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U.S. Department
of Veterans Affairs

Emerging Technologies

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Technological Advancements

This section in the Design Guide delves into emerging technologies in relation to a point in time, late 2012. With the fast pace of developing products and manufacturing, the following gives a brief overview and projections that will only be valid for a short period of time forward. To gain a current look at the items discussed, it is recommended that additional research be conducted on the subjects, at the time of reading.

In preparing this section, various comments, descriptions, topics, and write-ups from informational, news sources, internet sources, and company sources function as resources and are put forth to provide an overview, but, with all types of emerging technologies, change is constant, so this sections purpose is just to create an awareness. In addition, in the upcoming months and years, new devices and methodologies will come forth that are totally unknown at the present time, so one needs to constantly keep researching what's new. The following section is to help one get started.

Advancements in various industries continue to improve the quality and effectiveness of signage. It is not necessarily technological advancements in any one singular industry, but the overlapping convergence of different technologies in combination with one another that have allowed for large improvements in the signage industry. Innovations in material science, such as the development of UV resistant materials or improvement in L.E.D.- lighting technology, have a positive effect on product durability and reduce power consumption. Animated and interactive wayfinding systems have seen marked change due to technological advances in the computer and telecommunications industries. As these various industries continue to provide innovative solutions for complex wayfinding issues, signage solutions and designs will become more efficient, effective and less expensive than in the past.

Various and diverse industries often evolve towards similar goals. As a result convergence of previously separate technologies such as voice (and telephony features), data (and productivity applications), and GPS technology create new efficiencies. These emerging technologies represent progressive development that can separately and together yield innovative and a creative wayfinding solutions and create a positive and efficient visits to the VA. At the time of this writing, computer tablet and innovative software technologies are producing interesting products and applications that may influence and effect wayfinding.

Psychology and Human Behavior

Though research and psychological studies, behavioral science continues to gain a better understanding of human behavior. Being lost or not being able to find your destination is a stressful and undesirable experience in any medical facility. Integrating an advanced understanding of human behavior with emerging technologies may yield appropriate solution for some wayfinding issues. Not all VA visitors and patients feel comfortable navigating hallways using GPS rather than asking for help and directions. Interactive kiosks may be effective with one demographic group of users and not other. Each VA site will need to evaluate the best signage solution for its visitors and patients. Technology is not intended to replace volunteers and traditional signage, but may assist with an alternative method of delivering information and directions.

Resources

Sign societies are a source of information on new and emerging technologies. The International Sign Society holds national and regional tradeshows that are excellent events to research and connect with new and innovative manufactures. The Society for Environmental Graphic Design has seminars, conferences, and online educational forums and "webinars" that keep members up to date with emerging technologies, changes to codes and legislation.

ISA

International Sign Association

The International Sign Association (ISA) is a worldwide organization devoted to supporting, promoting, and improving the sign industry through government advocacy, education and training programs, technical resources, stakeholder outreach and industry networking events. Members are manufacturers, users and suppliers of on-premise signs and other visual communications systems. ISA has a strategic partnership with affiliated organizations and business partners and offers its members programs and services to grow their business. ISA International Sign Expo is the largest sign show in the world is held annually to promote, strengthen, and unify the sign industry.

International Sign Association/ ISA
707 North Saint Asaph Street
Alexandria VA 22314
(703) 836-4012

SEGD

Society for Environmental Graphics Design

Society for Environmental Graphic Design (SEGD) is the global community of people working at the intersection of communication design and the built environment that aspires to:

- Promote public awareness of our community and its role in shaping experience.
- Nurture demand for design excellence within the built environment.
- Serve as a source of education and inspiration for our community.
- Continue to define and refine our standards of practice.
- Foster relevant, well informed research to enhance our knowledge base.
- Sponsor peer recognition programs that inspire excellence.
- Promote collaboration across multiple design disciplines.
- Strengthen ties with educational programs that provide the academic underpinnings of our field.

Society for Environmental Graphics Design' SEGD
401 F Street NW Suite 3333
Washington DC 20001
(202) 638-0891

USGBC

U.S. Green Building Council

The Washington, D.C.-based U.S. Green Building Council (USGBC) is a 501 c3 non-profit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings. The USGBC is responsible for developing the LEED® Green Building Rating System™.

LEED®

Leadership in Energy and Environmental Design

LEED® is an acronym for Leadership in Energy and Environmental Design. The LEED® green building certification system is the preeminent program for rating the design, construction, and operation of green buildings. LEED® is a voluntary, consensus-based national standard for developing high-performance, sustainable ("green") buildings.

By using less energy, LEED®-certified buildings save money for individuals, businesses, and taxpayers; reduce greenhouse gas emissions; and contribute to a healthier environment for residents, workers and the larger community. Emerging Technology is continually being challenged to meet the building industries "green" goal. The demand for green products is driving changes in material and fabrication. Sustainable or "green building" design and construction is the opportunity to use our resources more efficiently, while creating healthier and more energy-efficient homes. Although there is no magic formula, success comes in the form of leaving a lighter footprint on the environment through conservation of resources, while at the same time balancing energy-efficient, cost-effective, low-maintenance products for our construction needs. In other words, green building design involves achieving the delicate balance between building and the sustainable environment.

Obtaining LEED® certification requires compliance with a minimum number of criteria affecting many aspects of a project, from site selection to the recycled content of building materials. While participation in the LEED® program has been mostly voluntary, some government entities require that publicly funded projects apply for LEED® certification and other states and communities are considering this.

Sustainable Design

Sign materials and fabrication methods can be "green." Use of recycled materials for the substrate will help reduce environmental impact. If a sign substrate is manufactured from recyclable materials such as: glass, metal and some photo polymers environmental impact can be reduced. Selection of Low VOC Matthews Acrylic Base Paint offers eco friendly paint solution. Paint that is applied through a specialized high volume low pressure (HVLP) paint applicator sprayer. It provides superior color coating with minimal overspray reducing waste and VOCs or volatile organic compounds. Power reduction can be made by the use of LED lighting. LED illumination creates a high brightness that offers reliable illumination providing long lasting light. LEDs consume very little energy and are effective in both interior and exterior illuminated signage.

Magazines and Web Resources

Below are a few online and printed publications specific to signage and information graphics

- DigitalSignagetoday.com

- Kioskmarketplace.com

- Signs of the Times (print publication ST Media Group, www.stmediagroup.com)

- SignWeb.com

Communication Technology

Web Based Technology

Web-based technologies can have a significant impact on how people interact with VA services and Medical Facilities. A web search for services and general information is often the first step for a visit of the facility. Integration of the website with GPS Technology such as driving directions and pedestrian wayfinding and navigation can help to create a positive visit to the VA. Web bases tools are changing the way we gather information, plan a doctor visit, scheduling appointments, and fill prescriptions. A VA Visit can be organized from finding a parking space, arriving at the proper entrance, to walking to a doctor's office or medical department. This technology will only assist thoughts clients with web access. If a client does not have personal web access, an interactive kiosk could be located at the main entry of the facility to provide navigational instructions or print out a map.

Bar CodeTechnology

Bar code technology could be utilized to assist with wayfinding. For example; a barcoded printed appointment card or patient identity card could be scanned at a barcode reader at the point of entry to the building to assist with navigation, provide information as to appointment wait times, lab work required or just directions to a specific office or departments. If the barcode were on a smart phone, the phones barcode image could be scanned, and through text to speech technology, the phone could continue to issue navigational information until the patient arrived at the destination.

Mobile Devices / Smart Phones

"In the Fall of 2011, approximately 25% of cell phone users had smart phones. It is projected that by 2113, 50% of phones will be smartphones. A growing number of applications (apps) for smart phones have a direct impact on wayfinding and signage. Though this technology may not reach all VA patients and visitors, cell phones are a growing segment of VA users. Mobile apps can assist with directions, appointments, health information, events and medical education."
– Wikipedia

GPS

Global Positioning Systems

GPS navigation software for Tablets Smartphones, Pocket phones and personal digital assistants (PDAs) is revolutionizing the way people navigate. These smart phones powered with apps for GPS and mapping technology can assist with wayfinding needs. One such solution is specifically designed to serve as a navigation aid for mobile devices. Though it is a separately licensed product, the mobile app is seamlessly integrated with popular screen readers. The Loadstone project, Mobile Geo and Code Factory's GPS navigation software are developing software for satellite navigation for blind and visually impaired users. The software runs currently on many different Nokia devices with the S60 platform under all versions of the Symbian operating system. A GPS receiver must be connected to the cell phone by Bluetooth. Blind and visually impaired people around the world are using cell phones because there are two screen reader products for the S60 Symbian platform: Talks from Nuance Communications and Mobile Speak from Code Factory, making these devices accessible by output of synthetic speech.

Along with the use of speech recognition and translation software GPS technology can pinpoint your location, assist in learning about the points of interest (POIs), in your immediate vicinity, plan a route between specified points of origin and destination, and get instructions on maneuvers to make, as well as information about waypoints along a route that you are following.

Communication Technology

RFID

*Radio-Frequency
Identification Device*

"Radio Frequency Identification Device (RFID) tag is a small electronic tag that stores, transmits and receives information. The RFID tag includes a small RF transmitter and receiver. An RFID reader transmits an encoded radio signal to interrogate the tag. The tag receives the message and responds with its identification information. Many RFID tags do not use a battery. Instead, the tag uses the radio energy transmitted by the reader as its energy source. The RFID system design includes a method of discriminating several tags that might be within the range of the RFID reader.*"*
– *Wikipedia*

Radio-frequency identification (RFID) is a technology that uses radio waves to transfer data from an electronic tag, called RFID tag or label, attached to an object, through a reader for the purpose of identifying and tracking the object. Some RFID tags can be read from several meters away and beyond the line of sight of the reader. The application of bulk reading enables an almost-parallel reading of tags.

Appointment cards could be issued with RFI tags. RFID readers could be installed at key intersections with in the Hospital. An appointment card is scanned and directional instructions are issued to help patients navigate the facility. A central scanner could be located at a main Info desk to issue directional instructions.

