

# AGENDA

## Lynnwood Planning Commission

Thursday, December 10, 2009 — 7:00 pm

Permit Center – 4114 198<sup>th</sup> St. SW, Lynnwood WA (note location)

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### A. CALL TO ORDER

Chair WRIGHT  
Commissioner AMBALADA  
Commissioner AUBUCHON  
Commissioner BRAITHWAITE  
Commissioner DAVIES  
Commissioner LARSEN, First Vice-chair  
Commissioner WOJACK, Second Vice-chair

### B. DINNER

### C. APPROVAL OF MINUTES:

Meeting of October 15, 2009

### D. COUNCIL LIAISON REPORT

E. **CITIZEN COMMENTS** – on matters not on tonight's agenda.

### F. PUBLIC HEARINGS

None

### G. WORK SESSION

1. **Electronic Message Signs Code Amendment (2009-CAM-0004).** Review of zoning regulations for electronic message signs.

2. **Dark Sky Ordinance (2009-CAM-0007).** Consideration of new zoning regulations to reduce light pollution in the night sky.

### H. OTHER BUSINESS

1. **Briefing on Report to Puget Sound Regional Council on Lynnwood Regional Growth Center.**

2. **Introduction: Permit Processing Procedures Code Amendment.**

Consideration of amendments to City regulations for processing and acting action on applications for development permits. Referral from City Council.

### I. DIRECTOR'S REPORT

### J. ADJOURNMENT

*The public is invited to attend and participate in this public meeting. Parking and meeting rooms are accessible to persons with disabilities. Upon reasonable notice to the City Clerk's office (425) 670-5161, the City will make reasonable effort to accommodate those who need special assistance to attend this meeting.*

***Lynnwood Planning Commission***  
**Meeting of December 10, 2009**

## **Staff Report**

Agenda Item: Zoning Code Amendment  
- Changing Electronic Message Board  
Signs (09CAM0004)

- Public Hearing
- Informal Public Meeting
- Work Session
- Business
- Information
- Miscellaneous

Lynnwood Community Development Dept.

### **ACTION**

Continued discussion

### **BACKGROUND**

At its October 15, 2009 meeting, the City of Lynnwood Planning Commission discussed changing electronic message board signs, how such signs are currently regulated under existing Lynnwood Municipal Code and ways in which such signs might be further regulated.

Lynnwood Municipal Code (LMC) section 21.06.676 defines electronic changing message signs as follows:

**“21.02.676 Sign, electronic changing message.**

“Electronic changing message sign” means a sign whose alphabetic, graphic or symbolic information can be changed or altered electronically.”

LMC section 21.16.310(D), relating to “Commercial Signs” states (NOTE: Other zones have requirements for electronic signs but the commercial zones are the most prevalent as to where electronic changing message signs exist),

**“D. Electronic Changing Message Signs.** No sign shall have blinking or flashing lights; provided, however, electronically changing message signs shall be allowed. These signs shall not change displays or images at a rate less than one every five seconds except for signs which provide alternate messages only as to times and temperature, which may change at a rate of not less than one message every two seconds. All such signs shall be equipped with a device which automatically dims the intensity of the lights during hours of darkness.”

Communities throughout the country have been reviewing their codes to address issues related to such signs (see **Attachment A**, April 2009 article from *Planning Magazine* as a recent general discussion of the issue.) The general perception is that the technology and affordability of changing electronic message board signs has advanced ahead of the regulations.

Generally, regulation of electronic changing message signs focus on mitigating three primary impacts including:

1. Impacts to adjacent uses, especially adjacent lower intensity uses (i.e. residential);
2. Aesthetics/community appearance (i.e. light, brightness, display); and,

3. Distractions to traveling public and potential adverse impacts upon traffic safety.

Planning Commission consideration of changing electronic message board signs is in response to a request by the City Council to have the issue discussed by the Planning Commission and to bring forward recommendations for action.

**ANALYSIS**

While not comprehensive, the following are examples of standards certain other Washington State cities use to regulate changing electronic message board signs. The following standards are broadly organized (i.e. Location, Number, etc), and then specific examples of other cities' regulations with respect to that topic are identified. Many of the standards are very similar to one another, reflecting how each has patterned their requirements after one another.

