



DEPARTMENT OF COMMUNITY DEVELOPMENT SERVICES

Planning Division

m e m o r a n d u m

TO: Urbana Plan Commission

FROM: Jeff Engstrom, AICP, Interim Manager

DATE: December 12, 2014

SUBJECT: Plan Case 2242-T-14: An amendment to Articles IX and XI of the Urbana Zoning Ordinance to establish regulations for Digital Outdoor Advertising Sign Structures, Urbana Zoning Administrator, applicant.

Introduction

The Zoning Administrator is requesting an amendment to the Zoning Ordinance in order to establish regulations to allow Digital Outdoor Advertising Sign Structures (also known as Digital OASS, or digital billboards) in the City of Urbana. Currently, digital OASS are prohibited in the City. The proposed regulations would add a definition to Section IX- 2, a new Paragraph IX-6.E spelling out requirements for digital OASS, and new language in Section XI-9 to specify fines for digital OASS and electronic displays.

Discussion

The proposed text amendment would allow for Digital OASS to be located in Urbana. Currently, Digital OASS are prohibited by the Zoning Ordinance. Electronic displays are allowed for on-premise signs (not billboards) in the B-3, General Business and CRE, Conservation-Recreation-Education Districts, but may only take up half of the total sign area. These electronic displays are limited to static messages that change no more frequently than once every three minutes. Staff is proposing a similar approach for Digital OASS. This would be the latest text amendment to the City's Zoning Ordinance related to OASS. Previous text amendments and legal actions regarding OASS are listed in Exhibit B.

Digital billboards have become increasingly popular over the last decade. They currently represent 3.5% of the estimated 450,000 billboards in the United States¹. Digital billboards allow for advertisements to be displayed on one sign by electronic means instead of by posting a new sign face

¹ <http://whattheythink.com/articles/63869-electronic-billboards-us-profit-main-motivator-growth/>

every few weeks. By rotating through a sequence of advertisement images, a digital billboard provides more views of different ads in the same space as a traditional billboard. This in turn increases revenues for the billboard's owner. Digital billboards can also provide for distribution of important information in the case of severe weather, AMBER alerts, and other emergencies. But the increased convenience of digital billboards has some tradeoffs, including the potential for increased driver distraction and changes to the aesthetics of an area towards a busier, more commercial appearance. Staff has reviewed safety studies, professional reports, and other cities' ordinances in order to better understand the potential benefits and pitfalls of digital billboards and to identify best practices in their regulation.

Costs and Revenues

Digital billboards represent an opportunity for increased revenue for advertising companies, as well as an opportunity for an increase advertising for local businesses and organizations. Advertising rates for static/traditional billboards typically range from \$2,000 to \$2,500 a month, while costs for eight-to-ten second time slots on digital billboards usually range from \$3,500 to \$4,500 a month. At Lamar Advertising, the average four-week rate for digital bulletin billboards (those with the largest face areas) is \$4,596, the average four-week rate for digital poster billboards is \$2,620, and the average four-week rate for static/traditional billboards is \$2,134. Advertisers typically obtain an eight-to-ten second time slot on a digital billboard that appears every 64 to 80 seconds. Moreover, an average of roughly eight advertisers are advertising on a single digital billboard at any one time. It is important to note that the average retention rate for a digital billboard is estimated at 94%, while it is estimated at only 40% for static/traditional billboards, further increasing the rate at which advertisers will pay to obtain a slot on a digital billboard².

Construction costs vary between digital and static/traditional billboards. On average, the construction costs for single-sided digital bulletin billboards are \$250,000³, and the owners of digital billboards spend roughly \$3,600 a month supplying power⁴. Meanwhile, static/traditional billboards carry construction costs that range from \$5,000 to \$50,000 (with costs for both types of billboards varying by the number of faces and panels found on the billboard). The increased cost of digital billboards would result in higher building permit fee revenues collected by the City. However, properties with digital billboards would not be assessed at a higher rate, as billboards are not factored into property assessments and do not pay property taxes.

Safety and Driver Distraction

Staff has researched professional literature and safety studies regarding digital billboards. An American Planning Association Zoning Practice Bulletin is attached as Exhibit A, which contains a

² <http://whattheythink.com/articles/63869-electronic-billboards-us-profit-main-motivator-growth/>

³ <http://www.bizjournals.com/charlotte/stories/2009/04/06/focus3.html?page=all>

⁴

[http://www.scenic.org/storage/documents/EXCERPT The Basics of Digital Signage and Energy Consumption.pdf](http://www.scenic.org/storage/documents/EXCERPT%20The%20Basics%20of%20Digital%20Signage%20and%20Energy%20Consumption.pdf)

summary of the issues surrounding digital signs, including digital OASS. This document and a number of safety studies were the primary research tools staff used for studying the issue of digital billboard safety. Staff found it was difficult to identify studies that were independently funded. Many studies were funded by the Foundation for Outdoor Advertising Research and Education. In general, independent studies suggest that drivers may glance at digital billboards for a longer period than they glance at regular billboards, and digital billboards are more distracting if they are in the direct line of sight of drivers. Animation, video, and scrolling text were the most distracting features of digital billboards and signs.

One University of Toronto study found that drivers looked at digital billboards twice as much as static ones. This was true amongst all three types of digital billboards (including video, scrolling text, and trivision). Moreover, 88% of drivers spent a prolonged amount of time (measured longer than 0.75 seconds) looking at digital billboards. Video and scrolling-text signs were stared at the longest. However, a second study by that university found that motorists started at digital billboards and traffic signals equally. The study also found that digital billboards located in the direct line of site of drivers are extremely distracting.

In July of 2012, the Swedish National Road and Transportation Institute issued a report in which it was determined that drivers spent a “significantly” longer amount of time staring at digital billboards than they do at static billboards. Most studies previous to this had not been able to show a correlation between the presence of digital billboards and an increase in traffic accidents. Data was collected from 41 drivers in a study that took place in Stockholm in the fall of 2010. It was found that six drivers stared at digital billboards for a prolonged amount of time (for over two seconds), while only one driver stared at static billboards for the same amount of time. However, these findings may also be impacted by other elements, such as traffic complexity, and no increase in accident rates was illustrated. The study can be found here: <http://www.scenic.org/storage/PDFs/eebdd.pdf>

In 2013 the United States’ Federal Highway Administration commissioned a study on how commercial electronic variable message signs (CEVMS) impacted driver behavior. The study was implemented in two cities, and the eye behavior of drivers was studied on highway and arterial streets in each city. The study found that, on average, drivers stared at digital billboards longer than they did at static billboards. However, the longest dwell time was found amongst those staring at static billboards. Typically, individuals stared at digital billboards longer than static billboards when they were driving down arterial streets than on freeways. It was also noted that drivers stared at both digital and static billboards as much as they looked at other distractions along the road. The study can be found here: http://www.fhwa.dot.gov/real_estate/oac/visual_behavior_report/final/cevmsfinal00.cfm

Local safety concerns were recently raised by an ongoing IDOT study of traffic safety along the University Avenue corridor. This corridor has been under scrutiny due to its high traffic volumes and recent fatal accidents. Traffic signal visibility is one of the issues identified in the study. If a digital billboard was placed such that it was directly behind the view of a traffic signal from the driver’s point of view, this would make it more difficult for the driver to recognize that signal. Also, one

IDOT engineer brought up the issue of illumination. If digital billboards are over-illuminated they could potentially be blinding to drivers. The study is still ongoing and a draft has not yet been released.

Finally, it should be noted that Urbana contains existing billboards that are clustered in groups of two, three, or four. Grouping billboards together potentially doubles, triples, or quadruples the time that drivers spend looking at these clusters, thereby reducing the amount of attention they pay to traffic. Staff has suggested an incentive to reduce billboard clusters as part of the proposed text amendment.

Aesthetics

Another factor in considering billboard regulations is aesthetics. Billboards have a major visual impact due to their size, height, and orientation. Indeed, the sole purpose of a billboard is to draw the attention of passersby. They have bright colors and striking graphic design that is meant to make people look at them. For these reasons, billboards do not fit into the character of most built environments. In Urbana billboards are limited to certain commercial corridors and are not allowed near residences, historic properties or downtown. The corridors where billboards are allowed are already developed with businesses, most of which contain freestanding signs. Billboards compete with these signs in an increasingly cluttered visual environment. Areas with clustered billboards can appear even more cluttered.

The City has taken some measures to reduce the negative visual impacts of billboards. For new freestanding OASS, the base must be screened through a landscape planting area or with architectural cladding. New billboards are only allowed in very limited areas, and must be 1,000 feet from other billboards.

Existing OASS Regulations and Inventory

Article IX of the Urbana Zoning Ordinance permits new construction of traditional billboards (OASS) in very limited circumstances. Section IX-6 places the following limits on OASS:

- Area: OASS shall not exceed 300 square feet in area, except that OASS with odd shapes may be up to 20% larger.
- Location: OASS are only allowed within 660 feet of the public right of way along Interstate 74, University Avenue, Cunningham Avenue, US Route 150, and Lincoln Avenue (north of Bradley Avenue).
- Zoning: OASS are only allowed in the B-3, B-4E, IN-1 and IN-2 zoning districts.
- Residential zones: OASS are not allowed within 300 feet of R-1, R-2, R-3 or CRE districts.
- Historic landmarks and districts: OASS are not allowed within 300 feet of a historic landmark or district.
- TIF Districts: OASS are not allowed on properties with a TIF redevelopment agreement.

- Buffers: OASS cannot be built within 1,000 feet of another OASS.
- Number of faces: OASS may be built back to back (facing opposite directions). OASS may not be otherwise clustered. For example, new OASS cannot be built side by side.
- Height limit: OASS shall not exceed 35 feet in height in Business districts and 40 feet in Industrial districts.

These limits apply to any OASS proposed to be installed in Urbana. However, there are several existing OASS within the City that do not conform to the Zoning Ordinance standards. These OASS became legally non-conforming when the City adopted its current OASS regulations. Such non-conforming OASS may not be replaced or expanded, as outlined in Section X-9 of the Zoning Ordinance.

