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Model
On-Premise
Sign Code

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Model Code For Regulation Of On-Premise Signs

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Offered as a model of suggested means that may be found appropriate for local regulation of on-premise signs. No expressed or implied warranty is made that any of the provisions of this model will withstand the scrutiny of a constitutional challenge, and/or be in conformance with prevailing or future requirements imposed by local, state, or national law.



UNITED STATES SIGN COUNCIL



UNITED STATES SIGN COUNCIL FOUNDATION

Since 1996, the United States Sign Council, through its research arm, the United States Sign Council Foundation, has published fourteen major academic studies covering the full range of on-premise sign legibility, placement, illumination, community impact, and traffic safety issues.

This work, by university research teams specializing in human factors and traffic engineering disciplines, has enabled the United States Sign Council to develop guideline standards and models designed to facilitate development of performance oriented community sign systems based on empirical scientific research.

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Foreword

Since the beginning of recorded history, signs have served to provide mankind with one of its most important and easily understood means of communication.

Today, as our environments become increasingly more complex, the need for direction, guidance, and information by means of adequate sign systems has never been more critical. In the built environment, on-premise signs, such as those depicted here, serve those critical functions.

It is the intent of this model to advance the ability of such signs to provide their communicative function within an orderly landscape consistent with community aesthetic and safety standards.





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MODEL ON-PREMISE SIGN CODE
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Overview...

It is the intent of this Model Sign Code to provide municipalities with a means to both understand and regulate the use of on-premise signs within their jurisdictions. To this end, the Model has been designed to provide regulatory schemes for on-premise signs only, and does not include schemes for the regulation of off-premise outdoor advertising signs, frequently referenced as billboards. Unless otherwise noted, the word “sign” when used in this Model refers to an on-premise sign.

Science Based Regulation:

The Model is based on numerous university level scientific studies conducted by the United States Sign Council (USSC) and its research arm, The United States Sign Council Foundation, aimed at quantifying various aspects of on-premise sign functionality, including viewer detection and legibility, viewer response and comprehension, traffic safety issues under varying roadside conditions, and optimum lighting levels. Table A (see Page 5) provides a detailed enumeration of this research effort to date.

Because of this research, it is now possible to craft sign regulation that is both objective and in concert with observable human factors performance criteria. Both the Model, and the performance data and numerical quantities within it, are based on the objective observations and measurements that are the result of this research effort into the form and function of on-premise signs as a principal means of roadside communication and situational awareness for motorists.

In addition to the obvious benefits of the application of verifiable scientific observation and evidence to the creation of any land-use code, such as a sign ordinance, the Model offers the added benefit of providing reasonable assurance that when questions concerning the constitutional integrity of its provisions arise, the use of quantifiable objective measurements and other performance criteria can be a firm buttress to guard against attack on the Code based on apparent subjectivity or lack of sustainable performance evidence.

This is particularly relevant in regard to any sign code or ordinance, because of the clear protection afforded on-premise signs particularly, as a form of protected speech. In essence, on-premise signs are visual communication devices, and in both their form in the landscape, and their function as a means of communication, provide an essential transfer of vital information not dissimilar to any other constitutionally protected media source. Additional information on the constitutional issues involving on-premise sign speech is provided as a convenient reference source below in ***Current Legal Considerations in On-Premise Sign Regulation*** (see Page 6).

Science Based Standards:

1) Size, Location, and Height Standards for Perpendicular and Parallel Sign Orientation

Based upon its research conclusions, USSC has developed on-premise sign size, location, height, and illumination guideline standards designed to integrate the research data into a tangible performance metric for the optimization of on-premise sign usage, particularly in motorist oriented environments.

These standards are the basis for the provision of the time, place, and manner requisites of the Model, and provide the empirical framework upon which it is built. Numerical values within the Model reflect the observational and empirical test values obtained through the research. As such, they clearly represent the most objective means of providing for time, place, and manner regulation consistent with motorist situational awareness and environmental orientation as well as the traffic safety mandate of any sign code.

These Standards for on-premise sign size, location, and height also reflect the informational transfer and communication aspects that are unique to the on-premise sign medium, which in both form and function serves a variety of community needs. Essentially, an on-premise sign performs at least three major functions, which are:

- a) Provision of situational awareness or indexing of places within the environment
- b) Provision of wayfinding or directional information
- c) Provision of basic communication regarding activities on the site, products or services available on the site, or other types of information regarding observer interest in the site.

On-premise signs communicate information through graphic presentation, using a combination of words, pictures, and thematic design to convey their place-based messages to people who pass within their view. It is this place-based orientation that gives on-premise signs their unique character, but which also acts to limit their communicative ability to a relatively short span of time during which they can be seen by any given viewer. It is, in fact, this time frame, known as Viewer Reaction Time (or VRT) that is the determining factor in the computation of the optimum size and placement of an on-premise sign in any motorist oriented environment.

The Model clearly recognizes this factor, and uses speed of travel as the primary determinant of sign size and height. Although the Model can be applied to a form-based zoning transect zone concept, it should be noted that the overriding distinction between transect zones for on-premise signs is not their specific placement in the landscape, but their specific placement in a given traffic speed environment.

2) Illumination Standards:

The functions of on-premise signs are no less critical after dark as they are during daylight hours. It may, in fact, be hypothesized that their functional value after dark is even more critical to the safety and awareness implications for older drivers, whose visual acuity has been shown to deteriorate markedly at night.

Extensive sign illumination research conducted under both controlled and real world conditions has shown a marked difference in legibility and attendant viewer reaction time between internally illuminated signs and their externally illuminated counterparts. This difference has been calculated to provide as much as a 70% advantage in legibility favoring internal over external sign illumination. Since it is the intent of the Model to promote traffic safety as one of its prime objectives, the use of internally illuminated signs is neither prohibited nor curtailed in any zone or district.

In addition, initiatives involving energy savings achieved through any reduction of sign luminance from optimum levels are likewise not considered appropriate to the Model, because of the potential that such reductions may compromise traffic safety. Unlike other sources of outdoor light in the nighttime landscape, on-premise signs are specifically designed to provide vital wayfinding and situational awareness information to motorists, and to this end, must be permitted to maintain illumination levels consistent with optimum legibility and viewer reaction time parameters. The minimum luminance values of the Model are structured to provide for these parameters.

Five distinct research studies investigating varied aspects of on-premise sign illumination in the built environment have now been completed by Transportation Institute research teams at the Pennsylvania State University. The five studies on sign illumination listed in Table A (see Page 5) have focused on optimum illumination parameters, legibility and potential safety differences between internally and externally illuminated signs; issues involving glare, light trespass, and sky glow when applicable; light measurement parameters; and differences in outcomes between controlled laboratory tests and tests under actual real world conditions. As a result, the data regarding the applicability of these issues to on-premise sign illumination is conclusive, and, as with size and height parameters, is used as a scientifically credible basis for the illumination requisites of the Model.

Luminance as Measurement Standard:

The USSC Standard for the measurement of on-premise sign illumination is Luminance. Luminance measures light output at its source, does not vary with ambient light conditions, and further can be objectively measured during both the sign fabrication process and after installation in the field to ensure adherence to the illumination requirements of the Model.

The Model imposes a delimiting luminance value for on-premise signs after dark which has been found to provide optimum legibility and its consequent traffic safety implications without any significant impact on environmental light trespass, glare, or

sky glow. The Model does not delimit luminance during daylight operation, but EMC signs and other dynamic message signs which, because of their LED powered display surfaces require daylight illumination of sufficient luminance to maintain legibility under bright ambient light, are required to adjust their light output after dark to meet the luminance level for all signs imposed by the Model.

General Provisions:

The design of the Model follows the generally accepted practice of dividing the document into manageable sections, each related to a specific area of information or regulatory coverage. The regulatory sections of the Model are likewise divided into zones, as is also common practice. The Model is designed to be performance oriented, with regulation based on documented research involving the interaction between the speed and density of traffic, and attendant viewer visibility and legibility requirements.

In response to evolving case law relating to the issue of content neutrality, the Model has been structured to avoid content-based regulation, particularly in the more restricted residential and professional zones in which a relatively limited amount of sign space is allocated by the Model for the display of either commercial or non-commercial speech. In the few instances in which sign content may be used to define the manner of regulation, such as delineated in the Model for directional signs, the regulation is based on the concept that these signs fulfill a substantial governmental interest in augmenting traffic flow and safety, which could be inhibited if such signs were not specifically identified by use or content.

Throughout the Model, author's clarification notes are provided in proximity to Code sections or Code elements to which they relate. Although these notes are not part of the Code verbiage itself, they are intended to provide relevant background information to assist implementation of the Code through a further understanding of the research and/or empirical observation behind the specific elements of the Code which they address. In this context, users of the Model may wish to retain them as a means of assisting zoning and building officials particularly in interpreting and administering the specific provisions of the Model.

Table A – USSC on-premise sign research studies & publications

- (1) SIGN VISIBILITY, Research and Traffic Safety Overview** (89p).
Pennsylvania Transportation Institute, Pennsylvania State University, 1996.
- (2) SIGN LEGIBILITY, The Impact of Color and Illumination** (80p)
Pennsylvania Transportation Institute, Pennsylvania State University, 1998.
- (3) REAL WORLD ON-PREMISE SIGN VISIBILITY, The Impact of the Driving Task on Sign Detection and Legibility** (56p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2002.
- (4) SIGN VISIBILITY, Effects of Traffic Characteristics and Mounting Height** (64p)
Pennsylvania Transportation Institute, Pennsylvania State University 2003.
- (5) TRAFFIC SAFETY STUDY, An Examination of the Relationship between Signs and Traffic Safety** (80p)
Tantala Associates, Consulting Engineers, 2003.
- (6) ENVIRONMENTAL IMPACT OF ON-PREMISE SIGN LIGHTING, With Respect to Potential Light Trespass, Sky Glow, and Glare.** (26p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2004.
- (7) RELATIVE VISIBILITY OF INTERNALLY AND EXTERNALLY ILLUMINATED ON-PREMISE SIGNS** (24p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2004.
- (8) DRIVER INFORMATION LOAD** (4p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2003.
- (9) ELECTRONIC MESSAGE CENTER RESEARCH REVIEW** (32p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2005.
- (10) ON-PREMISE SIGNS, The Impact of Zoning Regulation on Site Performance** (36p)
Pennsylvania State University, 2005.
- (11) ON-PREMISE SIGNS, Determination of Parallel Sign Legibility and Letter Heights** (20p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2006.
- (12) INTERNALLY ILLUMINATED SIGN LIGHTING, Effects on Visibility and Traffic Safety** (20p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2009.
- (13) INTERNAL vs. EXTERNAL ON-PREMISE SIGN LIGHTING, Visibility and Safety in the Real World** (26p)
Pennsylvania Transportation Institute, Pennsylvania State University, 2009.
- (14) ON-PREMISE SIGN LIGHTING, Terms, Definitions, Measurement** (27p)
Visual Communication Research Institute, 2010.

Current Legal Considerations in On-Premise Sign Regulation

The following section covering on-premise sign regulation and the law is included in order to provide municipalities with up-to-date information on a variety of topics of particular interest to local planners and legislators. At the outset it must be noted that this particular review will not include a long list of case citations and legal jargon. There are already existing sources of this type of legal information, related to on-premise signs, and if a municipality is contemplating a Sign Code review or revision, it is strongly recommended that an attorney assist in this process, from the beginning, so that any new Sign Code can pass legal muster and/or challenge. For the purposes of this section, if a statement is made, then there is a basis in statutory or case law for that statement, and/or scientific research related to the subject of on-premise signs that supports said statement.

On-premise Signs and First Amendment Protections

The Model is intended to provide guidance to municipalities when regulations are being created pertaining to on-premise signs. The term “on-premise signs” encompasses a wide variety of sign applications: political signs, religious communication, residential signs, identification of governmental facilities, and commercial speech - to name a few – and is defined in the Model Code itself.

While the Model addresses regulations for all types of on-premise signs, and their concomitant speech, the main focus of the Model is on the proper regulation of non-residential on-premise signs. It is in this area where difficult issues arise between the desire of municipalities to regulate signs and the communication needs of both on-premise sign owners and on-premise sign users (motorists in most situations). To that end, the Model has been carefully crafted to comply with the law as it relates to on-premise signs.

Even a cursory examination of First Amendment case law related to the regulation of on-premise signs shows that while there are consistent principles that guide court decisions, there is also substantial variation in specific outcomes, as well as variation between cases heard in a state court setting versus cases coming before any level of the federal court system.

There have been some significant changes in the interpretation of the law as it relates to on-premise signs and the First Amendment in recent years. Many professionals may not even be aware of these legal developments. The subject area is specific enough that one would not expect municipalities to have a thorough understanding of what types of regulations are permissible, and what are not, until the issues arise in a specific context or legal challenge.

In order to assure that sign regulations comply with the First Amendment, municipalities should strive to create “content-neutral” regulations. A content-neutral sign regulation does not apply to or affect the sign message or communication on the sign in any way: it does not pertain to the lettering, the graphics, the speech, the artwork, and the colors nor prohibit or control the use of any of these items. These

types of regulations are typically termed reasonable “time, place and manner” sign regulations. Time, place and manner regulations do no more than govern the dimensions of the sign, the sign placement, the number of signs on a property, issues of sign construction and so forth.

In fact, there is a consistent line of authority holding that on-premise sign regulations must be “content neutral”, meaning that a sign code may not regulate on the basis of content or favor the display of one message over another. See, e.g., *Boos v. Berry*, 485 U.S. 312 (1988); *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490 (1981). Content-based restrictions are subject to strict scrutiny by the courts. See, 44 *Liquormart, Inc. v. Rhode Island*, 517 U.S. 484 (1996).

It follows that municipalities should strive to avoid creating “content-based” sign regulations. A sign ordinance provision that regulates on-premise signs based on the content of the message displayed, or actively prohibits or regulates actual messages or colors or methods of expressing protected speech would be considered content-based. Examples include: a sign that can only state the legal name of a business - signs that advertise the sale of specific goods or services are prohibited; the color blue is prohibited; a sign can only have 3 colors; a sign can only display three words; a sign cannot display a telephone number; a dining establishment may only identify itself as a “restaurant” and the word “diner” is prohibited.

Courts use various tests to examine sign code provisions that are challenged on First Amendment grounds. For content-based regulations, the issues are generally more clear and easy to define. Some may say that content-based sign regulations are “per se” unconstitutional. This is not entirely accurate, but there is a presumption that a content-based sign regulation is unconstitutional.

When a municipality creates regulations based on the content of the sign (the regulated “speech”), courts will apply a stringent analysis known as “strict scrutiny.” To paraphrase, the strict scrutiny test requires that a content-based regulation of speech be justified by a compelling governmental interest and be narrowly tailored to further that interest.

The burden of justifying a content-based sign code scheme is on the municipality, rather than on the sign owner; in other words, the municipality carries the “burden of proof” in justifying the regulation. For instance, a system of permit approval that relies on any analysis of content is presumed to be an unconstitutional prior restraint under the First Amendment. See, *North Olmstead Chamber of Commerce v. City of North Olmstead*, 86 F.Supp. 2d 755 (N. D. Ohio 2000). The U.S. Supreme Court has consistently ruled against local restrictions on sign content, where the information to be displayed is truthful and not misleading. See, e.g., *Lorillard Tobacco Co. v. Reilly*, 121 S. Ct. 2404 (2001).

Content-neutral sign regulations (typical time, place and manner regulations) enjoy a lesser standard of review known as “intermediate scrutiny” or the intermediate scrutiny test. What is the “intermediate scrutiny” test for commercial speech? One

can find various statements and restatements of this test, all stemming from the landmark case: *Central Hudson Gas & Elec. Corp. v. Public Service Comm'n*, 447 U.S.557 (1980). In *Central Hudson*, a four-part test was announced to determine when content-neutral government regulation of commercial speech is valid (test components are paraphrased):

1. First, a court must ask whether the commercial speech at issue concerns a “lawful activity” and is not “misleading”;
2. If the answer to the first question is affirmative, then the court must ask if the government interest served by the regulation is substantial;
3. If the answer to both of the first two questions is affirmative, the court “must determine whether the regulation directly advances the governmental interest asserted”, and
4. “whether it is not more extensive than necessary to serve that interest”;

In summary, the Model attempts to avoid content-based regulations, and to suggest content-neutral time, place and manner sign regulations that are based on objective research and practical experience.

Final thoughts for consideration of on-premise signs, First Amendment protections and both content-based and content-neutral on-premise sign regulations:

Does a municipality have a legitimate governmental interest in making on-premise signs more difficult (for motorists) to see and read?

Is there a legitimate balancing test between sign regulations based on traffic safety vs. sign regulations based on aesthetics; that is, can aesthetic controls ever take precedence or supersede regulations intended to insure traffic safety?

Design Review

This Model Sign Code does not contain specific provisions for establishing a mechanism for Design Review of on-premise signs, which is typically conducted through a local Board or Committee. This omission is intentional. Suggested language for Design Review is not included here primarily because Design Review cannot be researched or quantified in an objective manner. Design Review is an inherently subjective process related to aesthetics, and municipalities often place themselves in an awkward legal position in regard to Design Review implementation.

While some communities in the US have enacted Design Review schemes for on-premise signs, experience has shown that any Design Review tends to present serious legal and constitutional challenges. Certain state courts have gone so far as to give approbation to Sign Design Review, based on aesthetics. At the same time, it appears that these Design Review arrangements have not been vigorously tested in the Federal Court system, where the balance between First Amendment issues and local aesthetic zoning controls may tilt in the opposite direction. Above all else, care should be taken in creating any type of Design Review for on-premise signs.