These standards are representative of options available to the City of Lynnwood and are itemized below in a manner to provide the Planning Commission with choices that will enable staff to draft an ordinance.

**A. Location (Restrictions by zone)**

Zoning codes regulate changing electronic message board signs by zoning district, permitting them in some zones, prohibiting them in others, or allowing them with additional standards in certain zones.

The City of Mukilteo zoning code, for instance, includes the following table.

**Table 2D  
PERMITTED SIGN CHARACTERISTICS BY ZONING DISTRICT**  
KEY: "P"=Permitted; Left blank=Prohibited

<b>Sign Type</b>	<b>SFR</b>	<b>MFR</b>	<b>Commercial<sup>1</sup></b>	<b>Industrial</b>	<b>Institutional</b>
Changeable copy (reader board and electronic message board)			P	P	P
Illumination:					
Internal			P	P	P
External <sup>1</sup>	P	P	P <sup>1</sup>	P	P
Exposed bulbs or neon			P	P	P

**Attachment B** identifies current City of Lynnwood allowances for changing electronic message signs by zoning district.

**B. Number/Type**

The number/type of electronic changing message signs per property/use may also be regulated. This can even be made more specific, focusing on certain street types such as arterial streets, or placing limits on such signs by sign type (see City of SeaTac example below which addresses building mounted signs.)

- “Number. No more than one changing message center sign per street frontage shall be permitted on each property.” (Auburn)
- “2. Building-Mounted Signs.
  - a. Building-mounted electronic signs are not allowed in the following zones: UL, T, O/C/MU, UM, UH, P, NB. (SeaTac)
  - b. In all other zones, a site or property may be allowed a maximum of fifty-five (55) square feet of building-mounted electronic changeable display per street frontage....” (SeaTac)

**C. Size (Sign Area)**

Limitations on the size (sign area) of a changing electronic message board sign can be imposed. Some communities permit only a portion of the allowable sign area to be a changing electronic message board sign. This can help frame the sign to minimize an electronic changing message sign’s aesthetic impact.

For example,

- Electronic signs shall have a non-electronic, fixed portion of the sign that is at least fifty percent (50%) of the size of the electronic portion of the sign.” (SeaTac)
- The area of the electronic message center shall not exceed 20 percent of the area of the sign; provided the area limitation shall not apply if the sign is solely limited to time and temperature.” (Vancouver)
- Sign Face Area. Except in the I and P-1 zones, the changing message center shall not constitute more than 75 percent of a sign’s total sign face area. (Auburn)

**D. Height**

Some zoning codes place a greater restriction on the maximum height of a changing electronic message sign than other signs.

Part of this is intended to keep the light from such changing electronic message signs from projecting over rooftops into other properties that may feature more sensitive land uses.

**E. Lighting/Light Levels**

The intensity of the electronic sign is another consideration. Other cities’ code requirements include specific light standards, often measured in “nits” (NOTE: a “Nit” is a measure of illumination):

- “Electronic message center signs which create a source of glare shall be adjusted or removed as directed by the Planning Official. No electronic message center sign may be illuminated to a degree of brightness that is greater than necessary for adequate visibility. In no case may the brightness exceed eight thousand nits (8,000) or equivalent candelas during daylight hours, or one thousand (1,000) nits or equivalent candelas between dusk and dawn.” (Vancouver)

- “All electronic message center signs shall have installed ambient light monitors and shall at all times allow such monitors to automatically adjust the brightness level of the electronic message center sign based on ambient light conditions.” (Vancouver)
- “C. Light Levels.
  1. All signs shall have installed ambient light monitors and shall at all times allow such monitors to automatically adjust the brightness level of the electronic sign based on ambient light conditions.
  2. Maximum brightness levels for electronic signs in commercial/industrial zones shall not exceed eight thousand (8,000) nits when measured from the sign’s face at its maximum brightness, during daylight hours and five hundred (500) nits when measured from the sign’s face at its maximum brightness between dusk and dawn. (SeaTac)
- “Light Levels.
 

...

d. The brightness level shall not exceed 8,000 nits when measured from the sign’s face at its maximum brightness during daylight hours and 500 nits when measured from the sign’s face at its maximum brightness between dusk and dawn.” (Auburn)

**F. Display**

The display of the messages can be regulated in a several ways:

**i. Rate at which a message much be displayed.**

The electronic changing message sign regulations can establish a minimum time for display of the changing message. (NOTE: Lynnwood’s standard is five (5) seconds.)