Currently, there are 72 separate billboard faces in Urbana on 37 OASS structures in the city (details in Exhibit C). Nearly all of these sign faces have an area of 300 square feet (54 have dimensions 12 feet by 25 feet, 16 are 10 feet by 30 feet). One sign is only 240 square feet (ten by 24). The sign at the southwest corner of University and Vine is 451.5 square feet (ten feet, six inches by 43 feet). Exhibit D shows the location of Urbana's existing OASS, including the areas where OASS are allowed and the 1,000 foot buffer around each sign. Exhibit F shows photos of some of Urbana's OASS. In some cases, these billboards are clustered together. Some are located along streets or in zoning districts where OASS are not allowed, such as Philo Road or in the B-4, Central Business District. At present, 14 OASS (38% of structures), containing 25 billboard faces, meet the current Zoning Ordinance requirements for district, corridor, and residential buffer. However, only three of these meet the minimum buffer distance from other existing OASS and also fully comply with existing zoning regulations.

If any new OASS were to be proposed in Urbana, there would be limited options for where they could be sited. These locations are shown in blue on Exhibit E. Billboards along State and U.S. Highways are also required to obtain permits from the Illinois Department of Transportation. State statutes allow municipalities to enact stricter regulations to control billboards along state rights of way within that municipality's jurisdiction.

Proposed Regulations

In researching the proposed text amendment, staff found that other cities have taken a variety of approaches to regulating digital billboards. These approaches include limits on sign location, minimum distance buffers between signs, limits on frequency of display change, and several other provisions. Exhibit G shows how different communities regulate various aspects of digital billboards. Staff is proposing to allow Digital OASS in Urbana under relatively strict regulations, based on current practices in Urbana, best practices from other cities, and other safety and aesthetic concerns. In general, staff is proposing that digital billboards would only be allowed to be built if they meet the requirements of a regular billboard, as specified in Sections IX-6.C and IX.6.D. These regulations pertain to allowed area, height, location, zoning district, buffer from residential districts,

buffer from historic properties, and buffer from existing billboards. Additionally, new Digital OASS would have to meet requirements in the following areas:

Hold Time

One key regulation is how often the displayed advertisement may change (hold time). Most cities have a minimum hold time of around eight to ten seconds. However, some cities have longer hold times, including six minutes for East Point, Georgia, and 20 minutes for Bloomington, Minnesota. Staff is proposing to use the same hold time that the City currently allows for electronic displays on business identification signs. This time is three minutes, with an instantaneous change that does not have animation, scrolling text, or any other transitions. As noted in safety studies, animation, video, or scrolling text are some of the most distracting aspects of digital signage.

Illumination

Lighting levels are another key regulation. Cities use different methods and measurements to limit lighting levels. Some use a measurement of light levels in footcandles at a certain distance from the billboard. Others use a display brightness level in nits (candelas per square meter). Some cities do not quantify light limits at all, and only require that light levels “adjust to match ambient conditions”. Setting an illumination limit in footcandles requires a measurement device. It may be difficult to measure the light level in footcandles in comparison to background light levels. For cities that put a limit on nits, this is the maximum brightness level allowed from the display itself. This level is determined by the manufacturer and can be controlled by software. However, Urbana staff have not been able to measure nits to verify if a billboard exceeds the required light level limits without climbing up to the face of the billboard. Due to the difficulty of obtaining measurements, staff suggests that we adopt similar rules for Digital OASS that we have for existing electronic displays. This limit is 0.3 footcandles brighter than ambient light levels, as measured from 150 feet away.

Existing OASS Removal Requirements

The City of Champaign adopted new rules for digital billboards in 2012. Their approach was to allow digital billboards in certain areas and to prohibit them in a target area that includes downtown and campustown. Champaign created a “sign bank” that must be drawn from in order to establish a new digital billboard. Whenever a sign is removed from within the target area, its surface area is added to the sign bank. Removal of nonconforming signs from outside the target area also counts toward the sign bank. The area stored in the sign bank can be used for two uses: to establish a new conventional billboard within the target area, or to establish a new digital billboard outside of the target area. In order to establish a new digital billboard, the applicant must withdraw twice as much surface area from the sign bank. Other cities have similar requirements of removal of existing signs in order to allow new digital billboards. These exchange rates go as high as requiring the removal of four existing billboards in order to establish one new digital billboard.

Staff proposes similar requirements for Urbana in order to encourage removal of billboards from certain locations. To establish a new billboard, the applicant must remove a certain amount of existing billboard face area. Staff is proposing that the amount of billboard face area to be removed should depend on the conformity status of the billboard being removed. If the billboard to be

removed is conforming, the applicant must remove four square feet of billboard face area for every one square foot of digital billboard to be installed. If the billboard is non-conforming, the applicant need only remove three square feet of existing billboard for every one square foot to be installed. The most incentivized categories would be Downtown billboards and clustered billboards. If the billboard to be removed is on a parcel zoned B-4, Central Business, or if it is on a parcel that contains a cluster of two or more billboard faces, the applicant would only need to remove two square feet of billboard area for every square foot of digital billboard to be installed. The existing OASS to be removed would be identified in the application for the new digital OASS, and must be removed between the submittal of the application and installation of the new digital OASS. These exchange ratios are formulated to incentivize removal of existing OASS with the most negative impacts. Clustered billboards are both a potential safety hazard and unsightly. Urbana's Downtown should be free of billboards in order to improve the aesthetics and coherence of the area as a walkable and friendly business environment, as called for in the 2012 Downtown Urbana Plan.

Line of Sight

This issue was not addressed in the regulations of other cities. Staff is proposing that digital OASS shall not be located in the line of sight of drivers looking at a traffic signal.

Emergency Messages and Malfunctioning OASS

Finally, staff proposes to require that any new digital OASS shall be wired into the Champaign County METCAD. This will allow for the County to display emergency alerts for events such as AMBER alerts, weather conditions, or other emergencies. This is a similar provision to what is required by the City of Champaign. Additionally, in the case of a malfunction, the OASS must display a default message at a lowered brightness level in order to ensure it does not distract drivers.

Text Changes

The proposed changes are listed below, using a strikethrough and underline notation system. A strikethrough is used to indicate ~~deleted language~~, while an underline is used to indicate added language. Staff proposes adding a definition for Digital OASS to Section IX-2:

F. *Digital Outdoor Advertising Sign Structure (Digital OASS):* An OASS with an electronic display capable of displaying changeable copy, controlled by programming or electronic communications.

The majority of the proposed text changes would come in a new paragraph E in Section IX-6:

E. *Digital OASS.* Digital OASS shall be allowed only in conformance with the following provisions:

1. *Permit Required.* Digital OASS, including those where the Digital OASS is replacing the display area of a previously existing OASS, shall meet all requirements for a new OASS and shall require issuance of a new OASS permit in conformance with Section IX-6.C and IX-6.D.
2. *Existing Sign Removal.* New Digital OASS shall only be allowed upon removal of existing OASS display area. OASS to be removed shall be identified at the time of the application and

removed prior to installation of the new Digital OASS. Digital OASS shall be allowed to replace existing OASS within the City at the following proportions:

- a. For every two square feet of OASS display area removed from properties in the B-4, Central Business district, one square foot of Digital OASS display area may be installed.
 - b. For every two square feet of OASS display area removed from lots containing more than one OASS face (excluding back-to-back OASS faces), one square foot of Digital OASS display area may be installed.
 - c. For every three square feet of OASS display area removed from OASS that do not meet other requirements of Section IX-6.D, one square foot of Digital OASS display area may be installed.
 - d. For every four square feet of OASS display area removed from any other OASS, one square foot of Digital OASS display area may be installed.
3. Animation and Image Change Time. Digital OASS shall not contain video, animated transitions, or otherwise be animated as defined by Section IX-2. Display images shall have a change frequency of no more than once every three minutes.
 4. Illumination. Digital OASS shall conform to the illumination requirements of Section IX-4.C.4. Digital OASS shall be controlled by a dimmer switch to automatically reduce the level of brightness to no more than 0.3 footcandles above ambient light levels at any time of day, measured from 150 feet away.
 5. Emergency Override. Digital OASS shall be directly connected to the Metropolitan Computer-Aided Dispatch system (METCAD) in order to allow emergency dispatchers to override the programmed message and display an emergency bulletin. The Director of METCAD or the Director's designee shall have authority to authorize such an override.
 6. Malfunctioning Digital OASS. All Digital OASS shall contain a mechanism that will display a default message at a lowered brightness level in the event of a malfunction.
 7. Traffic Signal Visibility. Digital OASS shall not be placed such that they interfere with motorist visibility of traffic signal as determined by the City Engineer.

Finally, there would be new language added to Article XI in order to provide for a method for staff to enforce against nonconforming Digital OASS. Staff is also proposing a fine for electronic displays on regular signs that do not conform to zoning ordinance regulations.

C. *Minimum Fine Schedule for Certain Violations*

1. The minimum fine for parking in violation of Section VIII-4 is \$25.
2. The minimum fine for displaying a temporary sign in violation of Section IX-7 is \$25.
3. The minimum fine for displaying an electronic sign that is animated or changes display more than once every three minutes in violation of Section IX-4 is \$50.

4. The minimum fine for displaying a digital OASS that is animated or changes display more than once every three minutes in violation of Section IX-6 is \$100.

City Staff commissioned a review of the proposed text amendment by Professor Daniel Mandelker and former Planning Manager Robert Myers, AICP. Professor Mandelker is recognized as a national expert in the area of sign regulation. Mr. Myers has also developed significant expertise in the area of sign regulation due to his work with the City of Urbana and his own research. Their report is attached to this memo as Exhibit H. Findings from their report were incorporated into the draft text amendment.

Summary of Staff Findings

1. The Urbana Zoning Administrator is proposing regulations to allow Digital Outdoor Advertising Sign Structures, which are currently prohibited within the City.
2. The City of Urbana has the authority to regulate OASS within its jurisdiction based on the Illinois home rule laws and billboard regulations.
3. The proposed amendment will modify Article IX and Article XI of the Urbana Zoning Ordinance to allow Digital OASS in the City under certain conditions.
4. The proposed amendment will establish regulations for hold time, illumination, exchange ratios, and emergency messaging for Digital OASS.
5. The proposed amendment will promote safety by prohibiting animation, video, and scrolling text on Digital OASS.
6. The proposed amendment will establish fines for Digital OASS and electronic displays in order to encourage compliance with safety-related regulations.
7. The proposed amendment will improve aesthetics in Urbana and conforms with the 2012 Downtown Urbana Plan by encouraging removal of OASS from Downtown and eliminating clusters of OASS.
8. The proposed amendment has been reviewed by experts in the field of signage law.
9. The proposed amendment is consistent with the goals and objectives of the 2005 Urbana Comprehensive Plan regarding updating various sections of the Zoning Ordinance.
10. The proposed amendment conforms to notification and other requirements for the Zoning Ordinances as required by the State Zoning Act (65 ILCS 5/11-13-14).