Traditionally, Design Review has been established in corridors of certain municipalities that possess a particular historic profile or special interest. Boards have been established to govern architectural and aesthetic features of these districts, which include on-premise signs, but also include the physical features of the buildings and landscaping itself: the shutters, the windows, the paint colors and so forth. Sign Design Review approval has become part of the sign permit process in certain jurisdictions, and a sign cannot be installed in areas governed by Design Review without a Design Review approval. Typical names for the Design Review entity are: Historic and Architectural Review Board (HARB); Design Review Board; Architectural Review Board.

Is Design Review Constitutional? If the local Design Review merely implements constitutionally permissible content-neutral “time, place and manner” sign regulations, then the answer may be affirmative. It has the potential, however, to migrate into areas of content-based regulation.

Items that Design Review may properly review under the First Amendment:

- style or type of illumination
- sign height
- sign size
- number of signs
- sign placement
- materials, based on written criteria

Items that Design Review should strive to avoid:

- is the sign harmonious with the building or property on which it is located?
- specific fonts and lettering styles
- so-called “items of information”
- colors
- sign copy (the messages or the content)
- vague and ambiguous language, or language clearly open to interpretation

For example, is the control of color on a sign a matter of “content control”, and therefore per se unconstitutional under the First Amendment? Since color is inextricably intertwined with the speech and message that a sign user is attempting to communicate, a strong case can be made for the affirmative. Colors, in fact, can be included in a trademark registration, thereby binding the color to the message or logo. Public and private organizations often spend considerable resources in developing unique branding identification, which includes color. Under the First Amendment, can local Design Review based on general aesthetics supersede these choices and this speech? This is the landscape of the Design Review dilemma.

The inherent tension between the communication rights of sign users and local Design Review control is magnified when Design Review is implemented for all on-premise signs, regardless of where they are located. In this situation, not only does the local Design Review Board regulate the appearance of architecture and signs in

“historic” areas or pedestrian “village” areas or areas of special interest, the Design Review Board attempts to regulate on-premise signs in commercial, industrial and institutional corridors, using the very same criteria. Sign characteristics that are typically desired in historic areas are then required in the other districts. These characteristics, unfortunately, may be inappropriate and unsafe in commercial and industrial districts, where the speed and density of traffic dictates a different approach in order to insure proper sign visibility and legibility, in the interests of traffic safety.

Does Design Review constitute an impermissible “prior restraint” of protected speech? An unconstitutional “prior restraint” occurs whenever the right to freedom of expression is conditioned on the prior approval of a governmental official. In order to create a sign permit system that is constitutional, a municipality must show that the permitting scheme is subject to clearly defined standards that limit the discretion of local officials, and meets stringent procedural safeguards i.e. there is a defined and short time limit for the permitting review. The conundrum with Design Review and Prior Restraint is this: a municipality cannot give to a committee powers that a municipal building or zoning department could not exercise. Adding additional time and expense for Design Review applications and hearings, and making Design Review a prerequisite for the display of constitutionally protected communication, may create conditions where a court could find unconstitutional Prior Restraint, in addition to content control. Because courts have not given municipalities a clear guideline in this area to date, this Model Code suggests that Design Review be used in a prudent and limited manner.

Lanham Act issues

Application of the Lanham Act to on-premise signs represents a new and developing area of the law. The Lanham Act is a federal statute passed by the US Congress in 1946. The law provided for a national system of trademark registration and protected the owner of a valid trademark against the use of similar marks if any confusion might result. The Bill defined a trademark as “any word, name, symbol, device or any combination thereof adopted by a manufacturer or merchant to identify his goods and distinguish them from those manufactured or sold by others.”

In 1982, the Lanham Act was amended to include the following language, which clearly applies to on-premise signs that display or consist of a “registered” mark. The relevant language of the amendment is clear on its face.

United States Code Annotated Title 15. Commerce and Trade

§ 1121. Jurisdiction of Federal courts; State and local requirements that registered trademarks be altered or displayed differently; prohibition.....

(b) No State or other jurisdiction of the United States or any political subdivision or any agency thereof may require alteration of a registered mark, or require that additional trademarks, service marks, trade names, or corporate names that may be associated with or incorporated into the registered mark be displayed in the mark in a manner differing from the display of such additional trademarks, service marks, trade

names, or corporate names contemplated by the registered mark as exhibited in the certificate of registration issued by the United States Patent and Trademark Office.

There have been several cases involving signs and the Lanham Act since 1982. No case has made its way to the US Supreme Court. Federal district courts have taken differing approaches to signs and the Lanham Act.

On the one hand, the 2nd Circuit Federal Appellate Court of New York rejected a Lanham Act challenge to a local sign code that required a business owner to change the color or some other element of a federally registered trademark: *Lisa's Party City, Inc. v. Town of Henrietta*, 2 F.Supp.2d 378, 1999 (2d Circuit).

And on the other, two cases have come out of the 9th Circuit in Arizona upholding a challenge to local sign content and color controls: *Blockbuster Videos, Inc. v. City of Tempe*, 141 F.3d 1295, C.A.9 (Ariz.), 1998 (9th Circuit) and *Desert Subway, Inc. v. City of Tempe*, 322 F.Supp.2d 1036, D.Ariz., 2003 (9th Circuit).

In the most recent case, two local Subway franchisees in Tempe, Arizona, challenged sign color restrictions imposed by the City. The City denied Subway the use of their standard yellow and white colors. Subway et. al. filed suit in federal court pursuant to Lanham Act protections and on First Amendment grounds (control of a business's colors = control of the content of the business's sign). In layman's terms, the City said that it could control and/or dictate the business's sign colors, even if these colors did not follow the registered trademark. In the end, the federal court agreed with Subway: the Lanham Act protected their sign and their colors, the court required the City to allow Subway to use its trademarked yellow and white colors.

Some commentators have reviewed these cases and stated that there is just an unfortunate split between the circuits. A careful reading of the *Party City* case, however, reveals that there are substantial weaknesses in the court's decision, and that municipalities should therefore take particular care when attempting to regulate in the area of trademarked names, logos and graphics, particularly since the language of the Lanham Act is clear and unambiguous on its face. A resource for information and analysis of the *Party City* case can be found in a September 1998 Southern California Law Review article titled: "*Regulating Trademarks on Exterior Signs: Should Local Law Trump the Lanham Act and the Constitution*" by Professor Roberta Rosenthal Kwall.

Regulation of Electronic Message Centers (EMCs)

The Model deals with the subject of Electronic Message Center signs (also referred to as digital signs or computer-controlled electronic signs) on a zoning district-by-district basis. Electronic Message Center control and code enforcement issues have become a matter of great interest at the municipal level across the United States. This interest has been spurred primarily by the availability of EMC technology, its increasing quality, and the interest of sign owners in utilizing the technology.

Further information on Electronic Message Centers (EMCs) can be found in the Model Code itself – in the definitional section and Section 20 on EMC regulation.

Municipalities typically govern EMC signs by creating valid time, place and manner regulations. From a legal and practical standpoint, experience indicates that regulation of EMC signs is preferred over an outright ban. Some communities have attempted to implement a prohibition on EMC signs (see the New Hampshire case *Naser Jewelers, Inc. v. City of Concord*) but it should be noted that there has been a heavy cost associated with these types of bans: legal and administrative costs to the municipality to defend such a ban; acrimony created within the community by the denial of this new communication technology without a scientific or traffic safety research basis; loss of the benefits created by enhanced EMC communication. In addition, a substantial percentage of EMC signs are installed at churches, municipal buildings, libraries, fire and rescue facilities, hospitals and out-patient medical offices. Therefore, it would seem that a more prudent and balanced approach to EMC regulation based on sound scientific principles could serve all stakeholders involved in these decisions, both in the long and short terms.

In regard to traffic safety issues and EMC signs, a municipality can rely on this statement to be true: *up to this time, research has shown no correlation between EMC signs and traffic accidents, and EMC signs have not been found to be a distraction having impact on the driving task or to cause unsafe driving behavior that causes an accident.*

Some researchers and regulators have offered opinions and theories about EMC signs and so-called distractions, but there has been no direct scientific research or proof of these distractions and EMC signs. The term “distraction” in and of itself is a pejorative term, suggesting a negative outcome or result. What research on motorist behavior has shown is that drivers engage in a wide variety of activities while operating a motor vehicle, and some for 2 seconds or longer. Some activities that drivers engage in have a positive effect on motorist performance, even though the driver’s eyes are away from the road. Examples of this would be checking the rear view mirror, checking the side mirrors, or checking the speedometer. Other activities that drivers engage in have a demonstrated negative effect on motorist performance – most notably cell phone use and texting while driving. Finally, other activities appear to have no effect either way – positive or negative – on driver performance, and EMC signs fall into this category. Drivers look at EMC signs but their driving performance is not affected, and that is why accident and driver distraction research fails to show any correlation with EMC signs.

Others have argued that municipalities have a legal basis under the First Amendment to ban or severely restrict EMC technology based on aesthetic concerns alone. Here too some caution should be employed by any municipality considering such action. Several questions should be thoroughly explored at the outset: (1) can a benefit to the community be substantiated or quantified in an objective fashion, without reliance on subjective or individual opinions? (2) if one municipality can ban EMC signs based on aesthetic considerations under the First Amendment, then all municipalities across the United States can implement such a

ban. Therefore it follows that all sign users can be denied what is essentially more modern sign technology, and the entire EMC sign industry can be extinguished, if a ban can be implemented under the First Amendment, based on aesthetics. These and other questions should be given appropriate consideration.

Another area where municipal regulation could create unforeseen legal challenge is in regard to the frequency that an EMC sign can change its message. A local Code provision that limits the ability of an EMC to change its message to once every 24 hours, or even once every hour, is essentially a *de facto* ban on EMC technology. Given the significant investment that a sign owner must make in acquiring an EMC sign, severe restrictions on the ability of the sign owner to utilize said EMC will serve as a substantial deterrent to the acquisition of the technology. The very purpose of the EMC technology is to allow a sign owner the ability to communicate information and different messages in a shorter period of time, and if that ability is severely restricted, the utility of the sign is substantially diminished.

The bottom line for municipalities is that there are a wide variety of tools available in creating equitable time, place and manner EMC regulations, and these regulations can be custom-tailored for each municipality or specific zoning district.

Sign Regulations by Zone

The following Model Code contains provisions that are categorized by zoning district. Traditional zoning district nomenclature is used. Individual municipalities may have more zones, finer distinctions between zoning districts, and/or different terminology. It is the intent of the Model to provide general zoning classifications and allow municipalities to then adapt the code language to fit local conditions and the format of each local zoning ordinance overall.

USSC Model On-Premise Sign Code

Section 1: Short Title

The On-Premise Sign Code of the Authority Having Jurisdiction (hereinafter referred to as AHJ).

Section 2: Purpose

These regulations balance the need to protect the public safety and welfare, the need for a well maintained and attractive community, and the need for adequate identification, communication and advertising. The regulations for signs have the following specific objectives:

- A.** To ensure that signs are designed, constructed, installed and maintained according to minimum standards to safeguard life, health, property and public welfare;
- B.** To allow and promote positive conditions for sign communication;
- C.** To reflect and support the desired ambience and development patterns of the various zones, overlay zones, and plan districts and promote an attractive environment;
- D.** To allow for adequate and effective signs whose dimensional characteristics further the interests of public safety and the needs of the motorist, where signs are viewed from a street or roadway.
- E.** To ensure that the constitutionally guaranteed right of free expression is protected.

Section 3: Scope (Where These Regulations Apply)

- A.** General. The requirements of this Code apply to all signs, sign structures, awnings, and other types of sign devices located within the AHJ, except as specified in Subsection B, below.
- B.** Signs and sign structures located in the AHJ that cannot be seen from a public roadway are not subject to the size, height, location and number regulations listed herein. These signs must however comply with safety and construction Building Code provisions in the AHJ.

Author's clarification notes:

Examples: signs inside a private property complex not seen from a public roadway; interior signs not seen from the outside of a building; signs in a shopping center which cannot be seen from a roadway.

Section 4: Hierarchy of Regulations.

A. Where there is a conflict between specific sign regulations and the base or general sign regulations of this Code, the specific sign regulations supersede the base sign regulations.

B. Other conflicts. Where there is a conflict between a land use regulation and a structural regulation, or other conflicts not otherwise addressed by this section, the most restrictive applies.

Section 5: Severability

If any word, sentence, section, chapter or any other provision or portion of this Code or rules adopted hereunder is invalidated by any court of competent jurisdiction, the remaining words, sentences, sections, chapters, provisions, or portions will not be affected and will continue in full force and effect.

Section 6: Authority

A. Responsibility. This Code will be administered and enforced by the AHJ Code Officer as designated by the AHJ.

B. Administration. The AHJ Code Officer will administer the Code as set forth herein. The Code Officer may implement procedures, forms, and written policies for administering the provisions of this Code.

Section 7: Definitions

Abandoned Sign - A sign that no longer identifies or advertises an ongoing business, product, location, service, idea, or activity conducted on the premises on which the sign is located. Whether a sign has been abandoned or not shall be determined by the intent of the owner of the sign and shall be governed by applicable State Case Law and Statutory Law on abandoned structures.

Alteration – A change in the size or shape of an existing sign. Copy or color change of an existing sign is not an alteration. Changing or replacing a sign face or panel is not an alteration.

Animated Sign - A sign employing actual motion, the illusion of motion, or light and/or color changes achieved through mechanical, electrical, or electronic means. Animated signs, which are differentiated from changeable signs as defined and regulated by this Code, include the following types:

1) Environmentally Activated: Animated signs or devices motivated by wind, thermal changes, or other natural environmental input. Includes spinners, pinwheels, pennant strings, and/or other devices or displays that respond to naturally occurring external motivation.

2) Mechanically Activated: Animated signs characterized by repetitive motion and/or rotation activated by a mechanical system powered by electric motors or other mechanically induced means.

3) Electrically Activated: Animated signs producing the illusion of movement by means of electronic, electrical, or electromechanical input and/or illumination capable of simulating movement through employment of the characteristics of one or both of the classifications noted below:

a) Flashing: Animated signs or animated portions of signs whose illumination is characterized by a repetitive cycle in which the period of illumination is either the same as or less than the period of non-illumination. For the purposes of this ordinance, flashing will not be defined as occurring if the cyclical period between on-off phases of illumination exceeds four (4) seconds.

b) Patterned Illusionary Movement: Animated signs or animated portions of signs whose illumination is characterized by simulated movement through alternate or sequential activation of various illuminated elements for the purpose of producing repetitive light patterns designed to appear in some form of constant motion.

Architectural Projection - Any projection from a building that is decorative and/or functional and not intended for occupancy, and that extends beyond the face of an exterior wall of a building but that does not include signs as defined herein. See also: Awning; Back-lit Awning; and Canopy, Attached and Freestanding.

Awning - An architectural projection or shelter projecting from and supported by the exterior wall of a building and composed of a covering of rigid or non-rigid materials and/or fabric on a supporting framework that may be either permanent or retractable.

Awning Sign - A sign displayed on or attached flat against the surface or surfaces of an awning. See also: Wall or Fascia Sign. An awning that contains a "sign" section or copy area shall comply with the applicable sign area requirements for parallel signs (see Table 3, Page 39) contained in this Code. Only the sign or copy area displayed on an awning shall be used to determine the permitted sign area – the entire awning shall not be included in a Sign Area calculation. Refer also to Section 8 (see Page 25) for visual reference example.

Back-lit Awning - An awning comprised of covering material exhibiting the characteristic of luminosity obtained by means of a source of illumination contained within its framework.

Banner - A flexible substrate on which copy or graphics may be displayed.

Banner Sign - A sign utilizing a banner as its display surface.

Bench Sign – A sign applied or affixed to the seat or back of a bench.

Billboard - See: Off-Premise Sign and Commercial Outdoor Advertising Sign.

Building Facade - That portion of any exterior elevation of a building extending vertically from grade to the top of a parapet wall or eaves and horizontally across the entire width of the building elevation.

Building Sign – A sign that is applied or affixed to a building.

Candela – The basic unit of measurement of light in SI (metric) units.

Candela per square meter (cd/m²) – The SI (metric) unit used to describe the luminance of a light source or of an illuminated surface that reflects light. Also referred to as Nits.

Candle or Candlepower - Synonymous with Candela, but in English, not SI, terms.

Canopy (Attached) - A multi-sided overhead structure or architectural projection supported by attachment to a building on one or more sides and either cantilevered from such building or also supported by columns at additional points. The surface(s) and/or soffit of an attached canopy may be illuminated by means of internal or external sources of light. Similar to a Marquee.

Canopy (Freestanding) - A multi-sided overhead structure supported by columns, but not enclosed by walls. The surface(s) and or soffit of a freestanding canopy may be illuminated by means of internal or external sources of light.

Canopy Sign - A sign affixed to the visible surface(s) of an attached or freestanding canopy. May be internally or externally illuminated. Similar to a Marquee Sign. Refer also to Section 8 (see Page 25) herein for visual reference example.

Changeable Sign - A sign with the capability of content change by means of manual or remote input, includes the following types:

- 1) Manually Activated - Changeable sign whose message copy or content can be changed manually on a display surface.
- 2) Electrically Activated - Changeable sign whose message copy or content can be changed by means of remote electrically energized on-off switching combinations of alphabetic or pictographic components arranged on a display surface. Illumination may be integral to the components, such as characterized by lamps or other light-emitting devices; or it may be from an external light source designed to reflect off the changeable component display. See also: Electronic Message Center.

Channel Letter (open faced) – A dimensional letter with a back and sides but no face at the front of the letter. Open Faced Channel Letters may be non-lit, externally illuminated, or illuminated by a light source contained inside the open channel of the letter itself, such as a neon tube.

Channel Letter (internally illuminated) – A dimensional letter with a back, sides and a translucent front face capable of transmitting light from an internal light source within the letter.