"Radio frequency identification is a powerful emerging technology that enables companies to achieve total business visibility. By knowing the identity, location and conditions of assets, tools, inventory, people and more, companies can optimize business processes and reduce operational costs."
– *RFID Journal, Mark Roberti*

**Speech/Voice
Recognition**

Voice recognition in combinaton with GPS technologies are creating new and interesting technological advances. It is speculated that Google's Android phone will address a number of common mobile phone issues, including the user interface that enables online searches. This is a hot topic as many users find it difficult to navigate through the array of expansive menus on today's handsets. Additionally, smaller keypads often add frustration to text messaging, creating a problem for Internet usage. Experts have recently declared that voice recognition GPS could be the key element in Google's mobile online strategy.

"Speech recognition (also known as automatic speech recognition or computer speech recognition) converts spoken words to text. The improvement of mobile processor speeds made feasible the speech-enabled Symbian and Windows Mobile Smartphones. Speech is used mostly as a part of User Interface, for creating predefined or custom speech commands. In 2011 the leading software vendors in this field are: Microsoft Corporation (Microsoft Voice Command), Digital Syphon (Sonic Extractor), Nuance Communications (Nuance Voice Control), Speech Technology Center, Vito Technology (VITO Voice2Go), Speereo Software (Speereo Voice Translator), and SVOX."
– *Wikipedia*

Emerging Technologies

Communication Technology

Digital Signage

Continual advances in LCD and LED plasma screens for electronic displays have allowed screens to be utilized as wayfinding displays, directory listing, facility information and advertising. Monitors are smaller less expensive and capable of features associated with computer capabilities. Changeable messages and large amounts of information can cost effectively be displayed on digital signs. Digital signage displays are not a stand-alone technology but work in conjunction with software driven on personal computers or servers. Digital signage is cost effective and becoming easier to use and operate.

Digital signage such as LCD, LED, plasma displays, or projected images can be used for a variety of signage needs.

- **Wayfinding:** Custom maps ensure visitors and guests are easily directed to their desired location, while avoiding secure areas. Using a digital signage network as a wayfinding tool reduces staff interruptions and increases operational efficiency.

- **Event Directories:** Display daily event schedules on a digital reader board. Computer programs can be created to seamlessly update wall monitors installed in the facilities whenever a change is made in the event management system.

- **Meeting Room Boards:** Digital displays outside of each meeting room dynamically update with meeting room information. Eliminate wasted paper and time by printing and distributing paper signs every day. Computer software can display corporate logos, upcoming events, the time, weather and much more.

- **Physician Directories:** Use the digital signage network as a physician directory to help visitors easily locate their doctor. Digital signage is the perfect solution for a healthcare facility that experiences a turnover in personnel. Signage software keeps the directory up-to-date and instantaneous.

- **Building Directories:** Maintaining a building directory has never been easier. Change tenant or department names in the software and instantly push the changed content out to the displays. Digital signage software eliminates days of waiting for proofs and printing to update the directory.

- **Donor Boards:**
   "Use Interactive touch screens or a digital display to recognize and say thank you to the community members whose generosity helps you continue your work. Digital donor boards eliminate the cost and time associated with printing traditional donor plaques and allow you to thank your donors faster than ever before."
   – *Janus Displays*

Touch Screen Displays

Touch Screen Display can be an integral part of an informational kiosk by allowing dynamic interaction with a map, directory or other informational displays.

Touch Screen technology can also be found in tablets monitors and Smart phones. A touchscreen electronic visual displays can detect the presence and location of a touch within the display area. The touchscreen enables one to interact directly with what is displayed without requiring any intermediate device that would need to be held in the hand. Such displays can be attached to computers, or to networks as terminals. The size other displays will vary with the application. Smartphone screen, Interactive kiosks or other custom user interfaces all could be part of a wayfinding signage program. There are a variety of touchscreen technologies.

Communication Technology

Touch Screen Displays

(continued)

- **Resistive:** A resistive touchscreen panel is composed of several layers, the most important of which are two thin, electrically conductive layers separated by a narrow gap. When an object, such as a finger, presses down on a point on the panel's outer surface the two metallic layers become connected at that point: the panel then behaves as a pair of voltage dividers with connected outputs. This causes a change in the electrical current, which is registered as a touch event and sent to the controller for processing. The cover sheet consists of a hard outer surface with a coated inner side. When the outer layer is touched it causes the conductive layers to touch creating a signal that the analog controller can interpret and determine what the user wants to be done. Resistive touch is used in restaurants, factories and hospitals due to its high resistance to liquids and contaminants. A major benefit of resistive touch technology is it is extremely cost-effective. One disadvantage of resistive technology is its vulnerability of being damaged by sharp objects.

- **Surface acoustic wave:** Surface acoustic wave (SAW) technology uses ultrasonic waves that pass over the touchscreen panel. When the panel is touched, a portion of the wave is absorbed. This change in the ultrasonic waves registers the position of the touch event and sends this information to the controller for processing. Surface wave touchscreen panels can be damaged by outside elements. Contaminants on the surface can also interfere with the functionality of the touchscreen.

- **Capacitive touchscreen of a mobile phone:** A capacitive touchscreen panel consists of an insulator such as glass, coated with a transparent conductor such as indium tin oxide. As the human body is also an electrical conductor, touching the surface of the screen results in a distortion of the screen's electrostatic field, measurable as a change in capacitance. Different technologies may be used to determine the location of the touch. The location is then sent to the controller for processing. Unlike a resistive touchscreen, one cannot use a capacitive touchscreen through most types of electrically insulating material, such as gloves; one requires a special capacitive stylus, or a special-application glove with fingertips that generate static electricity. This disadvantage especially affects usability in consumer electronics, such as touch tablet PCs and capacitive smartphones in cold weather.

Touch Screen Applications

An Interactive Kiosk has a touch screen requiring a visitor's interaction. The combination of voice recognition technology and 3-D animation a kiosk can contain a virtual attendant or an Avatar. The Avatar in a kiosk can dispense directional information in more of an active interaction. The Avatar may be programed to "reach out to the visitor and offer assistance prior to a request for information. Equipped with speakers, receivers and motion sensor, the avatar can "reach out" and offer assistant and information.

Interactive kiosk with a paper print out can provide "old School" maps or directions for visitors. As well as maps, an interactive kiosk can print marketing material and event schedules. Self-service kiosk solution combines cutting edge LCD technology, progressive design and proprietary software. With virtual Concierge software, an unlimited amount of brochures can be displayed on your kiosk as well as a solution for multilingual issues.

Lighting

The signage industry has been effected by the Energy Independence and Security Act of 2007 (EISA) and the energy reduction goals for federal agencies put forth in Executive Order 13423 to be adopted in 2012. These new federal standards introduces more aggressive requirements for three key provisions: the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards. To comply with these regulations the lighting industry has made advances and changes to illumination products in order to meet lighting efficiency standards. Signage fabricators have adopted new illumination products offered by the lighting industry, by shifting from the use of incandescent and fluorescent illumination to the more efficient halogen or LED illumination to meet economic, ecological and regulatory goals.

LED

Light Emitting Diode

LEDs present many advantages over incandescent light sources including lower energy consumption, longer lifetime, improved robustness, smaller size, faster switching, and greater durability and reliability. LEDs powerful enough for room lighting are relatively expensive and require more precise current and heat management than compact fluorescent lamp sources of comparable output.

LED flood lights powered by solar and battery back up are a good solutions for exterior signage and DOT road sign illumination. LED, solar with battery backup and power control systems technologies continues to make improvements in brightness, longevity, reliability, and durability. As these technologies advance more products will become available for commercial exterior illuminated signage applications. The solar power systems with battery backup will extend illumination capabilities beyond 6 to 8 hour run times even on cloudy days. LED illumination with solar power require no line voltage, digging, trenching and can be located in remote locations with limited scheduled maintenance for up to five years. The ultra light bright and efficient LED fixtures continue to yield economic and safety benefits to illuminated exterior signage.

Solar Illumination

Current and emergent photovoltaic technologies make solar powered sign illumination possible and practical.

Photovoltaic Solar power supply in conjunction with LED illumination and electronic controls systems which integrated multi power sources can lend to a reliable and predictable power supply for illuminated signage. Advancements are continually being made in both photovoltaic technology and sophisticated power management systems. Battery backup of solar power source can be effective solution for remote stand-alone signage needs.

While utilizing solar for powering illuminated signage can currently be accomplished, there are certain challenges to be addressed for real time practical application, particularly in the form of batteries. As energy collection with solar panels improves and new power management systems are developed, along with LED's with higher light output and low electrical consumption, batteries are, and will remain, the cornerstone of the system that needs development to allow installations to become truly viable. Look for many changes in this area in the upcoming years.

Digital Printing

In the past signage was painted or silk-screened graphics. Advancements in digital printing continue to be make an impact on how signage is produced and designed. Digital prints of maps for directories can be more colorful and pictorial. The low cost of digital prints makes updates and changeable graphics possible. Temporary signs and banners are cost effective, weatherproof and can be produced quickly.

The combination of technological advances in; the materials or substrates to print on, the inks and dyes to print with, the digital printers and cutting equipment with-which to produce graphic, continues to make marked improvement and increased signage capabilities. The substrates in which stable images can be printed on, has expanded. Premium cast vinyl film designed for long-term outdoor signage is a flexible material for vehicle wraps. Perforated material having a see through quality for window/bus wraps allow graphic to be placed on busses, buildings, windows, elevator doors and almost any surface. The difference of this enhanced resolution by high quality printers is unmistakable. High-definition output is both brilliant and eye-catching. Die sublimation is a printing process that allows for ink to penetrate various fabrics from very sheer see-through silks to UV stable inks on heavy aw-ning canvas. The Die-sub process has again expanded how and where a designer is able to place graphics.