Options

The Plan Commission has the following options for recommendation to the Urbana City Council regarding Plan Case 2242-T-14:

- a. forward this case to City Council with a recommendation for approval as presented herein;
- b. forward this case to City Council with a recommendation for approval as modified by specific suggested changes; or
- c. forward this case to City Council with a recommendation for denial.

Staff Recommendation

Based on the evidence presented in the discussion above, and without the benefit of considering additional evidence that may be presented at the public hearing, staff recommends that the Plan Commission recommend **APPROVAL** of the proposed text amendment to the Zoning Ordinance as presented herein.

cc: Cain Kiser, Adams Outdoor Advertising

Attachments:

Exhibit A: American Planning Association Zoning Practice Bulletin

Exhibit B: History of OASS Regulations in Urbana

Exhibit C: Inventory of OASS in Urbana

Exhibit D: Map of Existing Billboard Locations

Exhibit E: Map of Eligible Billboard Locations

Exhibit F: Photos of Existing OASS in Urbana

Exhibit G: Comparison of Digital OASS Regulations

Exhibit H: Mandelker and Myers Report on Draft Text Amendment

ZONING PRACTICE

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PRACTICE SMART SIGN CODES

A photograph of a modern building facade with a large digital sign. The sign is mounted on a wall with a grid of small, dark, triangular protrusions. The sign displays the text 'Digital Signs: Context Matters' in white. A large, bold, black number '4' is overlaid on the bottom right of the sign. In the background, a tall skyscraper is visible against a clear sky.

**Digital
Signs:
Context Matters**

4

Looking Ahead: Regulating Digital Signs and Billboards

By Marya Morris, AICP

Cities and counties have always been challenged to keep their sign ordinances updated to address the latest in sign types and technologies.

Each new sign type that has come into use—for example, backlit awnings and electronic message centers—has prompted cities to amend their regulations in response to or in anticipation of an application to install such a sign.

The advent in the last several years of signs using digital video displays represents the latest, and perhaps the most compelling, challenge to cities trying to keep pace with signage technology. More so than any other type of sign technology that has come into use in the last 40 to 50 years, digital video displays on both off-premise (i.e., billboards) and on-premise signs raise very significant traffic safety considerations.

This issue of *Zoning Practice* covers current trends in the use of digital technology on off-premise billboards and on-premise signs. It recaps the latest research on the effects of

this type of changeable signage on traffic safety. It also discusses the use of digital video sign technology as a component of on-premise signs, including a list of ordinance provisions that municipalities should consider if they are going to permit this type of sign to be used. I use the phrase digital display or video display, but these devices are also referred to as LEDs or, collectively, as “dynamic signs.”

BRIGHT BILLBOARDS

While digital technology is growing in use for on-premise signs, it is the proliferation of digital billboards that has triggered cities and counties to revise their sign ordinances to address this new type of display. Of the approximately half-million billboards currently lining U.S. roadways, only about 500 of them are digital. However, the industry's trade

group, the Outdoor Advertising Association of America, expects that number to grow by several hundred each year in the coming years. In 2008, digital billboards represent for the sign industry what the Comstock Lode must have represented for silver miners in 1858—seemingly limitless riches. The technology allows companies to rent a single billboard—or pole—to multiple advertisers. A billboard company in San Antonio, for example, estimated that annual revenue from one billboard that had been converted from a static image to a changeable digital image would increase tenfold, from \$300,000 to \$3 million just one year after it went digital.

It is very difficult for cities and counties to get billboards removed once they are in place. Billboard companies have made a concerted effort to get state legislation passed that limits or precludes the ability of local

➡ A typology of moving-image signs. The variable message sign at the right uses a motor to switch among three different static images. Next, the electronic messageboard at Wrigley Field in Chicago displays scrolling text and simple images. The on-premise digital sign, pictured third from left, looks like a giant television screen, displaying a steady stream of video images. On the far right, this digital billboard cycles through a number of static video images at regularly timed intervals.



ASK THE AUTHOR JOIN US ONLINE!

Go online from May 12 to 23 to participate in our “Ask the Author” forum, an interactive feature of Zoning Practice. Marya Morris, AICP, will be available to answer questions about this article. Go to the APA website at www.planning.org and follow the links to the Ask the Author section. From there, just submit your questions about the article using the e-mail link. The author will reply, and Zoning Practice will post the answers cumulatively on the website for the benefit of all subscribers. This feature will be available for selected issues of Zoning Practice at announced times. After each online discussion is closed, the answers will be saved in an online archive available through the APA Zoning Practice web pages.

About the Author

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governments to require removal of existing billboards through amortization. The only option left is paying cash compensation. The federal Highway Beautification Act, which was modified many years ago under industry pressure, also prohibits amortization and requires cash compensation for billboard removal.

With the amortization option unavailable, some cities and counties have struck deals with billboard companies requiring them to remove two boards for every new one they install. Other jurisdictions have established simple no-net-increase policies. Although many communities have had success with these approaches, in the

last few years the industry has devised a litigious tactic to secure new billboard permits. Billboard companies challenge the constitutionality of a sign provision, and when the ordinance is in legal limbo, they rush in to secure billboard permits.

The American Planning Association has joined Scenic America, the International Municipal Lawyers Association, and others in filing amicus curiae briefs in many of these cases to show the courts the industry’s pattern of conduct and deliberate strategy to circumvent local sign codes. A review in January 2006 found 113 such “shakedown” sign cases filed in the federal

courts since 1997, and eight filed in state courts in the same time period. For more information visit the APA Amicus Curiae webpage at www.planning.org/amicusbriefs.

The emergence of the highly lucrative digital billboards has also, however, given local governments some leverage to at least reduce the total number of billboards. Many of the applications cities are seeing for the video billboards are requests by companies to replace the static type with the new video displays in key locations. The added revenue potential from a digital format has proved to be enough of an incentive to get companies to agree to remove multiple static billboards in exchange for permits to install video display in certain locations.

In June 2007, Minnetonka, Minnesota, in the Twin Cities area, reached a settlement with Clear Channel in which the company agreed to

The emergence of the highly lucrative digital billboards has given local governments some leverage to at least reduce the total number of billboards.



Photos by David Morley

remove 15 of the 30 conventional static image billboards in the city in exchange for permission to install its digital billboards. The city will permit the company to install no more than eight dynamic signs at four to six locations.

The City of San Antonio amended its sign and billboard ordinance in December 2007 to require the removal of up to four static billboards in exchange for permission to install one digital display billboard in their place. Prior to that amendment the city had no provisions for digital sign technology, but it did already have a two-for-one replacement requirement. The city has a developed a sliding scale that determines the number of billboards required to be removed in exchange for a single digital billboard. According to the scale, the number of digital signs permitted is determined by the total square footage of static billboard faces removed. Therefore, a billboard company will be required to demolish as few as three and as many as 19 billboards to get one new digital billboard structure placed or an existing static billboard face replaced.

IT DEPENDS ON YOUR DEFINITION OF 'DISTRACTING'

Digital signs are brighter and more distracting than any other type of sign. Other attention-grabbers, like strobe lights, mirrors, searchlights, and signs with moving parts, are typically prohibited (or allowed under very narrow circumstances) by even the most hands-off jurisdictions. The high visual impact of digital signs has prompted highway and traffic safety experts to try to quantify how drivers respond to such distractions. This research, which is summarized below, has been instrumental in helping cities craft new sign ordinances that address the specific characteristics of such signs, including how often the messages or images change, the degree of brightness, and their placement relative to residential areas.

The Federal Highway Administration is currently conducting a study on driver distraction and the safety or impact of new sign technologies on driver attention. The initial phase, which is slated to be completed by June 2008, will identify and evaluate the most significant issues and develop research methods needed to secure definitive results. The FHWA anticipates the second phase of the research study and final report will be completed in the latter part of calendar year 2009. Also, the Transportation Research Board (a branch of the National Science Foundation) has formed a subcommittee to examine research needs on electronic signs.

Recent studies indicate that digital displays with continuous dynamic content are more distracting than other types of moving-image signs. Signs that work well in pedestrian-oriented areas might be inappropriate for busy highways.



David Morley

Until a couple of years ago, one of the only studies on the effects of billboards and traffic safety was a 1980 survey of existing research on the subject prepared for the Federal Highway Administration (Wachtel and Netherton 1980). It did not, however, provide any concrete answers. The study noted “attempts to quantify the impact of roadside advertising on traffic safety

have not yielded conclusive results.” The authors found that courts typically rule on the side of disallowing billboards because of the “readily understood logic that a driver cannot be expected to give full attention to his driving tasks when he is reading a billboard.”

A 2006 study by the National Highway Traffic Safety Administration that focused primarily on driver distractions inside the car (i.e., phone use, eating, and changing the radio station) concluded that any distraction of more than two seconds is a potential cause of crashes and near crashes.

A 2004 study at the University of Toronto found that drivers make twice as many glances at active (i.e., video signs) than they do at passive (i.e., static) signs. All three of the moving sign types that were studied (video, scrolling text, and trivision) attracted more than twice as many glances as static signs. They also found that the drivers’ glances at the active signs were longer in duration; 88 percent of glances were at least 0.75 seconds long. A duration of 0.75 seconds or longer is important because that is the amount of time required for a driver to react to a vehicle that is slowing down ahead. Video and scrolling text signs received the longest average maximum glance duration.