Channel Letter (reverse) – A dimensional letter with a face and sides but no back, opposite to an Open Faced Channel Letter. A Reverse Channel Letter has an open channel facing the wall or building to which it is affixed. A Reverse Channel Letter may contain a source of illumination designed to project lighting against the surface behind the letter, commonly referred to as a Backlit Channel Letter; also referenced as a halo or silhouette lighted channel letter. The face of a Reverse Channel Letter does not illuminate.

Cladding – A non-structural covering designed to conceal the actual structural supports of a sign. See also pole or pylon cover.

Commercial Outdoor Advertising Sign - A permanent off-premise sign erected, maintained or used in the outdoor environment for the purpose of providing copy area for commercial or noncommercial messages.

Conforming Sign – A sign that is legally installed in conformance with all prevailing jurisdictional laws and ordinances.

Copy - The graphic content or message of a sign.

Copy Area of Sign - The actual area of the sign copy as applied to any background. Copy area on any individual background may be expressed as the sum of the geometrically computed shape or shapes encompassing separate individual letters, words, or graphic elements on the background. See Section 9 (see Page 26) for computational methodology.

Dimensional Letter, Symbol, or Graphic – A letter, symbol, or graphic that is three dimensional in character, containing height, width, and depth.

Directional Sign - Any sign that is designed and erected for the purpose of providing direction and/or orientation for pedestrian or vehicular traffic.

Display Time – The amount of time a message and/or graphic is displayed on an Electronic Message Sign.

Dissolve – A mode of message transition on an Electronic Message Sign accomplished by varying the light intensity or pattern, in which the first message gradually appears to dissipate and lose legibility with the gradual appearance and legibility of the second message.

Double-faced Sign - A sign with two faces, back to back.

Dynamic Frame Effect – An Electronic Message Sign frame effect in which the illusion of motion and/or animation is used.

Electric Sign - Any sign activated or illuminated by means of electrical energy.

Electronic Message Center or Sign (EMC) - An electrically activated changeable sign whose variable message and/or graphic presentation capability can be electronically programmed by computer from a remote location. Also known as an EMC. EMCs typically use light emitting diodes (LEDs) as a lighting source. (See also following terms principally associated with Electronic Message Centers: Display Time, Dissolve, Dynamic Frame Effect, Fade, Frame, Frame Effect, Scroll, Transition, Travel)

Externally Illuminated Sign – See Illuminated Sign.

Exterior Sign - Any sign placed outside a building.

Facade - See Building Facade.

Fade – A mode of message transition on an Electronic Message Sign accomplished by varying the light intensity, where the first message gradually reduces intensity to the point of not being legible and the subsequent message gradually increases intensity to the point of legibility.

Fascia Sign - See Wall Sign

Flashing Sign - See Animated Sign, Electrically Activated.

Font – A set of letters, numerals, symbols, or shapes conforming to a specific set of design criteria.

Foot Candle – An English unit of measurement of the amount of light falling upon a surface (illuminance). One foot candle is equal to one lumen per square foot. Can be measured by means of an illuminance meter.

Foot Lambert – An English unit of measurement of the amount of light emitted by or reflecting off a surface (luminance) equivalent to 3.4262591 candelas per square meter.

Frame – A complete, static display screen on an Electronic Message Sign.

Frame Effect – A visual effect on an Electronic Message Sign applied to a single frame. See also Dynamic Frame Effect.

Freestanding Sign - A sign principally supported by one or more columns, poles, or braces placed in or upon the ground. May also be referenced as a Ground or Monument Sign. Refer also to Section 8 for visual reference examples.

Frontage (Property) - The length of the property line(s) of any single premise along either a public way or other properties on which it borders.

Frontage (Building) - The length of an exterior building wall or structure of a single premise along either a public way or other properties that it faces.

Ground Sign - See Freestanding Sign

Illuminance – The amount of light falling upon a real or imaginary surface, commonly called “light level” or “illumination”. Measured in foot candles (lumens/square foot) in the English system, and lux (lumens/square meter) in the SI (metric) system.

Illuminated Sign - A sign characterized by the use of artificial light, either projecting through its surface(s) [Internally or trans-illuminated]; or reflecting off its surface(s) [Externally illuminated].

Internally Illuminated Sign – See Illuminated Sign.

Interior Sign - Any sign placed within a building, but not including window signs as defined by this ordinance. Interior signs, with the exception of window signs as defined, are not regulated by this ordinance.

Listed Sign – A sign manufactured and labeled in accordance with specifications promulgated by a recognized testing laboratory designed to assure compliance with applicable American National Standards (ANSI) and/or the National Electric Code (NEC).

Luminance – The light that is emitted by or reflected from a surface. Measured in units of luminous intensity (candelas) per unit area (square meters in SI measurement units or square feet in English measurement units.) Expressed in SI units as cd/m^2 , and in English units as foot lamberts. Sometimes also expressed as “nits”, a colloquial reference to SI units. Can be measured by means of a luminance meter.

Lux – The SI (metric) unit for illuminance. One lux equals 0.093 foot candles.

Mansard - A roof-like facade comparable to an exterior building wall. See Section 9 (see Page 26) for visual reference

Marquee - See Canopy (Attached).

Marquee Sign - See Canopy Sign.

Multiple-Faced Sign - A sign containing three (3) or more faces.

Nit – A photometric unit of measurement referring to luminance. One nit is equal to one cd/m^2 .

Non-Conforming Sign - A sign that was legally installed by permit in conformance with all municipal sign regulations and ordinances in effect at the time of its

installation, but which may no longer comply with subsequently enacted laws and ordinances having jurisdiction relative to the sign.

Non-Conforming Use – A continued and lawful use of property, including a sign or signs lawfully installed in accordance with laws or ordinances prevailing at the time of installation.

Off-Premise Sign – See Outdoor Advertising Sign. See also, Wayfinding Sign.

On-Premise Sign - A sign erected, maintained or used in the outdoor environment for the purpose of the display of messages appurtenant to the use of, products sold on, or the sale or lease of, the property on which it is displayed.

Outdoor Advertising Sign - A permanent sign erected, maintained or used in the outdoor environment for the purpose of the display of commercial or noncommercial messages not appurtenant to the use of, products sold on, or the sale or lease of, the property on which it is displayed. May also be referenced as an Off-Premise Sign, Billboard, or Commercial Outdoor Advertising Sign.

Parallel Sign – See Wall Sign

Parapet - The extension of a building facade above the line of the structural roof.

Perpendicular Sign – See also Freestanding Sign; see also Projecting sign;

Pole Cover or Pylon Cover – An enclosure designed to conceal poles and/or other structural supports of a sign. See also Cladding.

Pole Sign - See Freestanding Sign.

Political Sign - A temporary sign intended to advance a political statement, cause, or candidate for office.

Portable Sign - Any cord-connected sign not permanently attached to the ground and can be removed without the use of tools.

Projecting Sign - A sign other than a Wall Sign that is attached to or projects more than eighteen (18) inches from a building face or wall or from a structure whose primary purpose is other than the support of a sign. Refer also to Section 8 (see Page 25) for visual reference example.

Pylon Sign – See Freestanding Sign.

Real Estate Sign - A temporary sign advertising the sale, lease, or rental of the property or premises upon which it is located.

Revolving Sign - A sign that has the capability to revolve three hundred and sixty degrees (360°) about an axis. See also: Animated Sign, Mechanically Activated.

Roof Line - The uppermost line of the roof of a building or, in the case of an extended facade or parapet, the uppermost point of said facade or parapet.

Roof Sign - A sign mounted on the main roof portion of a building or on the uppermost edge of a parapet wall of a building and which is wholly or partially supported by such building. Signs mounted on mansard facades, pent eaves, and architectural projections such as canopies or marquees shall not be considered to be roof signs. Refer also to Section 9 (see Page 26) for visual reference example of roof signs, and comparison of differences between roof and fascia signs.

Scroll – A mode of message transition on an Electronic Message Sign in which the message appears to move vertically across the display surface.

SI (International System of Units) – The modern metric system of measurement; abbreviated SI for the French term “Le Systeme International d’Unites.”

Sign - Any device visible from a public place whose essential purpose and design is to convey either commercial or noncommercial messages by means of graphic presentation of alphabetic or pictorial symbols or representations. Noncommercial flags or any other flags displayed from flagpoles or staffs will not be considered to be signs.

Sign Copy – The physical sign message including any words, letters, numbers, pictures, and symbols.

Sign Structure - Any structure designed for the support of a sign.

Sign Area - The area of the smallest geometric figure, or the sum of the combination of regular geometric figures, which comprise the sign face. The area of any double-sided or “V” shaped sign shall be the area of the largest single face only. The area of a sphere shall be computed as the area of a circle. The area of all other multiple-sided signs shall be computed as fifty (50) percent of the sum of the area of all faces of the sign. See Section 9 (see Page 26) for computational methodology for various sign area configurations.

Sign Copy - The letters, numerals, figures, symbols, logos and graphic elements comprising the content or message of a sign, exclusive of numerals identifying a street address only.

Sign Face - The surface upon, against or through which the sign copy is displayed or illustrated, not including structural supports, architectural features of a building or sign structure, nonstructural thematic or decorative trim, or any areas that are separated from the background surface upon which the sign copy is displayed by a distinct delineation, such as a reveal or border. Refer to Section 9 (see Page 26) for sign face computational illustrations.

1. In the case of panel or cabinet type signs, the sign face shall include the entire area of the sign panel, cabinet or face substrate upon which the sign

copy is displayed or illustrated, but not open space between separate panels or cabinets.

2. In the case of signs painted on a building, or individual letters or graphic elements affixed to a building or structure, the sign face shall comprise the sum of the geometric figures or combination of regular geometric figures drawn closest to the edge of the letters or separate graphic elements comprising the sign copy, but not the open space between separate groupings of sign copy on the same building or structure.

3. In the case of sign copy enclosed within a painted or illuminated border, or displayed on a background contrasting in color with the color of the building or structure, the sign face shall comprise the area within the contrasting background, or within the painted or illuminated border.

Site – The ground area legally designated as a zoning lot, which may be categorized as a permanent parcel (a lot of record), multiple lots of record, or a portion of a lot of record.

Special Event Sign – A temporary sign pertaining to any civic, patriotic, or special event of general public interest.

Temporary Sign - A sign intended to display either commercial or noncommercial messages of a transitory or temporary nature. Portable signs or any sign not permanently embedded in the ground, or not permanently affixed to a building or sign structure that is permanently embedded in the ground, are considered temporary signs.

Trans-Illuminated Sign – See Internally Illuminated Sign

Transition – A visual effect used on an Electronic Message Sign to change from one message to another.

Travel – A mode of message transition on an Electronic Message Sign in which the message appears to move horizontally across the display surface.

Under Canopy Sign or Under Marquee Sign - A sign attached to the underside of a canopy or marquee.

V Sign - A sign containing two faces of equal size, positioned at an interior angle subtending less than one hundred seventy-nine degrees (179°) at the point of juncture of the individual faces.

Wall or Fascia Sign - A sign that is in any manner affixed to any exterior wall of a building or structure and that projects not more than eighteen (18) inches from the building or structure wall. Also includes signs affixed to architectural projections that project from a building provided the copy area of such signs remains on a parallel plane to the face of the building facade or to the face or faces of the architectural

projection to which it is affixed. Refer also to Section 9 (see Page 26) for visual reference examples, and comparison examples of differences between wall or fascia signs and roof signs.

Wayfinding Sign – A sign, frequently off-premise, specifically designed to provide directional or destination information. See also, Off-Premise Sign.

Window Sign - A sign affixed to the surface of a window with its message intended to be visible to the exterior environment.

Section 8: Typical On-Premise Sign Types

FREESTANDING SIGNS

usually perpendicular to viewer's line-of-sight. May be double or multi faced and contain thematic embellishment and integral covers or cladding to conceal structural supports.



PYLON



POLE WITH CLADDING



MULTI PANEL PYLON



POLE



MONUMENT



CANOPY

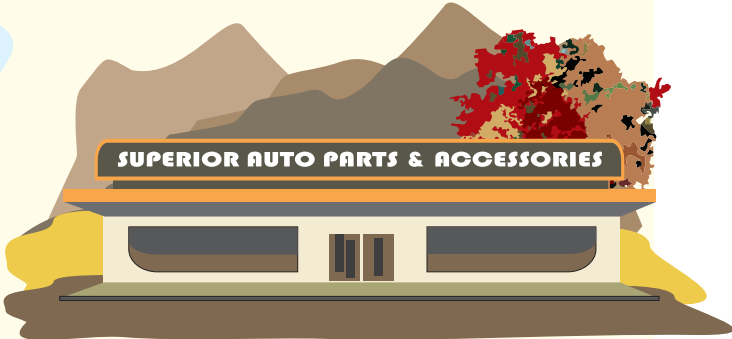


MONOLITH

BUILDING SIGNS



AWNING



ROOF

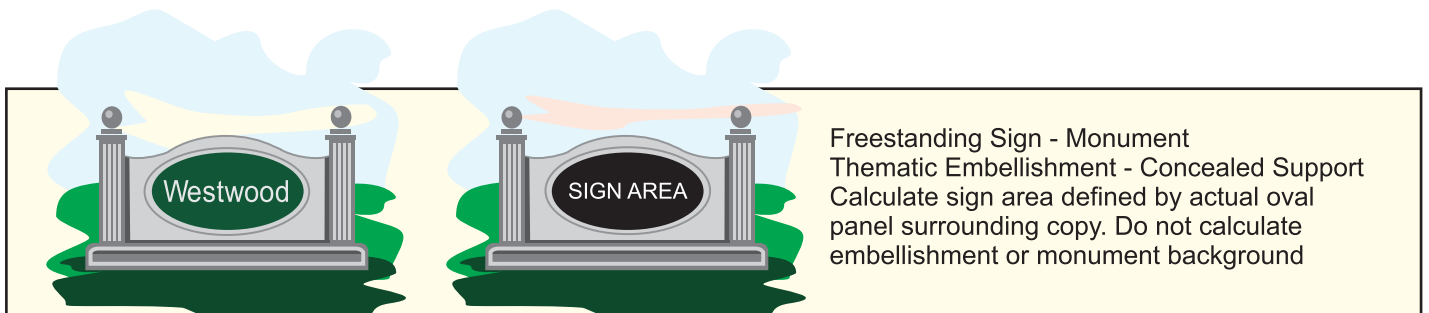
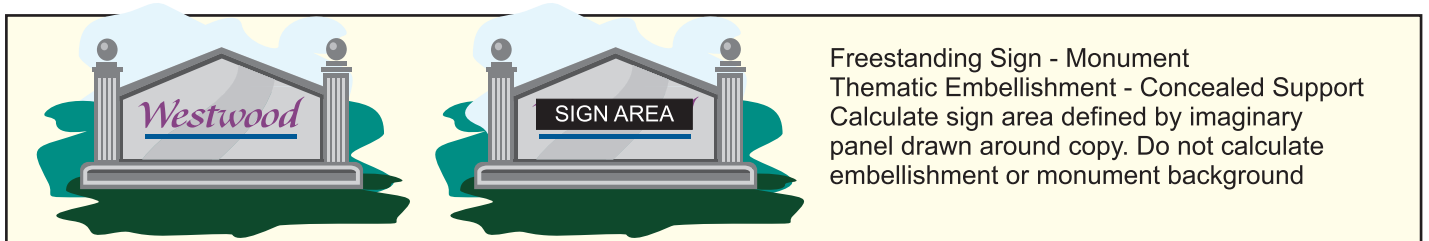
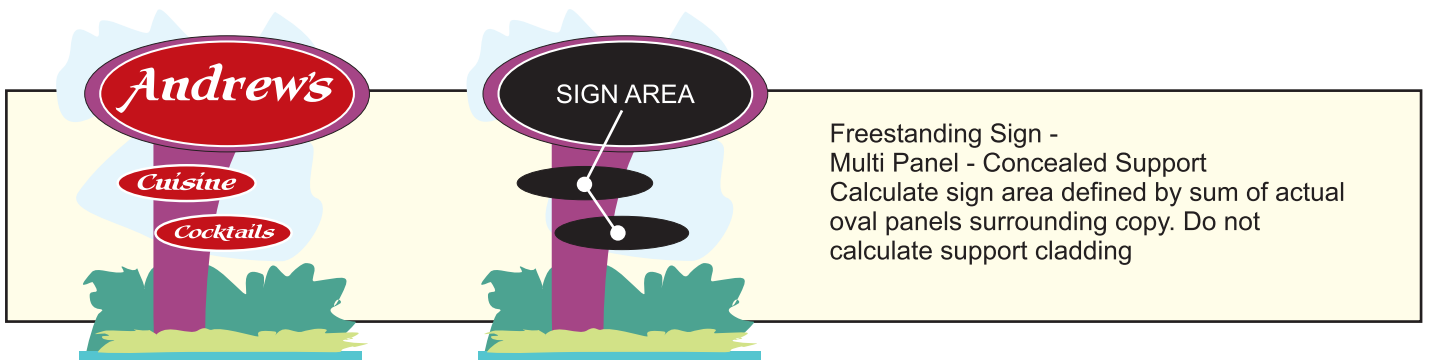
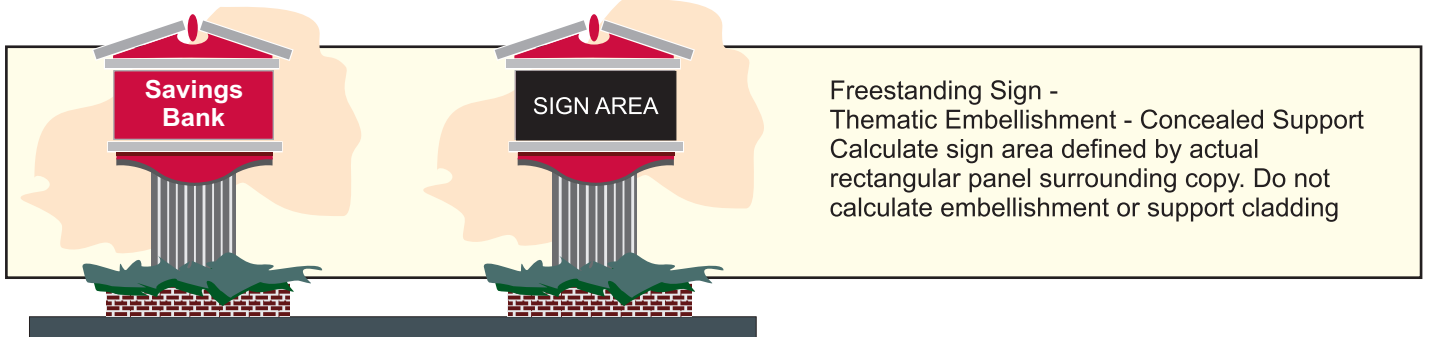
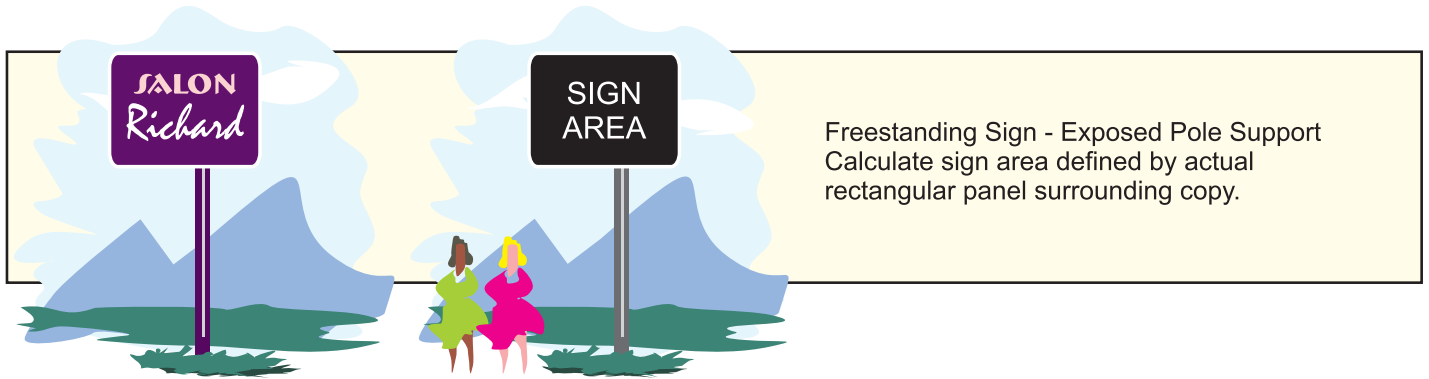