Large format printers, printers with increasing resolution DPI (dots per inch), and printer speed impact graphic solutions and cost of on site graphics. Large format printers can print on rolled paper or fabric of increasing widths. Where once bill-boards where painted by hand now digital graphics can wrap an entire buildings. Fabrication and computer controlled cutting technology allows for high production fabrication runs of fairly complex shapes. All these production technologies are continually changing and advancing, allowing for design solutions for signage to be cost effective and more creative.

Wide Format Printers

"Wide Format printers (contrast to vector-rendering plotters) are generally accepted to be any printer with a print width between 17" and 100" Printers over the 100" mark may be called Super-Wide or Grand format. Wide format printers are used to print banners, posters and general signage and in some cases may be more eco-nomical than short-run methods such as screen-printing. Wide format printers gen-erally use a roll of print material rather than individual sheets and may incorporate hot-air dryers to prevent prints from sticking to themselves as they are produced."
–*Wikipedia*

Digital Printing Categories

Digital printing is categorized according to ink used:

- **Aqueous:** Thermal or Piezo inkjet printers using ink known as aqueous or water-based. The term "water base" is a generally accepted misnomer. The pigment is held in a non-reactive carrier solution that is sometimes water and other times a substitute liquid, including a soy based liquid used by Kodak. Aqueous ink generally comes in two flavors, Dye and UV (alternatively known as pigment). Dye ink is high color, low UV-resistant variety that offers the widest color gamut. UV ink is generally duller in color but withstands fading from UV rays. Similar in general principal to desktop inkjet printers. Finished prints us-ing dye inks must be laminated to protect them if they are to be used outdoors while prints using UV inks can be used outdoors un-laminated for a limited time. Various materials are available, including canvases, banners, metabolized plas-tic, and cloth. Aqueous technology requires that all materials be properly coated to accept and hold the ink.

Digital Printing and Laminates

- **Solvent ink:** This term is used to describe any ink that is not water-based. Piezo inkjet printers whose inks use petroleum or a petroleum by-product such as acetone as its carrier liquid. "Eco-solvent" inks usually contain glycol esters or glycol ether esters and are slower drying. The resulting prints are waterproof. Solvent inks may be used to print directly on uncoated vinyl and other media as well as ridged substrates such as Foam Board and PVC.

- **Dye sublimation:** Inks are diffused into the special print media to produce continuous-tone prints of photographic quality.

- **UV:**

  Piezo inkjet printers whose inks are UV-curable (dry when cured with UV light). The resulting prints are waterproof, embossed and vibrant. Any media material can be used in this technology, polymer made media are best. Ceramics, glass, metals, and woods are also used with printing with this technology. Important features of these UV-stable polyester films include: low transmission of ultraviolet light, high mechanical strength, and good dimensional stability. They also enable good adhesive bond strength to be achieved in coating, printing and laminating. The UV resistant "HOSTAPHAN® Protective Films" from Mitsubishi Polyester Film GmbH are biaxially oriented films made from polyethylene terephthalate (PET). These polyester films offer good weathering resistance and very high absorption of UV radiation.

  – *Alpha Imaging Wikipedia*

Laminate Types

The end result of digital printing is not always a flexible product. Digital prints can be laminated on substrates to produce ridged panel graphics. This type of product is excellent for out door use or interior high traffic wall panel installations. Graphics with laminate protection extends the durability of a graphic panel with vandal resistant, UV stable, and waterproof qualities. Below are some of the laminate options available in the sign industry.

– *Artcraft*

- **Matte laminates:** Matte laminates provide the most protection against surface glare from lights. The frosted surface, however, can make colors appear less intense and some brands are more susceptible to scratching. Gloss laminates make colors appear vivid and bright, but have serious glare problems and can scratch easily as well. Often the best compromise is a lustre (satin) laminate. It allows good color quality and minimizes glare.

- **Graffiti-resistant laminates:** Graffiti-resistant laminates are made of a Teflon-like substance and allow for spray paint and felt pens to be washed right off. The toughest come in high-gloss only. These products cannot be used in conjunction with any plastic substrates. There are serious compatibility issues.

- **Scratch-resistant laminates:** Scratch-resistant laminates have textured surfaces. The greater the texture, the tougher the laminate, but the more the color and image quality are compromised. Polycarbonate laminates are the toughest of these but are too thick for edge-wrapping.

- **Hot laminates:** Hot laminates become rigid when they cool. The thicker the film, the more rigid it becomes. Standard thicknesses are 3 mil, 5 mil and 10 mil. 10 mil on both sides of a print becomes 20 mil when heated together. These laminates have no UV rating, don't work well outdoors, and don't stick well to many types of digital prints. This necessitates leaving an overlap of laminate around the edge of the print to seal it all in (known as encapsulation). Hot laminates are also available in matte or gloss.

Advancements in Cutting, Routing, and Milling

Graphic Image / Digital Laminate

By far the most advanced technologically, Graphic Imaging is a custom print option that captures full color, photographic images. Graphic Imaging can replicate images created on computer or designs that can be scanned electronically. Since graphic image process is a full color reproduction, the appearance of the print presents itself in a digital format. Image resolution of 300 d.p.i. or higher can produce clear images on a large finished replication. One of the key factors to keep in mind about graphic image production is that a vendor can only reproduce the quality of what is given to then. For example, if the only available artwork is a faxed copy of a copy, then our finished laminate will only duplicate that art. In some cases, Some vendors can recreate artwork images, however, this is time consuming and expensive to accomplish.

– *Tape-Ease 620; Green Bay Rd. Denmark, WI*

Graphic panels do not need to be rectangles any more. With the advancement in computer numerical controlled (CNC) cutting systems the complexity of the cut shape is no longer a major design concern. Most production runs for ridged panel substrates are done on various CNC cutting tables with plasma, waterjet, or milling and routing capabilities

Routing

A CNC Router is a numerical control tool that cuts objects from wood or plastic. Parts of a project can be designed in the computer with a CAD/CAM program, and then cut automatically using a router to produce a finished part. The CNC router works like a printer. Work is composed on a computer and then the design or drawing is sent to the CNC router for the hard copy. This outputs a 3-dimensional copy of the work. The CNC router uses a cutting tool following the vector based computer instructions in Cartesian coordinate system (X, Y, Z) for 3D motion control. This gives the computer a printer-like ability to drive a CNC machine to make dimensional letters and other sign parts.

Cutting

Plasma Cutting is a process that is used to cut steel and other metals of different thicknesses (or sometimes other materials) using a plasma torch. In this process, an inert gas (in some units, compressed air) is blown at high speed out of a nozzle; at the same time an electrical arc is formed through that gas from the nozzle to the surface being cut, turning some of that gas to plasma. The plasma is sufficiently hot to melt the metal being cut and moves sufficiently fast to blow molten metal away from the cut. Plasma is an effective means of cutting thin and thick materials alike. Hand-held torches can usually cut up to 2 inches (51 mm) thick steel plate, and stronger computer-controlled torches can cut steel up to 6 inches (150 mm) thick. Since plasma cutters produce a very hot and very localized "cone" to cut with, they are extremely useful for cutting sheet metal in curved or angled shapes.

Freehand Cut of a Thick Steel Plate The HF Contact type uses a high frequency, high-voltage spark to ionize the air through the torch head and initiate an arc. These require the torch to be in contact with the job material when starting, and so are not suitable for applications involving computer numerical controlled (CNC) cutting.

The Pilot Arc type uses a two-cycle approach to producing plasma, avoiding the need for initial contact. First, a high-voltage, low current circuit is used to initialize a very small high-intensity spark within the torch body, thereby generating a small pocket of plasma gas. This is referred to as the pilot arc. The pilot arc has a return electrical path built into the torch head. The pilot arc will maintain itself until it is brought into proximity of the work piece where it ignites the main plasma-cutting arc. Plasma arcs are extremely hot and are in the range of 25,000 °C (45,000 °F).

Advancements in Cutting, Routing, and Milling

Water Jet Cutting

"The water jet is unparalleled in many aspects of cutting and has changed the way many products are manufactured. Many types of water jets exist today, including pure water jets (water only), abrasive water jets, percussive water jets, cavitation jets and hybrid jets. Operation of the cutter is commonly connected to a high-pressure water pump where the water is then ejected from the nozzle, cutting through the material by spraying it with the jet of high-speed water. Additives in the form of suspended grit or other abrasives, such as garnet and aluminum oxide, can assist in this process.

An important benefit of the water jet cutter is the ability to cut material without interfering with the material's inherent structure as there is no "heat-affected zone". Water jet cutters are also capable of producing rather intricate cuts in material. With specialized software and 3-D machining heads, complex 3-D shapes can be produced.

Advances in control and motion technology, 5-axis water jet cutting (abrasive and pure) has become a reality.

Water jet is considered a "green" technology. Water jets produce no hazardous waste, reducing waste disposal costs. They can cut off large pieces of reusable scrap material that might have been lost using traditional cutting methods. Parts can be closely nested to maximize material use, and the water jet saves material by creating very little kerf. Water jets use very little water (a half gallon to approximately one gallon per minute depending on cutting head orifice size), and the water that is used can be recycled using a closed-looped system. Wastewater usually is clean enough to filter and dispose of down a drain. The garnet abrasive is a non-toxic natural substance that can be recycled for repeated use. Garnet usually can be disposed of in a landfill. Water jets also eliminate airborne dust particles, smoke, fumes, and contaminants from cutting materials such as asbestos and fiberglass. This greatly improves the work environment and reduces problems arising from operator exposure."
–*Wikipedia*

Advancements in Materials

Photo Polymer

"A photopolymer is a polymer that changes its properties when exposed to light, often in the ultraviolet spectrum. These polymers are useful in dentistry for fillings and in rapid prototyping in the stereo lithography and 3D printing processes. In the past this material was also used in the creation of ABA/ADA compliant Architectural Signage. However the photo polymer does NOT produce a domed Braille dot. And an application of paint to form the dome is required. This material also used as a relief plate for flexographic printing, can be used in plastics, paper, labels and sign inserts. Some commercial brands worldwide include DuPont Cyrel, BASF Nyloflex, Novacryl, Elaslon, McDermid and Soleflex Exaprint.