An earlier study also at the University of Toronto that was designed to determine whether video billboards distract drivers’ attention from traffic signals found that drivers made roughly the same number of glances at traffic signals and street signs with and without full-motion video

ORDINANCES AND ZONING REPORTS

- ◆ City of Minnetonka, Minnesota. 2007. Staff report to city council recommending adoption of an ordinance regulating digital signs. June 25. Available at www.eminnetonka.com/community_development/planning/show_project.cfm?link_id=Dynamic_Signs_Ordinance&cat_link_id=Planning.
- ◆ City of San Antonio City Code, Chapter 28. Amendment Adding Provisions for Digital Signs. Last revised December 2, 2007. Available at <http://epay.sanantonio.gov/dsddocumentcentral/upload/SIGNsecDRAFF.pdf>.
- ◆ City of Seattle, Land Use Code, Section 23.55.005 Signs, Video Display Methods. Last revised 2004. <http://clerk.ci.seattle.wa.us/~public/clrkhome.htm>.

billboards present. This may be interpreted to mean that while electronic billboards may be distracting, they do not appear to distract drivers from noticing traffic signs. This study also found that video signs entering the driver's line of sight directly in front of the vehicle (e.g., when the sign is situated at a curve) are very distracting.

A 2005 study by the Texas Transportation Institute of driver comprehension of sign messages that flash or change concluded that such signs are more distracting, less comprehensible, and require more reading time than do static images. While this research did not evaluate advertising-related signs, it does demonstrate that flashing signs require more of the driver's time and attention to comprehend the message. In the case of electronic billboards, this suggests that billboards that flash may require more time and attention to read than static ones.

The City of Seattle commissioned a report in 2001 to examine the relationship between

Sign messages that flash or change are more distracting, less comprehensible, and require more reading time than do static images.

The Seattle study also found that drivers expend about 80 percent of their attention on driving-related tasks, leaving 20 percent of their attention for nonessential tasks, including reading signs. The report recommended the city use a "10-second rule" as the maximum display time for a video message.

APPROACHES TO REGULATING DIGITAL DISPLAY SIGNS

Most cities and counties that have amended their sign ordinances to address the use of digital display on on-premise signs and billboards have done so in response to an application by a sign owner to install a new sign that uses the

ital video display signs while still permitting electronic message centers.

3) A relatively small number of sign ordinances have been amended to allow video display signs under narrowly prescribed circumstances and with numerous conditions.

For jurisdictions that want or need to allow them, the following section explains additional considerations that should be added to a sign ordinance to effectively regulate digital display signs.

Sign type. The ordinance must indicate whether the digital display can be used on off-premise billboards only, on on-premise signs only, or on both sign types.

Billboards with changeable digital images allow billboard companies to dramatically increase their revenue by renting the same sign face to multiple advertisers.



David Morley

electronic signs with moving/flashing images and driver distraction. The study was conducted by Jerry Wachtel, who in 1980 had conducted the first-ever study on signs and traffic safety for the Federal Highway Administration.

The Seattle report concluded that electronic signs with moving images will distract drivers for longer durations (or intervals) than do electronic signs with no movement. The study also noted that the expanded content of a dynamic sign also contributes to extended distraction from driving. Specifically it found that signs that use two or more frames to tell a story are very distracting because drivers are involuntarily compelled to watch the story through to its conclusion.

technology or in response to a sign owner having replaced an existing sign face with a digital display. Some cities, like Minnetonka, were required by a court settlement with a billboard company to allow the technology. Although regulations for digital signs are still relatively new, we can group the regulatory approaches (or lack thereof) into three general categories:

- 1) Most sign ordinances are still silent on the issue of digital video displays, but almost all do regulate electronic message centers and also prohibit or restrict signs that move, flash, strobe, blink, or contain animation.
- 2) A smaller but growing number of sign ordinances contain a complete prohibition on dig-

Definitions. The definitions section must be updated to include a detailed definition of digital display signage and the sign's functional characteristics that could have an effect on traffic safety and community aesthetics.

Zoning districts. The ordinance should list the districts in which such signs are permitted and where they are prohibited. Such signs are commonly prohibited in neighborhood commercial districts, historic districts, special design districts, and scenic corridors, in close proximity to schools, and in residential districts. On the other end of the spectrum, East Dundee, Illinois, for example, expressly encourages digital video signs in two commercial overlay districts, but only a

RESOURCES

- ◆ Beijer, D. and A. Smiley. 2005. “Observed Driver Glance Behavior at Roadside Advertising Signs,” *Transportation Research Record*.
- ◆ Dudek, C. L. et al. 2005. “Impacts of Using Dynamic Features to Display Messages on Changeable Message Signs,” Washington, D.C.: Operations Office of Travel Management: Federal Highway Administration.
- ◆ “Dynamic” Signage: Research Related To Driver Distraction and Ordinance Recommendations. Prepared by SRF Consulting Group, Inc. for the City of Minnetonka, Minnesota. June 7, 2007 (www.digitalooh.org/digital/pdf/2007-minnetonka_digital-srf_consulting_reporto6-08-07.pdf).
- ◆ “The Impact of Driver Inattention on Near-Crash/Crash Risk: An Analysis Using the 100-Car Naturalistic Driving Study Data.” 2006. National Highway Traffic Safety Administration, U.S. Department of Transportation. April.
- ◆ McBride, Sarah. “Seeing the Light: In Billboard War, Digital Signs Spark a Truce.” *Wall Street Journal*. February 3, 2007.
- ◆ Smiley, A. et al. 2004. “Impact of Video Advertising on Driver Fixation Patterns.” *Transportation Research Record*.
- ◆ *Unsafe at Any Speed: Billboards in the Digital Age*. 2007. Scenic America Issue Alert 2. Available at www.scenic.org/pdfs/eb.pdf. The Scenic America website has a number of excellent resources for planners and citizens interested in regulating digital signage, including a downloadable PowerPoint presentation, research summaries, and model ordinances.
- ◆ Wachtel, J. and R. Netherton. 1980. “Safety and Environmental Design Considerations in the Use of Commercial Electronic Variable-Message Signage.” Report No. FHWA-RD-80-051. Washington, D.C.: Federal Highway Administration.

few land uses—new car dealerships, multi-tenant retail centers, and amusement establishments—are permitted to have them.

Placement and orientation. A minimum spacing requirement between signs and residential areas should be considered, as should a provision requiring that the sign face be oriented away from residential areas and other scenic or sensitive areas. The Baker and Wolpert study recommended that dynamic signs be limited or prohibited at intersections, in demanding driving environments, and in places where they obstruct a driver’s view. In Seattle, the sign face of on-premise digital signs must not be visible from a street, driveway, or surface parking area, nor may it be visible from a lot that is owned by a different person.

Sign area. For on-premise signage, many ordinances include a limit on the percentage of the sign face that can be used for digital display. Thirty percent is common although in some areas, such as entertainment districts, that proportion may be much higher.

Illumination and brightness. The ordinance should address the legibility and brightness of a sign both during the day and after dark. During the day the issue is reducing or minimizing glare and maintaining contrast between the sign face and the surrounding area. At night the issues are the degree of brightness and its impact on driver distraction and on light trespass into residential areas. In the study for the City of Minnetonka, researchers noted the challenge posed by this aspect of digital signs: “There is no objective definition of excessive brightness because the appropriate level of brightness depends on the environment within which the sign operates.”

Message duration and transition. The ordinance must include a minimum duration of time that a single message must be displayed. Typically this is expressed in terms of seconds. The San Antonio billboard ordinance requires each image to remain static for at least eight seconds and that a change of image be accomplished within one second or less.

The city’s ordinance requires any portion of the message that uses a video display method to have a minimum duration of two seconds and a maximum duration of five seconds. Further, it requires a 20-second “pause” in which a still image or blank screen is showed following every message that is shown on a video display.

Public service announcements. In exchange for permission to use digital displays, owners of billboards in Minnesota and San

Antonio have agreed to display emergency information such as Amber Alerts and emergency evacuation information. Such a requirement can be included in an ordinance or imposed as a condition of approval.

Whether undertaking a comprehensive revision of a sign ordinance or more limited, strategic amendments to address digital technology, there are other common provisions related to electronic and digital signage that should be revisited as part of the rewrite. At the top of the list would be updating standards for conventional electronic message centers to reflect the latest research regarding driver distraction and message duration. Also, the boilerplate provisions common to so many ordinances that prohibit signs that flash, are animated, or simulate motion should also be rethought. These provisions could conceivably be used to prohibit digital displays without additional regulations. The problem is that these characteristics are very rarely defined in the ordinance and remain open to interpretation. Also, whenever new regulations are being considered for digital billboards, jurisdictions should take the opportunity to draft new provisions to address digital technology for on-premise signs as well. And, finally, any time the sign ordinance goes into the shop for repair—whether to address digital signage or to make broader changes—is a good time to remove or revise any provisions that violate content neutrality rules.

NEWS BRIEFS SMART GROWTH TAKES A HIT IN MARYLAND

By Lora Lucero, AICP

The *Baltimore Sun* hit the nail on the head when it reported on March 12 “[t]he state’s highest court declared that Maryland law does not require local governments to stick to their master plans or growth-management policies in making development decisions.”

Trail, et al. v. Terrapin Run, LLC, et al. presented an important question for the court to address: What link is required between the community’s adopted plan and the decision by the Zoning Board of Appeals (ZBA) to grant or deny a request for a special exception? In a 4 to 3 vote, the majority concluded that Article 66B, the state planning law, is permissive in nature and plans are only advisory guides, so a strong link between plans and implementation is not required. The court affirmed the county’s

The majority concluded that the state planning law is permissive in nature and plans are only advisory guides, so a strong link between plans and implementation is not required.

approval of the special exception and determined that the “in harmony with” traditional standard in applications for special exceptions remains the standard, in the absence of specific legislative language to the contrary. The court’s decision is available at www.planning.org/amicusbriefs/pdf/terrapinrundecision.pdf.

Terrapin Run, LLC, the developer, proposed to build an “active adult” community of 4,300 homes on 935 partially wooded acres in Allegany County, a rural area of mountainous Western Maryland. The land is primarily zoned District “A” (Agricultural, Forestry, and Mining), with a portion located in District “C” (Conservation). In addition to the homes, the developer proposed to build an equestrian center, a community building, and a 125,000-square-foot shopping center.

The residential density is 4.6 units per acre. A planner who testified at trial indicated that the density of the proposed development would approximate that of Kentlands, in Montgomery County. The initial phase of development would use individual septic tanks, but the project would eventually require its own sewage treatment plant. Significantly, the property is not located in one of Maryland’s priority funding areas.