PROJECTING

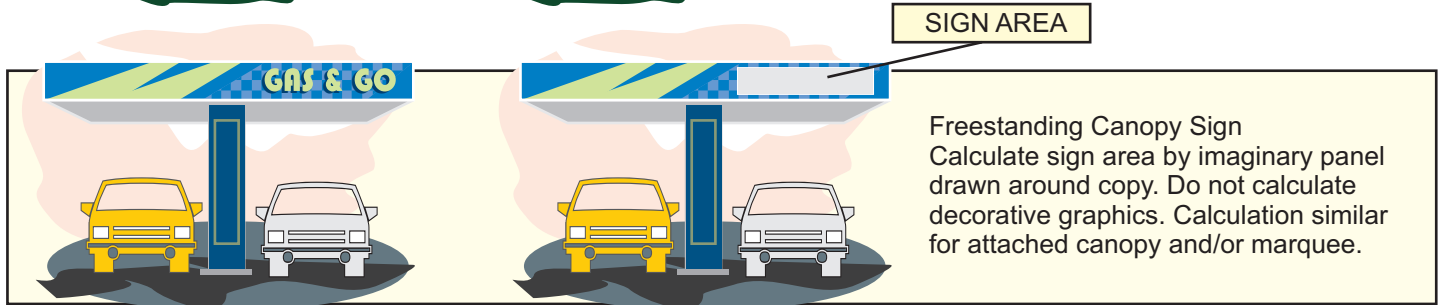
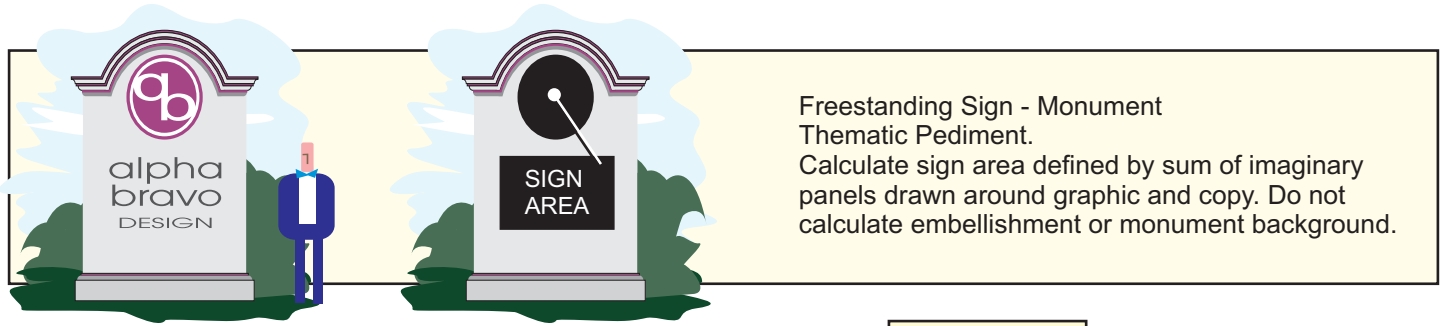
WALL / FASCIA



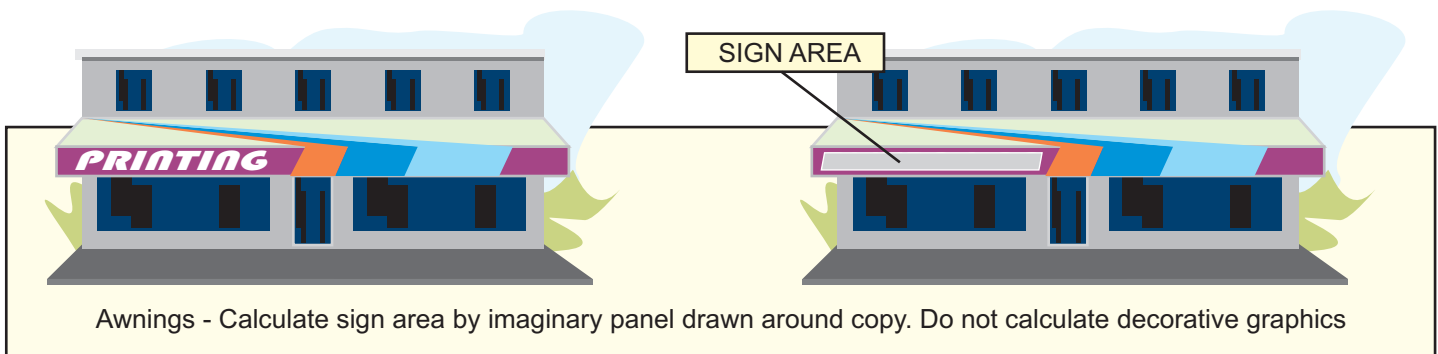
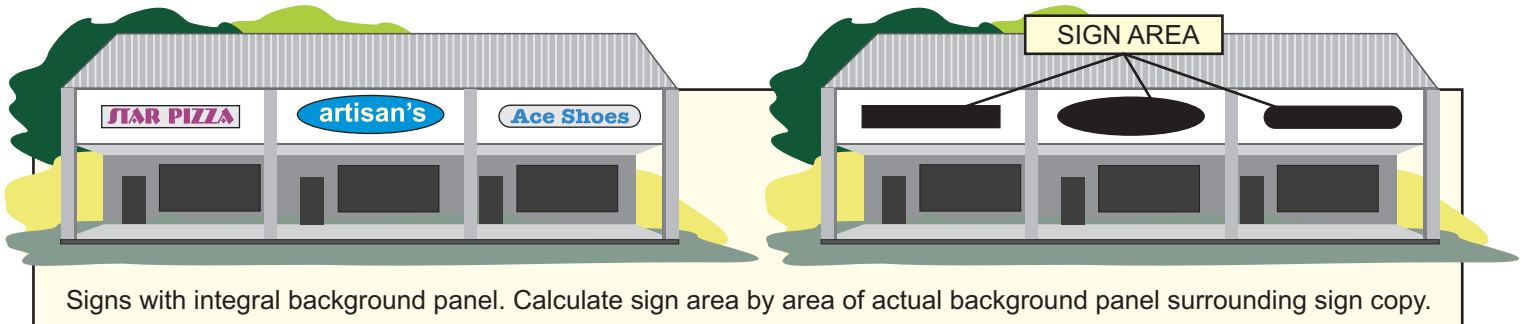
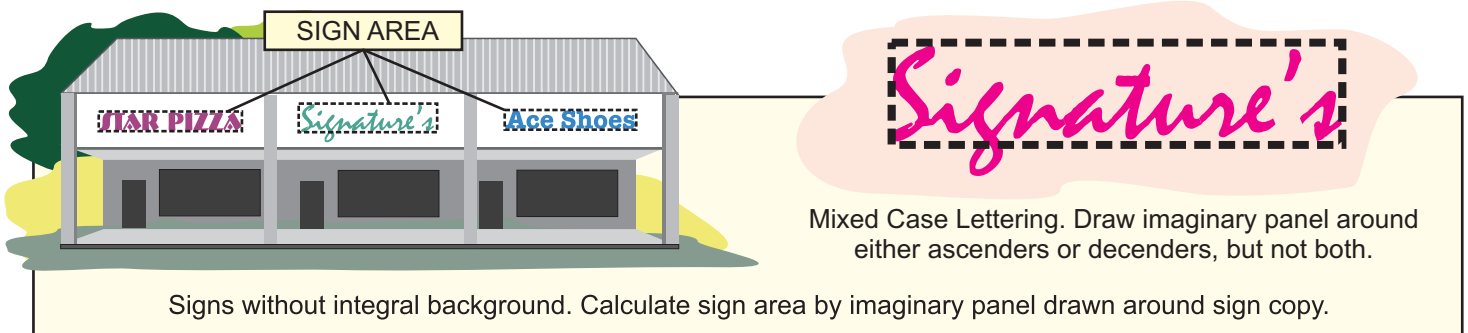
Section 9: Sign Area Computational Methodology / Ground Signs



Section 9: Sign Area Computational Methodology / Ground Signs

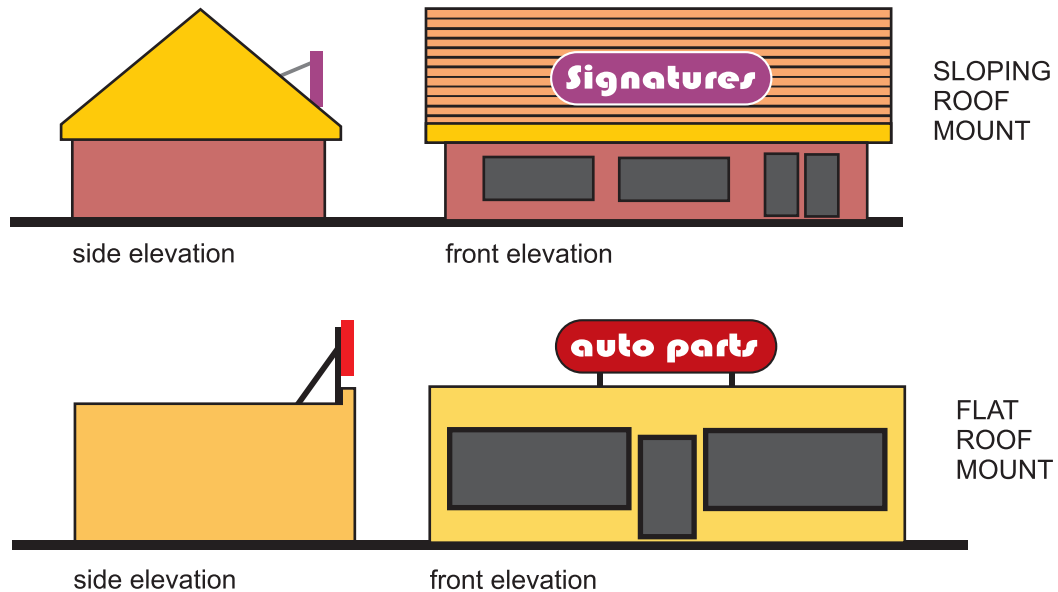


Wall / Fascia Signs

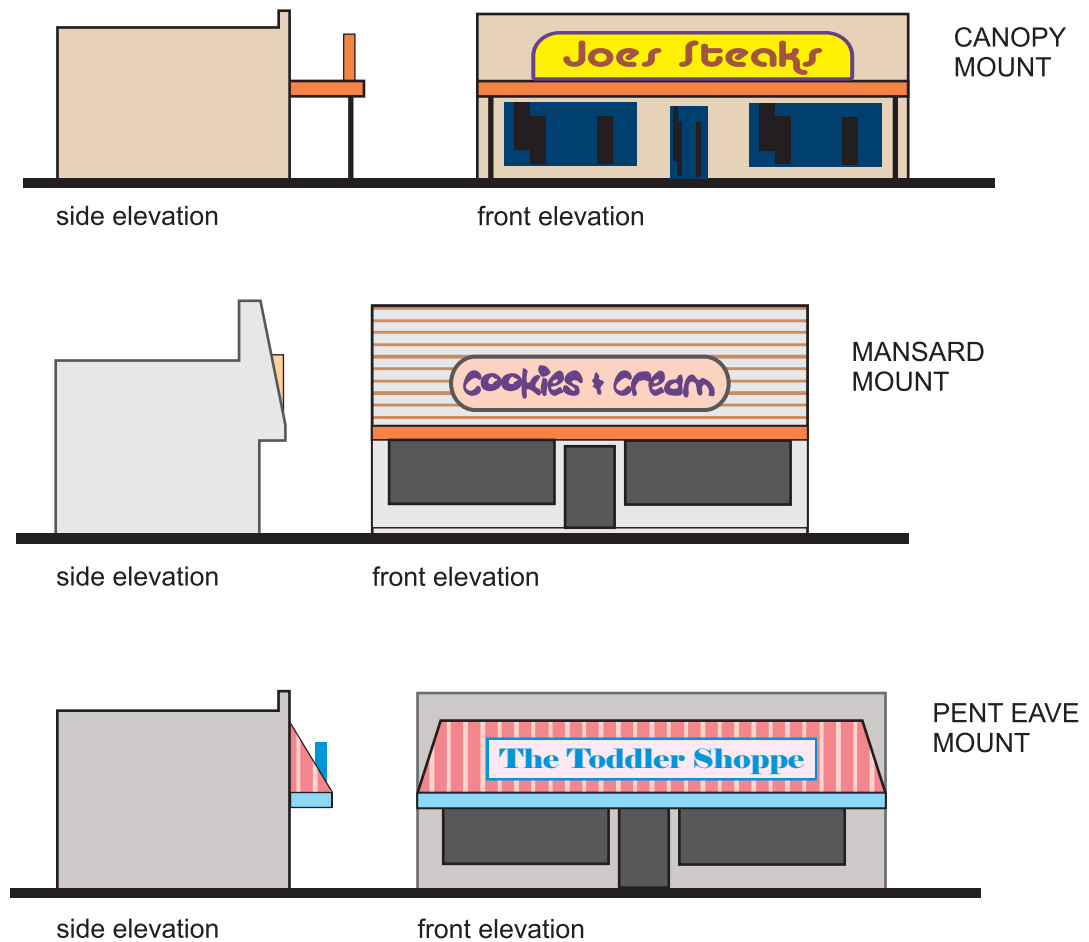


Section 9: Comparison: Roof and Wall Sign Distinctions

ROOF SIGNS



Fascia Signs on Roof-Like Projections NOT ROOF SIGNS



Section 10: Exemptions

The following are exempt from the regulations of this Code, but may be subject to other Codes enacted by the AHJ where applicable:

- A.** Signs which are not visible from a public roadway; however, these signs must comply with any building and construction provisions enacted by the AHJ;
- B.** Signs inside a building.
- C.** Signs carved into a building or raised in integral relief on a building.

Author's clarification notes:

Signs or letters that are raised must be a physical part of the building façade to qualify under this provision; they must be a part of the physical construction of the building materials comprising the façade; letters or signs that are merely attached to the exterior façade of the building do not qualify, even if the same finish or color;

- D.** Signs required by federal or state law.
- E.** Flags & individual pennants (not on a string);
- F.** Signs required by municipal authority
- G.** Painted and/or applied wall accents and decorations;
- H.** Illuminated building accents and decorations;
- I.** Public Art, including Permitted Original Art Murals
- J.** Name and Address – Up to two (2) signs indicating address, number and/or name of occupants of the premises, that do not exceed two (2) square feet in area per side, and do not include any commercial advertising or other identification.
- K.** Decals - Decals and/or logos affixed to windows or door glass panels, such as those indicating membership in a business group or identifying credit cards accepted at the establishment.
- L.** Handicapped Parking Space - Signs not exceeding two (2) square feet in area reserving parking for handicapped individuals.
- M.** Private Drive Signs - On-premise private drive signs are limited to one (1) per driveway entrance, not exceeding two (2) square feet in area.

N. Public Signs - Signs erected by government agencies or utilities, including traffic, utility, safety, railroad crossing and identification signs for public facilities and any signs erected by the AHJ.

