescent lamps.

**font** – A set of letters and numerals sharing the same design characteristics. Examples of font sets include Times New Roman and Arial. (Also called typeface.)

**footing** – The base of a sign's supporting structure. The footing is typically secured to a foundation or other anchor such as a building's roof.

**foundation** – A concrete substructure that anchors a sign and its supporting structure to the ground. (See also footing.)

**four-color process** – A halftone printing process that uses the four essential ink colors of cyan, magenta, yellow and black (CMYK) to create a full range of colors on a printed surface. (Also called process color.)

**frangible sign mount** – A type of sign foundation that allows a sign pole or other attached support structure to break away cleanly if struck by a motor vehicle, thereby reducing the force of impact to the occupants inside the vehicle. Required by law in many areas. (Also called a breakaway foundation.)

**freestanding sign** – A sign that is not attached to a building, has its own support structure and is typically secured to a foundation or with guy wires.

**frequency** – The number of times a typical viewer has the opportunity to see a sign and its message over a given period, typically four weeks.

**front end documents** – Documents from a prospective customer that state for the contractor the requirements and conditions of the project under bid. These documents typically communicate such details as design intent, desired materials, installation criteria and other project specifics. They also include standardized bidding forms and bidding instructions. (Also called bid documents.)

**front lighted letter** – An illuminated channel letter having a translucent face.  
**galvanized steel** – Refers to steel that has been coated with a thin layer of zinc for corrosion protection.

**gateway sign** – A sign marking the entrance to a town, neighborhood, development, park or other public area. (Also called precinct sign.)

**gauge** – A unit of measurement for the thickness of sheet metal or wires. The lower the gauge number the greater the thickness.

**gilding** – The artful process of applying a thin layer of gold or gold-like material to a surface by mechanical or chemical means for the purpose of ornamentation. (See also gold foil.)

**glare** – Any direct or reflected light within your field of vision that is sufficiently

## GLOSSARY OF TERMS cont.

bright enough to cause visual annoyance, discomfort or obscuration.

**glazing** – The process of installing glass panes.

**gloss** – An indicator of the amount of light reflected by the finish of a surface. A high gloss finish reflects 80-90% of the light directed at it. Semi gloss 50-75%. Satin 30-45%. Matte finish 5-15%.

**glossimeter** – A device used to measure the amount of light reflected off a given surface. (See also gloss.)

**gold leaf** – A very thin type of foil made of gold and used in gilding.

**gradation** – The smooth transition from one color to another color, from black to white, or from color to the absence of color. (Also called gradient.)

**grade** – The elevation or contour of the ground at a particular location. (See also height above grade.)

**gradient** – The smooth transition from one color to another color, from black to white, or from color to the absence of color. (Also called gradation.)

**grommet** – A small metal or plastic ring that is inserted into a hole made in another piece of material. It prevents fraying of the material around the hole and provides a durable, easily threaded opening for rope or twine. (Also called an eyelet.)

**ground sign** – A freestanding sign that is not secured to a foundation or other secondary support structure.

**guardian letter** – A metal letter having a curved face of highly-polished stainless steel.

**guy rope** – A rope or cable used to secure and stabilize mounted signs, or awning and canopy signs. It is attached to the sign on one end and the ground or a building at the other end. (Also called guy wire.)

**guy wire** – A rope or cable used to secure and stabilize mounted signs, or awning and canopy signs. It is attached to the sign on one end and the ground or a building at the other end. (Also called guy rope.)

**H-channel letter** – A dimensional letter with a cross sectional shape (e.g. like an "H") that allows for the mounting of neon tubing within the lettering itself.

**hairline joint** – The thinnest possible joint between two edges.

**halation** – A halo-like effect can result from extreme contrast between adjacent illuminated and non-illuminated portions of a sign. The light appears to spread or bleed across the non-illuminated area, making it more difficult for the viewer to focus on the sign and its message.

**halftone** – The process by which a continuous tone image such as a photograph is reproduced and simulated using a pattern of printed or silk screened dots of varying size and equal spacing. At a normal viewing distance the reproduced image appears as continuous tone.

**halo** – A glowing ring of light surrounding a object such as a channel letter which has been lit from behind. (See also halo lighting.)

**halo lighting** – A type of sign lighting where a light source located within or behind a sign is allowed to reflect off the mounting surface. The result is that the sign appears to be surrounded by a halo of light.

**hanging sign** – A projecting double-faced sign mounted to a wall or pole and hung from a bracket or support arm. (Also known as a projecting sign.)

**heat color-transfer** – A process of applying color to fabric whereby a pigmented resin is activated by heat and then pulled into the fabric with a vacuum applicator.

**heat-bending** – The process of heating a piece of material such as PVC, acrylic or glass tubing in order to make it malleable enough to bend and shape.

**height** – The measured distance between the highest point of a sign to the highest point of the grade underneath the sign.

**height above grade** – The measured distance between the lowest portion of a sign and the highest point of the grade underneath. (Also called clearance.)

**high-rise sign** – A freestanding sign tall enough to be seen from a distance, especially by motorists.

**hinged side** – The hinged side of a double-faced sign. When opened it provides access to the interior of the sign allowing for the inspection and servicing of its internal components. (See also access door.)

**hue** – A given color's tendency towards any of the four base wavelengths of visible light: red, yellow, blue and green. For example, if yellow appears more dominant in an orange colored ink, then that color orange would be said to have a yellowish hue. Hue is one of the three attributes of color along with brightness and saturation.

**identification sign** – A sign that provides the name of the business displaying the sign.

**illuminance** – The amount of light falling on a surface expressed in lumens.

**illuminated awning** – An awning sign that is lit from underneath by fluorescent or other high output lighting. The light shines through the awning fabric illuminating whatever text or graphics are on it and providing effective nighttime readability. The light emanating from underneath the awning also provides light to the sidewalk or street below. (Also called backlit awning. See also awning sign and canopy sign.)

**illuminated sign** – A sign where the sign face is illuminated in some manner. (Also called backlit sign. See also internally illuminated sign and exterior illuminated sign.)

**incandescent lamp** – A lamp that contains a wire filament (typically made of tungsten) that produces visible light when heated by an electric current to the point of glowing.

**incidental sign** – A sign intended for informational purposes as opposed to commercial or advertising purposes. Typically smaller in size, examples of incidental signs include parking signs, restroom signs and entrance and exit signs.

**incise** – To decorate a surface by carving or cutting into it using sharpened tools of varying size and shapes. (See also engrave.)

**inert gas** – A gas that does not react chemically with other substances coming in contact with it. Also referred to as noble or rare gases, inert gases include neon, argon, helium, krypton and xenon.

**inflatable sign** – A sign made of flexible material or fabric that is made to take on a three-dimensional shape (to blow up like a balloon) when filled with a sufficient volume of air or gas. Commonly used as a temporary sign for special events or promotions.