The zoning ordinance divides Allegany County into urban and nonurban areas. “A” and “C” are classified as nonurban zoning districts. The zoning ordinance provides:

“Non-urban districts are designed to accommodate a number of non-urban land uses including agriculture, forestry, mining, extractive industries, wildlife habitat, outdoor recreation, and communication, transmission and transportation services, as well as to protect floodplain areas, steep slope areas, designated wetlands and habitat areas, and Public Supply Watersheds from intense urban development.” Allegany County Code, Chapter 141, Part 4 (Zoning) §141-5(B) (emphasis supplied).

Opponents to the project argued that the ZBA erred when it found that strict conformity with the plan was not required and that the proposed development would be “in harmony with” the Allegany County Comprehensive Plan

because Maryland Code (Article 66, § 1(k)) requires a special exception to be “in conformity with” the plan.

Gov. Martin O’Malley’s administration argued in its amicus brief that counties and municipalities are required to conform to the seven broad “visions” for growth in Maryland as listed below:

§ 1.01. Visions

- (1) Development is concentrated in suitable areas.
- (2) Sensitive areas are protected.
- (3) In rural areas, growth is directed to existing population centers and resource areas are protected.
- (4) Stewardship of the Chesapeake Bay and the land is a universal ethic.
- (5) Conservation of resources, including a reduction in resource consumption, is practiced.
- (6) To assure the achievement of items (1) through (5) of this section, economic growth is encouraged and regulatory mechanisms are streamlined.
- (7) Adequate public facilities and infrastructure under the control of the county or municipal corporation are available or planned in areas where growth is to occur.

APA and its Maryland Chapter jointly filed an amicus brief. We argued that “[p]lans are documents that describe public policies that the community intends to implement and not simply a rhetorical expression of the community’s desires.” APA’s position is that (1) the adopted comprehensive plan must be implemented; (2) effective implementation requires that the day-to-day decisions made by local officials be consistent with the adopted comprehensive plan; and (3) the court’s review of whether consistency is achieved should be more searching when local officials are acting in their administrative (quasi-judicial) capacity. APA’s amicus brief is available at www.planning.org/amicusbriefs/pdf/terrapinrun.pdf.

The lengthy majority opinion (52 pages) recounts much of Maryland’s legislative history in statutory reforms. “[T]his case, in one sense is a continuation of legislative battles that began in the early 1990s, where representatives of the

environmental protection and professional land planning interests attempted to establish that the State, or State planners, should exercise greater control than theretofore enjoyed over most aspects of land use decision-making that then reposed in the local jurisdictions” (*Trail, et al. v. Terrapin Run, LLC, et al.*, 2008 WL 638691, p.1). The majority concludes that the “in harmony” standard is synonymous with “in conformity.” However, the three dissenting justices said the majority “sets special exception considerations on a lubricious path” (*Trail, et al. v. Terrapin Run, LLC, et al.*, Minority Opinion, p.13). The statutory amendments made by the legislature in 1970, and subsequent case law, buttresses the argument that a stricter linkage is required between the adopted plan and the grant of a special exception, the minority opined.

Richard Hall, Maryland secretary of planning and past president of the Maryland Chapter of APA, said: “We think this is a time when we need more smart, sustainable growth, not less.” The O’Malley administration is going to study the ruling before deciding whether to advance legislation to reverse the court’s decision.

Lora Lucero, AICP, is editor of Planning & Environmental Law and staff liaison to APA’s amicus curiae committee.

Cover concept by Lisa Barton.

Photos: Sign © iStockphoto.com/David McShane; Screen © iStockphoto.com/Alexey Khlobystov

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IS YOUR COMMUNITY READY
FOR DIGITAL SIGNAGE?

4

Exhibit B: History of OASS Regulations in Urbana

Prepared by Max Mahalek, Planning Intern

In 1971, the City of Urbana enacted new Sign Regulations (Ordinance no. 7172-69), which substantially restricted the erection and maintenance of billboards. A new amortization provision required that nonconforming billboards be removed without compensation. In October 1976, C & U Poster Advertising Company, Inc. filed suit against the City of Urbana in the Sixth Judicial Circuit Court of Champaign County (Case no. 76-C-1070) claiming that Urbana's Comprehensive Sign Regulations were unconstitutional. At that time, C & U Poster owned 43 billboard faces in the City of Urbana, and enforcement of Urbana's regulations would have required the removal of most of these.

A January 1984 Final Judgment Order found that portions of Urbana's Sign Regulations were unconstitutional, and following an unsuccessful appeal, both C & U Poster and the City of Urbana settled the case. In 1985, the City revised its Sign Regulations, and C & U Poster agreed to remove three of its fifteen billboard sites. The agreement stipulated that, in order to avoid paying legal fees, the City would not enact more stringent billboard requirements before January 1, 2004.

In 1991, the City Council approved Ordinance no. 9091-126, which regulated OASS structures located along I-74. On December 18, 2000, the City Council implemented a 180 day moratorium on the construction of OASS structures to allow time to review regulations (Ordinance no. 2000-11-136). This moratorium was extended for an additional 180 days on July 16, 2001 (Ordinance no. 2001-07-078) to provide the City time to study how new OASS regulations in Champaign would impact the construction of bill boards there. During these two moratoriums, aesthetic regulations for OASS structures were approved by the City of Urbana on June 4, 2001 (Ordinance no. 2001-05-044).

From 1985 to 2004, the number of OASS structures in the City of Urbana grew to 38. Following the end of the settlement agreement in 2004, the City studied whether its billboard standards needed revision. In September 2004, the Urbana City Council adopted an interim development ordinance which imposed a 365-day moratorium on constructing new outdoor advertising sign structures (Ordinance no. 2004-09-126). The purpose of the moratorium was to provide time to review and revise the City's billboard ordinance based on concerns such as billboard proliferation, and to review potential amendments such as "cap and replace" provisions. The City Council approved a 300-day extension of this moratorium in August 2005 (Ordinance no. 2005-08-127).

On June 5, 2006, the Urbana City Council amended the standards and procedures regarding OASS structures. In terms of procedures and the issuance of permits, the revised ordinance (Ordinance no. 2006-06-071) ended the moratorium on OASS structures, and required that OASS structures be approved as a Special Use in order to ensure they were aesthetically compatible with their surroundings, did not interfere with existing businesses or redevelopment projects, and did not interfere with traffic circulation in any way. The ordinance prohibited lighting from OASS structures to be directed onto roadways, prevented OASS structures from overhanging into the public right-of-way, and required landscaping at the base of the structures.

In terms of heightened spatial regulations, the revised ordinance increased the separation distance for OASS structures from 300 to 1,500 feet, no longer allowed OASS structures in the downtown area, prohibited OASS structures within 300 feet from any residential, agricultural, or conservation-recreation-education district (including those of other governmental jurisdictions), and likewise prohibited OASS structures within 300 feet of any historic district or landmark.

In November 2006, Adams Outdoor Advertising Co. filed a complaint in Circuit Court against the City of Urbana (Case no. 06-CH-356) claiming that provisions of Urbana's Comprehensive Sign Regulations were unconstitutional. These provisions included the requirement to obtain a Special Use Permit, which Adams Outdoor Advertising claimed affected their right of freedom of speech and failed to incorporate basic procedural due process protections. This lawsuit prompted a revision of the City's sign regulations ensuring that they were content neutral, that owners did not have to pay for the removal of nonconformities, and offering strict design guidelines in lieu of the Special Use Permitting process. These revisions were approved on December 3rd, 2007 (Ordinance no. 2007-10-120). The lawsuit was dropped by Adams Outdoor Advertising following this approval.