O. Security and Warning Signs - On-premise signs regulating the use of the premises, such as “no trespassing”, “no hunting” and “no soliciting” signs that do not exceed one (1) sign two (2) square feet in area in residential areas and one (1) sign five (5) square feet in area in commercial and industrial zones. These limitations shall not apply to the posting of conventional “no trespassing” signs in accordance with state law.

Author’s clarification notes:

In order to be constitutionally sound, a Code should keep the list of “exempted” signs to an absolute minimum if the exemptions are based on:

- differentiating between uses and/or who is speaking, as this would represent a control of content based on the status of the “speaker”;***
- or if there can be some perceived discrimination between certain types of signs that are exempt from the Code, and others that fall within the parameters of the Code. A properly drafted Sign Code will avoid, as often as possible, making distinctions between uses and/or speakers.***

Section 11: Prohibitions

The following signs are prohibited:

- A.** Signs containing strobe lights;
- B.** Abandoned sign structures, as defined by this code;
- C.** Signs placed on or painted on a motor vehicle or trailer parked with the primary purpose of providing signage not otherwise allowed by the Code; Prohibited is any sign displayed on a parked trailer or truck or other vehicle where the primary purpose of the vehicle is to advertise a product, service business, or other activity. This regulation shall permit the use of business logos, identification or advertising on vehicles primarily and actively used for business purposes and/or personal transportation.
- D.** Signs that imitate or resemble official traffic lights, signs or signals or signs that interfere with the effectiveness of any official traffic light, sign or signal.
- E.** Mechanically Moving Signs – An environmentally activated sign or other display with actual mechanical motion powered by natural, manual, mechanical, electrical or other means, including but not limited to pennant strings, streamers, spinners, propellers, and search lights.

F. Flashing Signs – See Definitions. For the purposes of this Code, a sign that has a change rate or dwell time of four (4) seconds or longer does not fit within the prohibition noted herein.

G. Inflatable Signs and Other Permanent Objects - Signs and other objects which are inflated, including, but not limited to, balloons. Balloons may be permitted in temporary non-commercial situations; for instance: they are permitted for special occasions at a residence.

H. Posters and Handbills - Any signs affixed to any structures, trees or other natural vegetation, rocks or poles.

J. Roof Signs - Roof signs, except for those permitted by special exception in commercial and industrial zones. See Section 18.B.3

K. Simulated Traffic Signs and Obstructions - Any sign which may be confused with, or obstruct the view of, any authorized traffic sign or signal, obstruct the sight-distance triangle at any road intersection or extend into the public right-of-way.

L. A-frame/Wheeled Signs – Any portable “A” frame or similar portable sign is prohibited except as described under Temporary signs below.

M. Signs Adversely Affecting Safety. Signs which prevent free ingress or egress from any door, window, fire escape, or that prevent free access from one part of a roof to any other part. No sign other than a safety sign shall be attached to a stand-pipe or fire escape.

N. Sign Emissions- No sign which emits smoke, visible vapors, particles, sound or odor shall be permitted. Open flames used to attract public attention to a place of business or to an advertising sign shall not be permitted.

O. Mirrors. No mirror device shall be used as part of a sign.

Author’s clarification notes:

This Model Code recommends that AHJs include language that makes “Prohibited” signs general in nature; All AHJs/municipalities have different regulatory and community needs in regard to available signs types. “Regulation” over “Prohibition” is always preferred, from a legal and constitutional perspective.

This commentary to the USSC Model Sign Code merely suggests that the above noted sign types are often included by AHJs in their Sign Code “Prohibitions” section.

Section 12: General Rules For Reading and Applying the Code Language.

A. Reading and applying the code. Literal readings of the code language will be used. Regulations are no more or less strict than as stated. Application of the regulations that are consistent with the rules of this Code are non-discretionary actions of the Code Officer to implement the code. The action of the Code Officer is final.

B. Situations where the code is silent. Where the Code is silent, or where the rules of this Code do not provide a basis for concluding that a sign is allowed, said sign is therefore prohibited.

Section 13: Terms

A. Defining words: Words used in the Code have their dictionary meaning unless they are listed and described otherwise. Definitions: Words listed in the Definitions chapter have the specific meaning stated, unless the context clearly indicates another meaning. The word "sign" in this Code always refers to an "on-premise" sign.

B. Tenses and usage

1. Words used in the singular include the plural. The reverse is also true.
2. Words used in the present tense include the future tense. The reverse is also true.
3. The words "shall", "must," "will," and "may not" are mandatory.
4. "May" is permissive.
5. When used with numbers, "Up to x," "Not more than x" and "a maximum of x" all include x.

C. Conjunctions. Unless the context clearly indicates otherwise, the following conjunctions have the following meanings:

1. "And" indicates that all connected items or provisions apply;
2. "Or" indicates that the connected items or provisions may apply singly or in combination;
3. "Either...or" indicates that the connected items or provisions apply singly, but not in combination.

D. Lists. Lists of items that state "including the following," "such as," or similar language are not limited to just those items. The lists are intended to provide examples, but not to be exhaustive of all possibilities.

Section 14: Sign Face Area

A. Sign cabinets. The area of sign faces enclosed in frames or cabinets is determined based on the outer dimensions of the frame or cabinet

B. Double sided signs. Only one (1) side of a double sided sign is counted in determining the area of sign faces. Where the two (2) sides are not of equal size, the larger of the two (2) sides is used for the determination of sign area. The area of multiple-faced signs in which the interior angle formed by the faces is greater than ninety-one degrees (91°) shall be expressed as the sum of the areas of all the faces, except for multiple-faced signs containing faces that are configured back to back, in which case the area of the faces configured back to back will be calculated according to the rule for double-faced signs.

C. Round, Oval & Irregularly shaped signs. To be measured based on the appropriate mathematical formula to obtain the sign area for a circle, an oval or irregularly shaped sign.

D. Calculating Sign Area

1. Signs containing integral background areas: The area of a sign containing a clearly defined background area shall be calculated based on the area of the smallest standard geometric shape or combination of geometric shapes capable of encompassing the perimeter of the background area of the sign. In the case of signs in which multiple background areas are separated by open space, sign area shall be calculated based on the sum of the areas of all separate background areas, calculated as referenced above, but without regard for any open space between the separate background areas.

2. Signs without integral background areas: In instances in which a sign consists of individual elements such as letters, symbols, or other graphic objects or representations that are painted, attached to, or otherwise affixed to a surface such as a wall, window, canopy, awning, architectural projection, or to any surface not specifically designed to serve as a sign background, the sign area shall be based on the sum of the individual areas of the smallest geometric shape or combination of geometric shapes capable of encompassing the perimeters of the individual elements comprising the sign.

E. Awnings and marquees. When graphics or sign copy is incorporated into an awning, the sign area is determined by computing the area of a standard imaginary geometric shape or combination of shapes drawn around the sign

copy area or graphics. When the ends of awnings or marquees are parallel and contain graphics or sign copy, only one side is counted in addition to the sign face area on the front.

Section 15: Height of Signs

A. The overall height of a freestanding sign or sign structure is measured from the lowest point of the ground directly below the sign to the highest point of the freestanding sign or sign structure.

B. Exception: Where a freestanding sign or sign structure is mounted along a roadway that has a higher grade level as compared to the grade level directly below the freestanding sign or sign structure, then the freestanding sign or structure's height will be measured from the roadway grade level to the highest point of the freestanding sign or sign structure. See Figure A.

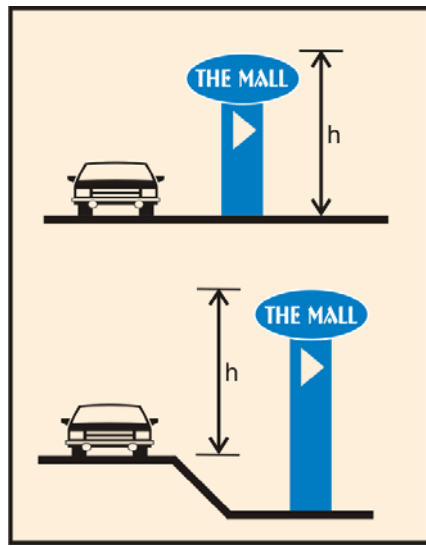


Figure A

Author's clarification notes:

The intent of this section is to describe how freestanding sign height is determined: by measuring from the grade level directly beneath the freestanding sign to the top of the sign. An exception is included in order to assist adopting jurisdictions in conserving resources and to avoid unnecessary Zoning Appeals, as illustrated below.

If a freestanding sign is installed along a roadway that is elevated as compared to grade level around the freestanding sign, then there is the potential that the freestanding sign will sit too low as compared to motorists on the roadway, and sign visibility and legibility will be compromised. The exception is a reasonable adjustment to address this type of situation administratively via the routine sign permit application, and will allow jurisdictions to avoid the bureaucratic time and expense involved in hearing Zoning Appeals filed to address the height disparity.

Section 16: Standards in Residential Zones

A. General standards: standards for permanent on-premise signs in the Residential, Apartment, Multi-family, Agricultural and Sub-Division Development Zones are described below and on Table 1 (see Page 36).

B. Residential properties – all single family residential properties that are located in Residential Zoning Districts are permitted signs not to exceed eight (8) square feet in total sign area per road frontage. Corner lots and lots with frontage on more than one street are entitled to eight (8) square feet per frontage. This sign area allowance covers but is not limited to: address signs, home occupation signs, lawn signs, real estate signs, contractor signs, and political signs. Signs may be freestanding, mounted to a permanent building structure or displayed in a window. Trees, rocks or other naturally occurring landscape features may not be used to support a residential sign.

Author's clarification notes:

It is the intent of this Model Code to give a specific overall sign area allowance to a residential property, and no more. It is then up to the individual property owner how the overall sign area is apportioned. This relieves the AHJ from the responsibility of making differentiations and distinctions between types of signs and speech on residential properties and its attendant constitutional implications. The Model Code recommends a maximum area of eight (8) square feet as a reasonable allowance that will meet most residential sign needs – particularly if there is more than one sign involved, if even on a temporary basis (for instance, a political sign and a contractor's sign).

C. Subdivisions, apartment, multi-family dwellings and condominium complexes are permitted a freestanding sign not to exceed sixty-four (64) square feet, and further provided that one (1) such sign shall be permitted for each separate street and/or separate building frontage occupied by the subdivision, apartment, or condominium complex and/or for each means of entrance to or exit from the subdivision, apartment, or condominium complex. Wall signs are also permitted not to exceed five (5) percent of the area of the façade in elevation view upon which they are placed.

D. For properties located in a Residential Zone as described in subsection C above, other directional, incidental and/or accessory signs are also permitted, to be located within the subdivision, complex or multi-family residential development. Such directional, incidental and/or accessory signs shall not exceed six (6) square feet in sign area and eight (8) feet in height (if freestanding).

E. Other permitted non-residential uses in a Residential Zone are permitted a freestanding sign not to exceed forty-eight (48) square feet, and further provided that one (1) such sign shall be permitted for each separate street and/or separate building frontage occupied by the permitted use, and for each

means of entrance to or exit from the permitted use. Wall signs are also permitted not to exceed five (5) percent of the area of the façade in elevation view upon which they are placed.

G. Electronic Message Centers: EMC's are allowed, by Special Exception only, on properties with permitted non-residential uses in a Residential Zone. They are prohibited on residential properties and on subdivision, apartment, multi-family dwellings and condominium properties.

H. Animated signs: as defined by this Code, animated signs are prohibited in Residential Zones.

I. Roof Signs: as defined by this Code, Roof signs are prohibited in Residential Zones.

Table 1 - Signs in Residential Districts				
	TYPES OF SIGNS ALLOWED	NUMBER OF SIGNS ALLOWED	PERMITTED SIGN AREA	MAXIMUM HEIGHT (IF APPLICABLE)
RESIDENTIAL PROPERTIES INCLUDING SINGLE FAMILY DETACHED, SEMI-DETACHED, TOWN HOMES	FREESTANDING OR WALL	ANY NUMBER SO LONG AS THE TOTAL SF OF ALL SIGNS DOES NOT EXCEED 8 SF PER FRONTAGE	8 SF	6'-0"
RESIDENTIAL SUBDIVISIONS, APARTMENT COMPLEXES, MULTI-FAMILY DWELLINGS, CONDOMINIUMS	FREESTANDING	ONE PER FRONTAGE	64 SF	15'-0"
	WALL	ONE PER FACADE	5% OF FACADE	-----
	INCIDENTAL OR DIRECTIONAL	UNLIMITED	6 SF	8'-0"
PERMITTED NON-RESIDENTIAL USES IN RESIDENTIAL ZONES	FREESTANDING	ONE PER FRONTAGE	48 SF	15'-0"
	WALL	ONE PER FACADE	5% OF FACADE	-----
	INCIDENTAL OR DIRECTIONAL	UNLIMITED	6 SF	8'-0"
	ELECTRONIC MESSAGE CENTERS ARE ALLOWED BY SPECIAL EXCEPTION ON PROPERTIES WHERE PERMITTED NON-RESIDENTIAL USES IN A RESIDENTIAL ZONE ARE LOCATED			

Section 17: Standards in Office and Professional Zones

A. Any signs permitted in a Residential Zone that relate to a use permitted in the Office and Professional Zones are permitted.

B. Signs for an office, office development or professional building, including a directory of tenants engaged in professional and/or commercial activity on the premises. The area of any such sign shall not exceed sixty-four (64) square feet and not more than two (2) such signs shall be permitted on premises held in single and separate ownership unless such premises fronts on more than one (1) street in which case two (2) such signs shall be permitted on each separate street frontage, and further provided that one (1) sign, the area of which shall not exceed sixty-four (64) square feet, shall be permitted for each means of entrance to or exit from the premises.

C. Signs for permitted uses within the zone other than an office or professional building provided that the area of any such sign shall not exceed forty-eight (48) square feet and further provided that not more than two (2) such signs shall be permitted for each separate street and/or separate building frontage occupied by the permitted use.

D. Unless otherwise regulated by specific reference herein, freestanding signs shall be limited to a height above the grade level on which they are placed of twelve (12) feet to the top of the sign.

E. Electronic Message Centers: EMC's are permitted in Office and Professional Zones.

F. Animated signs are prohibited in Office and Professional Zones.

G. Roof signs are prohibited in Office and Professional Zones.

Section 18: Standards in Commercial and Industrial Zones

General standards and sign features: The standards for permanent signs in Commercial and Industrial Zones are as follows. All such signs must conform to the regulations of this Section.

A. Any signs permitted in a Residential Zone or Office and Professional Zones are permitted in Commercial and Industrial Zones.

B. Signs on Commercial and Industrial properties as regulated by reference to types noted below.



(1) Freestanding Signs:

a. Freestanding signs shall be limited to one (1) per property held in single and separate ownership except for a property that has frontage on more than one (1) street, in which case one (1) such sign shall be permitted for each separate street frontage. If a property has frontage that exceeds three hundred (300) lineal feet on any given roadway, one (1) additional such sign on such frontage shall be permitted; and for each multiple of three hundred (300) lineal feet of frontage thereafter, one (1) additional such sign shall be permitted for each separate street frontage.

Unless otherwise regulated by specific reference herein, the area and height above grade of any freestanding sign shall not exceed the amounts specified in Table 2 below.

b. In the case of a property designated as a shopping center or planned industrial park, additional freestanding signs shall be permitted for each vehicular entrance to the property. Permitted sign area for

these additional freestanding signs shall be sixty (60) percent of the sign area permitted by Table 2 for Signs in Commercial and Industrial Zones. Sign height shall be in conformance with Table 2.

Table 2 - Freestanding Signs in Commercial & Industrial Districts Values indicated are maximum limits on sign size and height A = Sign Area in Square Feet / H = Sign Height in Lineal Feet										
Zoning District 	Downtown		Neighborhood Commercial		Highway Commercial		Industrial		Limited Access Highway	
Speed Limit 	A	H	A	H	A	H	A	H	A	H
25	24	14	50	22	78	26	78	26		
30	28	16	72	26	112	30	112	30		
35	32	18	98	30	153	36	153	36		
40			128	34	200	42	200	42		
45			162	38	253	48	253	48		
50			200	42	312	52	312	54		
55					378	56	378	60	457	66
60					450	60	450	66	544	70
65									639	74
70									741	78
75									850	86

(2) Building Signs:

- a. Building signs include wall or fascia signs, roof signs, and signs otherwise permanently applied to walls or other building surfaces.
- b. The total area of all parallel wall signs applied to any given facade shall not exceed the area computed as a percentage of the building facade in elevation view, including window and door areas and cornices to which they are affixed or applied in accordance with Table 3 for Parallel Signs in Commercial and Industrial zones.
- c. In the case of a shopping center or a group of stores or other business uses on a lot held in single and separate ownership, the provisions of this section relating to the total area of signs permitted on a premises shall apply with respect to each building, separate store, separate storefront, or separate use. Only wall signs shall be permitted for individual establishments in a Shopping Center or on a property

with more than one use, entity or business (multi-use or multi-tenant properties; these properties may also have one (1) freestanding sign per street frontage).

Table 3 - Parallel Signs	
Distance of sign from road or adjacent commercial or industrial zone.	Percentage of building elevation facade permitted for sign area
0 to 100 feet	Fifteen (15%)
101 to 300 feet	Twenty (20%)
Over 301 feet	Twenty-Five (25%)

Author's clarification notes:

Tables #2 and #3 above are included in order to provide the local AHJ with specific dimensional values for sign area, sign size and sign height, all based on existing scientific research related to on-premise signs. The intent of this Code is to provide guidelines for the regulation of on-premise sign dimensions that are based on scientific principles, and thereby assist the local AHJ in crafting a Sign Code that is fact-based, and to eliminate subjective or individual preferences, which can vary greatly.

These standards are objective in nature. They have their basis in furthering the interests of traffic safety. They will insure that on-premise signs in the Commercial and Industrial zones have adequate visibility and legibility for motorists, again in the interests of public safety.