The basic material is soft and light sensitive. A selective exposure to UV lamps is then applied, then developed and cured. the procedure involves exposing image wise a photopolymerizable element to actinic radiation emitting at a wavelength in the range of 365 nm. removing the unexposed or unpolymerized areas of the plate with solvent, drying the resulting plate. The photopolymerized element can then be detackified by exposing the element to U.V. radiation emitting a wavelength in the range of 254 nm. To ensure final plate hardening and photopolymerization, the printing element can be further post-exposed to radiation emitting at wavelengths in the range of 365 nm.

Advancements in Cutting, Routing, and Milling

Current platemaking processes utilize various sources of radiation for developing relief images and maximizing plate hardening. For example, actinic radiation from a variety of sources can be used, including commercial ultraviolet fluorescent tubes, medium, high, and low pressure mercury vapor lamps, argon glow lamps, photographic flood lamps, pulsed xenon lamps, carbon arc lamps, etc. Called photopolymeric flexographic relief printing plates in the flexographic printing plate industry because maximum consistent print quality will be obtained using plates with reduced shrinkage."

–*Wikipedia*

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U.S. Department
of Veterans Affairs

Sustainability

- **Sustainability**
- **Green Strategies for Signs**

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Sustainability

Executive Order (EO) 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," was signed by President Obama on 5 October 2009. This EO does not rescind/eliminate the requirements of EO 13423. Instead, it expands on the energy reduction and environmental performance requirements for Federal agencies identified in EO 13423.

The goal of EO 13514 is "to establish an integrated strategy towards sustainability in the Federal Government and to make reduction of greenhouse gas emissions (GHG) a priority for Federal agencies."

Towards meeting that goal, Federal agencies are required to meet a series of deadlines critical to achieving the GHG reduction goals of the EO. This EO also sets non-numerical targets that agencies must reach. The full text of the required targets and strategies can be found within Executive Order 13514.

Green Strategies for Signs

Signs, in and of themselves, are not an item that can be considered "green" or a LEED® product, or product created from materials that are recycled. However, there are many elements related to signs that can contribute to accomplishing a green strategy for signs.

- Look into working with a sign company that does environmentally responsible production.

  Ask what programs a company has in place for things like solvent use reduction, water conservation, disposal and recycling of manufacturing waste and by products. Do they use low VOC paints, do they use T5 or T8 bulbs in building illuminated signs; do they build illuminated signs and letters with LED lighting, do they install signs on the wall with mechanical fasteners instead of glue?

- Analyze the various elements of the design, fabrication, installation and product life cycle to eliminate materials and methods that are contrary to the intent of sustainability.

  Look toward the use of durable materials that fit a signs application or location in order to extend the life of the sign. Implement a design that allows for signing to be updated with discarding the entire sign. Select materials that will not deteriate from weather or environmental conditions.

  Utilize signs that are constructed from a component based system that allows for message modification and that can incorporate changes without have to replace the entire sign. Recycle signs whenever possible.

- A sign program can aid in the qualifications of a building for a LEED® rating.

  A sign program can be developed that educates the public on the benefits of a green building. It can highlight and identify elements, systems and materials of a building that specifically contribute to the LEED® rating.

- Look specifically at materials involved in producing signs.

  A material such as aluminum is commonly used in signs can be recycled. This is a better material selection than say wood, even considering that wood is also a product that can be recycled. The life cycle of a wood sign is considerably shorter than a sign made of aluminum so it enters the "waste stream" sooner.

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Sign Index

- **Introduction**
- **List of Signs**

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Sign Numbering System

Each sign in this guide is given a specific index number that can be used to easily identify each individual sign. Signs are named based on the sign type, the family of sign they belong to, and then given a specific number. Signs are grouped based on their purpose, configuration, layout, and installation specifications. Certain sign families may have only one sign, whereas others may have several signs assigned to them.

Certain signs that have been used in the past may have been moved, renamed or have been removed from the guide altogether; when determining which signs are needed, consult the guide to obtain the appropriate number for each necessary sign. If planning on updating any or all signs, refer to **Section 2- "Need a Sign" Program** of the Guide for more information.

Signs are named in the following manner:

IN - 17.01 A

XX Designates the type of sign:

IN= Interior Signs

SP= Specialty Signs

EI= Exterior Illuminated Signs

EN= Exterior Non-Illuminated Signs

PS= Parking Structure Signs

PL= Parking Lot Signs

NC= Cemetery Signs

17 Two digit number identify a particular directory family.

.01 The two digit number, following the period, identifies a specific sign within the directory family.

A The letter designates a specific sign configuration, version and/or layout for graphics.

Example Sign

The following sign is an example of how this numbering system is used:

IN-04.03: Primary Room Identification with Insert

25286

Blood Draw
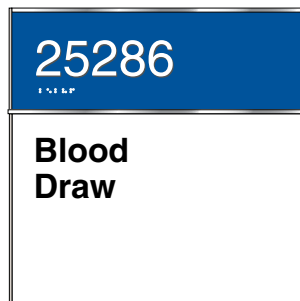
IN- Designates that this sign is an Interior Sign

04- Designates that this sign is a Primary Room Identification sign.

.03- Identifies this specific sign in the Room Identification sign family. (Sign with Insert)

Sign	Sign Name	Description	Page No.
		CODE AND LIFE SAFETY SIGNS	
IN-01.01.01	Emergency Exit Plan	Evacuation Map/Fire Exit Plan with pocket to accept map insert is to be placed at points of exit and transition in a building (all elevators, exits, and exiting stairwell doors); other locations as needed. Use this large size sign when large size maps are necessary.	Page 8-5-1
IN-01.01.03	Emergency Exit Plan and Hoptel Door Emergency Exit Plan	Evacuation Map/Fire Exit Plan with pocket to accept map insert is to be placed at points of exit and transition in a building (all elevators, exits and exiting stairwell doors); other locations as needed.	Page 8-5-3
IN-01.02	Fire Equipment Identification Sign	Fire equipment identification sign is used to locate and identify fire equipment cabinets.	Page 8-5-5
IN-01.03	Fire Procedure Sign	Fire procedure sign to be installed at elevators, adjacent to stairwell doors, nurse stations, and other locations as needed. This sign is optional.	Page 8-5-7
IN-01.04	Elevator Call Button	Elevator call button fire procedure sign to be installed at elevators. Position above type IN01.3.	Page 8-5-9
IN-01.05	Fire Door Sign	Fire Door sign is used to identify a fire door. Exception: signs shall not be provided for fire doors that are held open by automatic devices.	Page 8-5-11
IN-01.06	No Exit Sign	No Exit sign used to identify a door in a stairwell or other locations that are not exits.	Page 8-5-13
IN-01.07	Exit Sign	Non-illuminated exit sign used to identify exit or direction to exit.	Page 8-5-15
IN-01.08	Automatic Fire Door Sign - Hinged Door	Do Not Block information to be communicated at hinged fire doors held open by automatic devices.	Page 8-5-17
IN-01.09	Automatic Fire Door Sign - Roll Up	Do Not Block information to be communicated at roll down fire doors held open by automatic devices.	Page 8-5-19

Sign	Sign Name	Description	Page No.
IN-01.10	Stair Identification Sign	Identifies stairwell doors that are fire exits.	Page 8-5-21
IN-01.11	Stairwell Identification Sign	Stairwell, floor level and egress information. Sign is located within the stair enclosure at each floor landing and must be readily visible when stair door is in open or closed position. Per NFPA 101, Section 7.2.2.5.4, Stairwell Identification signs are required only at new enclosed stairs serving three or more stories and at existing enclosed stairs serving five or more stories.	Page 8-5-23
IN-01.12	Area of Refuge (evacuation Assistance)	Disabled evacuation assistance directional sign indicating area of refuge for evacuation assistance.	Page 8-5-25
IN-01.13	Push Alarm Identification Sign	Push alarm identification sign is an instructional sign for push alarmed doors.	Page 8-5-27
IN-01.14	Open Door Fire Safety Sign	Open door fire safety sign is used to identify a particular door is a fire safety door and is to remain open at certain times.	Page 8-5-29
IN-01.15	Hazardous Material Information Sign	Hazardous materials information sign used to easily identify specific hazards within room, storage cabinet or locker.	Page 8-5-31
IN-01.16	Oxygen In Use Warning Sign	Caution information regarding oxygen in use. Sign must be installed on all doors to rooms in which oxygen is in use.	Page 8-5-33
IN-01.17	Compressed gas Warning Sign	Caution information regarding gases in use. Sign must be installed on all doors to rooms that contain the listed gases. Adjust the listing of gases to reflect the actual gases being used in the laboratory.	Page 8-5-35
IN-01.18	Nonflammable Anesthesia Restriction Sign	Caution information regarding anesthetic agents in use. Sign is to be installed on the doors to all operating rooms.	Page 8-5-37
IN-01.19	Radioactive Material Warning Sign	Caution information regarding radioactive material. Sign is to be installed on the doors to all rooms where radioactive materials are in use or stored.	Page 8-5-39

Sign	Sign Name	Description	Page No.
IN-01.20	Radioactive Area Warning Sign	Caution information regarding area with radioactive material. Sign must be installed in areas where radioactive materials are used or stored.	Page 8-5-41
IN-01.21	High Voltage Warning Sign	Caution information regarding high electrical voltage. Sign must be installed on the doors to all rooms with high voltage (over 600 volt) equipment.	Page 8-5-43
IN-01.22	Biohazard Warning Sign	Caution information regarding biohazard materials. Sign must be installed on the doors of all rooms where there are biohazard materials.	Page 8-5-45
IN-01.23	Laser Warning Sign	Caution information regarding lasers. Sign must be installed on the doors to all rooms where lasers are used.	Page 8-5-47
IN-01.24	Occupational Exposure Area Warning Sign	Caution information regarding occupational exposure. Sign is to be installed on doors to all rooms where there is occupational exposure.	Page 8-5-49
IN-01.25	No Re-Entry Floor Sign	No re-entry floor sign is used to identify a door to a stairwell or other locations, which locks will not allow re-entry.	Page 8-5-51
IN-01.26	Push To Exit Sign	Push to exit sign is used to inform type of action needed to activate door. Sign is to be installed on doors to all exits where push motion is needed to activate door.	Page 8-5-53
IN-01.27	Emergency Push To Open Sign	Emergency push to open sign is used to inform type of action needed to activate door in case of an emergency. Sign is to be installed next to doors at all exits where push motion is needed to activate door.	Page 8-5-55
IN-01.28	Emergency Slide To Open Sign	Emergency slide to open sign is used to inform type of action needed to activate door in case of an emergency. Sign is to be installed next to doors at all exits where slide motion is needed to activate door.	Page 8-5-57
IN-01.29	Direction Of Exit Sign	Direction of exit sign used to indicate direction egress. Sign is to be installed	Page 8-5-59