Exhibit C: Urbana OASS Inventory

Site	Face	Facing	Unit type	Size
I-74 0.45 mi W/O Lincoln Ave. SS	3	West	Side by Side/Back to Back	12' x 25'
I-74 0.45 mi W/O Lincoln Ave. SS	4	West	Side by Side/Back to Back	12' x 25'
I-74 0.45 mi W/O Lincoln Ave. SS	1	East	Side by Side/Back to Back	12' x 25'
I-74 0.45 mi W/O Lincoln Ave. SS	2	East	Side by Side/Back to Back	12' x 25'
1908 N. Lincoln Ave. 235 ft N/O Kettering Park Dr. ES	1	North	Back to Back	12' x 25'
1908 N. Lincoln Ave. 235 ft N/O Kettering Park Dr. ES	2	South	Back to Back	12' x 25'
University Ave. 70 ft W/O Lincoln Ave. NS	3	North	Side by Side/Back to Back	12' x 25'
University Ave. 70 ft W/O Lincoln Ave. NS	4	North	Side by Side/Back to Back	12' x 25'
University Ave. 70 ft W/O Lincoln Ave. NS	1	South	Side by Side/Back to Back	12' x 25'
University Ave. 70 ft W/O Lincoln Ave. NS	2	South	Side by Side/Back to Back	12' x 25'
University Ave. 120 ft W/O Lincoln Ave. NS	1	East	Single Face	12' x 25'
University Ave. 112 ft W/O Lincoln Ave. NS	2	South	Single Face	12' x 25'
814 W University Ave. 100 ft E/O Lincoln Ave. NS	1	West	Side by Side	12' x 25'
814 W University Ave. 100 ft E/O Lincoln Ave. NS	2	West	Side by Side	12' x 25'
103 W University Ave. 190 ft E/O Race St. SS	1	East	Side by Side/Back to Back	12' x 25'
103 W University Ave. 190 ft E/O Race St. SS	2	East	Side by Side/Back to Back	12' x 25'
103 W University Ave. 190 ft E/O Race St. SS	3	West	Side by Side/Back to Back	12' x 25'
103 W University Ave. 190 ft E/O Race St. SS	4	West	Side by Side/Back to Back	12' x 25'
Broadway Ave. 360 ft S/O University Ave. WS	3	North	Side by Side/Back to Back	12' x 25'
Broadway Ave. 360 ft S/O University Ave. WS	4	North	Side by Side/Back to Back	12' x 25'
Broadway Ave. 360 ft S/O University Ave. WS	1	South	Side by Side/Back to Back	12' x 25'
Broadway Ave. 360 ft S/O University Ave. WS	2	South	Side by Side/Back to Back	12' x 25'
Broadway Ave. 560 ft S/O University Ave. ES	1	North	Back to Back	12' x 25'
Broadway Ave. 560 ft S/O University Ave. ES	2	South	Back to Back	12' x 25'
Vine St. 40 ft N/O Main St. WS	1	South	Back to Back	12' x 25'
Vine St. 40 ft N/O Main St. WS	2	North	Back to Back	12' x 25'
Philo Rd. 275 ft N/O Fairlawn Dr. ES	1	South	Single Face	12' x 25'
Philo Rd. 290 ft N/O Fairlawn Dr. ES	1	South	Single Face	12' x 25'
Philo Rd. 370 ft N/O Fairlawn Dr. ES	1	South	Single Face	12' x 25'
505 N Cunningham Ave. 370 ft N/O University Ave. WS	2	North	Back to Back	12' x 25'
505 N Cunningham Ave. 370 ft N/O University Ave. WS	1	South	Back to Back	12' x 25'
710 N Cunningham Ave. 214 ft S/O Barr Ave. ES	1	North	Side by Side	12' x 25'
710 N Cunningham Ave. 214 ft S/O Barr Ave. ES	2	North	Side by Side	12' x 25'
909 N Cunningham Ave. 185 ft S/O Kerr Ave. WS	2	North	Back to Back	12' x 25'
909 N Cunningham Ave. 185 ft S/O Kerr Ave. WS	1	South	Back to Back	12' x 25'
1206 N Cunningham Ave. 236 ft N/O Oakland Ave. ES	1	North	Side by Side/Back to Back	12' x 25'
1206 N Cunningham Ave. 236 ft N/O Oakland Ave. ES	2	North	Side by Side/Back to Back	12' x 25'
1206 N Cunningham Ave. 236 ft N/O Oakland Ave. ES	3	South	Side by Side/Back to Back	12' x 25'
1206 N Cunningham Ave. 236 ft N/O Oakland Ave. ES	4	South	Side by Side/Back to Back	12' x 25'
US 45 0.56 mi N/O O'Brien Dr. ES	1	North	Single Face	12' x 25'
US 45 0.55 mi N/O O'Brien Dr. ES	2	North	Single Face	12' x 25'
US 45 0.54 mi N/O O'Brien Dr. ES	3	South	Single Face	12' x 25'
US 45 950 ft N/O Oaks Rd. WS	2	North	Back to Back	12' x 25'
US 45 950 ft N/O Oaks Rd. WS	1	South	Back to Back	12' x 25'
US 45 800 ft N/O Oaks Rd. WS	2	North	Back to Back	12' x 25'
US 45 800 ft N/O Oaks Rd. WS	1	South	Back to Back	12' x 25'
501 E University Ave. 868 ft E/O Cunningham Ave. SS	2	East	Back to Back	12' x 25'
501 E University Ave. 868 ft E/O Cunningham Ave. SS	1	West	Back to Back	12' x 25'
1701 E University Ave. 900 ft W/O US 150 SS	2	East	Back to Back	12' x 25'
1701 E University Ave. 900 ft W/O US 150 SS	1	West	Back to Back	12' x 25'
1801 E University Ave. 226 ft W/O US 150 SS	2	East	Back to Back	12' x 25'
1801 E University Ave. 226 ft W/O US 150 SS	1	West	Back to Back	12' x 25'
1710 N Cunningham Ave. 380 ft S/O Kenyon Rd. ES	1	North	Back to Back	12' x 25'
1710 N Cunningham Ave. 380 ft S/O Kenyon Rd. ES	2	South	Back to Back	12' x 25'
Vine St. 50 ft S/O University Ave. WS	1	North	Single Face	10'5" x 43'
I-74 0.2 mi E/O Lincoln Ave. SS	1	West	Single Face	10' x 24'
304 W. University Ave. 500 ft W/O Race St. NS	2	East	Back to Back	10' x 30'
304 W. University Ave. 500 ft W/O Race St. NS	1	West	Back to Back	10' x 30'
407 W. University Ave. 800 ft W/O Race St. SS	1	East	Back to Back	10' x 30'
407 W. University Ave. 800 ft W/O Race St. SS	2	West	Back to Back	10' x 30'
703 N Cunningham Ave. 100 ft N/O Crystal Lake Dr. WS	2	North	Back to Back	10' x 30'
703 N Cunningham Ave. 100 ft N/O Crystal Lake Dr. WS	1	South	Back to Back	10' x 30'
2410 N Cunningham Ave. 165 ft S/O O'Brien Drive ES	1	North	Back to Back	10' x 30'
2410 N Cunningham Ave. 165 ft S/O O'Brien Drive ES	2	South	Back to Back	10' x 30'
102 W. University Ave. 95 ft W/O Broadway Ave. NS	1	West	Back to Back	10' x 30'
102 W. University Ave. 95 ft W/O Broadway Ave. NS	2	East	Back to Back	10' x 30'
1201 E. University Ave. 626 ft E/O Cottage Grove Ave. SS	2	West	Back to Back	10' x 30'
1201 E. University Ave. 626 ft E/O Cottage Grove Ave. SS	1	East	Back to Back	10' x 30'
1102 N. Cunningham Ave. 170 ft S/O Oakland Ave. ES	1	North	Back to Back	10' x 30'
1102 N. Cunningham Ave. 170 ft S/O Oakland Ave. ES	2	South	Back to Back	10' x 30'
2000 N. Cunningham Ave. 100 ft N/O Willow View Rd. ES	1	North	Back to Back	10' x 30'
2000 N. Cunningham Ave. 100 ft N/O Willow View Rd. ES	2	South	Back to Back	10' x 30'

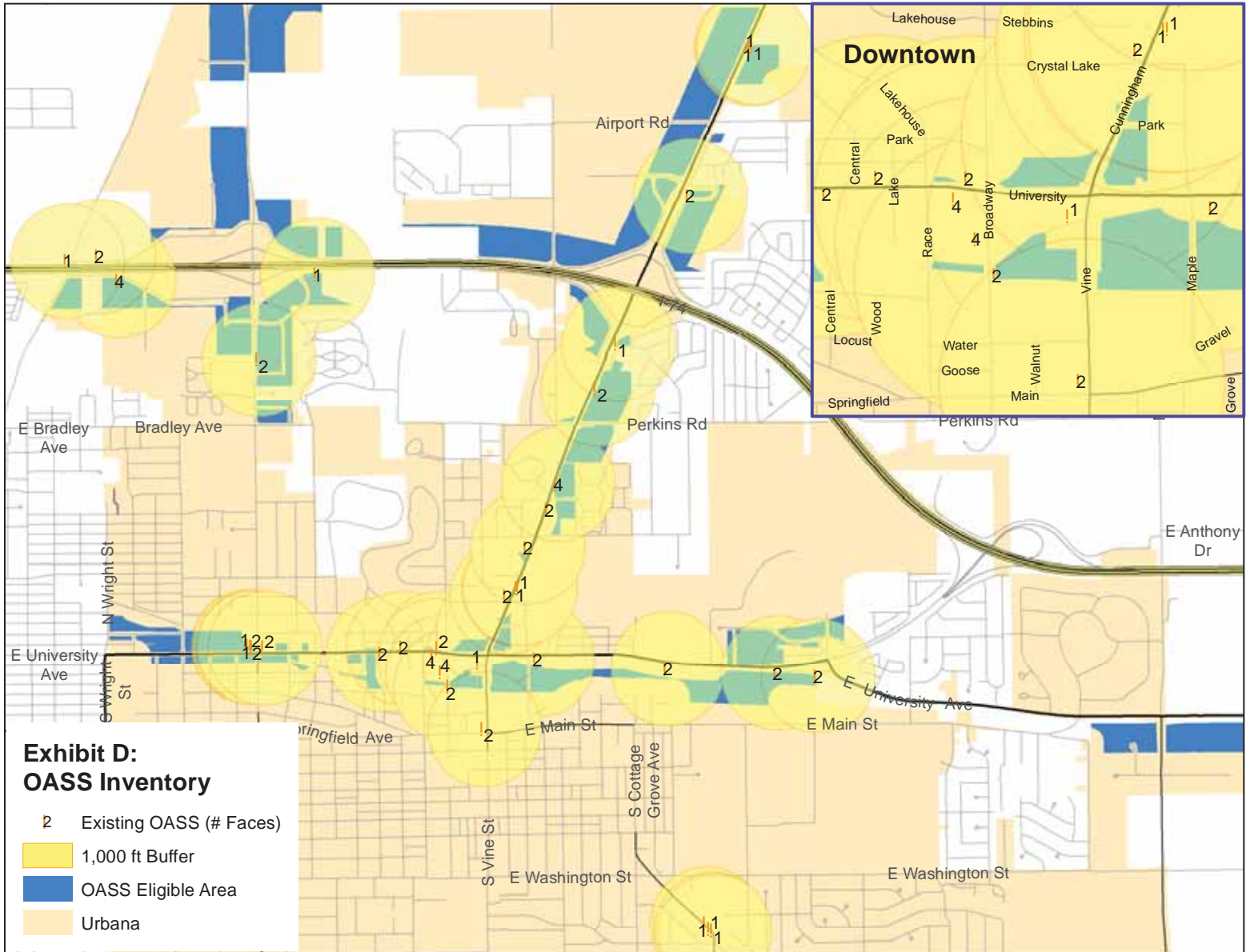
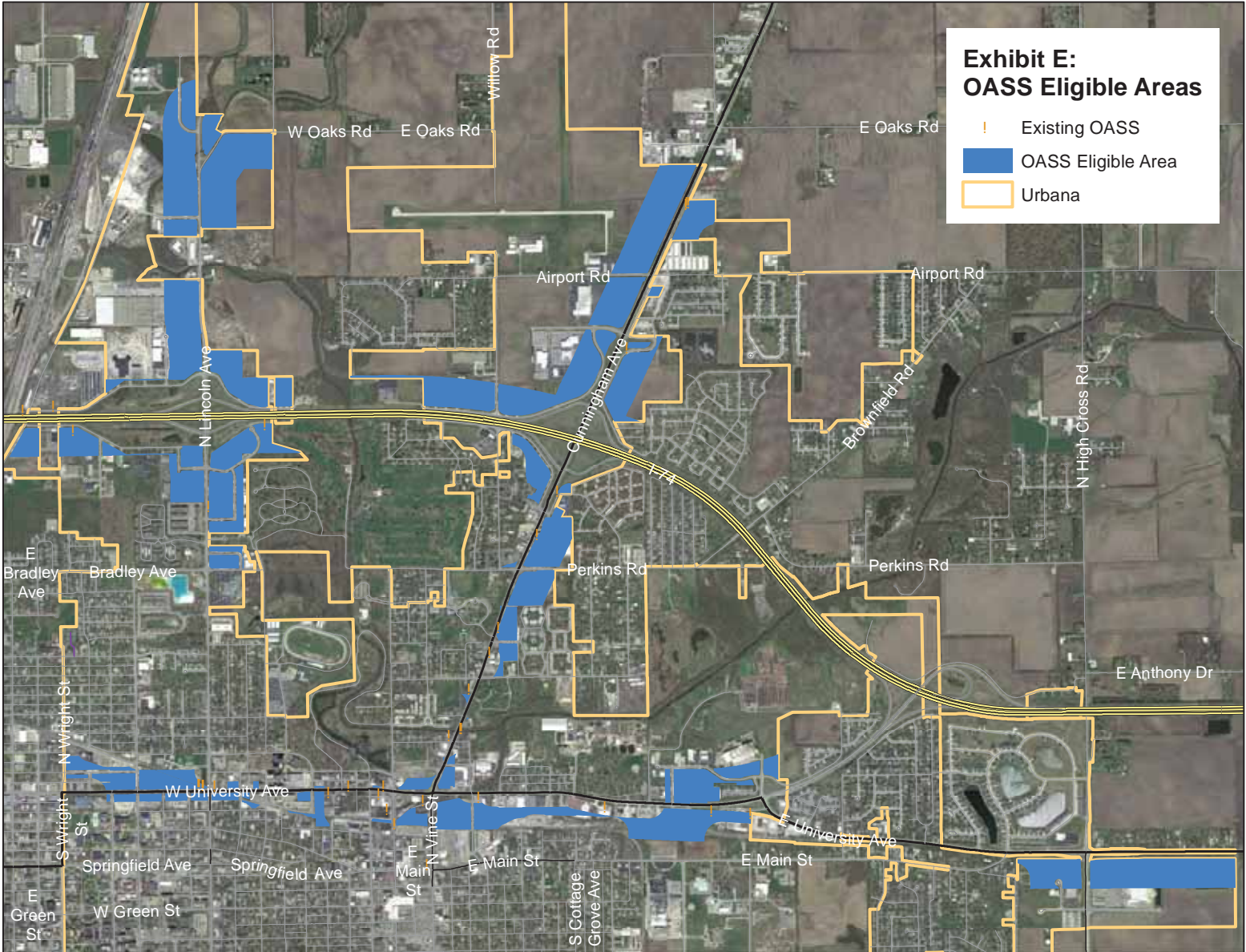