The primary goal of these standards is to insure that all on-premise signs have sufficient area and height to provide a motorist with adequate time and travel distance to detect a sign, read and understand its contents, and then execute an appropriate driving maneuver. Factors that would impede this process (making the sign smaller, lowering its height) would be at odds with traffic safety principles, and should be avoided by a local AHJ, assuming that the goal of public and motorist safety is paramount.

(3) Roof Signs, Special Considerations:

a. Roof signs are permitted by Special Exception in the Commercial and Industrial Zones and are in lieu of a building or wall sign. For permitted roof sign area, see Table 3 above for parallel signs in Commercial and Industrial Zones. The height of any roof sign above the highest architectural point of the building to which it is mounted shall not exceed the percentage of the vertical dimension of the building facade parallel to the sign in accord with sections (1) and (2) below. Measurements shall be computed from the highest building point to the top of the sign.

1. Commercial Zones - Twenty-five (25) percent.
2. Industrial Zones - Forty (40) percent.

b. The area calculation for any roof sign whose orientation on a roof may be other than parallel to an individual building facade shall be computed with reference to the building facade that most closely parallels the orientation of such sign.

(4) Canopy Signs (Also Marquee Signs and Signs on Architectural Projections): Special Considerations

a. Canopy Signs, Marquee Signs and Signs on Architectural Projections are signs that are mounted to either structures that project off the face of the building more than eighteen (18) inches or signs that are mounted to a freestanding structure not attached to a building that creates a canopy or covering over an area below.

Author's clarification notes:

Canopy signs, marquee signs and signs on architectural projections are special sign applications. Although they are unique, they should be provided for in a comprehensive sign code. An example of a canopy sign would be lettering installed on a canopy over a series of gas pumps at a service station – it is neither a true wall sign nor freestanding sign. An example of a marquee sign would be lettering and graphics displayed on the front and sides of a theater marquee that projects out over a portion of a downtown sidewalk. An example of a sign on an architectural projection would be letters installed on a decorative masonry feature that projects off a building face.

b. Signs affixed or applied in an essentially flat plane to the face of a building or freestanding canopy, marquee, or architectural projection provided that the copy area of any such sign, as defined herein, does not exceed an area equal to forty (40) percent of the product of the height and length of the face area of the canopy, marquee, or architectural projection to which such sign is affixed or applied, or fifteen (15) percent of the building façade to which it is attached, whichever is greater.

c. Graphic treatment in the form of striping or patterns shall be permitted on the face of any building or freestanding canopy, marquee, or architectural projection without restriction, and the area of any such graphic treatment shall not be calculated as a component of permitted copy area.

(5) Awning Signs

- a. Graphics affixed or applied to the face or side surfaces of an awning or backlit awning are permitted provided that the copy area of any such sign copy or graphic, as defined herein, does not exceed an area in accordance with Table 3 for parallel signs, to which the awning is attached.
- b. Graphic treatment and/or embellishment in the form of striping, patterns, or valances shall be permitted on the face or side surfaces of any awning or backlit awning without restriction, and the area of any such graphic treatment and/or embellishment shall not be calculated as a component of permitted copy area.

(6) Projecting Signs: permitted in Commercial Zones only

- a. Projecting signs shall be limited to one (1) per building facade on which any such sign is mounted except for a use that fronts on more than one (1) street, in which case, one (1) such sign shall be permitted per facade for each separate street frontage. In the case of a building in which any individual facade exceeds two hundred (200) lineal feet, one (1) such sign shall be permitted for each two hundred (200) lineal feet of such facade or multiple thereof on each separate street on which such facade fronts.
- b. The area of any projecting sign shall not exceed one (1) square foot per every two (2) lineal feet of the building facade on which such sign is mounted, except that no such sign shall be larger in area than one hundred (100) square feet.
- c. No projecting sign shall extend in a vertical dimension above the highest architectural point of the facade to which it is mounted in excess of twenty-five (25) percent of the vertical dimension of the facade itself.
- d. Projecting signs extending over a public sidewalk shall be limited to a projection distance not to exceed two-thirds ($\frac{2}{3}$) of the width of the sidewalk.
- e. Projecting signs shall not be permitted in addition to any permitted freestanding signs on any given property frontage, except that, in the case in which a premises is permitted either freestanding or projecting signs on any one frontage, projecting signs may be substituted for any of the permitted freestanding signs on such frontage, provided that the requirements herein specifically relating to size, height, and extension of projecting signs are met.

Section 19: Additional Standards in All Zones.

A. Where these regulations apply. These regulations apply to all signs regulated by this Code.

B. Sign placement. All signs and sign structures must be erected and attached totally on or within the site or property to which they refer, behind any applicable legal right of way.

C. Signs extending into the right-of-way. Exceptions:

(1) Projecting signs: in a Downtown or Central Business District, projecting over a public sidewalk.

(2) Awnings and marquees: in a Downtown or Central Business District, projecting over a public sidewalk.

(3) A-frame signs. A-frame signs may be used in a Downtown or Central Business District if they meet the following standards:

- a. The sign is entirely outside the street or roadway;
- b. The sign is no larger than ten (10) square feet;
- c. The sign does not obstruct a continuous through pedestrian zone of at least six (6) feet in width.
- d. The sign does not obstruct pedestrian and wheelchair access from the sidewalk to any of the following:
 - i. transit stop areas;
 - ii. designated disabled parking spaces;
 - iii. disabled access ramps; or
 - iv. building exits including fire escapes.

Author's clarification notes:

The above exceptions for projecting signs, awnings and marquees and A-frame signs are included for municipalities where an area of special interest or a central town district has been created with features such as sidewalks, buildings located close to the street or roadway, no front lawns or landscaped areas, substantial pedestrian traffic in addition to vehicular traffic.

D. Removal of signs. The AHJ Engineer may require signs extending into the right-of-way to be modified or moved if streets are widened, or other improvements made in the right-of-way, which result in the creation of unsafe conditions. The modification or moving will be at the owner's expense. If a

nonconforming sign is moved under this requirement, it may be re-erected on the site without being brought into conformance.

F. Freestanding Signs

- (1) Freestanding signs may not extend into the right-of-way.

G. Fascia or Wall Signs

- (1) Vertical extensions: Fascia or wall signs may not extend above the top of the building wall upon which they are mounted.
- (2) Horizontal extensions: Fascia or wall signs may not extend more than eighteen (18) inches out from the wall or structure to which they are attached.

H. Pitched Roof Signs

- (1) Vertical extensions: A pitched roof sign may not extend above the roofline.
- (2) Placement and angle. Pitched roof signs must be parallel to the building face. They may not extend beyond the building wall. See illustrations in Section 9 (see Page 28).
- (3) Support structures: Support structures must be designed so that there is no visible support structure above the sign.

I. Projecting Signs

- (1) Placement: Projecting signs are not allowed on rooftops or on pitched roofs. Projecting signs may not extend over a right-of-way unless they are located in a Downtown or Central Business District.

J. Directional Signs

- (1) General standards: Directional signs that meet the standards of this subsection are allowed in all zones and are not counted in the total square footage of permanent signage allowed on any property or site.
- (2) Size: Freestanding directional signs may be up to six (6) square feet in area and ninety-six (96) inches in height. Fascia directional signs may be up to sixteen (16) square feet in area.
- (3) Directional signs in any zone may have internal or external illumination.

K. Permanent Banners

(1) General: Banners used as permanent signs are allowed in all Commercial and Industrial Zones and will be included in the total square footage of permanent signage allowed on the site. Temporary banners are regulated under Subsection L, below.

(2) Standards: Permanent banners are subject to the standards for either fascia signs or projecting signs depending on how the banner is supported or anchored.

L. Temporary Signs

(1) Signs that meet the standards of this subsection are exempt from the standards for permanent signs and are not counted in the total square footage of signage allowed on any particular property or site. Signs that do not meet the standards of this subsection are subject to the standards for permanent signs.

(2) Temporary signs may have external or internal illumination.

(3) Temporary banners: Temporary banners are subject to the following regulations:

a. In all Residential Zones, temporary banners are not permitted on sites with houses, duplexes, and attached houses. Exception: banners for holidays, religious commemoration, and special family events.

b. In the Office, Professional, Commercial and Industrial Zones, one banner no larger than thirty-two (32) square feet in size is permitted per property or, on a multi-use property, per storefront. Only one (1) of these banners may be hung on each building wall or on each separate structure. Any additional banners, or banners larger than thirty-two (32) square feet in size, must meet the following standards for permanent signs in this Code.

i. In no case may a site or storefront have more than two (2) temporary banners.

ii. In no case shall a temporary banner be larger than fifty (50) square feet in size.

iii. A temporary banner may be displayed no longer than ninety (90) days per calendar year.

iv. Banners that do not meet the regulations of this subparagraph, must meet the standards for permanent signs.

(4) Temporary Wall or Fascia Signs. One (1) temporary wall sign is allowed per street frontage in the Commercial and Industrial Zones. Temporary wall signs may be up to thirty-two (32) square feet in area. Temporary wall signs may not extend above roof lines. Extensions into the right-of-way are prohibited. A temporary wall sign may be displayed no longer than ninety (90) days per calendar year.

(5) Temporary Freestanding or Portable Signs. One (1) temporary freestanding sign is allowed per property in the Commercial Zones and is not counted in the total square footage of permanent signage allowed on the site. Temporary freestanding signs may be up to thirty-two (32) square feet in area. Extensions into the right-of-way are prohibited. A temporary freestanding sign may be displayed no longer than ninety (90) days per calendar year.

Section 20: Electronic Message Centers

A. In the Office, Professional, Commercial and Industrial Zones, Electronic Message Centers (EMCs) are permitted in accordance with the sign areas noted in Table 2 (see Page 38) or Table 3 (see Page 39) respectively.

B. Additional general EMC regulations:

(1) An EMC sign may be a portion of a building sign or freestanding sign, or may comprise the entire sign area.

(2) All EMC signs shall have automatic dimming controls, either by photocell (hardwired) or via software settings, in order to bring the EMC lighting level at night into compliance with Section 21 of this Code "Sign Illumination Standards".

C. EMC regulations by Zone

(1) In Residential Zones, EMC signs are permitted only in certain circumstances by Special Exception in accordance with Section 16 (G) of this Code. They are otherwise prohibited in Residential Zones.

(2) In Residential Zones, where permitted, EMC signs shall have a minimum display time of twelve (12) seconds. The transition time between messages and/or message frames is limited to one (1) second.

(3) In Residential Zones, where permitted, the following EMC display features and functions are prohibited: scrolling, traveling, flashing,

spinning, rotating, fade, dissolve, any other moving effects, and all dynamic frame effects or patterns of illusionary movement or simulated movement.

(4) In Office and Professional Zones, EMC signs shall have a minimum display time of eight (8) seconds. The transition time between messages and/or message frames is limited to three (3) seconds and these transitions may employ fade, dissolve, and or other transition effects.

(5) In Office and Professional Zones, the following EMC display features and functions are prohibited: continuous scrolling and/or traveling, flashing, spinning, rotating, and similar moving effects, and all dynamic frame effects or patterns of illusionary movement or simulating movement.

(6) In Commercial and Industrial Zones, all EMC display features and functions are permitted, with the exception of (a) flashing, which is prohibited, and (b) full motion video or film display via an electronic file imported into the EMC software or streamed in real time into the EMC. Full motion video as described shall be permitted by special exception only.

Author's clarification notes:

1. Electronic Message Center control and code enforcement issues have become a matter of great interest at the municipal level across the United States. This interest has been spurred primarily by the availability of EMC technology, its increasing quality, and the interest of sign owners / end users in utilizing the technology.

2. Most EMC signs installed today are illuminated via LEDs, or light emitting diodes. LEDs are the current industry standard for the illumination of EMC signs, and it is likely that this will remain so for the near future, until another technology is perfected that is both tolerant to outdoor environmental conditions, sufficiently bright, and cost effective. There may be other sources of illumination in the near future, so the term EMC is intended to refer to any on-premise sign that can display messages and change them at regular intervals via a computer-controlled interface.

3. From a legal and practical standpoint, experience indicates that local control of EMC signs is preferred over an outright ban. Some communities have attempted to implement a prohibition on EMC signs, but it should be noted that there has been a heavy cost associated with these types of bans – legal and administrative costs to the AHJ to defend such a ban; acrimony created within the community by the denial of this new communication technology without a scientific or traffic safety research basis; loss of the benefits created by enhanced EMC communication. In addition, a substantial percentage of EMC signs are installed at churches, municipal buildings, libraries, fire and rescue facilities, hospitals and out-patient medical offices. Therefore, a more prudent and balanced approach to EMC regulation based on sound scientific principles may serve the local AHJ in both the long and short terms.

4. In regard to traffic safety issues and EMC signs, a local AHJ can rely on this statement to be true: up to this time, research has shown no correlation between EMC signs and traffic accidents, and EMC signs have not been found to be a distraction having impact on the driving task or to cause unsafe driving behavior that causes an accident in driver distraction studies. Some have offered opinions and theories about EMC signs and so-called distractions, but there has been no direct scientific research on these distractions and EMC signs. The term "distraction" in and of itself is a pejorative term, suggesting a negative outcome or result. What research on motorist behavior has shown is that drivers engage in a wide variety of activities while operating a motor vehicle, and some for two (2) seconds or longer. Some activities that drivers engage in have a positive effect on motorist performance, even though the driver's eyes are away from the road. Examples of this would be checking the rear view mirror, checking the side mirrors, or checking the speedometer. Other activities that drivers engage in have a demonstrated negative effect on motorist performance – most notably cell phone use and texting while driving. Finally, other activities appear to have no effect either way – positive or negative – on driver performance, and EMC signs fall into this category. Drivers look at EMC signs but their driving performance is not affected, and that is why accident and driver distraction research fails to show any correlation with EMC signs.

5. All stakeholders agree that EMC lighting levels must be adjusted at night. In order for an EMC to be visible and legible during the day, the EMC sign must be energized or illuminated – it must have sufficient brightness to be seen while the sun is present. At night, however, EMC brightness must be adjusted to a much lower level, so that the sign is not over-bright and/or create glare so that a motorist cannot read the sign. Most EMC manufacturers have technology built into their products to accomplish this lighting level adjustment, typically using photocells and/or software timing controls. Section 20 coordinates with the general lighting standards of this Code contained in Section 21 Sign Illumination Standards to insure that all EMCs have an appropriate lighting level at night, based on the needs of the motorist and traffic safety. This standard is a "Luminance" standard, or an objective measurement and control of the actual brightness of the EMC sign, based on on-premise sign research.

6. Section 20 provides regulations for "display time" on an EMC sign. Display time is sometimes also referred to as a "change rate", and is intended to describe the rate at which a message can be changed on the EMC display panel.

7. EMC signs are capable of a wide range of dynamic message and image presentations as well as visual effects including simple scrolling or moving message effects to full video display. Since no negative correlation between on-premise EMC signs and traffic safety has been demonstrated by current research, any restriction on the various operational capabilities of EMC signs are necessarily imposed for aesthetic purposes only.

In placing operational restrictions on EMC sign use in Residential and Professional Zones as an aesthetic consideration, this Model accepts the premise that these zones are not normally commercially active, and do not require the more visually dynamic forms of on-premise communication necessary for the rapid transfer of commercial speech in Commercial and/or Industrial Zones.

Since neither an aesthetic nor traffic safety justification can be advanced for placing similar restrictions on the dynamic operational capabilities of EMC signs in Commercial

and/or Industrial Zones, the Model – except for prohibition of flashing and provision that video display be subject to special exception – places no specific prohibitions on EMC operational usage in those zones. The AHJ, however, in assessing local conditions

involving community aesthetic considerations, may place specific usage restrictions as it determines to be appropriate, or, as the Model suggests regarding video usage, make certain operational usage features of EMC signs within its jurisdiction are subject to special exception.

The prohibition on EMC video display is intended to cover the display of videos, films, motion video clips, and streaming video images that are not a part of the standard EMC software. It is not intended to prohibit the use of standard effects that are a part of the EMC software capabilities, which sometimes can be confused with actual video. These permitted effects are generally shown in the background of a message (flag waving, leaves falling, clouds passing) and are not the primary EMC content or message, but merely a design element intended to compliment the primary communication.

Each AHJ may make a determination in regard to zones where EMC video capabilities enhance the character of the zone, and where they may be prohibited, based on local conditions.

Section 21: Sign Illumination Standards

Signs may be illuminated consistent with the following standards:

- A.** A sign in any district may be illuminated at night. Signs that are illuminated at night may not exceed a maximum luminance level of seven hundred fifty (750) cd/m² or Nits, regardless of the method of illumination.
- B.** Signs that have external illumination, whether the lighting is mounted above or below the sign face or panel, shall have lighting fixtures or luminaires that are fully shielded.
- C.** All illuminated signs must comply with the maximum luminance level of seven hundred fifty (750) cd/m² or Nits at least one-half hour before Apparent Sunset, as determined by the National Oceanic and Atmospheric Administration (NOAA), US Department of Commerce, for the specific geographic location and date. All illuminated signs must comply with this maximum luminance level throughout the night, if the sign is energized, until Apparent Sunrise, as determined by the NOAA, at which time the sign may resume luminance levels appropriate for daylight conditions, when required or appropriate.
- D.** On-premise signs do not constitute a form of outdoor lighting at night, and are exempt from any other outdoor lighting regulations that the AHJ has adopted, or will adopt in the future.

Author's clarification notes:

The intent of these Sign Illumination provisions is to set a clear and uniform lighting level for illuminated on-premise signs at night based upon research, the needs of the motorist, and traffic safety. This lighting level standard is simple and easy to understand.

Experience has shown that outdoor lighting and illumination regulations can often become very complicated and use concepts and terms that even professionals do not

fully understand. The goal of this Model Code is to help create enforceable standards that require a minimum of administrative resources, yet can be applied uniformly.