Sign	Sign Name	Description	Page No.
		next to doors at all exits where direction is needed to exit.	
IN-01.30	No Re-Entry Sign	No re-entry sign is used to identify an exit door which will lock and not allow re-entry into room, floor or building.	Page 8-5-61
IN-01.31	Fire Equipment Identification Sign	Fire equipment identification sign is a flag sign used to identify a fire equipment cabinet.	Page 8-5-63
IN-01.32	Pregnancy Notification Sign	Pregnancy notification sign is used to convey a request for patient information. Sign is placed in patient waiting areas, treatment rooms and dressing rooms.	Page 8-5-65
IN-01.33	Re-Entry Sign	Re-entry Sign is used to identify an entry door which will allow re-entry into room, floor, or building.	Page 8-5-67

MANDATORY VA POLICY SIGNS

Sign	Sign Name	Description	Page No.
IN-02.02	No Smoking	No Smoking sign is required to be placed at the entrance of a building.	Page 7-4-3
IN-02.03	No Weapons Permitted	No Weapons sign is required to be placed at the entrance of a building.	Page 7-4-5
IN-02.04	Business Hours	Hours of Operation sign is required to be placed at the entrance of a building.	Page 7-4-7
IN-02.05	Notice of Weapons Search	This is only required at metal detector screening devices and is to be installed next to the detector and in a location that is visible before passing through the machine.	Page 7-4-9
IN-02.06	Single Post Parking Notice	Large, non-illuminated single post or wall mounted tow away informational sign.	Page 7-4-11
IN-02.07	Patient Rights and Responsibilities	Non-illuminated enclosed display case / frame to accommodate foam core mounted paper print behind glass or acrylic.	Page 7-4-13
IN-02.08	Policies and Directives	Non-illuminated enclosed display case / frame to accommodate foam core mounted paper print behind glass or	Page 7-4-15

Sign	Sign Name	Description	Page No.
		acrylic.	
IN-02.10	No Weapons Sign: Small	No Weapons sign to be placed at all public building entrances.	Page 7-4-17
IN-02.11	No Weapons Sign: Large	Non-illuminated wall mounted or single post "No Weapons" sign. To be placed at all public drive entrances to site.	Page 7-4-19
IN-02.12	Security Notice Sign	Large, non-illuminated single post or informational sign	Page 7-4-21

INTERIOR SIGNS

Sign	Sign Name	Description	Page No.
IN-04.01	PRIMARY ROOM IDENTIFICATION	This sign has tactile number and Braille on the top sign component. The sign is to identify the occupant or activity within a room.	Page 9-5-3
IN-04.02	SECONDARY ROOM IDENTIFICATION	This sign always has a tactile number and Braille in its top sign component. This sign is used to identify secondary rooms or rooms that have short names.	Page 9-5-5
IN-04.03	PRIMARY ROOM IDENTIFICATION WITH INSERT	This sign always has tactile number and Braille as its top sign component. Lower section is for insert. Use this sign to identify the occupant or activity within a room.	Page 9-5-7
IN-04.04	SECONDARY ROOM IDENTIFICATION WITH INSERT	This sign always has tactile number and Braille as its top sign component. Lower section is for insert. Use this sign to identify the occupant or activity within a room.	Page 9-5-9
IN-05.06	PATIENT ROOM IDENTIFICATION WITH PAPER HOLDER	Use this sign to identify patient room.	Page 9-5-11
IN-05.07	PATIENT ROOM IDENTIFICATION WITH PATIENT CONDITION PULLOUTS	Sign is to be placed at patient rooms.	Page 9-5-13
IN-05.08	PATIENT ROOM IDENTIFICATION (TWO BED ROOM)	Sign is to be placed at patient rooms.	Page 9-5-15

Sign	Sign Name	Description	Page No.
IN-06.05	PATIENT BED SIGN	Use this sign above patient beds to identify the bed.	Page 9-5-17
IN-06.06	PATIENT BED SIGN	Use this sign above patient beds to identify the bed.	Page 9-5-17
IN-07.01	ROOM SIGN WITH INDICATOR	This sign always has tactile and Braille section at the top of the sign component. Use this sign for conference rooms, meeting rooms. This type of sign can also be used for exam rooms, treatment rooms, and offices where the occupants want to indicate that room is in use.	Page 9-5-19
IN-07.02	ROOM SIGN WITH INDICATOR	This sign always has tactile and Braille section at the top of the sign component. Use this sign for conference rooms, meeting rooms. This type of sign can also be used for exam rooms, treatment rooms, and offices where the occupants want to indicate that room is in use.	Page 9-5-19
IN-07.03	ROOM SIGN WITH INDICATOR	This sign always has tactile and Braille section at the top of the sign component. Use this sign for conference rooms, meeting rooms. This type of sign can also be used for exam rooms, treatment rooms, and offices where the occupants want to indicate that room is in use.	Page 9-5-19
IN-07.05	ROOM SIGN WITH INDICATOR AND PAPER INSERT	This sign always has tactile and Braille section at the top of the sign component. Use this sign for conference rooms, meeting rooms. This type of sign can also be used for exam rooms, treatment rooms, and offices where the occupants want to indicate that room is in use.	Page 9-5-21
IN-07.06	ROOM SIGN WITH INDICATOR AND PAPER INSERT	This sign always has tactile and Braille section at the top of the sign component. Use this sign for conference rooms, meeting rooms. This type of sign can also be used for exam rooms, treatment rooms, and offices where the occupants want to indicate that room is in use.	Page 9-5-21
IN-07.07	ROOM SIGN WITH INDICATOR AND PAPER INSERT	This sign always has tactile and Braille section at the top of the sign component.	Page 9-5-21

Sign	Sign Name	Description	Page No.
		Use this sign for conference rooms, meeting rooms. This type of sign can also be used for exam rooms, treatment rooms, and offices where the occupants want to indicate that room is in use.	
IN-08.01	NO SMOKING	Use these signs to inform "No Smoking" in a bold manner.	Page 9-5-23
IN-08.02	PROHIBIT INSTRUCTIONAL AND CONTROL	Use these signs to inform in a bold manner.	Page 9-5-25
IN-09.01	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	Page 9-5-27
IN-09.02	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	Page 9-5-27
IN-09.03	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	Page 9-5-27
IN-09.04	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	Page 9-5-27
IN-09.05	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	Page 9-5-27
IN-09.06	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	Page 9-5-27
IN-09.07	RESTROOM IDENTIFICATION	Use these signs to inform with a symbol, tactile raised text and Braille.	
IN-09.08	PICTOGRAM AND SYMBOL	Use these signs to inform with a symbol as well as text.	Page 9-5-29
IN-10.01	SIGN FRAME	Use these signs to hold posters, fire alarm bell schedules, maps or other information sheets.	Page 9-5-31
IN-10.02	SIGN FRAME	Use these signs to hold posters, fire alarm bell schedules, maps or other information sheets.	Page 9-5-31
IN-10.03	SIGN FRAME	Use these signs to hold posters, fire alarm bell schedules, maps or other information sheets.	Page 9-5-31
IN-10.04	SIGN FRAME	Use these signs to hold posters, fire alarm bell schedules, maps or other	Page 9-5-31

Sign	Sign Name	Description	Page No.
		information.	
IN-10.05	SIGN FRAME	Use these signs to hold posters, fire alarm bell schedules, maps or other information sheets.	Page 9-5-31
IN-10.06	SIGN FRAME	Use these signs to hold posters, fire alarm bell schedules, maps or other information sheets.	Page 9-5-31
IN-11.01	INFORMATIONAL OR INSTRUCTIONAL-	Use this sign to communicate miscellaneous information.	Page 9-5-33
IN-11.02	INFORMATIONAL OR INSTRUCTIONAL-	Use this sign to communicate miscellaneous information.	Page 9-5-33
IN-11.03	INFORMATIONAL OR INSTRUCTIONAL-	Use this sign to communicate miscellaneous information.	Page 9-5-33
IN-11.04	INFORMATIONAL OR INSTRUCTIONAL-	Use this sign to communicate miscellaneous information.	Page 9-5-33
IN-12.01	DESK OR COUNTER	Use this sign for messages to be communicated at counters and desks.	Page 9-5-35
IN-12.02	DESK OR COUNTER	Use this sign for messages to be communicated at counters and desks.	Page 9-5-35
IN-12.03	DESK OR COUNTER	Use this sign for messages to be communicated at counters and desks.	Page 9-5-35
IN-12.04	DESK OR COUNTER	Use this sign for messages to be communicated at counters and desks.	Page 9-5-35
IN-13.01	PERPENDICULAR (FLAG) MOUNT	Use this sign for messages to be communicated in corridors on the wall, above doors.	Page 9-5-37
IN-14.01	WALL DIRECTIONAL	Use this sign for directional information.	Page 9-5-39
IN-14.02	WALL DIRECTIONAL	Use this sign for directional information.	Page 9-5-39
IN-14.03	WALL DIRECTIONAL	Use this sign for directional information.	Page 9-5-39
IN-14.04	WALL DIRECTIONAL	Use this sign for directional information.	Page 9-5-39
IN-14.05	WALL DIRECTIONAL	Use this sign for directional information.	Page 9-5-39
IN-14.06	WALL DIRECTIONAL WITH INSERT	Use this sign for directional information.	Page 9-5-41