**initial lumens** – The lumen output of a new lamp as measured after it has been powered on for a standard length of time.

**ink** – Pigmented liquid used for screen printing, press printing, writing and drawing. Inks are either water-based or solvent-based depending on the application.

**ink receptive** – Refers to any material that will absorb ink and bond with it.

**inscribe** – To write, print, incise or stamp letters and words onto or into a given surface.

**insert** – An uninstalled sign panel with no lettering or graphics applied. (Also called a blank.)

**intensity** – 1. The amount of light (measured in lumens) put out by a lamp in relation to the distance at which it is viewed. The greater the output and the closer the viewing point, the greater the perceived intensity. 2. The relative saturation of a given color.

**interior sign** – Any sign located within a building or structure.

**internally illuminated sign** – A sign that is illuminated by a light source contained within the sign structure or housing. (See also backlit sign and exterior illuminated sign.)

**italic** – A font style characterized by a distinct slant in the letters and numbers. (Example: ABC123.)

**J-bolt** – A 'J' shaped bolt that is threaded on the long straight portion of the 'J.'

**job site sign** – A temporary sign, typically large and freestanding, displayed at construction site to promote and provide information about the company or companies involved in the project. These can include the contractor, architect, developer, etc. (Also called a construction site sign.)

**JPEG (Joint Photographic Experts Group)** – A common file format for color digital images. The JPEG standard utilizes a 'lossy' data compression method, meaning that in order to reduce the overall size of the file a small amount of sharpness from the original image is sacrificed.

**Kelvin** – 1. A unit of measure expressed in degrees used to denote the color temperature of a light source. 2. A unit of thermal temperature expressed in degrees.

## GLOSSARY OF TERMS cont.

**kerf** – The width of the cut or channel made by a saw or other tool.

**kerning** – The act of moving printed or mounted letters further apart or closer together in order to achieve a desired effect. (See also letter spacing, tracking and justified.)

**kick plate** – A metal or plastic plate placed along the bottom of a sign structure in order to protect its surface against damage from kicking or other light to moderate contact.

**kiosk** – A small, freestanding structure traditionally used for the posting of temporary signs and notices. May also be equipped with an interactive computer screen and provide services such as event ticket sales.

**lacing** – A common method of attaching a fabric covering to the frame of an awning. It is tied to the frame using thin rope that is threaded (laced) through grommets at the edge of the fabric.

**lacquer** – A clear glossy coating applied to material for appearance and protection. Known for its ability to dry quickly. Similar to varnish but provides a harder finish.

**lambert** – A unit of measure of luminance (brightness). One lambert is the luminance of a surface that emits or reflects one lumen per square centimeter. One lambert = 0.318 foot-candles per square centimeter.

**laminated fabric** – Two or more layers of fabric (natural and/or synthetic) joined together with an adhesive. (See also lamination.)

**laminated glass** – Two sheets of glass bonded to an inner layer of transparent plastic. For signage, lettering and graphics can be applied to the plastic layer prior to bonding. Laminated glass also provides a measure of safety as the bonded plastic layer helps prevent the glass from shattering if broken. In addition, laminated glass has greater sound reduction qualities when compared to glass alone. (See also lamination.)

**lamination** – The process of binding together two or more layers of material by means of one or more of the following: heat, pressure and adhesive bonding. (See also delamination.)

**lamp bank** – The array of lamps (lights) in a message center that are used to create the messages seen by the public.

**landscape format** – An image or sign panel where the length is appreciably greater than the height is said to be in landscape format.

**laser** – A highly focused beam of light that when generated with sufficient power can be used for the purpose of engraving or cutting material.

**layout** – The overall arrangement of the graphics and lettering on the face of a sign.

**LCD (liquid crystal display)** – A type of flat panel display that recreates an image or message through the manipulation of electrically sensitive crystals suspended in a liquid medium. Commonly used in electronic message centers.

**LED (light emitting diode)** – A small electronic device that emits light when electrically charged. In computer controlled arrays, LEDs can be used to create an electronic message center.

**letter spacing** – A typographic term for the space between letters and words.

**life safety signs** – Signage that conveys life-saving information such as important fire, security and evacuation information. The specific types of life safety signage required are determined by local, state and federal regulations.

**light box** – A sign that is self enclosed in a typically square or rectangular structure and houses an internal light system for illumination of the sign face. (See also box sign.)

**light emitting diode (LED)** – A small electronic device that emits light when electrically charged. In computer controlled arrays, LEDs can be used to create an electronic message center.

**light reflectance value (LRV)** – An indication of the relative amount of light reflected by a given color. For example, yellow has a higher LRV than blue.

**line screen** – The resolutions of a halftone print measured in lines per inch. The higher the number of lines per inch, the higher the resolution of the resulting print. Most halftone printing is at a line screen resolution of 133 and 175 lines per inch.

**line spacing** – A typographic term for the space between lines or blocks of text.  
liquid crystal display (LCD) sign – A type of flat panel display that recreates an image

or message through the manipulation of electrically sensitive crystals suspended in a liquid medium. Commonly used in electronic message centers.

**load** – Any measurable force exerted on a structure or object. Things that can add load to a sign and its supporting structure include water, snow and wind. (See also dead load.)

**logo** – A visually distinctive name and/or symbol that identifies a business, product or service. (See also trademark.)

**low profile sign** – A freestanding sign built close to the ground or on top of a base sitting directly on the ground. Often incorporates the support structure into the overall design. (See also monument sign.)

**low voltage** – Voltage not exceeding 1000V AC or 1500V DC between conductors, or 600V AC or 900V DC between conductor and ground.

**LRV (light reflectance value)** – An indication of the relative amount of light reflected by a given color. For example, yellow has a higher LRV than blue.

**lumen** – A measurement of light output. One lumen equals the amount of light falling on a one square foot area located one foot away from a single candle.

**luminance** – The intensity of a light emitted by a source as measured in a given direction. Luminance is a measure of the amount of light only. It is expressed as footlamberts or candelas per square foot or meter respectively.

**luminance ratio** – With an illuminated sign, some areas of the sign face will have a higher luminance than others. The difference in luminance between any two areas is referred to as the luminance ratio.

**luminescence** – The quality of emitting light by absorbing radiant energy from another source and converting it into a visible wavelength. (See also fluorescent lamp.)

**luminous efficacy** – The amount of light produced by a lamp as measured in lumens compared to the amount of energy the lamp consumes.

**luminous flux** – The total visible light energy emitted by a source in all directions, where the luminous flux is the radiant flux multiplied by the human eye's sensitivity. The unit of measurement for luminous flux is the lumen.

**magnetic sheeting** – A layer of magnetic material laminated to a flexible surface material such as vinyl that can be printed with lettering and graphics. Magnetic sheeting is commonly used for temporary signage that can be placed on the side of vehicles or other metal surfaces.