The lighting standard provided controls the actual brightness of the sign, or luminance of the sign – of the sign face, the sign letters, the sign panel etc. This standard is based on existing on-premise sign research. The correct lighting level at night for an on-premise sign has been confirmed, both in a test track setting and in real world environments. The maximum luminance level noted by the Model will insure that signs have sufficient brightness at night so that they can be detected and read by motorists at night in the interests of traffic safety.

The luminance standard also provides flexibility to both manufacturers and AHJs. The luminance of a sign can be determined at the place of manufacture prior to installation or in the field after the sign is installed. If multiple signs of the same design and manufacture are installed, then only one (1) sign needs to be measured as the representative sample, thereby conserving resources.

This Model Code strongly recommends that other light measurement methods be avoided in regard to on-premise signs (for instance, an illuminance standard, or including ambient lighting conditions as a part of a complicated formula), because these methods do not account for true sign brightness which, in regard to traffic safety, is the primary determinant as to whether a sign is visible and legible to the motorist.

It should also be noted that research has shown that on-premise signs are not a factor in creating so-called light trespass or light spillage conditions. Regulators often confuse the fact that an on-premise sign can be seen from a distance at night with light trespass. Instead, on-premise signs can be detected from a distance because they have proper sign brightness or luminance at night, and not because they project a great deal of unnecessary lighting to surrounding areas. This Model Code suggests that a light trespass measurement method, aimed at sign illuminance, may result in a more confusing and complicated regulatory scheme and may compromise public safety.

Section 22: Additional Sign Standards for Historic or Overlay Zones

Author's clarification notes:

This Model Code does not provide suggested Code language for areas of special interest within an AHJ or Historic Zones. These types of regulations must be individually tailored to the needs of each AHJ, applicable state and federal law, and therefore it would be virtually impossible to craft a set of general guideline regulations that could apply in all 50 states.

If the local AHJ has bona fide historic areas or districts, or Areas of Special Interest, these standards should be inserted here. The Additional Standards address the following:

- the specific districts or zones where the additional sign standards apply should be clearly delineated;*
- the standards should be as objective and uniform as possible;*
- the standards should not give a local AHJ committee or Board unbridled discretion in reviewing, controlling or censoring sign content or sign colors or sign design; this could simply invite a constitutional challenge; while the courts in some states have allowed broad sign design review procedures, a local AHJ should be cautioned that these procedures have generally not been tested in the Federal Court system, and a local AHJ or state cannot summarily preempt constitutional guarantees related to speech.*
- Terms to be avoided in drafting Additional Sign Standards: the words: may, should, encourage, discourage, architecturally complimentary or compatible, and/or any other phrase that vests subjective discretion over speech in a local official or volunteer.*

Section 23: Nonconforming Signs

Author's clarification notes:

The purpose of regulations related to nonconforming signs is to insure that existing signs installed by valid permit that are made nonconforming by adoption of any new Sign Code may continue and that the new sign regulations will not cause unnecessary burdens. The owner of a sign with a valid permit has a legitimate expectation that the sign can be used for the period of its useful life.

The extinguishment of nonconforming signs is sometimes a goal at the local AHJ level, under the theory that these signs are "regulatory nuisances". A favorable outcome for all stakeholders in regard to the treatment of nonconforming signs is most often achieved when all the interested parties are included in the process.

The intent of these regulations is not to force all signs to be immediately brought into conformance with current regulations; instead, the intent is to gradually bring existing signs into conformance. Most sign codes contain provisions for nonconforming signs. The degree to which a sign code can extinguish nonconforming signs is also controlled by individual state law, and particular attention should be given to these rules.

A. Nonconforming permanent signs may continue to exist after passage of this Code. Nonconforming signs will be removed and changed in accordance with the provisions of this Code.

B. Permanent signs and sign structures that are moved, removed, replaced, or structurally altered must be brought into conformance with the sign regulations. However, nonconforming signs required to be moved because of public right-of-way improvements may be re-established. Removable faces or sign panel inserts in a cabinet style sign may also be changed by right, and

such change does not constitute a structural alteration nor trigger loss of nonconforming status.

C. Nonconforming temporary signs must be removed within two (2) months of the passage of this Code.

D. Ownership. The status of a nonconforming sign is not affected by changes in ownership.

E. Once a sign is altered to conform or is replaced with a conforming sign, the nonconforming rights for that sign are lost and a nonconforming sign may not be re-established.

F. Loss of nonconforming sign status.

(1). Discontinuance. See definition of Abandoned Sign.

(2) Destruction. When a sign or sign structure is removed or intentionally destroyed, replacement signs and sign structures must comply with the current standards. However:

a. Repair and maintenance. A nonconforming sign or sign structure may be removed temporarily to perform sign maintenance or sign repair.

b. Unintentional destruction. When a sign or sign structure that has nonconforming elements is partially or totally damaged by fire or other causes beyond the control of the owner, the sign and sign structure may be rebuilt to the same size and height using the same materials.

Section 24: Electrical Regulations Applying to all Permanent and Temporary On-Premise signs

A. All on-premise electric signs, outline lighting systems and skeleton neon lighting systems shall be manufactured and installed in compliance with NFPA 70, the National Electric Code (NEC).

B. The Listing label number for all signs shall be provided on the Sign Permit Application, or, if the sign has not been manufactured yet, through Nationally Recognized Testing Laboratory (NRTL) validation: A NRTL file number from the sign manufacturer shall be provided for all electric signs on the Sign Permit Application.

Author's clarification notes:

Sign manufacturers may not pre-assign labels before manufacture. Labels are serialized and would require the municipality to call the listing company and verify it with the NRTL. If the manufacturer's NRTL is on file, the municipality can generally access the most current information on-line, or require follow-up from the sign manufacturer.

The primary purpose of this Section is to insure that sign manufacturers build, list and label their electrical signs to comply with national electrical and fire safety codes in the interest of public safety.

C. The Code Officer shall have the authority to immediately remove any sign that is not in conformance with this section, or to have said sign removed, at the owner's expense.

Section 25: Construction and Structural Requirements

A. Structural Standards

(1) Signs, sign structures, sign foundations and methods to attach and anchor signs must be designed and constructed in accordance with applicable provisions of the Building Code adopted by the AHJ. All signs and their foundations and attachments must be designed for the appropriate dead, wind and snow loads for the geographic area in question.

(2) The supports and foundations used in construction for all signs and sign structures must be located outside of any rights-of-way.

(3) Welds of sign structures & sections of sign structures must be welded in accordance with the Building Code.

B. Engineering Standards

(1) Signs, sign structures, sign foundations and anchorages to a building must be individually designed in accordance with the Building Code and the provisions of this Sign Code.

(2) When the Building Code of the AHJ, or any Building Code enacted after passage of this Sign Code, calls for sealed sign design construction plans to be submitted as a part of any sign permit application, this requirement is not compulsory as it relates to on-premise signs regulated under this Sign Code.

The instances when sealed plans by a licensed engineer are required and when they are not required will be determined by specific criteria

and procedures established by the AHJ and administered by the Code Official on a case-by-case basis.

Author's clarification notes:

Some state and local jurisdictions have interpreted certain language in the International Code Council's International Building Code (IBC) in regard to construction documents and construction permit applications to require so-called "sealed" sign designs or plans as a part of the routine sign permit application process. This reading is not entirely accurate, and has caused confusion and inefficiencies, without increasing public safety or increasing the quality of sign construction.

In general, enforcement of local building code regulations and sign code electrical regulations will insure that standard on-premise signs are properly installed and that public safety is protected. Requirement of a sealed plan for a simple wall sign or low-mounted monument sign or for types of sign projects that are repetitively installed using the same installation system does not add to the value of the sign nor change how the signs will be mounted nor automatically increase public safety. The sign installer is generally the expert in these areas, and will install the sign in the appropriate manner based on already established methods and industry accepted procedures.

There will be sign projects, however, that are of such size and scope that AHJs may want to require the services of a licensed engineer in order to confirm that the sign installation details are correct for site and geographic conditions. The criteria to determine when sealed plans are required will vary from locality to locality, and the AHJ therefore will create its own set of rules for engineering requirements.

The intent of this section on Engineering Standards is to create a mechanism to determine when sealed sign plans are required and when they are not. The requirement for sealed plans will be triggered when the sign project achieves such scope as determined by the AHJ that the services of an engineer or architect will insure the AHJ that proper engineering principles are being applied.

C. Clearances

(1). Vision clearance areas: Vision clearance areas are triangular-shaped areas located at the intersection of any combination of rights-of-way, alleys or driveways. The sides of the triangle extend thirty (30) feet from the intersection of the right-of-way, alley or driveway in either/each direction. No sign may be installed within this clear sight triangle.

(2) Vehicle area clearances: In areas outside of rights-of-way, when a sign or awning extends over an area in which vehicles travel or are parked, the bottom of the structure must be at least fourteen (14) feet above the ground. Vehicle areas include driveways, alleys, parking areas, and loading and maneuvering areas.

(3) Pedestrian area clearances. When a sign or awning extends more than twelve (12) inches over a sidewalk, walkway, or other space used

by pedestrians, the bottom of the structure must be at least eight (8) feet above the ground.

(4) Clearances from fire escapes, means of egress or standpipes. Signs, sign structures and awnings are prohibited from being erected in any manner that interferes in any way with the free use of any fire escape, means of egress or standpipe. Attaching signs, sign structures or awnings to a fire escape is prohibited.

(5) Obstruction of windows and ventilation. Signs, sign structures and awnings are prohibited from being installed in any way that obstructs any building openings to such an extent that light, ventilation or exhaust are reduced to a level below that required by either the Building Code, Plumbing Regulations, Heating and Ventilating Regulations or Housing and Maintenance Regulations.

Section 26: Maintenance Requirements.

A. Signs, sign structures and awnings, together with their supports, braces, guys, anchors and electrical components must be maintained in a proper state of repair. The Code Officer may order the removal of any sign, sign structure or awning that is not maintained in accordance to this Code.

B. Dangerous Structures and Equipment

(1) Signs, sign structures or awnings that are dangerous must be taken down and removed or made safe as the Code Officer or Building Official deems necessary. Signs may be deemed dangerous for one or more of the following reasons:

a. Whenever a sign structure or its foundation, a sign's attachments to a building, or a building to which a sign is attached is damaged by fire, earthquake, wind, flood or by any other cause, to such an extent that the structural strength or stability is materially less than it was before the catastrophe and is less than the minimum requirements of the Building Code;

b. Whenever any portion or member of a sign, sign structure or awning is likely to fail, or become detached or dislodged, or to collapse and thereby injure persons or property;

c. Whenever any portion or member of a sign, sign structure or awning is likely to partially or completely collapse as a result of any cause, including, dilapidation, deterioration, or decay; faulty construction or wiring; or removal, movement or instability of any portion of the ground or building necessary for supporting such structure;

d. Whenever a sign, sign structure or awning is structurally or electrically unsafe or otherwise hazardous to human life or safety by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment;

(2) All signs, sign structures and awnings determined after inspection by the Code Officer to be dangerous must be abated by repair, rehabilitation, demolition or removal;

Author's clarification notes:

This Model Code includes a listing of supplementary sections, intended as a general reference, that appear in most sign codes. These regulations are procedural in nature. Most AHJs include these provisions, and they should be crafted to local standards and in accordance with State Law in the applicable jurisdiction. They are included here as a convenience to the local AHJ.

Section 27: Permits and Registration

Permit or Registration Required
Application Requirements
Review of Applications and Issuance of Permits
Life of Permit and Registration Limited
Suspension or Revocation

Section 28: Inspection

General
Inspections
Refusal of Entry

Section 29: Enforcement

Violations
Civil Penalties and Fees
Citations
Stop Work Orders
Review by the Director

Section 30: Fees

General
Sign Permit Fees
Fee Refunds

Appendix A...

Grayscale Images:

Section 8: Typical On-Premise Sign Types

Section 9: Sign Area Computational Methodology



Section 8: Typical On-Premise Sign Types

FREESTANDING SIGNS

usually perpendicular to viewer's line-of-sight. May be double or multi faced and contain thematic embellishment and integral covers or cladding to conceal structural supports.