Sign	Sign Name	Description	Page No.
IN-14.07	WALL DIRECTIONAL WITH INSERT	Use this sign for directional information.	Page 9-5-41
IN-14.08	WALL DIRECTIONAL WITH INSERT	Use this sign for directional information.	Page 9-5-41
IN-14.09	WALL DIRECTIONAL WITH INSERT	Use this sign for directional information.	Page 9-5-41
IN-14.10	WALL DIRECTIONAL WITH INSERT	Use this sign for directional information.	Page 9-5-41
IN-14.11	FLOOR LEVEL DIRECTIONAL	Use this sign for directional information in a elevator lobby or stairwell landing. This sign is always a top sign component to designate floor level.	Page 9-5-43
IN-14.12	FLOOR LEVEL DIRECTIONAL	Use this sign for directional information in a elevator lobby or stairwell landing. This sign is always a top sign component to designate floor level.	Page 9-5-43
IN-14.13	FLOOR LEVEL DIRECTIONAL	Use this sign for directional information in a elevator lobby or stairwell landing. This sign is always a top sign component to designate floor level.	Page 9-5-43
IN-14.14	FLOOR LEVEL DIRECTIONAL	Use this sign for directional information in a elevator lobby or stairwell landing. This sign is always a top sign component to designate floor level.	Page 9-5-43
IN-14.15	FLOOR LEVEL DIRECTIONAL WITH INSERTS	Use this sign for directional information in a elevator lobby or stairwell landing. This sign always has floor designation on the top of the signs to designate floor level.	Page 9-5-45
IN-14.16	FLOOR LEVEL DIRECTIONAL WITH INSERTS	Use this sign for directional information in a elevator lobby or stairwell landing. This sign always has floor designation on the top of the signs to designate floor level.	Page 9-5-45
IN-14.17	FLOOR LEVEL DIRECTIONAL WITH INSERTS	Use this sign for directional information in a elevator lobby or stairwell landing. This sign always has floor designation on the top of the signs to designate floor	Page 9-5-45

Sign	Sign Name	Description	Page No.
		level.	
IN-14.18	FLOOR LEVEL DIRECTIONAL WITH INSERTS	Use this sign for directional information in a elevator lobby or stairwell landing. This sign always has floor designation on the top of the signs to designate floor level.	Page 9-5-45
IN-14.20	ELEVATOR LOBBY DIRECTIONAL WITH STRIPS AND MAP	Use this sign for directional information in an elevator lobby or stairwell landing. This sign always has floor designation and a "You are Here Map".	Page 9-5-47
IN-14.21	ELEVATOR LOBBY DIRECTIONAL WITH STRIPS AND MAP	Use this sign for directional information in an elevator lobby or stairwell landing. This sign always has floor designation and a "You are Here Map".	Page 9-5-47
IN-14.25	ELEVATOR LOBBY DIRECTIONAL WITH DIGITAL PRINT INSERT	Use this sign for directional information in a elevator lobby or stairwell landing. This sign always has floor designation and a "You are Here Map".	Page 9-5-49
IN-14.26	ELEVATOR LOBBY DIRECTIONAL WITH DIGITAL PRINT INSERT	Use this sign for directional information in a elevator lobby or stairwell landing. This sign always has floor designation and a "You are Here Map".	Page 9-5-49
IN-15.51	CEILING MOUNTED DIRECTIONAL AND IDENTIFICATION	Use this sign for directional and department identification information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-51
IN-15.52	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID-	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-53
IN-15.53	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID-	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-55
IN-15.55	CEILING MOUNTED DIRECTIONAL AND IDENTIFICATION WITH INSERT	Use this sign for directional and Department Identification information that needs to be communicated overhead. Sign is double sided and both	Page 9-5-57

Sign	Sign Name	Description	Page No.
		sides can be used for messages.	
IN-15.56	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID WITH INSERT	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-59
IN-15.57	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID WITH INSERT	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-61
IN-15.61	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-63
IN-15.62	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-65
IN-15.63	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-67
IN-15.65	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID WITH INSERT	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-69
IN-15.66	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID WITH INSERT	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-71
IN-15.67	CEILING MOUNTED DIRECTIONAL AND DEPARTMENT ID WITH INSERT	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-73
IN-16.51	SOFFIT MOUNTED DIRECTIONAL AND IDENTIFICATION	Use this sign for directional and department identification information that needs to be communicated overhead. Sign is single sided mounted on wall or over doorway.	Page 9-5-75

Sign	Sign Name	Description	Page No.
	IDENTIFICATION WITH INSERT	header or doorway.	
IN-16.67	SOFFIT MOUNTED DIRECTIONAL AND IDENTIFICATION WITH INSERT	Use this sign for directional information that needs to be communicated overhead. Sign is double sided and both sides can be used for messages.	Page 9-5-97

"YOU ARE HERE" MAPS AND DIRECTORIES

Sign	Sign Name	Description	Page Number
IN-17.01	Strip Directory	Small size main lobby directory with 48 directory strips	Page 10-5-1
IN-17.02	Large Strip Directory	Main lobby directory with 90 directory strips	Page 10-5-3
IN-17.03	Strip Directory with Map	Small size main lobby directory with 48 directory strips and map of building	Page 10-5-5
IN-17.04	Large Strip Directory with Map	Main lobby directory with 90 directory strips and a map of the building.	Page 10-5-7
IN-17.05	Strip Floor Directory	Small size elevator lobby directory with 24 directory strips	Page 10-5-9
IN-17.06	Large Strip Floor Directory	Elevator lobby directory with 48 directory strips.	Page 10-5-11
IN-17.11	Directory with Insert	Small size main lobby directory header and digital print insert.	Page 10-5-13
IN-17.12	Large Directory with Insert	Large size main lobby directory header and digital print.	Page 10-5-15
IN-17.13	Directory with Map and Listing Insert	Small size main lobby directory header and digital print inserts.	Page 10-5-17
IN-17.14	Large Directory with Map and Listing Insert	Main lobby directory header and digital print with 90 directory listings.	Page 10-5-19
IN-17.15	Floor Directory with Insert	Small size elevator lobby directory. Directory header and digital print with 24 listings.	Page 10-5-21
IN-17.16	Large Floor Directory with Insert	Elevator lobby directory. Directory header and digital print with 48 listings	Page 10-5-23
			Page 10-5-31

Sign	Sign Name	Description	Page No.
IN-18.01	GLASS DOOR AND SIDE LIGHT GRAPHICS	This sign is for use at glass entry doors to rooms or departments that are used by patients and public.	
IN-18.04	APPLIED DIGITAL IMAGE AND GRAPHIC TEXT	The sign is for use at the elevator doors that are used by patients and public.	
IN-18.05	APPLIED DIGITAL IMAGE AND GRAPHIC TEXT	The sign is for use at the elevator doors that are used by patients and public.	
IN-19.01	DIMENSIONAL LETTERS	Identification of information counters, major departments or services.	
IN-19.02	DIMENSIONAL LETTERS	Identification of information counters, major departments or services.	
IN-19.03	DIMENSIONAL LETTERS	Identification of information counters, major departments or services.	
IN-20.01	INSTRUCTIONAL SIGN	Use this sign above handicap accessible automatic door opening buttons.	
IN-27.01	Freestanding Information Kiosk	Free Standing kiosk Identifies Information station or floor directory. Used where wall is not available.	Page 10-5-25
IN-27.02	Wall Mounted Touch Screen Directory	Wall mounted interactive information station for identification of information service and department location. Monitor content is a separate project.	Page 10-5-27
IN-27.03	Freestanding Touch Screen Directory	Freestanding interactive information station for identification of information service and department location. Monitor content is a separate project.	Page 10-5-29

PARKING STRUCTURES

Sign	Sign Name	Description	Page No.
PS-01.01	22" - Long Ceiling Hung Directional	Non-illuminated, ceiling hung sign. This sign type is directed specifically to drivers providing them information such as the exit, additional parking and the elevators or stairs.	Page 5-5-1
PS-01.02	22" - Short Ceiling Hung Directional	Non-illuminated, ceiling hung sign. This sign type is directed specifically to drivers providing them information such as the exit, additional parking and the	Page 5-5-3

Sign	Sign Name	Description	Page No.
		and exits.	
PS-04.01	Wall Mounted Warning	Precautionary information placed strategically to avoid traffic conflict or accidents.	Page 5-5-21
PS-05.01	Square Colum Marker	Floor level identification marker for placement on the wide faces of the column.	Page 5-5-23
PS-05.02	Narrow Column Marker	Floor level identification marker for placement on the faces of narrow columns.	Page 5-5-25
PS-05.03	Round Column Marker	Floor level identification marker for placement on round columns.	Page 5-5-27
PS-05.04	Small Round Column Marker	Floor level identification marker for placement on round columns.	Page 5-5-29
PS-05.05	Pole Mount Marker	Floor Level identification marker for placement on pole.	Page 5-5-31
PS-06.01	Wall Mounted Identification	Stairwell and elevator identification sign.	Page 5-5-33
PS-07.01	Floor Level Identification Vinyls	Floor level identification for placement on stairwell and elevator doors.	Page 5-5-35
PS-07.02	Floor Level Identification Vinyls	Floor level identification for placement inside stairwells.	Page 5-5-37
PS-08.01	Dimensional Letters	Individual letters to identify an entrance or exit.	Page 5-5-39
PS-09.01	Clearance Height Bang Bar	Ceiling hung vehicular clearance identification marker to be placed at all entrances and at grade level changes.	Page 5-5-41
PS-10.01	Electronic Lane Use Sign	Sign to inform status of alternating entrance / exit lane.	Page 5-5-43
PS-11.01	Entrance and Exit Identification	Non-illuminated, free swinging ceiling hung sign with, and without, bang bar. This sign type is directed specifically to drivers providing entrance identification and information.	Page 5-5-45
PS-12.03	Parking Stall Designation	Non-illuminated post or wall mounted parking identification and informational sign. This type of sign is for use in	Page 5-5-47