- “The display of the sign shall not change more rapidly than once every one and one-half (1.5) seconds. (SeaTac)”
- “The display of the sign shall not change more rapidly than once every one and one-half seconds (Auburn).

**ii. Rate at which a message must be displayed in its entirety**

Changing electronic message sign regulations can establish a maximum time for a message to be displayed in its entirety.

- “No message shall require more than ten (10) seconds to be displayed in its entirety.” (SeaTac)
- “Scrolling or traveling of a static display onto the sign from one (1) direction only per display shall be allowed; provided, that each display remains in a static state for at least one and one-half (1.5) seconds. There shall be ten (10) seconds of still image or blank screen following every scrolling or traveling display.” (SeaTac)
- “No scrolling message shall require more than five seconds to be displayed in its entirety.” (Auburn)
- “The rate of change for sign copy from one message to another shall be no more frequent than every eight seconds and the actual copy change shall be

accomplished in four seconds or less. Once changed, the copy shall remain static until the next change.” (Vancouver)

**G. Display of non-text images**

In addition to regulating the text portion of the message, the non-text display of the changing electronic message sign may be subject to regulation.

- “The display shall not, or shall not appear to, flash, undulate, pulse or portray explosions, fireworks, flashes of light, or blinking or chasing lights; the display shall not appear to move toward or away from the viewer, expand or contract, bounce, rotate, spin, twist or otherwise portray movement or animation as it comes onto, is displayed on, or leaves the sign board.” (SeaTac)
  
- “The display shall be limited to text and static images only and shall not appear to flash, portray blinking or chasing lights, or otherwise create continuously changing images. However, scrolling of text (horizontal or vertical) is permitted.” (Vancouver)

**H. Color of Display**

- The display shall have a dark background with only the message or foreground lit in a white, amber or other light tone or shade. (SeaTac)

**I. Protection for Residential Zones/Uses**

Certain codes seek to protect residential or other lower intensity uses that might be affected by changing electronic message board signs.

- “Electronic message center signs shall not be associated with any dwelling or home occupation in any residential zone.” (Vancouver)
  
- “Electronic signs shall not be allowed within any dwelling or home occupation in any residential zone. (SeaTac)
  
- “c. Electronic displays in residential zones shall be turned off between the hours of 10:00 p.m. and 7:00 a.m.” (SeaTac, see also J. below.)”
  
- “c. All lighting shall be arranged to reflect away from any residential zone. The director shall have the authority to require a sign permit application include information to ensure the intent of this requirement is met.” (Auburn)

**J. Hours of Operation**

At the October 15, 2009 Planning Commission meeting, a question was asked as to whether or not a changing electronic message board sign could be regulated by hours of operation. This standard is typically implemented to protect residential or other nearby lower intensity land uses.

In checking with the City Attorney, regulation of signs by hours of operation is possible but does require considerable documentation in the record for why such a regulation is being adopted. The examples below are very specific to certain zoning districts.

- “c. Electronic displays in residential zones shall be turned off between the hours of 10:00 p.m. and 7:00 a.m.” (SeaTac)
- “b. In the I zone, no changing message center sign shall operate between the hours of 10:00 p.m. and 6:00 a.m.” (Auburn, “I” zone being institutional uses)

**K. Additional Requirements**

In addition to the traditional means of regulating electronic message board signs (e.g. location, size, brightness, frequency of changes in messages, limits on the use of animation or video, number of signs, etc), certain regulations address matters related to the manufacturer’s recommended standards and a commitment from the owner to operate a sign within City codes.