**mall signage** – A general term for on-premise signs located within a multi-tenant building or mall.

**margin** – The space between the any lettering or graphics and the border of the sign face.

**marquee sign** – A permanent structure attached to the front of a building and which incorporates a large message center. Typically illuminated and often ornate in design, a marquee sign projects over the entrance of the building and provides a canopy over at least a portion of the sidewalk or street. Marquee signs are often used by movie theaters and concert halls.

**matte** – Having a dull or non-shiny surface or finish.

**MDO (medium density overlay)** – An exterior grade plywood sheet that has been given a resin-impregnated overlay on one or both sides to improve its paintability.

**medium density overlay (MDO)** – An exterior grade plywood sheet that has been given a resin-impregnated overlay on one or both sides to improve its paintability.

**memorial sign** – A sign, typically a plaque, which commemorates a person, place or event.

**menu board** – A changeable point-of-purchase sign that provides a list of products and prices. It is a type of sign commonly seen in sandwich shops and other fast service restaurants where it is used to display the menu. (See also variable message sign.)

**mercury** – A silvery-white metal that remains liquid at room temperature. In a neon lamp and fluorescent lamp, mercury is heated to a vapor through the application of an electric current and mixed with an inert gas such as argon to produce the ultra-violet light necessary to excite the phosphorous coating on the inside of the lamp, which in turn then generates visible light.

**mesh** – 1. Any fabric or woven material having a loose or open weave. 2. In screen

## GLOSSARY OF TERMS cont.

printing, the material through which ink or paint is applied to a surface.

**message area** – Any segment or surface of a sign that conveys meaning to the viewer either through words or graphics.

**message center** – Any sign designed such that the copy (message) can be changed as needed through mechanical or electronic means. (See also variable message sign.)

**mild steel** – A type of sheet metal commonly used to form channels and other sign components and structures.

**mildew resistant** – Refers to fabric that has been chemically treated so as to inhibit the growth of mold and fungus.

**mobile billboard** – A large sign mounted on a trailer or back of a truck. The sign may or may not be illuminated. (Also called a mobile sign.)

**mobile sign** – A large sign mounted on a trailer or back of a truck. The sign may or may not be illuminated. (Also called a mobile billboard.)

**mock-up** – A full scale model of a structure. A sign mock-up is created to test and review in detail the appearance, legibility and other aspects of a final design. It is typically made of cheaper, less durable material than the final sign but given the same colors and finishes. (See also model.)

**model** – A scaled version of a structure. Typically, sign models are substantially smaller than the actual sign it represents, and are used during the design process to test and review different design concepts.

**molded letter** – A letter created by heating a sheet of acrylic or plastic until it is pliable and then shaping it into the desired form using a mold of the letter. After the plastic cools, it retains the molded shape and any excess material is trimmed away.

**molding** – A decorative strip of metal or wood that frames the outer edge of a sign. Molding can be simple or ornate in style.

**monolith** – A structure created out of a single mass of material such as a block of granite or marble, or formed concrete.

**monument sign** – A freestanding sign that stands directly on the ground or ground level foundation. A monument sign is often used to mark a place of significance or the entrance to a location. (See also low profile sign.)

**mottled** – Term for a surface or finish that is marked with irregular patches of color.

**muntz metal** – A type of brass alloy that has good casting and hot-work properties, and is resistant to corrosion. Commonly used for the making of plaques. (Also known as alpha-beta brass and yellow metal.)

**mural** – A wall surface that has been decorated with a direct application of paint, tile or printed graphics.

**nameplate** – A small wall-mounted or freestanding sign made of plastic or metal that states the name, occupation and/or title of the occupant of an office, desk or building.

**National Electric Code (NEC)** – A set of codes and standards set forth by the National Fire Protection Association (NFPA) for the safe use of electrical wiring and equipment.

**NEC (National Electric Code)** – A set of codes and standards set forth by the National Fire Protection Association (NFPA) for the safe use of electrical wiring and equipment.

**negative space** – Empty or unused space (having no lettering or graphics) within the sign face. (Also called white space. See also positive space.)

**neon gas** – An inert gas that remains colorless in its natural state. When a sufficient electrical charge is applied to neon gas, it produces a distinct orange-red glow.

**neon lamp** – 1. A lamp that utilizes electrically charged neon gas contained within a vacuum tube (typically clear) to generate light. 2. A general term that refers to any lamp utilizing an inert gas.

**neon sign** – A sign that incorporates one or more neon lamps. The sign message is created by bending and forming the neon tubes into lettering and/or iconic graphical shapes.

**neon tubing** – The vacuum tubing (typically clear) used to hold the inert gas (neon gas) used in a neon lamp. Neon tubing can be bent and formed into almost any

shape to create lettering and iconic graphics. The color of the tubing and coatings applied to it may alter the color of the light emitted.

**neoprene** – A type of synthetic rubber with good resistance chemical, oil, flame and abrasion. It remains flexible in cold conditions is commonly used for gaskets, cushioning and weatherproofing.

**nickel plating** – A thin, protective finish made of nickel that is applied to a surface using an electrochemical process. It is commonly used as an undercoating for subsequent plating.

**notched** – Describes channel letters that have been cut out in the back in order to fit over a raceway, conduit or other object protruding from the mounting wall or substrate.

**nylon** – A strong and durable synthetic material used in a wide range of fibers/fabrics, objects and coatings.

**Occupational Safety and Health Administration (OSHA)** – A U.S. federal government agency that monitors and enforces workplace safety laws.

**off-premise sign** – A sign that is not located on or directly adjacent to the business or property to which it relates. A billboard is an example of an off-premise sign. (See also on-premise sign.)

**oil canning** – Refers to the occurrence of slight buckling or waviness in a metal surface due to insufficient thickness of the material or inadequate support behind it.

**on-premise sign** – Any sign that is located on or directly adjacent to the business or property to which it relates. (See also off-premise sign.)

**opaque** – Describes any material or substance through which light does not pass, i.e. it is neither transparent nor translucent.

**open channel letter** – A channel letter with returns that project forward from face of letter such that the neon tubing is visible.

**OSHA (Occupational Safety and Health Administration)** – A U.S. federal government agency that monitors and enforces workplace safety laws.

**outgas** – 1. The removal of gases trapped within a solid substance by heating it until the gases escape. 2. The escape of gases from a solid or liquid which occurs naturally over time.

**paint** – 1. The general term for pigmented coatings that are applied to an object or surface while in a liquid state and then allowed to dry into a colored, protective finish. 2. The process of applying a liquid coating to an object or surface.

**painted wall sign** – A sign that is painted directly onto an exterior wall of a building.

**pan channel letter** – A dimensional letter that is constructed with integrated face, back and sidewalls so as to make the letter appear as a single solid unit.