Sign	Sign Name	Description	Page No.
		identifying or controlling specific parking areas, spaces or stalls.	
PS-12.04	Handicapped Parking Stall	Wall mounted or single post, non-illuminated handicapped parking stall sign.	Page 5-5-49
PS-12.05	Handicapped Parking Area	Wall mounted or single post, non-illuminated handicapped parking area sign. Identification of handicapped parking areas and directional information regarding access. These signs can also be used to provide direction information to drivers to direct them to handicapped parking that may not be obvious.	Page 5-5-51
PS-12.07	Informational Panel	Non-illuminated wall panel sign. Sign used to communicate various informational or instructional messages.	Page 5-5-53
PS-13.01	Electronic Stall Availability Sign	Sign to inform visitors as to the number of available parking spaces per floor. Electronic counting devices record the number of cars that enter and exit the garage and floor levels. This information changes as the corresponding number of parking spaces per floor is reflected.	Page 5-5-55
PS-14.01	Exterior Building Mounted Parking Directional/Availability Sign	Illuminated double sided parking lot identification and parking stall availability sign.	Page 5-5-57
PS-15.01	Stall Identification Number	Stalls can be assigned a designated number based on a logical/sequential stall numbering system. It is recommended that each number be painted at the isle facing end of each stall. The ideal number height is 6 inches (numbers should be no less than 4 inches in height).	Page 5-5-59
Regulatory	Regulatory Signs	Parking and traffic regulatory signs.	Page 5-5-60
	Identification Signs	Information and room identification.	Page 5-5-61
	Painted/Vinyl Floor, Wayfinding and Area Information Options	Painted and/or vinyl options for garage core identification.	Page 5-5-62

Sign	Sign Name	Description	Page No.
	Painted Wayfinding and Area Information Options	Options for painted columns / column markers and overhead directional messaging.	Page 5-5-63

PARKING LOT SIGNS

Sign	Sign Name	Description	Page No.
PL-12.01	Post and Panel Information	Large, non-illuminated post and panel parking lot identification sign. This sign type is for identifying parking lots to drivers circulating on a roadway system.	Page 6-5-1
PL-12.02	Single Post and Panel Information	Non-illuminated single post and panel sign with messages directed specifically to drivers. This sign can be used to communicate various informational or instructional messages.	Page 6-5-3
PL-12.03	Parking Stall Designation	Non-illuminated single post parking identification and informational sign. This type of sign is for use in identifying or controlling specific parking areas, spaces or stalls.	Page 6-5-5
PL-12.04	Handicapped Parking Stall	Single post, non-illuminated handicapped parking stall sign.	Page 6-5-7
PL-12.05	Handicapped Parking Area	Single post, non-illuminated handicapped parking area sign. Identification of handicapped parking areas and directional information regarding access.	Page 6-5-9
PL-12.06	Pole Mounted Lot Identification or Area Sign	Parking lot and parking area identification sign for mounting on light pole in parking lots and parking areas where the size of the parking lot is so large that zone information is needed to assist the drivers in locating their cars.	Page 6-5-11
PL-12.07	Wall Informational Panel	Non-illuminated panel sign with messages directed specifically to drivers and pedestrian. This sign can be used to communicate various informational or instructional messages.	Page 6-5-13
PL-12.08	Spinal Cord/Permit Parking Sign	Non-illuminated single post permit	Page 6-5-15

Sign	Sign Name	Description	Page No.
		parking sign.	
PL-12.09	Spinal Cord/Permit Van Parking Sign	Non-illuminated single post permit parking sign.	Page 6-5-17
PL-13.01	Electronic Stall Availability Sign	Sign to inform visitors as to the number of available parking spaces per lot. Electronic counting devices record the number of cars that enter and exit the lot(s). As this information changes, the corresponding number of parking stalls available per lot is reflected on the sign.	Page 6-5-19
PL-15.01	Stall Identification Number	Painted parking stall numbers.	Page 6-5-21
	Regulatory	Parking and traffic regulatory signs.	Page 6-5-22
	Flexible Sign Post	Flexible single post sign	Page 6-5-23

EXTERIOR SIGNS

Sign	Sign Name	Description	Page No.
EI-01.01	Site Monument	Internally illuminated large horizontal free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-1
EI-01.02	Site Monument	Internally illuminated horizontal free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-3
EI-01.03	Site Monument	Internally Illuminated small horizontal free standing monument sign for identifying a medical center where there is a space limitation. This sign can also be used to identify secondary drive entrances to the medical center.	Page 4-6-5
EI-01.04	Vertical Site Monument	Internally Illuminated vertical free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-7
EI-01.05	Vertical Site Monument	Internally Illuminated small free standing vertical monument sign for identifying a medical center where there is a space limitation. This sign can also be used to identify secondary drive entrances to the medical center.	Page 4-6-9

Sign	Sign Name	Description	Page No.
EI-02.01	Monument Primary Directional	Internally Illuminated Large directional monument sign with 10 stacking strips. Directional sign with messages directed specifically to drivers.	Page 4-6-11
EI-02.02	Monument Secondary Directional	Internally Illuminated small directional monument sign with 10 stacking strips. Directional sign with messages directed specifically to drivers.	Page 4-6-13
EI-03.01	Post and Panel Building Identification	Internally Illuminated large post and panel sign for identifying a medical center where there is a space limitation or there are other physical restraints that prevent a monument sign from being installed. This sign, in a non-illuminated version, can also be used to identify secondary drive entrances to the medical center.	Page 4-6-15
EI-03.02	Primary Directional Post and Panel	Internally Illuminated post and panel directional sign with messages directed specifically to drivers.	Page 4-6-17
EI-04.01	Post and Panel Directional	Internally Illuminated large/long auto oriented stacking 8 directional sign strips with messages directed specifically to drivers. Internally illuminated sign to be used only in locations where there is a heavy night time driver need for directional information.	Page 4-6-19
EI-04.02	Post and Panel Directional	Internally Illuminated standard auto oriented stacking 8 strip bar directional sign with messages directed specifically to drivers. Internally illuminated sign to be used only in locations where there is a heavy night time driver need for directional information.	Page 4-6-21
EI-06.01	Wall Mounted Overhead	Internally illuminated overhead wall mounted identification sign for a stand alone building that is not a medical center. This sign type can also be used to identify an entrance to a building.	Page 4-6-23
EI-06.02	Wall Mounted Building Identification	Internally Illuminated large wall mounted sign type that can be used to identify a	Page 4-6-25

Sign	Sign Name	Description	Page No.
		building on a medical center campus. It also can be used for identification of a stand alone building that is not a medical center and there is no place to install a free standing sign.	
EI-08.01	Wall Mounted Ambulance Entrance Identification	Internally Illuminated overhead wall mounted sign to be placed above the ambulance entrance.	Page 4-6-27
EI-08.02	Wall Mounted Ambulance Entrance Identification	Internally Illuminated wall mounted sign to be placed on the wall adjacent to the ambulance entrance.	Page 4-6-29
EI-08.03	Post and Panel Ambulance Entrance Identification	Internally Illuminated post and panel sign to be placed on the roadway, adjacent to the ambulance entrance to direct ambulance drivers to the correct building entrance.	Page 4-6-31
EI-09.01	Dimensional Building Identification Letters	Internal halo-illuminated, fabricated metal dimensional letters and logo for identifying a facility.	Page 4-6-33
EI-14.01	4 Panel Site Monument Kiosk	Internally Illuminated vertical free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-35
EI-15.01	4 Panel Monument Kiosk with Directional	Internally Illuminated vertical free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-37
EI-15.02	4 Panel Monument Kiosk with Directional & Address	Internally Illuminated vertical free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-39
EI-16.01	Vertical Site Monument with Electronic Message Center	Internally Illuminated vertical free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-41
EI-16.02	Horizontal Site Monument with Electronic Message Center	Internally Illuminated vertical free standing monument sign for identifying a medical center or the medical center's main entrance drive.	Page 4-6-43

Sign	Sign Name	Description	Page No.
EN-02.01	Primary Directional Monument	Large, non-illuminated 10 strip directional monument sign with messages directed specifically to drivers. Monument type directional signs should only be used on the main entrance drive and in front of the medical center.	Page 4-7-1
EN-02.02	Secondary Directional Monument	Small, non-illuminated 10 strip directional monument sign with messages directed specifically to drivers. Monument type directional signs should only be used on the main entrance drive and in front of the medical center.	Page 4-7-5
EN-03.02	Primary Directional Post and Panel	Standard non-illuminated auto oriented post and panel sign with messages directed specifically to drivers.	Page 4-7-7
EN-03.03	Secondary Post and Panel	Small non-illuminated post and panel sign with messages directed specifically to drivers. This sign can also be used to identify buildings.	Page 4-7-9
EN-03.04	Secondary Post and Panel	Non-illuminated, post and panel sign directional sign with messages directed specifically to pedestrians. Also, the sign can be used to identify buildings.	Page 4-7-11
EN-03.05	Primary Building Identification	Large, non-illuminated auto oriented building number/identification post and panel sign for identification of a building when a large sign is needed because the building is set back away from the roadway or the architectural scale (size) of the building warrants a large sign.	Page 4-7-13
EN-03.06	Secondary Building Identification & Information	Non-illuminated, pedestrian oriented building number/identification post and panel sign. This sign can be used for other general applications from information text to identifying specific functions or activities.	Page 4-7-15
EN-04.01	Primary Directional Post and Stacking Bar	Large/long, non-illuminated auto oriented 6-8 stacking bar directional sign.	Page 4-7-17
EN-04.02	Secondary Directional Post and Stacking Bar	Standard non-illuminated auto oriented 5 to 8 stacking bar directional sign.	Page 4-7-19