Exhibit E: OASS Eligible Areas

- ! Existing OASS
- OASS Eligible Area
- ▭ Urbana



Anthony east of Oak – north side



Cunningham north of Airport – east side



Cunningham north of Crystal Lake- east side



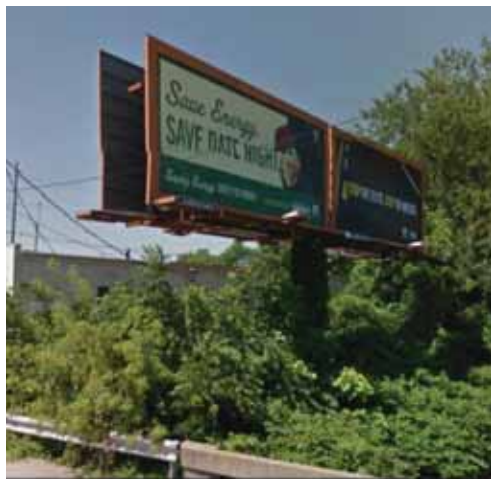
Broadway north of Water – east side



Cunningham north of Crystal Lake- west side



Broadway south of University – west side



Photos of Current Billboards in Urbana

Exhibit F

Cunningham north of Kerr – east side



Cunningham north of Oaks –west side (2)



Cunningham north of Oakland – east side



Cunningham south of Kerr – west side



Cunningham south of O'Brien – east side



Cunningham north of Oaks –west side (1)



Cunningham north of Perkins- east side



Kenyon west of Federal – south side



Cunningham north of Willow View (parallel) – east side



Lincoln north of Kettering Park – east side



I-74 east of Kilarney – south side



Lincoln at University – east side



Lincoln at University – west side (near west)



Philo north of Fairlawn- north/east side



University east of Cottage Grove – south side



Lincoln at University- west side (far west)



University west of Broadway – north side



Oak north of Anthony –west side



University west of Broadway – south side



University east of Lierman – south side



University west of Guardian – south side



University east of Maple – south side



University west of Lake - north side



University east of McCullough – south side



University west of Vine – south side



Vine north of Main – west side



Exhibit G

Digital OASS Ordinance Comparison

City	Minimum Static Time (seconds)	Minimum Distance from Residential District/Land Use (ft.)	Lighting Regulations	Minimum Distance Between Billboards (ft.)	Replacement Ratio (Digital Sign: Static Sign)	Max Area (sq. ft.)	Height Limit (ft.)
Bismarck, ND	7	300 (150 if board not visible from homes).	Match ambient conditions.	300 from static boards, 1,200 from digital.	1:1	800	50
Bloomington, IL	N/A	100	40 watts during day, 20 watts at night.	200, no more than three within 1/2 mile on same side of street.	N/A	300	Based on lot zoning.
Bloomington, MN	20 Minutes	N/A	5,000 nits during day, 500 nits at night (max.).	Billboards prohibited in all districts.	N/A	N/A	N/A
Carbondale, IL	6	Distance not specified, only allowed in CBD.	Match ambient conditions.	No more than one sign for every 300 ft. of street frontage.	N/A	25	12
Champaign, IL	10	Distance not specified, but not allowed within 300 ft. of a historic district/landmark, nor within 1/2 mile of protected building.	Minimum resolution of 20 mm.	300	1:1 in overlay district, 1:2 outside overlay district.	N/A	Based on lot zoning.
Danville, IL	N/A	200	Match ambient conditions.	1,000	1:3	300	40
Decatur, IL	10	Distance not specified, only allowed in some business/industrial districts.	Match ambient conditions.	750	1:1	300	35
East Point, GA	6 Minutes	500	Match ambient conditions.	500	1:2	672	75
Edwardsville, IL	30	500	5,000 nits during day, 0.3 foot candles at night (max.).	500	N/A	300	30
Gaines, MI	8	Distance not specified, only allowed in commercial/industrial districts.	0.2 foot candles (max.).	4,000	N/A	672	45
Glendale, AZ	8	1,000	Dark between 11:00 PM and sunrise. 5,000 nits during day, 150 nits at night (max.).	1,760	N/A	672	60

Exhibit G

Digital OASS Ordinance Comparison

City	Minimum Static Time (seconds)	Minimum Distance from Residential District/Land Use (ft.)	Lighting Regulations	Minimum Distance Between Billboards (ft.)	Replacement Ratio (Digital Sign: Static Sign)	Max Area (sq. ft.)	Height Limit (ft.)
Lafayette, LA	8	300	Match ambient conditions.	1,500	1:1 in terms of structures, 1:2 in terms of sign area.	same as replaced	Based on lot zoning.
Leon County, FL	6	300	Match ambient conditions.	1,800 from static billboard, 2,700 from digital.	1:4	380	40
Maryville, TN	8	100	Daytime brightness at 90% capacity, nighttime at 20% (max.).	2,000	1:1	same as replaced	same as replaced
Mobile, AL	8	500	5,000 nits during day, 500 nits at night (max.).	3,000	N/A	N/A	N/A
Morrow, GA	10	250 (from a single-family home).	Match ambient conditions.	500 from static billboard, 2,500 from digital.	1:1	672	75
Normal, IL	N/A	200	Match ambient conditions.	1,000 on same side of street, 500 on different sides.	N/A	300	Based on lot zoning.
Peoria, IL	10, except in B-1, which can change every 3.	300	5,000 nits during day, 500 nits at night (max.).	1,000	1:1	700	30
Plainfield, MI	8	200	.2 foot candles over ambient levels (max.).	1,000, no more than 3 in a mile.	N/A	672	35
San Antonio, TX	10	N/A	7,000 nits brightness (max.).	2,000	Varies from 1:1 to 5:20	672	60
Springfield, IL	N/A	100	N/A	500	N/A	175	35
Tolleson, AZ	8	200	6,000 nits during day, 500 nits at night (max.).	2,640	N/A	672	65
Average	1.6 Minutes	315	Match ambient conditions (alternative: 5,000 nit max. during day, 500 nit min. during night).	1,264 regarding distance from static billboards, 1,398 from digital billboards.	1:1.5	487	46

November 14, 2014

Jeff Engstrom, AICP
Interim Planning Division Manager
City of Urbana
400 South Vine Street
Urbana, IL 61801

re: Plan Case 2242-T-14: An amendment to Articles IX and XI of the Urbana Zoning Ordinance to establish regulations for Digital Outdoor Advertising Sign Structures

Mr. Engstrom:

In 2014, the Urbana City Council and Mayor's goals included an action item to "Study the issue of whether to allow electronic billboards in Urbana". As follow-up to this action item, City staff has drafted an amendment to the Urbana Zoning Ordinance, which would allow digital billboards in Urbana, and requested our input on this draft.

Home Rule Status

In the 1992 ruling *Scadron v the City of Des Plaines*, the Illinois Supreme Court decided that home rule municipalities may adopt billboard standards which are stricter than Illinois' Highway Advertising Control Act, including prohibiting billboards in areas allowed by the State. The City of Urbana is a home rule municipality and as such has greater flexibility in creating city codes and ordinances than non-home rule municipalities. For specific advice on what flexibility Urbana's home rule status has on adopting billboard requirements please consult your City Attorney.