**pan face** – A plastic sign face that has had three dimensional lettering or graphical elements vacuum molded (embossed) into its surface. (Also called embossed plastic face sign.)

**panel** – Any visible surface of a sign on which copy and/or art is present. One or more panels make up the sign face.

**Pantone Matching System (PMS)** – A standardized color scheme used in the printing industry to ensure the consistency of color from design to final print.

**parapet** – A low wall built along the edge of a building's roof.

**parapet sign** – A sign mounted on the parapet of a building. (See also building mounted sign.)

**patina** – The thin layer of color, corrosion or texture that develops on a metal surface as a result of natural (exposure to the elements over time) or artificial (chemical treatment) oxidization. The color of patina on bronze is typically brown while patina on copper is typically green or green-gray.

**pattern** – A full-scale design layout of a sign or its components such as the neon tubing or lettering. (See also pounce pattern.)

**pavement graphics** – Graphics and markings applied to roadways and parking areas to guide and manage traffic and to supplement other traffic signs.

**pegged out** – A term describing letters mounted using pegs or pins such that they stand off from the substrate to which they are attached. (Also called pinned out.)

## GLOSSARY OF TERMS cont.

**pennant** – A triangular flag. (See also banner.)

**permanent sign** – Any sign that is affixed to a building or structure in such a manner as to give it the support necessary to resist environmental loads over time and to preclude easy removal.

**permit** – A legal document (license) granted by the appropriate government agency that gives official permission to take a specific action, e.g. erect a sign.

**phosphor** – A chemical substance that becomes excited and emits visible light when struck by electrons from another source such as an ultraviolet light. Phosphors continue to emit light for a time even after the energizing source is removed. Phosphorous coatings are used on the inside of fluorescent lamps.

**phosphorescent sign** – A sign that uses inks, paints or dyes containing phosphors.

**photopolymer** – A type of plastic having a photosensitive coating which can be masked and photo-etched to create a tactile sign message. It is commonly used for ADA signage that requires Braille lettering.

**pictogram** – A symbol or simple illustration used to represent an object or concept. Commonly found in ADA and DOT signage. An example of a pictogram would be the wheelchair symbol seen on some ADA signs, the presence of which indicates a handicap accessible location.

**pigment** – A natural or synthetic insoluble compound used to infuse color into other materials such as paints and inks. (See also dye and stain.)

**pinned out** – A term describing letters mounted using pins or pegs such that they stand off from the substrate to which they are attached. (Also called pegged out.)

**planning permission** – Authorization required from the Local Planning Authority to install an illuminated sign or billboard. (See also permit.)

**plaque** – An inscribed, commemorative plate or tablet, usually of metal, placed on a building, monument or the like.

**plasma screen** – A type of flat-screen digital image display which is uniformly flat and less than five inches deep and uses gas plasma technology.

**plastic** – A generic term for a wide range of synthetic materials which consist of long chains of polymers that are moldable and soften when heated. Many plastics used in the sign industry are of the thermoplastic variety, which means they can melt and solidify repeatedly.

**plastic faced letters** – Channel letters in which the front of the channel is covered by a translucent plastic face, diffusing the neon lighting within. (See also regency and embassy letters.)

**Plexiglas** – The trade name for a brand of acrylic sheeting, which (like Kleenex) is often mistakenly used as a generic term.

**plywood** – A common type of wood product sold in 4'x 8' sheets. Plywood is made of a number of thin sheets of wood laminated together with the grain of the adjacent layers perpendicular, except for the two outside plies, which are parallel to provide stability.

**PMS (Pantone Matching System)** – A standardized color scheme used in the printing industry to ensure the consistency of color from design to final print.

**point-of-purchase (POP) sign** – In-store advertising designed to stimulate impulse purchases by shoppers inside a store. The term applies to a store's internal sign system, as well as special displays and dispensers created by and for specific product manufacturers. Also known as "point-of-sale advertising."

**pole sign** – A freestanding sign, usually double-faced, mounted on a round pole, square tube, or other fabricated member without any type of secondary support.

**polyester** – A synthetic fiber used for its strength and resistance to ultraviolet deterioration. It does not have the stretch and elasticity of nylon and, as a result, will often last longer.

**POP (point of purchase) sign** – In-store advertising designed to stimulate impulse purchases by shoppers inside a store. The term applies to a store's internal sign system, as well as special displays and dispensers created by and for specific product manufacturers. Also known as "point-of-sale advertising."

**porcelain sign** – A traditional process to coat metal with a ceramic slip which is fired at extremely high heat to create a durable, glasslike surface that is impervious to the environment.

**portable sign** – A freestanding, on-premise sign, not designed to be permanently affixed in place. These could include free-standing signs or notices as well as point-of-purchase signs.

**portrait format** – Proportion of a sign in which height is appreciably longer than width. (See also landscape format.)

**positive space** – The copy and art on a sign face. The opposite of negative space.

**post and panel sign** – A sign panel with one or more posts.

**post mounted sign** – A sign that is attached to one or more sign poles.

**poster** – 1. A series of paper sheets printed for use on a billboard. Other substrates used for posters include plastic and cloth. 2. Also, a sign typically printed on paper and intended for indoor use. Other substrates used for posters include plastic and cloth.

**poured in place** – Refers to concrete footings for signs. Wet concrete is delivered or mixed on site and poured into a form, creating desired shape. Normal curing and finishing techniques are applied as necessary. Alternative to pre-cast concrete, which is formed, poured, cured and finished off site, then brought to site and installed.

**powder coating** – A specific process for applying paint to a surface that creates a very durable protective surface.

**PPI (pixels per inch)** – The number of pixels in a raster image that will occur in one line in the span of one inch. The higher the PPI, the greater the resolution and the less distinguishable each pixel becomes.

**precast concrete** – Steel-fiber or glass-fiber reinforced concrete cast in a mold.

**precinct sign** – A sign marking the entrance to a town, neighborhood, development, park or other public area. (Also called gateway sign.)

**primary colors** – The three colors from which all other colors can be created. In paint pigments, the primary colors are yellow, red and blue. In four-color process printing, all colors are mixed from yellow, magenta (red) and cyan (blue). In light, the primary colors are red, green and blue. See also RGB display, additive colors.

**primary wiring** – Electrical wiring that directly connects a transformer to the breaker box.

**projecting sign** – A sign that is attached to a building but extends beyond the building structure. Regulators often set a predetermined distance that a sign must extend beyond a building for it to be considered a projecting sign. A decorated awning is an example of a projecting sign. (Also called blade sign.)

**prototype** – Usually a full-sized sample that uses final materials, methods of construction, fasteners and finishes to test assembly, design, construction and appearance issues. Also used to approve the "first sample" in a long production run.