- “Electronic sign permit applications must include a copy of the manufacturer’s operating manual, which includes the manufacturer’s recommended standards for brightness, scrolling or travelling speed, and other display operations.” (SeaTac)
- “Electronic sign permit applications must also include a certification from the owner or operator of the sign stating that the sign shall at all times be operated in accordance with City codes and that the owner or operator shall provide proof of such conformance upon request of the City.” (SeaTac)
- “Additionally, whether the sign is programmed from the site or from a remote location, the computer interface that programs the sign shall be available to City staff for inspection upon request. If the computer interface is not immediately available, the sign shall cease operation until such program can be provided. (SeaTac)”
- “A copy of the manufacturer’s operating manual shall be provided to the city upon request.” (Auburn)
- “Electronic message center sign permit applications must include a copy of the manufacturer’s operating manual, which includes the manufacturer’s recommended standards for brightness, scrolling or traveling speed, and other display operations. (Vancouver)
- “Electronic message center sign permit applications must also include a certification from the owner or operator of the sign stating that the sign shall at all times be operated in accordance with City codes and that the owner or operator shall provide proof of such conformance upon request of the City. (Vancouver)

**L. Amortization**

- “Amortization. All changing message center signs that do not comply with the requirements of subsections (F)(4) and (5) of this section shall be brought into compliance with those requirements by April 1, 2009.” (Auburn)

**NOTE:** Subsections (f)(4) and (5) above are as follows:

*4. Display.*

*a. The display of the sign shall not change more rapidly than once every one and one-half seconds.*

*b. No scrolling message shall require more than five seconds to be displayed in its entirety.*

*5. Light Levels.*

*a. Changing message center signs shall have installed ambient light monitors and shall at all times allow such monitors to automatically adjust the brightness level of the sign based on ambient light conditions.*

*b. At no time shall a changing message center sign be operated at a brightness level greater than the manufacturer's recommended levels.*

*c. All lighting shall be arranged to reflect away from any residential zone. The director shall have the authority to require a sign permit application include information to ensure the intent of this requirement is met.*

*d. The brightness level shall not exceed 8,000 nits when measured from the sign's face at its maximum brightness during daylight hours and 500 nits when measured from the sign's face at its maximum brightness between dusk and dawn.*

**RECOMMENDATION**

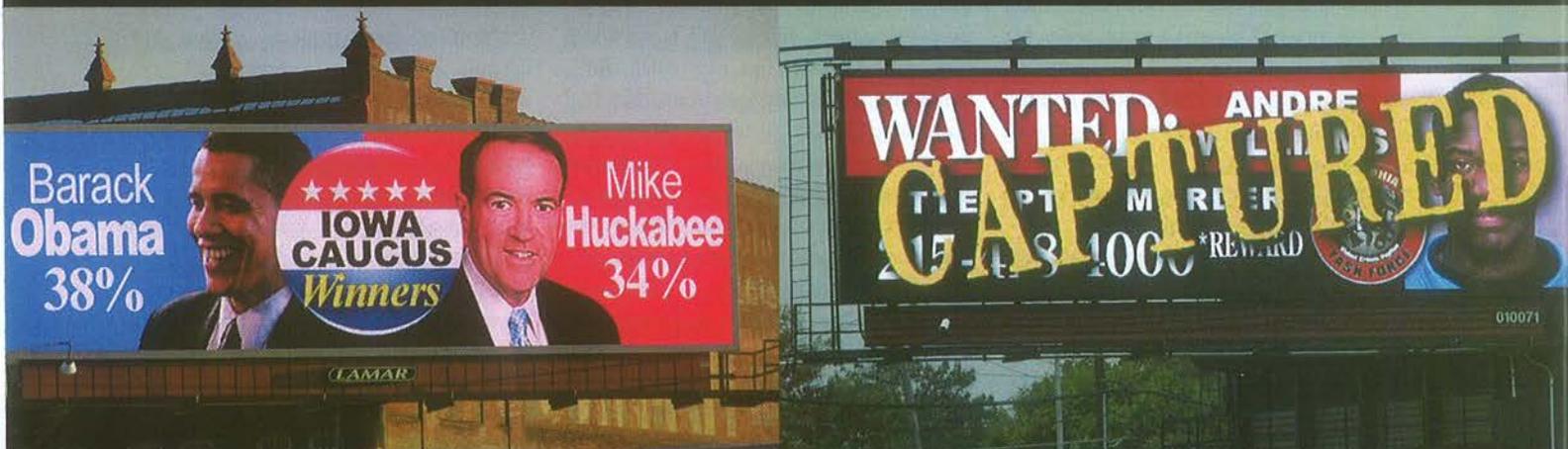
Discussion. Based on Planning Commission comments an ordinance will be drafted.