PYLON



POLE WITH CLADDING



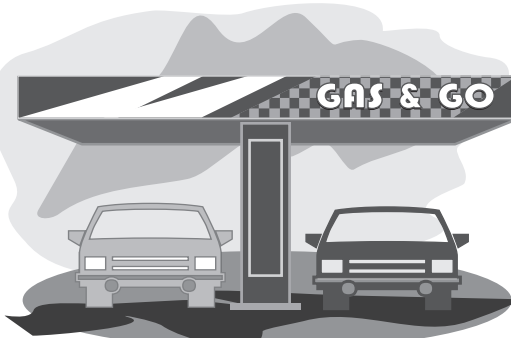
MULTI PANEL PYLON



POLE



MONUMENT

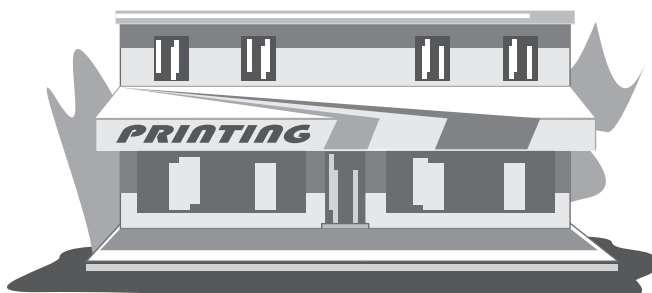


CANOPY

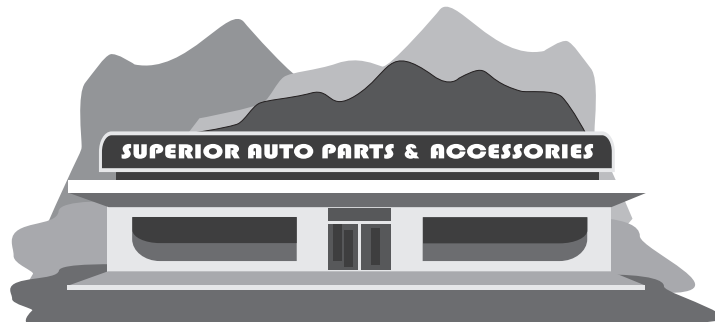


MONOLITH

BUILDING SIGNS

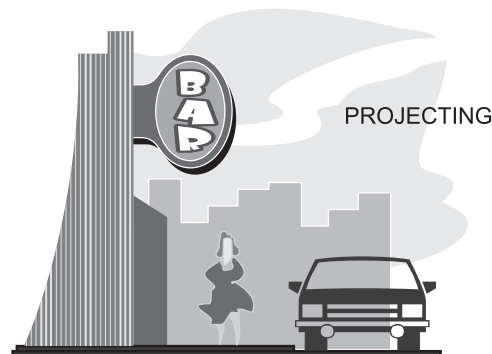


AWNING

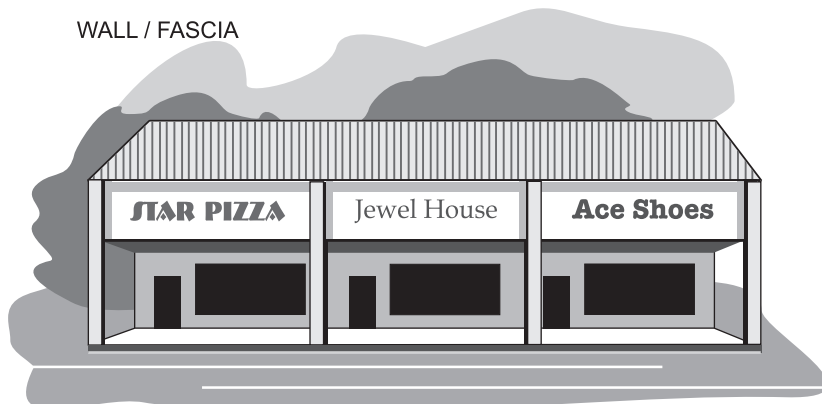


ROOF

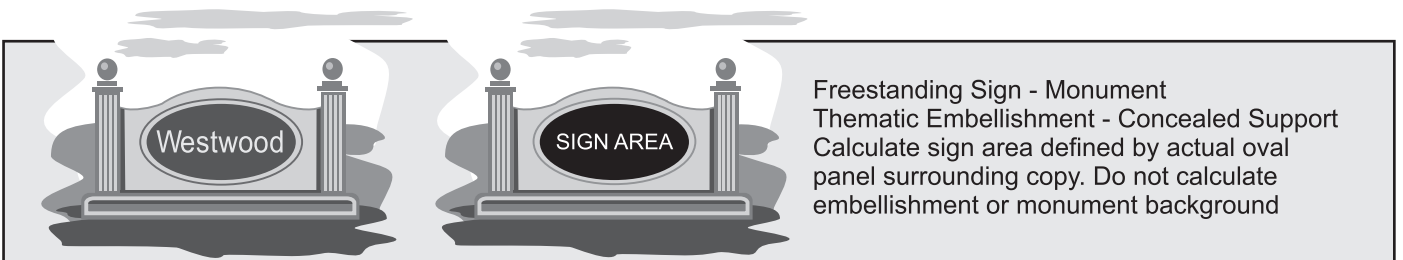
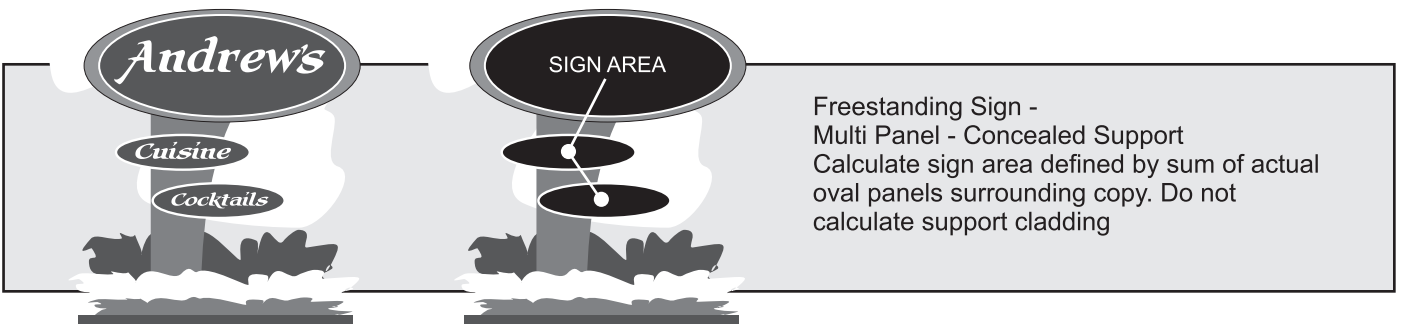
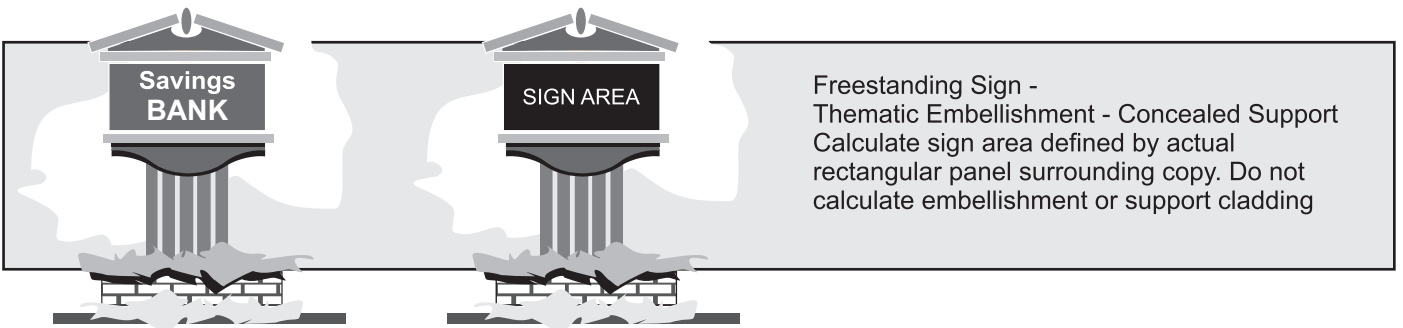
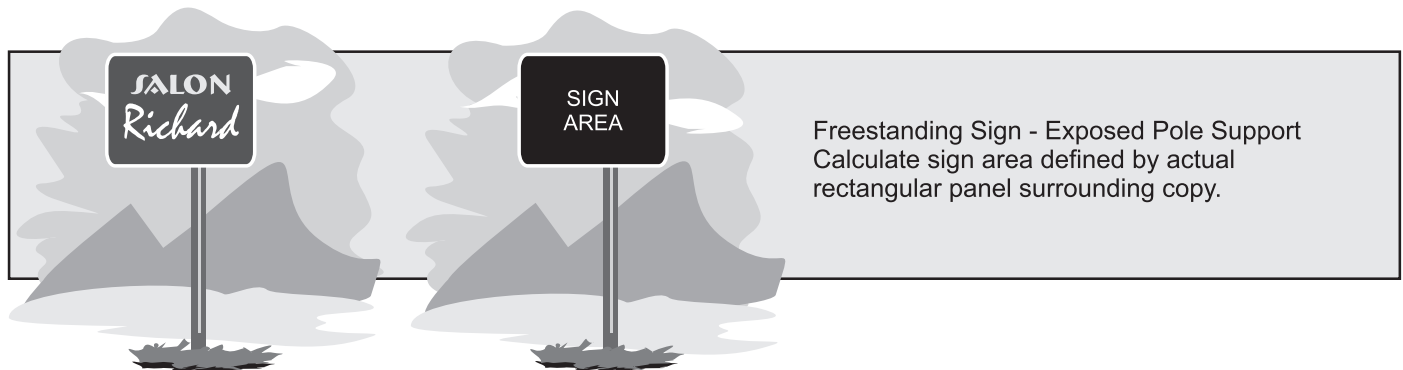
WALL / FASCIA



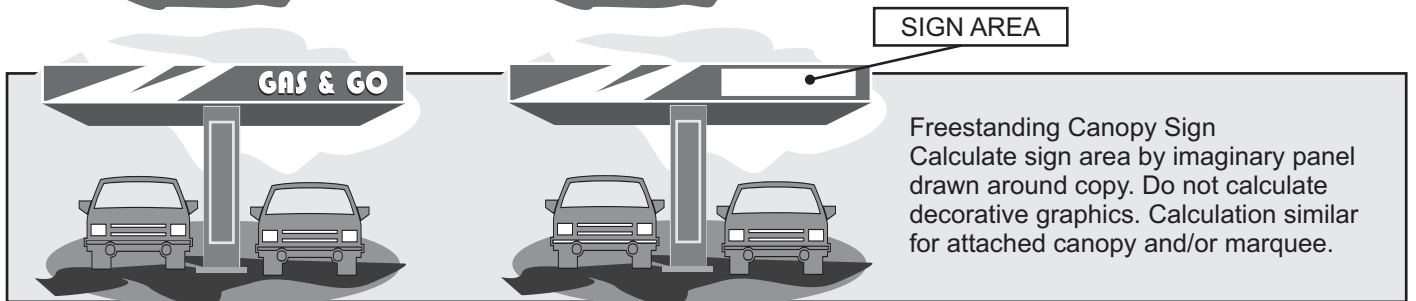
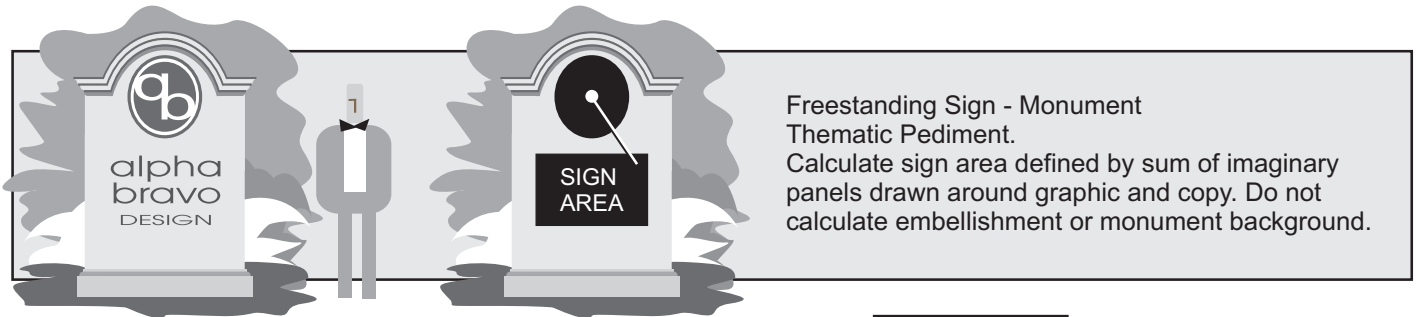
PROJECTING



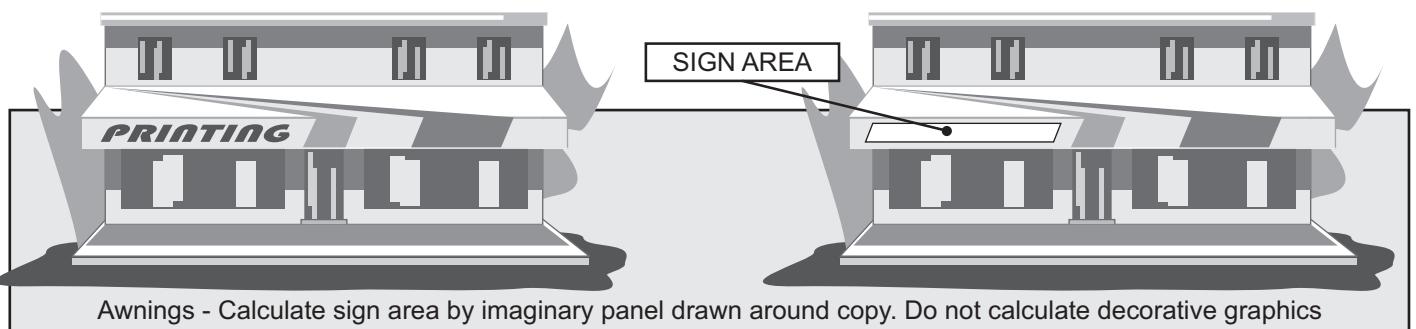
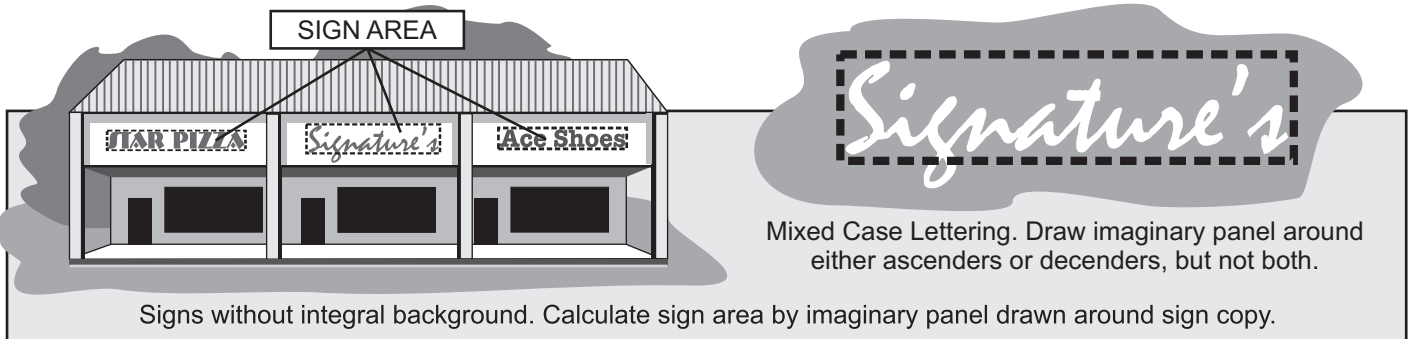
Section 9: Sign Area Computational Methodology / Ground Signs



Section 9: Sign Area Computational Methodology / Ground Signs

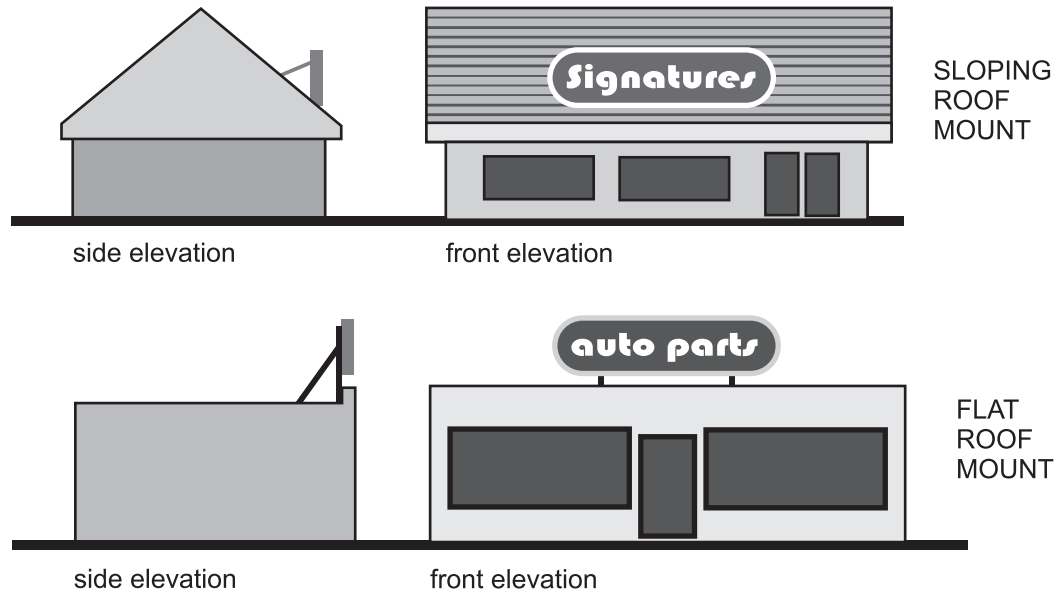


Wall / Fascia Signs

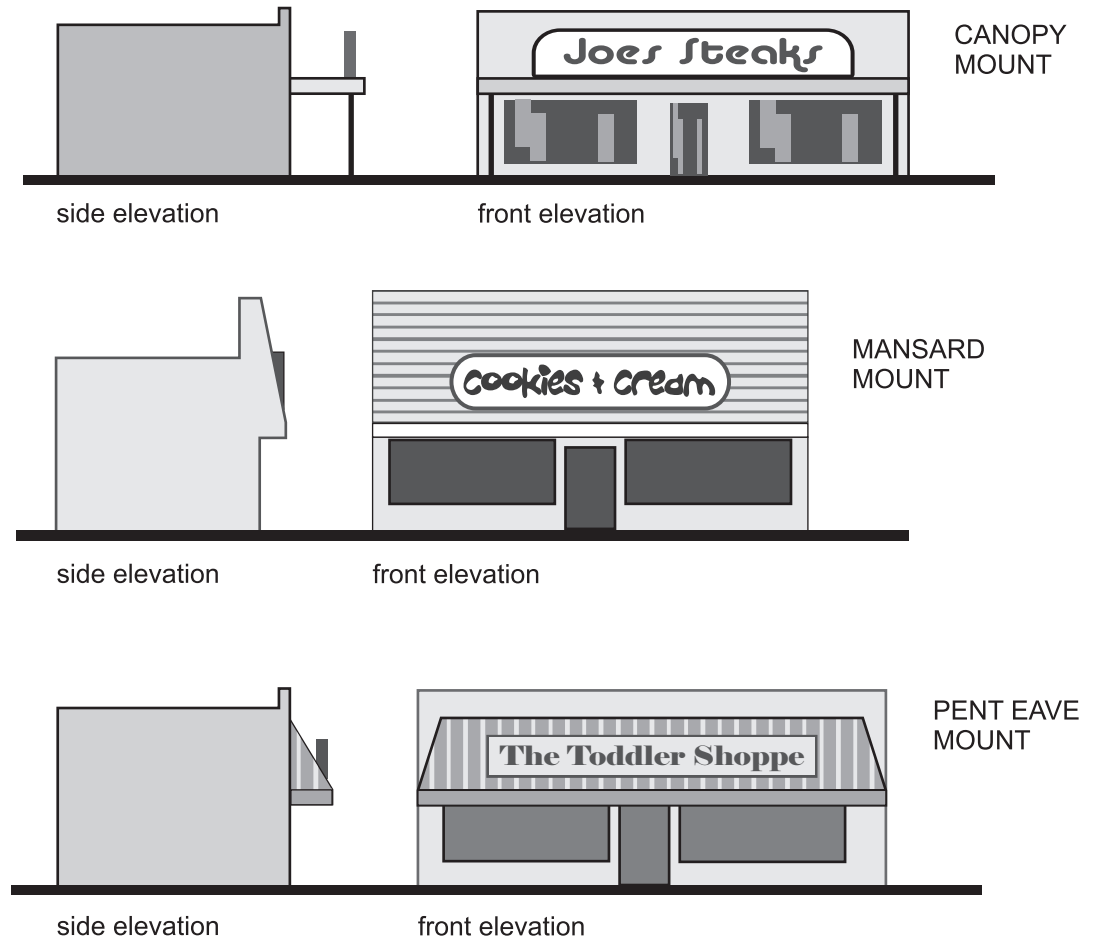


Section 9: Comparison: Roof and Wall Sign Distinctions

ROOF SIGNS



Fascia Signs on Roof-Like Projections NOT ROOF SIGNS



APPENDIX B

FORMULAE: COMMON GEOMETRIC SHAPES

Even the most complex sign backgrounds are simply combinations of various geometric shapes. Included here are useful formulae to assist in the computation of the areas of common shapes. Some of these formulae utilize the Greek letter pi, designated as the symbol π . The approximate numerical value of π is 3.1416.



CIRCLE

The AREA of a circle is found by multiplying the square of its radius (radius is the distance from the center to the outer edge or circumference) by π (3.1416). **Area = πr^2**



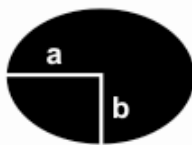
SQUARE, RECTANGLE, PARALLELOGRAM

The AREA of a square, rectangle, or parallelogram (all four sided figures with two pair of parallel sides) is found by multiplying the length by the width. **Area = $L \times W$**



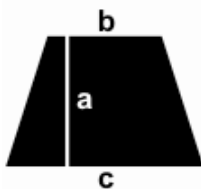
TRIANGLE

The AREA of a triangle (three sided figure) is found by multiplying one-half of the base times the height. **Area = $\frac{1}{2} (b \times h)$**



ELLIPSE

The AREA of an ellipse is found by multiplying half the length of the major axis by half the length of the minor axis, then multiplying the result by π (3.1416). **Area = $\pi (a \times b)$**



TRAPEZOID

A four sided figure with only one pair of parallel sides. The AREA equals one-half the product of its altitude (a) multiplied by the sum of its bases (the bases are the two parallel sides - b and c). **Area = $\frac{1}{2} a (b+c)$**



REGULAR POLYGONS

Polygons are figures bounded by straight lines called sides. The AREA of a polygon equals the number of triangles within it times the area of each triangle. See formula for triangle. **Area = $\frac{1}{2} (b \times h) \times \text{number of triangles}$** .



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