**public path** – A heavily used route, including corridors and public elevators, that connects public destinations.

**push-through** – A letter or graphic which is cut out, then pushed through a corresponding space that has been removed from a sign substrate. The push-through is typically different color and/or material than the rest of the sign. Typically used with an opaque sign cabinet and internal lighting. "Push-thru letters" are most often translucent acrylic letters that are pushed through a sign face panel to be flush or over-flush with the front surface of the sign face.

**pylon sign** – A freestanding sign that is not a pole or ground sign.

**quality assurance** – All those planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality.

**quarter round** – Wood or metal molding and trim which in profile is the equivalent of a quarter circle.

**raceway** – 1. A metal structure enclosing the electric components of a sign, exclusive of the transformer. 2. An electrical enclosure that may also serve as a mounting structure for the sign. (See also deck cabinet.)

**readability** – The quality of a sign's overall design that allows the viewer to correctly interpret the information presented on it. Also, the optimum time and distance in which this can be done. Letter size and style, legibility of typeface, color contrast between letters and background, and a sign's layout all contribute to readability. (See also conspicuity.)

## GLOSSARY OF TERMS cont.

**readerboard** – A readerboard is a sign on which copy can be changed manually. It usually consists of a panel on which individual letters or pictorials are mounted. Like a window sign, it can advertise special prices or items. It can also be placed so that it can be easily seen from a passing motor vehicle.

**recall** – In signage, this refers to the ability of a viewer to remember the message even when they are not viewing it.

**recognition** – Refers to the ability of a viewer to identify the message.

**reflective sheeting** – Film with very small glass or glasslike bead materials encapsulated below its surface, creating the ability to bounce light beams back to their source, such as from a car headlight back to the driver.

**reflectorized sign** – A sign that has been coated with a highly reflective material. (See also reflective sheeting.)

**registered trademark** – A trademark that has been officially registered with the government by its owner. Indicated by the symbol ®. (See also trademark.)

**registration** – 1. In screen printing, the correct placement of the image to be printed on the substrate. 2. In multicolor printing, registration also refers to the correct alignment of the colors with one another.

**regulatory sign** – Signs installed by various government bodies to inform the public of traffic laws and other regulations.

**relief** – The projection of art from a flat surface. The shortened form of “bas-relief.”

**rendering** – An artistic sketch or representation of a design concept.

**resin transfer** – A method of heating a colored resin material and printing it onto vinyl. The resin is sublimed, or momentarily turned into a gas without passing through a liquid state. The gas seeps into the vinyl and then resolidifies, creating a permanent image.

**resolution** – 1. In digital images, the number of pixels shown on a screen; the higher the number of pixels in a given space (i.e., the greater the density of pixels), the more precise the pictured image. 2. In plotting, the degree of accuracy with which a plotter will place a knife-head in relation to a theoretical, perfect location of a coordinate.

**retainer** – The projecting rim around the sign face that holds it in place.

**retardant** – An additive that slows the drying time of ink.

**retractable awning** – A cantilevered structure, entirely supported from a building, and constructed so that the awning cover and supporting frame retracts completely against the building. This relieves the awning from wind, rain and snow pressure and loads normally associated with extended fixed frame awning or canopies.

**return** – The sides of a channel letter.

**reveal** – An indented detail on a sign.

**reverse channel letter** – A channel letter that has a face and sides but no back, and is pinned out from a background surface. When the neon tube inside the letter is illuminated, it produces a halo effect around the letter.

**revolving sign** – A sign that has the ability to turn 360 degrees because of the presence of an electric motor to drive its movable parts. All or a portion of the sign may revolve at a steady or variable speed.

**roof sign** – A sign structure that is erected on or above a roof or that is installed directly on a roof's surface.

**router-cut sign** – Describing a sign cut with a hand router or by a computerized router, using various shaped cutting blades (in a variety of sign materials).

**routing** – Elimination of material in a substrate, using a tool bit that has been machined for this purpose. In computerized sign making, using a CAD/CAM machine, a tool is programmed to eliminate material along a tool path created along x-, y-, and z-axes.

**sandblasting** – A method for decorating glass or wood. A rubberized stencil of the artwork is either hand- or computer-cut and applied to the substrate, which is then sprayed with a pressurized stream of sand or synthetic particles to texture the unprotected area. Once the desired depth has been achieved on the item being blasted, the stencil is removed, and if on wood, the surfaces may be painted.

**sandwich sign** – A moveable sign not secured or attached to the ground or surface upon which it is located, but supported by its own frame and most often forming the

cross-sectional shape of an A. (Also known as sidewalk sign.)

**sans serif** – Any typeface that lacks serifs. In most sans serif fonts, there is little differentiation between the width of strokes within the letter. Helvetica and Futura are familiar sans serif fonts.

**schematic design** – A conceptual design developed at the beginning of a project which demonstrates a design approach or strategy. (Also known as schematics.)

**scoring** – Cutting or notching a material prior to bending it. Sufficient scoring of some substrates will also allow them to be broken cleanly without cutting them all the way through.

**screen** – A frame over which fabric is stretched for use in screen printing. The screen supports the stencil or emulsion through which the ink is forced by the squeegee, created the print.

**screen printing** – Graphic application method capable of printing great detail and color on a variety of substrates such as paper, plastics, aluminum, vinyl and banner materials.

**seam** – A line formed by the joining together of two separate pieces of the same or different materials at their edges, as with flexible-face fabric material or wood, metal or plastic sheet. (See also butt joint.)

**second-surface** – Refers to a sign made of a clear substrate, such as acrylic, where the art is applied in reverse on what can be an interior face of the sign, providing extra protection from the environment. Some large exterior signs are painted that way, as are many smaller identification, wayfinding, restroom and evacuation signs that are subject to handling on a regular basis.

**serif** – A small line or embellishment finishing off the strokes of letters in some fonts. Well-known serif fonts include Souvenir, Times Roman and Garamond.

**service** – The general maintenance of a sign. It may include cleaning, repainting, replacement of bulbs or lamps and repairs, which may be provided on a regular basis under contract.

**service cover** – In an electric sign cabinet, a panel that allows ready access to the bulbs or lamps and the electrical connections for their replacement and maintenance.

**setback** – In a sign or development code, the distance between the primary face of the sign and the property line or right of way. The distance is measured in a straight line from the base/bottom of the sign. Most municipalities require that signs comply with specified setbacks or that a variance from the regulations be applied for and secured.

**shade** – A color made darker than the original by adding black to it.

**shadow** – Duplication of an image that is slightly offset. Drop shadow is a simple copy and offset; block shadow joins the outlines of the original and duplicate to create a 3D-relief effect; and cast shadow alters the shape and size of the duplicate to imitate shadows cast from varied placement of light, as the sun does on a sundial.