**ATTACHMENTS**

- Attachment A Planning Magazine Article, "Scroll, Roll and Flash - Welcome to the World of Digital Signs". April 2009.
- Attachment B Electronic Message Board Sign regulations by City of Lynnwood zoning district

SPRING  
FLASH

Welcome to the world of digital signs



Two examples of digital billboards with pro bono ads provided by the outdoor advertising industry—one posted during the 2008 presidential primaries (left), the other with information from the FBI.

**T**he technology of signs and billboards has gotten ahead of the regulations," says Kevin Fry, president of Scenic America, the nonprofit that has long campaigned against what it calls billboard blight. "Many if not most communities have been caught off guard. The regulations that they thought regulate these things often don't."

Most local ordinances that address electronic signs were drafted when such gizmos were capable of displaying only scrolling news bulletins or the time and temperature. The newer signs scroll, roll, and dissolve. The content of such signs can be changed with a click of a computer mouse, and the fanciest of them are capable of full-motion color video in applications that range in size from check-out counter displays to the biggest roadside billboards—in effect, TV screens that measure 14 by 40 feet.

The technologies promise heightened visibility to advertisers, potential profits to sign companies—and headaches to local officials responsible for regulating these new additions to the cityscape.

#### **PowerPoint in the sky**

The newer signs introduce a couple of new issues for municipalities. For one thing, self-illuminated electronic signs are inherently brighter than their convention-

al cousins, much as a color TV image is inherently brighter than a photo of the same subject hanging on a wall next to it. "They become the dominant visual element wherever they sit, especially at night," says Fry. "It's PowerPoint in the sky."

A full-size billboard can contain as many as a half-million LEDs, or light-emitting diodes. Regulations regarding placement and orientation of such signs (especially signs that can be seen from residential areas or that may block a driver's line of sight, as on street curves) are even more crucial than with static image signs.

The Outdoor Advertising Association of America, the industry's chief trade association, has a Code of Industry Principles that discourages excess lighting. "The code and industry practices are well within federal guidelines," says Jeff Golimowski, OAAA's communications director. "Companies voluntarily follow the code; however, we don't know of any instances of a violation of this provision."

What an advertiser considers an appropriate light level may not be appropriate to a nearby home owner. Harker Heights, a city of some 28,000 in central Texas, includes in its electronic billboard ordinance the usual boilerplate about light not causing glare, impairing the vision of an ordinary driver, or constituting a nuisance. It also incorporates widely used standards (in

this case, borrowed from the Texas Transportation Code) and limits the brightness of full-color displays to 7,000 NITs (a unit of light intensity, as measured by candelas per square meter) during daytime and 2,500 at night.

A few municipalities have opted for stricter limits. Bloomington, Minnesota, stipulates that such a sign must not exceed a maximum illumination of 5,000 NITs during daylight hours and a maximum illumination of 500 NITs between dusk and dawn.

Enforcing such rules is tricky, though, since it's difficult to measure brightness in the field. Most cities use a work-around in the form of a requirement that a sign must be factory-certified as incapable of exceeding the standard. Other cities resort to a reasonableness standard that calls for light levels to be "appropriate for the ambient light conditions" or "not unreasonably bright."

#### **On the cutting edge**

Not every town wants to look like Times Square. Complaints about "trashy" or "garish" signs are common in public hearings on the topic. Example: "They're making our community look like Las Vegas," said Barbara Thomason, president of the Houston Northwest Chamber of Commerce, of the scores of digital signs

By James Krohe Jr.

she has noticed popping up in the last few years. “The word ‘trashy’ has been used.”

At the same time, some people (including local officials) use terms such as “new” and “cutting-edge” to describe electronic signs, praising them for making everything appear up to date.

It’s all a matter of context. The decision by the city of Nashville to allow full-motion video signs (10-by-15-foot video billboards) in the commercial entertainment zone around Opryland on Briley Parkway (the only zone in which they are legal) stirred no controversy, while a proposal to allow digital on-premise signs on arterial streets did. Such was the fuss that the Hamilton County Metropolitan County Council impaneled a task force of residents, planners, sign companies, and other businesses to study its existing sign ordinance and make recommendations to the council regarding appropriate modifications.