Sign	Sign Name	Description	Page No.
EN-04.03	Secondary Directional Post and Stacking Bar	Small, non-illuminated auto oriented 4 to 6 stacking bar directional sign.	Page 4-7-21
EN-04.04	Secondary Directional Post and Stacking Bar	Non-illuminated, pedestrian oriented 3 to 4 stacking directional bar sign.	Page 4-7-23
EN-05.01	Large Single Post Informational	Large, non-illuminated single post identification, informational and directional sign. This type of sign is for miscellaneous uses and can be utilized in landscape areas, at the head of parking stalls, or in other locations which have space limitations.	Page 4-7-25
EN-05.02	Medium Single Post Informational.	Standard, non-illuminated single post identification, informational and directional sign. This type of sign is the standard one for miscellaneous uses. It can be utilized in landscape areas, at the head of parking stalls, or in other locations which have space limitations which preclude the use of a double post and panel sign.	Page 4-7-27
EN-05.03	Small Single Post Informational	Small, non-illuminated single post identification and informational sign. This type of sign is for miscellaneous uses and can be utilized in landscape areas at the head of parking stalls, or in other locations which have space limitations. This type of sign would be placed in situations where a small sign is required.	Page 4-7-29
EN-06.01	Wall Mounted Overhead	Non-illuminated, overhead wall mounted sign. Identification of a stand alone building that is not a medical center. This sign type can also be used to identify an entrance to a building.	Page 4-7-31
EN-06.02	Wall Mounted Building Identification	Large, non-illuminated wall mounted sign This sign type can be used to identify a building on a medical center campus. It also can be used for identification of a stand alone building that is not a medical center and there is not place to install a free standing sign.	Page 4-7-33
EN-06.03	Wall Mounted Building	Large, non-illuminated wall mounted sign	Page 4-7-35

Sign	Sign Name	Description	Page No.
	Identification	with separate name panel. Building identification with and without names of the occupant or service. The secondary name of the occupant or service is on a changeable panel to allow modification to the sign without changing the entire sign.	
EN-06.04	Wall Mounted Building Identification	Medium, non-illuminated wall mounted sign. Building identification. When names of the occupant or service are used along with the building number, it should be text that will not likely change.	Page 4-7-37
EN-06.05	Wall Mounted Building Identification	Standard size, non-illuminated wall mounted sign with separate name panel. Building identification with and without names of the occupant or service. The secondary name of the occupant or service is on a changeable panel to allow modification to the sign without changing the entire sign.	Page 4-7-39
EN-06.06	Wall Mounted Building Identification	Standard size, non-illuminated wall mounted sign. Building identification with and without names of the occupant or service.	Page 4-7-41
EN-06.07	Wall Mounted Informational	Small, non-illuminated wall mounted sign. This sign is for miscellaneous uses such as identifying minor entrances, information messages, identifying sheds and equipment buildings, etc.	Page 4-7-43
EN-06.08	Wall Mounted Informational	Minor informational, non-illuminated wall mounted sign. This sign is for miscellaneous uses such as identifying minor entrances, information messages, identifying sheds and equipment buildings, etc.	Page 4-7-45
EN-08.01	Wall Mounted Ambulance Entrance Identification	Overhead, non-illuminated wall mounted sign to be placed above the ambulance entrance.	Page 4-7-47
EN-08.02	Wall Mounted Ambulance Entrance Identification	Non-illuminated wall mounted sign to be placed on the wall adjacent to the ambulance entrance.	Page 4-7-49

Sign	Sign Name	Description	Page No.
EN-08.03	Post and Panel Ambulance Entrance Identification	Non-illuminated post and panel sign to be placed on the roadway, adjacent to the ambulance entrance to direct ambulance drivers to the correct building entrance.	Page 4-7-51
EN-09.01	Dimensional Letters	Non-illuminated dimensional letters for identifying a facility. Should be placed on the building in a location that is highly visible to the public.	Page 4-7-53
EN-10.01	Traffic Regulatory Signs	Traffic regulatory signs	Page 4-7-55
EN-11.01	2 Blade Street Sign	Non-illuminated double blade name sign for an intersection	Page 4-7-57
EN-11.02	1 Blade Street Sign	Tall, Non-illuminated single blade street name identification for a single street	Page 4-7-59
EN-11.03	Pylon Street Sign	Non-illuminated Pylon type Street Sign	Page 4-7-61
EN-14.01	Building Entrance Door Identification	Non-illuminated, applied vinyl letter identification sign with messages directed specifically to pedestrians. The sign can also be used to identify buildings.	Page 4-7-63

SPECIALTY SIGNS

Sign	Sign Name	Description	Page Number
SP-21.01	Small Freestanding Stanchion Sign	Small freestanding identification, information, and directional sign to provide temporary information or queuing for lines.	Page 11-4-1
SP-21.02	Freestanding Informational Sign	Freestanding identification, information, and directional sign to provide temporary information.	Page 11-4-3
SP-21.03	Freestanding Informational Sign for Changeable Messages	Small freestanding information sign to provide temporary information.	Page 11-4-5
SP-21.04	Freestanding Informational Sign for Changeable Messages	Freestanding information sign to provide temporary information.	Page 11-4-7
SP-21.05	Infection Control Sign	Non-illuminated, freestanding, single sided kiosk to provide hand sanitizer, tissues, gloves, information regarding infection control and (possibly) face-	Page 11-4-9

Sign	Sign Name	Description	Page No.
		information designating the specific "Department of Veterans Affairs" project under construction as well as the name of the general contractor and other project specific consultants.	
SP-24.02	Construction Sign: Text with Rendering	Sign used at construction sites to provide information designating the specific "Department of Veterans Affairs" project under construction as well as the name of the general contractor and other project specific consultants.	Page 11-4-31
SP-24.03	Construction Sign: Rendering	Sign used at construction sites to provide visual information specific to the "Department of Veterans Affairs" project under construction.	Page 11-4-33
SP-24.04	Construction Sign: Safety	Sign used in construction sites to provide information regarding frequency of onsite construction related accidents.	Page 11-4-35

NATIONAL CEMETERY SIGNS

Sign	Sign Name	Description	Page No.
NC-01.01	Information / Regulations	National Cemetery non-illuminated, post and panel. Informative sign with visitor instructions and hours.	Page 12-4-1
NC-01.02	Information / Regulations	National Cemetery non-illuminated, post and panel informative sign with visitor instructions and hours	Page 12-4-3
NC-01.03	Information / Regulations	National Cemetery non-illuminated, post and panel informative sign with visitor instructions.	Page 12-4-5
NC-02.01	Horizontal You Are Here Map	Horizontal non-illuminated cemetery orientation map "You Are Here" sign with map and messages directed specifically to pedestrians. Position to provide pedestrians with an unobstructed view of the sign.	Page 12-4-7
NC-02.02	Vertical You Are Here Map	Vertical, non-illuminated cemetery orientation sign, "You Are Here" map and messages directed specifically to pedestrians. Position to provide	Page 12-4-9

Sign	Sign Name	Description	Page No.
NC-06.02	Flag Type Street Sign	National Cemetery non-illuminated, post and flag panel street identification sign with messages directed specifically at vehicles and pedestrians. The sign may also be used to identify buildings.	Page 12-4-23
NC-06.03	Tall Flag Street Sign	National Cemetery non-illuminated, post and flag panel street identification sign with messages directed specifically at vehicles.	Page 12-4-25
NC-07.01	Pylon Section Marker	National Cemetery non-illuminated, pylon sign with messages directed specifically at pedestrians.	Page 12-4-27
NC-07.02	Faucet Post with Sign Panel	National Cemetery non-illuminated, pylon sign with messages directed specifically at pedestrians.	Page 12-4-29
NC-07.03	Standard Granite Section Marker	National Cemetery granite section marker.	Page 12-4-31
NC-08.01	Wall Sign - Small	This sign has applied graphics and is informational.	Page 12-4-33
NC-09.01	Incised Letters	Incised letters cast into wall.	Page 12-4-35
NC-09.02	Incised Letters	Incised letters cast into wall.	
NC-09.03	Incised Letters	Incised letters cast into wall.	
NC-10.01	Dimensional Letters	Cast metal dimensional letters. Surface mounted, tight to wall.	Page 12-4-37
NC-10.02	Dimensional Letters	Cast metal dimensional letters. Surface mounted, tight to wall.	
NC-10.03	Dimensional Letters	Cast metal dimensional letters. Surface mounted, tight to wall.	
NC-11.01	Dimensional Seal	Cast metal seal inset or applied to entry wall.	Page 12-4-39
NC-14.01	Primary Room Identification	This sign must always be tactile and Braille. Use this sign to identify the occupant or activity within a room.	Page 12-4-41
NC-15.01	Restroom Identification	Use these signs to inform with a symbol as well as text: "Men- Handicapped	Page 12-4-43

Sign	Sign Name	Description	Page No.
		Access"	
NC-15.02	Restroom Identification	Use these signs to inform with a symbol as well as text: "Women- Handicapped Access"	Page 12-4-43
NC-15.03	Restroom Identification	Use these signs to inform with a symbol as well as text: "Unisex/Family-Handicapped Access"	Page 12-4-43
NC-15.04	Restroom Identification	Use these signs to inform with a symbol as well as text: "Men"	Page 12-4-43
NC-15.05	Restroom Identification	Use these signs to inform with a symbol as well as text: "Women"	Page 12-4-43
NC-15.06	Restroom Identification	Use these signs to inform with a symbol as well as text: "Unisex/Family"	Page 12-4-43
NC-16.01	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "Information"	Page 12-4-45
NC-16.02	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "Gravesite Locator"	Page 12-4-45
NC-16.03	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "No Smoking"	Page 12-4-45
NC-16.04	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "This Is A Smoke-Free Facility"	Page 12-4-45
NC-16.05	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "Caution Flammable"	Page 12-4-45
NC-16.06	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "Caution High Voltage"	Page 12-4-45
NC-16.07	Pictogram and Symbol Signs	Use these signs to inform with a symbol as well as text: "Authorized Personnel Only"	Page 12-4-45