Digital sign requirements

The City of Urbana's Zoning Ordinance currently allows traditional billboards, which use paper or vinyl facing, but prohibits digital display billboards. The proposed Zoning Ordinance text amendment intends to allow some traditional billboards within the City to be replaced by digital billboards.

In the case *Naser Jewelers, Inc. v City of Concord, New Hampshire* (2008), the First Circuit U.S. Court of Appeals upheld the City of Concord's ban of all digital signage as constitutional because it was a "content neutral" standard, meaning that the City was not regulating the content of speech through its sign ordinance. Although the City of Concord's prohibition of all digital signs and billboards was found constitutional, the outdoor advertising industry may be seeking an appropriate test case to challenge a municipality that allows digital on-site signage (for commercial speech) but not digital billboards (for both commercial and noncommercial speech).

Urbana's move to allow digital billboards would negate what the outdoor advertising industry sees as unfair distinction between on-site signs and billboards.

Driver distraction

An important governmental interest in regulating digital signs and billboards is that driver distraction can be a significant traffic hazard. Drivers can be distracted by a variety of ways, including texting while driving, cell phones, and navigation systems, and digital signs and billboards. A 2006 study conducted by the National Highway Safety Administration shows that drivers who take their eyes off the road for more than two seconds are far more likely to suffer a crash or near crash. In order to mitigate the potential of digital signs and billboards to distract drivers, the states and many local jurisdictions have enacted standards to prohibit moving images and to control brightness.

Hold time between images.

Under the Federal Highway Beautification Act (23 USC 131), as a requirement for receiving Federal transportation funding, states must adopt and administer specific limitations along routes which are part of the Federal-aid highway system. As part of this Act “intermittent”, “flashing”, or “moving” lights along these routes are prohibited.

The Illinois Department of Transportation (IDOT) changed its administrative code in October 2006 to allow “multiple message signs” (digital billboards) with a display time per image of no less than 10 seconds.

In a September 25, 2007 memorandum, the Federal Highway Administration provided official guidance to state Departments of Transportation as to whether or not digital billboards would be considered “intermittent” or “flashing” lights. The memorandum counsels that the Federal Highway Administration would recommend a hold time of 8 seconds (or greater), and a transition time between images of no more than 1-2 seconds as complying with the Highway Beautification Act.

As the City of Urbana is located within the Champaign-Urbana Metropolitan Area, which is principally served by one outdoor advertising company, it is important to consider the City of Champaign's requirements. Champaign began allowing digital on-premise signs in 1996 with a minimum 15-minute hold between message changes. In 2007, the City of Champaign allowed digital billboards for the first time and enacted a 10-second hold time. As some businesses saw the disparity between the two hold times as unfair, Champaign City staff in 2008 proposed to change the hold time for on-premise signs from 15 minutes to 3 minutes, in part for consistency with the City of Urbana's standard. Instead of 3 minutes the Champaign City Council adopted a 30-second delay period.

Today, the City of Champaign allows digital signs and billboards with the following minimum frequency of image changes (Section 37-412):

- On-premise signs: thirty (30) seconds;
- outdoor stadiums and arenas with a seating capacity of 10,000 or greater: no limits; and
- outdoor advertising sign structures (billboards): ten (10) seconds.

The City of Urbana currently allows on-premise signs to include digital display for a portion of its signage allowance. The minimum frequency of image changes for on-site signage is three (3) minutes. In Plan Case 2242-T-14, the Urbana Zoning Administrator proposes to allow digital billboards with an equal three (3) minute frequency change. This minimum hold time is longer than the 10-second delay required by the State of Illinois and City of Champaign. However, a 3-minute hold time would have the advantage of being consistent across all signs and billboards in Urbana. A uniform minimum hold time for both digital signs and billboards is commendable.

Brightness

The brightness of digital billboards is another important factor which attracts driver attention and is potentially a source of distraction. And certainly night time glare from digital signs can effect driver performance. As these issues impact public safety, they present a compelling governmental interest in regulating the light levels from signs and billboards. Consequently, many jurisdictions have adopted light level limits for signs and billboards.

Attached is a 2009 City of Urbana memorandum providing analysis and background research for enactment of light limits for on-site digital signs. This 2009 Zoning Ordinance text amendment was approved by the Urbana City Council and remains the standard today for brightness of on-site digital sign. These standards were based on the Lewin Report which the Outdoor Advertising Association of America adopted as recommended community standards for digital billboard brightness. (See attached.) Consequently use of these standards for digital billboards would best align with the purposes of the original study and report.

In 2009 the Lewin Report was the only known standard for digital brightness adopted by the outdoor advertising industry and so its recommendations for small billboards formed the basis for Urbana's on-site digital sign brightness standards. The outdoor advertising industry has subsequently commissioned brightness standards specifically for on-site digital signs, and the City of Urbana may wish to consider whether its current standards for on-site digital signs should be amended to reflect these newer studies. Attached is a 2011 publication by the International Sign Association promoting a standard for on-site electronic message boards. This report, which was also prepared by Dr. Lewin, as in his report on digital billboard brightness recommends community standards using footcandles rather than nits, and that 0.3 footcandles above ambient light levels should be the limit. The recommended measurement distances are modestly different

than those recommended for the same sized billboard from his 2009 study. Dr. Daniel Mandelker, FAICP, Stamper Professor of Law at Washington University, advised that the United States Sign Council has just prepared a new study on brightness standards for on-site digital signs. The City of Urbana may wish to contact Richard Crawford, an attorney and consultant to the United States Sign Council, to discuss these new standards and consider whether the City should amend digital brightness standards for on-site signage.

The City of Urbana should also know that recommended measurement distances are somewhat subjective in that the respective distances are considered to be “average viewing distances” based on the particular size of signs and billboards and allowing for legibility of sign lettering. As the viewer approaches closer to digital signs and billboards, the perceived brightness should increase. Thus a compliant billboard at 150 feet may exceed the brightness standard and cause glare when viewed closer than that distance. This is both a technological and regulatory limitation which presently cannot be overcome.

Removal of OASS for Digital OASS

Under the proposed Section IX-6.E.2, installation of digital billboards in Urbana would be tied to the removal of existing billboards. As this is an incentive-based removal program at the discretion of billboard owners, the draft ordinance would avoid amortizing or requiring the removal of nonconforming billboards without compensation. Under Illinois law, municipalities cannot force billboard owners to remove nonconforming billboards without just compensation. Billboards are valued not only by the cost of their structures but also include projected revenues over the period of the lease (often 20 years). Thus, compensation in Illinois for forced removal of just one traditional billboard could reach \$500,000 or more. Additionally, the U.S. Congress, through Federal transportation funding requirements, has preempted local jurisdictions from the ability to require the removal of any nonconforming billboards falling under State permit jurisdiction. Only state departments of transportation can buy out such nonconforming billboards and must use a specific fund. But since Urbana's proposed Zoning Ordinance text amendment creates an incentive to remove billboards rather than a requirement, the ordinance should not conflict with State and Federal requirements.

Although the City staff memo makes it clear that the intent is to measure the square footage of OASS faces, the proposed text refers to the square footage of OASS. Under the Zoning Ordinance definition, Outdoor Advertising Sign Structures (OASS) include the entire support structure and not just the display areas or “faces”. It is recommended that the ordinance reference the display area as defined by Section IX-3.A.3 (Measurement Standards for OASS) of the Urbana Zoning Ordinance.

Second, the City may want to think about the details of how this provision will be administered. The proposed language would allow a digital billboard “...upon removal of existing OASS...” meeting certain requirements. This wording seems to presume several traditional OASS would

be removed and a new digital billboard immediately installed. If this is to operate like a sign face “bank”, then delays of months or even years might be necessary between removal and installation, especially since the square footage of billboard faces, rather than the number of faces, would be exchanged. How far back in time can billboard removal be credited (including before the ordinance change)? And how far in the future will the credits continue? Should the square footage (or faces) removed only be counted within each outdoor advertising company's own sign inventory? Is the City's goal to remove OASS structures or billboard faces or both; for instance could one billboard face be removed from a two sided billboard and have that count toward installing a digital OASS? Rather than a billboard face “bank” the City might instead consider requiring that applications for removal of traditional billboards be submitted for City approval at the same time as their application to install the new digital billboard. Each approach has apparent advantages and drawbacks.

Animated Displays

As presently enacted for on-site signs, the proposed Zoning Ordinance text amendment would prohibit animated displays on billboards, as defined by Section IX-2 of the Zoning Ordinance. In the interests of public safety, prohibiting animated displays, including full-motion video, is critical. However, the proposed limit on “sequential” messages seems unnecessary given the proposed 3-minute image change limit. In jurisdictions allowing 10-second (or less) image changes, and where heavy traffic customarily allows motorists to view several cycles of messages, sequential message “storytelling” might cause a public safety concern as it can distract motorists for much longer than 2 seconds. However, given the draft ordinance's proposed 3-minute change between images, and relatively low traffic congestion and a short average commute time in Champaign-Urbana, sequential messages should not be a factor in increasing driver distraction. Conceivably, the prohibition on sequential messages could be viewed as regulation of content, meaning that it could be open to legal challenge on Constitutional grounds, but this conjecture has not been tested in court.

Thank you for the opportunity to review and comment on this draft ordinance. Please feel free to contact us should you have any questions.

Robert Myers, AICP
St. Louis, Missouri

November 14, 2014

Jeff Engstrom, AICP
Interim Planning Division Manager
City of Urbana
400 South Vine Street
Urbana, IL 61801

Re: Plan Case 2242-T-14: An amendment to Articles IX and XI of the Urbana Zoning Ordinance to establish regulations for Digital Outdoor Advertising Sign Structures

Mr. Engstrom:

I have reviewed your memorandum and would like to suggest two recent cases that should help give you answers to the legal questions this memorandum raises:

- Hucul Adver., LLC v. Charter Twp. of Gaines, 748 F.3d 273 (6th Cir. 2014)
- E & J Equities, LLC v. Bd. of Adjustment of Twp. of Franklin, No. A-2432-12T3, 2014 WL 5285501 (N.J. Super. Ct. App. Div. Oct. 17, 2014)

I also suggest that you consult my handbook, *Free Speech Law for On Premise Signs*, which is available for free download on my web site, landuselaw.wustl.edu.

Daniel R. Mandelker
Stamper Professor of Law
Washington University in Saint Louis