**sheet metal** – Traditionally, drawings prepared by specific trades to describe the quantity, shape, size and materials and other details to be manufactured, built, or constructed. In signage, it now refers to drawings prepared by fabricators describing their intended methods of construction and sequence of assembly to be reviewed by designer and owner for approval prior to construction and fabrication. The essential reason for shop drawings is to be sure the original design concept is accurately carried out in the construction process. (See also template.)

**shop drawings** – Drawings prepared by trades to describe the quantity, shape, size, materials and other details of a product's construction. In signage, it refers to drawings prepared by fabricators describing their intended methods of construction and sequence of assembly to be reviewed by designer and owner for approval prior to construction and fabrication. Shop drawings help assure that the original design concept is accurately carried out in the construction process.

**sidewalk sign** – A moveable sign not secured or attached to the ground or surface upon which it is located, but supported by its own frame and most often forming the cross-sectional shape of an A. (Also known as sandwich sign.)

**sign** – Any device, structure, display or placard which is affixed to, placed on or in proximity to, or displayed from within a building to attract the attention of the public for the purposes of advertising, identifying or communicating information about goods and services.

**sign band** – A horizontal area above a multi-tenant building entrance, architecturally designed to accommodate signage in a signcentric manner.

**sign cabinet** – The enclosure of an electric sign, not including the components and mounting structure. (See also box sign and light box.)

**sign can** – An informal term for sign cabinet.

**sign code** – A sign code may be part of a government body's land use planning regulations, or it may be a separate document designed to interact with other land use codes. As part of the police powers granted to local governments, a sign code normally seeks to promote the health, safety and welfare of the public. Sign codes may regulate size, placement, illumination, structure and aesthetics of sign content and design.

**sign face** – Typically refers to the most prominent message area of a sign but may refer generically to any message area. (Also called face. See also panel.)

**sign location map** – Usually a site plan or floor plan indicating where signs will be placed (called "sign locations").

**sign location plan** – See sign location map.

**signage** – Interchangeable terms used to describe signs. Any group of posted commands, warnings, information or directions.

**signature building** – Architectural design of a building or structure that reinforces signage.

**signcentric design** – Building architectural design which makes the signage the prominent visual feature.

**silhouette** – The overall shape or profile of a sign, or a block of copy within a sign.

**silkscreening** – One of the oldest and simplest forms of printing. A print is made using a squeegee to force ink through stencil or emulsion that is supported by fabric that has been stretched over a frame to create a screen. Several synthetic fabrics have replaced silk as the fabric of choice for screen printers. (See also screen printing.)

**single face sign** – A sign consisting of one face, rather than back-to-back faces on a common frame or back-to-back messages on the same piece of material.

**skeleton** – The metal frame on which a sign is installed.

**slip-base** – Foundation consisting of two bolts fastened between the foundation plate and the concrete footer.

**snipe sign** – An overlay sign added to an existing sign layout, as an additional message to the main sign, for example a band across a corner saying "coming soon." Also a term for illegal posting of handbills and posters without permits.

**soda-lime glass** – The most common type of glass manufactured and the type used in most fluorescent tubes and incandescent bulbs. Soda-lime glass is made from a combination of sand, limestone, and sodium carbonate, and can either be clear or colored.

**solvent** – A petroleum-based liquid used to modify oil-based paints and inks and to remove them from sign components, frames and brushes.

**spacer** – Any device used in mounting letters or signs that separates them from the surface to which they are being installed. A spacer allows letters to be pinned out.

**specifications** – May include General Requirements, Products and Execution sections for sign specification package. Similar to architectural construction format per CSI (Construction Specifications Institute) standards.

**spectacular** – An extra large outdoor sign that incorporates special lighting and/or motion effects, or an interior sales display that also includes special lights and motion elements.

**spinner sign** – A sign, either freestanding or wall-mounted, where the messages rotate in the wind. A spinner sign is not considered an animated sign.

**spotlight** – A source of illumination for an extremely illuminated sign; a lamp with a strong focused beam directed toward a sign.

**spun glass** – A strong, lightweight material created from tiny glass threads woven into a fabric and then hardened using a special polyester resin. Fiberglass can be used to create sign faces and cabinets of varying sizes and shapes. (See also

fiberglass.)

**sputtering** – Occurs when the electrode in a neon tube, because of the heat and electrical forces, gradually erodes, blackening the ends of the tube near the electrode and decreasing gas pressure, eventually making the tube inoperative.

**squeegee** – 1. In screen printing, a flexible blade mounted in a wood or metal handle and used to force ink through a stencil mounted on the screen. 2. In sign making, a hard plastic or nylon blade used to apply pressure to increase surface adhesion between cutting vinyl and the transfer tape or between the vinyl and sign face.

**stain** – Wood stain is a type of paint that is very "thin," that is, low in viscosity, and formulated so that the pigment penetrates the surface rather than remaining in a film on top of the surface. Stain is predominantly pigment or dye and solvent with little binder, designed primarily to add color without providing a surface coating.

**stainless steel** – As the name implies, this is a special steel alloy that is made more stainless than regular steel, due to higher concentrations of chromium and nickel.

**stand-offs** – Insulators that support a neon tube, as well as hold it away from the background surface and provide some impact resistance. (See also supports).

**standard frame** – The structural supports found inside a sign cabinet.

**star of life** – The asterisk symbol, indicating exit level, showing preferred route for gurney, emergency egress, etc., required by ADA next to floor indication on elevator control panels and elevator jambs.

**stationary sign** – A sign with a power cord for attachment to a source of electrical power that is not readily moveable or portable.

**stencil** – A thin sheet of material into which a design is cut. When a stencil is placed on another substrate and paint or ink is applied, the image represented by the cut-out portion of the stencil is printed on the substrate below it. Stencils range from metal to card stock to photo emulsions.

**stippling** – A method for taking out brush marks and creating a transparent look on windows. Paint is mixed with linseed oil to slow the drying process, then brushed on the surface to be stippled. A stippler is created by wrapping a piece of cheesecloth or other lint-free cotton rag around a wad of cotton, which is then either held firmly in the hand or securely attached to a short stick, taking care that the work surface of the stippler is wrinkle-free. Stippling is done by daubing the stippler over the wet, painted surface.

**stochastic screening** – A silkscreening process that conveys the tone of a screened image by varying the number and location of dots rather than just varying the size of the dots within the grid.

**stone signs** – Typically sandstone, granite, marble, limestone and other common decorative stone material. Letters can be stud-mounted to stone or they can be carved or incised into the face of the stone.

**strain** – The measure of the change in size or shape of a body under stress, compared to its original size or shape. It is usually measured as the change (in inches) per inch of length.

**streamer** – A long, narrow banner included in interior or window displays only.

**street furniture** – Advertising displays, many which provide a public amenity, positioned at close proximity to pedestrians for eye-level viewing or at a curbside to reach vehicular traffic. (See also bench sign.)

**stretching** – 1. The process of securing mesh to a frame in screen printing. 2. The stretching of vinyl face material over a flex-face sign cabinet.

**stroke** – A single movement of the hand or arm, or of a marking tool. Stroke refers to a pass of the squeegee in screen printing, and a pass of the brush in painting. (See also stroke width.)

**stroke width** – The width of the major lines comprising a letterform. A wider stroke width is used to make a bolder letter; a narrower stroke width is used to make a lighter letter.

**structure** – In the sign industry, a fabrication designed for and capable of supporting a sign. Can refer to internal or external skeleton (exoskeleton) of sign as well as support pole or mechanism.

**styrene** – Refers to polystyrene, a usually colorless, rigid plastic that can be molded

## GLOSSARY OF TERMS cont.

into objects, used in the manufacture of signs.

**substrate** – The material out of which the face is made. Wood, metal sheeting, paper and acrylic are some examples of sign substrates.

**supports** – Insulators that support a neon tube, as well as hold it away from the background surface and provide some impact resistance. (See also stand-offs.)

**symmetry** – The balance of design elements in which one side equals or mirrors the other.

**tack** – The stickiness of an adhesive under a given condition. Some adhesives require a particular temperature range for maximum tack.

**tactile sign** – A sign, or an area within a larger sign or area, that conveys its message through raised or engraved artwork, making it accessible to the visually impaired. Required by A.D.A. for all permanently identified rooms

**tagged image file format (TIFF)** – Standard graphics file format used for scanned bit-mapped images.

**target audience** – The profile of the most desired consumer prospects for a product or service, listed by characteristics such as demography, lifestyle, brand or media consumption, purchase behavior, etc. This is common to all media.

**TCO (Temporary Certificate of Occupancy)** – This typically allows a new building to be occupied before it is fully complete and therefore requires life safety signs to be in place to protect the public at large.

**TDD (Telecommunications Device for the Deaf)** – This communication system enables visual typographic messages to be transmitted and received over telephone lines. ADA requires use of symbols to show where TDD unit is available.

**Telecommunications Device for the Deaf (TDD)** – This communication system enables visual typographic messages to be transmitted and received over telephone lines. The ADA requires use of symbols to show where TDD unit is available.

**tempera** – Pigment mixed in a water medium, usually with a binder and adhesive. Tempera paints produce a luminous effect.

**template** – A full-sized pattern, layout or computerized output showing the exact size and placement of letters. Typically used for installing dimensional letters, signs or architectural elements.

**temporary sign** – Any sign that is not intended to be permanently installed. Banners and signs at construction sites are good examples of temporary signs. Often, sign codes seek to limit the length of time a temporary sign can remain in place.

**tensile strength** – The maximum load a material can withstand before it breaks. (Also called breaking strength.)

**thermoforming** – A process that takes a flat sheet of material and gives it dimension by heating then forcing it into a mold either mechanically or pneumatically. See also vacuum-forming.

**thinner** – Any liquid used to reduce the thickness of paint or ink.

**three-dimensional (3D) engraving** – A routing procedure where the tool bit can be moved independently along the up-and-down z-axis while still traveling an x/y-axis tool path. 3D engraving can create relieves and hand-chiseled looks while removing material from a substrate.

**thumbnail** – A type of rough sketch of a design made prior to developing more finalized presentations. Some sign artists prepare several thumbnail sketches of a job, varying their layouts and fonts, before preparing one or two more complete ideas to take to a client.

**TIFF (tagged image file format)** – standard graphics file format used for scanned bit-mapped images.

**tiling** – The digital process of dividing a large image into individual sections to print with overlap.

**time and temperature display** – A variable message sign which displays current time and temperature in a stationary or alternating manner. Some also display simple messages.

**time switch** – A switch that utilizes a clock or timer to automatically turn on and off electric signs at set times each day.

**time, place, and manner (TPM) regulations** – Consistently applicable non-discriminatory sign regulations that specify, without reference to the content of the

message, when, how and where a sign can be displayed, with physical standards, such as but not limited to height, size and location, that allow the sign to be readable.

**tint** – A color made lighter than the original by adding white to it.

**tone** – The effect on a color brought about by blending it with another color.

**tongue tear** – This is a property of fabrics where a machine will tear a strip of fabric across the warp and filling. The resulting effort to this is measured in pounds.

**top coating** – The coating intended for the front, side or top of a fabric or membrane.

**touch screen** – Computerized CRT or LCD screen directory or information station that is activated by touching the screen.

**TPM (time, place and manner) regulations** – Consistently applicable non-discriminatory sign regulations that specify, without reference to the content of the message, when, how and where a sign can be displayed, with physical standards, such as but not limited to height, size and location, that allow the sign to be readable.

**tracking** – The ability of a computer, at the operator's instruction, to add or subtract minute increments of space between letters. (See also letter spacing and kerning.)

**trade area** – Most retail businesses have a relatively fixed area that customers come from to do business at their store. In general; the trade area is either the living or work locale for the customer. The selling zone of place-based retail business will be dynamic for two reasons; the customer is moving residences or jobs or the customer is passing through on a trip that intersects the trade area. The trade area for most small businesses is 3 to 5 miles.

**trademark** – Used by a business to distinguish itself and its products from competition. A trademark may include a name, symbol, word or combination of those. Protected by the federal government and considered to have financial value, a sign maker should only reproduce a trademark with the company's permission and should discourage customers who seek to imitate well-known trademarks too closely. (See also logo and registered trademark.)

**traffic count** – The estimated number of people who will see a sign in a given time period. Traffic count is most commonly associated with number of vehicles passing a location in a day.

**transfer tape** – A medium-tack adhesive coated on translucent paper. Transfer tape is placed on weeded vinyl images still on the original carrier liner; the tack of the tape is stronger than the adhesion of the vinyl to the coated liner, so the image is pulled off the liner in a transfer to another surface.

**transformer** – Electrical equipment that converts input voltage and current to a different output voltage and current. In general, a transformer is any apparatus that continuously increases or decreases the voltage of a power supply. They are an important element in all neon signs, due to the high voltage required. (Fluorescent lamps require a specialized type of transformer unit called a ballast.)

**translucent** – The property of a material such as vinyl, paint or ink that allows the passage of some light through it without being transparent. Internally illuminated signs rely on translucent paints and vinyls.

**transparent** – The property of a material that allows light and images through and may also show a color tint.

**trapping** – In screen printing, to overlap one color on another. Trapping may result in the creation of a third color in the overlap area, or, if opaque links are used, the edge of the first color may be hidden for purposes of registration. (See also bleed.)

**tri-color LED** – An LED that displays only the colors red, yellow and green.

**triple message sign** – A type of sign consisting of rotating triangular louvers. The louvers turn in unison showing three different messages as the three faces are exposed. Allows for three times the static advertising/communication power at one location.

**trough letter** – A metal channel letter with an exposed cold cathode tube in the trough for illumination.

**tube colors** – Tubing for neon signs is produced as clear glass or in colors. Different tube colors serve as filters that only allow the desired color to shine through. In many cases, the only way to achieve rich primary colors is through colored glass.

**tube diameter** – The term used to describe the width of a tube. The standard mea-

## GLOSSARY OF TERMS cont.

surement to describe the width of neon tubing is expressed in millimeters.

**tube supports** – Insulators that support a neon tube, as well as hold it away from the background surface and provide some impact resistance.

**tunneling** – The separation of a laminate from a substrate, appearing in a straight line/channel, due to insufficient adhesion, inadequate tension/stability during application, inadequate quality of substrate or improper curing after application.

**typeface** – A set of letters and numerals sharing the same design characteristics. Examples of font sets include Times New Roman and Arial. (Also called font.)

**ultimate strength** – The maximum strength under which an awning material is capable of sustaining a gradual and uniformly applied load.

**ultraviolet light (UV)** – Part of the spectrum ranging from 185 to 450 nanometers. UV has both a negative and positive influence on the sign industry. When UV strikes certain surfaces, such as the phosphors in neon and fluorescent tubes, it is transformed into visible light. UV is also used for curing some screen printing inks and paints. On the other hand, UV light is the prime cause of pigment failure in some paints and vinyls, especially red ones.

**under-canopy sign** – A sign designed to be mounted underneath a canopy.

**UV resistance** – Ability to withstand decay due to the damaging effect of the ultraviolet rays of the sun.

**vacuum forming** – Method of forming sign faces in which a plastic sheet is clamped in a stationary frame, heated and forced down by a vacuum onto a mold.

**vacuum pump** – A device used by a neon shop to draw a vacuum on the inside of a neon lamp.

**variable message sign** – A sign on which the copy can be changed, either manually through the use of attachable letters (usually plastic) or electronically using incandescent bulbs or light emitting diodes. (See also marquee sign, readerboard, changeable copy panel, changeable copy sign, electronic message center, menu board.)

**variable plank sign** – A variable sign that consists of a frame within which pre-printed sign planks can be assembled.

**variance** – A method by which a government body formally deviates from the terms of its sign or zoning ordinance. Typically, obtaining a variance for a sign requires the applicant to show that it would not be contrary to the public interest or that a literal enforcement of the regulations would result in unnecessary and undue hardship (due to conditions unique to the property).

**video matrix signal** – Array of CRT monitors, plasma screens, etc., linked to display a single image or variety of images.

**video sign** – A variable sign displayed on a television screen.

**vinyl** – Polyvinyl chloride (PVC) film that, in sign making, is backed with an adhesive that creates a strong bond to a surface when pressure is applied. Many different integral colors are available with adhesives having different levels of aggressiveness (adhesion) for various applications from permanent to semi-permanent to temporary.

**vinyl letters** – Letters cut from adhesive-backed material, in dozens of opaque, translucent, metallized, and transparent colors and patterns.

**visibility** – The quality of a letter, number, graphic, or symbol, which enables the observer to distinguish it from its surrounds or background.

**vitreous** – Resembling glass, as in transparency, brittleness, hardness, glossiness, etc.

**vitreous enamel** – A hard, brittle glass coating applied to steel by firing at high temperature in an oven. Some limitations to panel size and complexity of shape due to distortion at temperature but is very hard wearing.

**wall mounted sign** – A single-face sign mounted on a wall. (See also wall sign.)

**wall sign** – In the most literal sense, a sign that is painted on a wall. The term is often expanded to include flat signs that are placed on or attached to the wall of a building. These latter signs are also called fascia-mounted signs and wall mounts. (Also known as a wall mounted sign.)

**water resistant** – Describing a face that has been treated to make it resistant to damage or deterioration caused by water.

**waterproof** – The use of the term in relation to treated cotton ducks is prohibited by

the “Fair Trade Practices Act” unless the product shall be impervious to the passage of any water so long as the fabric may endure. “Water Resistant” is the proper designation for cloths treated to resist water penetration and leakage.

**wax transfer** – A method of heating a colored wax material and printing it on to vinyl.

**weathering steel** – A steel alloy that forms a tenacious, self-protecting rust layer when exposed to the atmosphere.

**weave** – The configuration of threads running perpendicular to one another. A plain weave places weft thread over the warp thread in sequence, then reverses for the next row of threads.

**webbing** – A sturdy fabric woven in narrow widths for use where strength is required, such as seat belts or headbands. Often used in banners, where heavy duty usage is required, like over-the-street banners.

**weed** – The process of peeling extraneous vinyl or matrix away from a plotter cut, leaving only the sections representing the final image. Pulling the extra material away in one quick stroke is known as “rip weeding.”

**weep hole** – A small opening or hole in the bottom of a letter or a sign cabinet, placed at the lowest point to prevent water from accumulating in a unit.

**weft-fill** – Threads that run in the crosswise direction of woven fabric. Weft also is referred to as fill.

**weld** – The process that connects pieces of material by heating until molten and fusing together.

**welt** – A strip of material seamed to a pocket opening as a finishing and a fabric strengthening device.

**welt cord** – A tape or covered cord sewn into a seam as a reinforcement or trimming.

**wet location fixture** – A watertight electrical or light fixture that is sealed to protect against moisture.

**white space** – Empty or unused space (having no lettering or graphics) within the sign face. (Also called negative space. See also positive space.)

**wickability** – The property of a fiber that allows moisture to move rapidly along the fiber surface and pass quickly through the fabric.

**wind load** – The basic term for describing the design strength of a sign. Standard windload is 30 PSF (pounds per square foot), which can withstand winds up to approximately 90 MPH. Heavy windload is 55 PSF, which can withstand approximately 110 MPH.

**window sign** – A sign that is mounted for display on a window and intended to be viewed from the outside.

**wood lag screws** – Screws which are tapered to a point and do not utilize nuts. Their strength is proportional to the hardness of the wood in which they are embedded. In many awning applications that require fastening to wood framing, wood lag screws may be the best available option.

**word space** – Horizontal space between words.

**working load** – Also known as “working strength,” this is the weight in pounds that is recommended for safe working conditions. It is applied to new rope in good condition with appropriate splices and only under normal service conditions. Where dynamic loading may occur, the recommended working load should be adjusted accordingly.

**x-height** – In a given typeface, the height of the lowercase letters which do not have ascenders or descenders.

**yield** – 1. In regulatory signs pertaining to traffic flow, concede right of way. 2. In production, the amount of material utilized versus what is wasted or dropped.

**zinc** – A malleable metal that has unique gray appearance, somewhat like lead, and can be used raw in exterior applications.