Local governments seldom allow electronic billboards to display full-motion video. Instead, the billboards typically display a collection of static images. Basically, digitals are TV commercials that the viewer can’t fast-forward through. “We cannot change the channel,” said one advocate for anti-digital Citizens for Scenic South Carolina in a meeting protesting the placement of digital faces that would run 1,013 eight-second ads per day. “We have to watch it.”

Los Angeles has issued permits allowing 95 billboards to be converted to digital. As “modernizations,” the new signs were not subject to basic environmental review or zoning restrictions. They started appearing on old poles along busy streets and in residential districts. They are bright enough to be seen for miles, and some were so close to homes that, as one resident put it to reporters, her bedroom decor changed every time the

ensuing 12 months as permanent “experiments,” but otherwise banned them. (The program had not been reviewed as of December 2008.)

### Moving targets

Signs that move, or seem to move, have been a familiar sight in U.S. cities for decades. What makes the new ones problematic is that they are cropping up not in pedestrian environments such as entertainment and shopping enclaves, but along heavily traveled city streets and highways.

The question local officials must decide is, are these signs too distracting? How long can a driver look away from the road at a sign before he puts himself and others in jeopardy?

Serious highway safety questions have been raised concerning this visual medium by the Federal Highway Administration, the University of North Carolina



Announcements found on digital billboards range from movie and TV ads (in Los Angeles, left) to emergency messages (right).

In general, signs tend to be allowed in residential, mixed use, and office districts only as a special exception, and permitted by right only in commercial and industrial zoning districts. The risk in the latter zones is that electronics, by their higher visibility, will make bad sign clutter worse—not by adding to it, but by making the clutter more noticeable.

### ‘We have to watch’

It is the wired, large, off-premise advertising signs that have caused the most fuss. Of the 450,000 billboards around the country, only about 1,400 are digital—so far. “We anticipate that number to grow by several hundred per year,” says OAAA’s Golimowski.

nearby sign changed images.

Public outrage led neighborhood activists to demand that new signs be subject to local planning reviews, arguing that the signs merited full hearings since the modifications posed new environmental impacts. LA planning officials last November recommended a six-month moratorium on new billboards (including the conversion of existing ones to digital) while the city reviewed its rules.

Des Moines, Pittsburgh, and St. Paul are among the many other cities that have slapped a moratorium on the permitting of electronic signs so they could study the issue. In Texas, San Antonio’s city council voted in December 2007 to allow 15 digital conversions on a pilot basis over the

Highway Safety Research Center, the Municipal Research and Services Center of Washington, and the Wisconsin Department of Transportation. However, it was not until 2007 that the Federal Highway Administration announced that it will initiate the first major study to examine the safety issues specifically related to electronic signs, with results expected sometime this year.

Most municipalities simply ban roadside signs displaying images or messages that flash, blink, scroll, or otherwise move. The prohibition of moving signs is not universal, however. For example, officials of the West Texas town of San Angelo in December rejected recommendations of its planning staff and approved an ordi-

nance that allows any animation or movement on their signs short of flashing (the staff had proposed allowing movement of text only).

"Moving" signs are distinct from "changing signs." The latter include signs that display a succession of static images. A rotating series of static images still moves after a fashion, and municipalities that regulate electronic signs generally seek to limit how often and how quickly such images change.

There is no commonly accepted standard. St. Paul, Minnesota, has a new electronic sign ordinance that requires messages to stay in place for 12 seconds. Seattle has set 10 seconds as the minimum "dwell time" and San Antonio at least eight seconds. Green Bay, Wisconsin, has set a minimum of six seconds, Albuquerque five.

"The industry will pretty cheerfully settle for changes every eight seconds," says Eric Damian Kelly, FAICP, of Ball State University, who has written extensively on sign regulations. Some safety-conscious municipalities reason that the less often a message or image changes, the fewer people will be distracted by it when it happens. The Seattle suburb of Tukwila currently bans all signs from changing message more frequently than once every 24 hours (except for time-and-temperature signs). Mesa, Arizona, requires that every message be displayed for a minimum period of one hour, unless the city council specifies otherwise.

"I've seen a variety of approaches," says John Baker, a land-use attorney with the Minneapolis-based firm of Greene Espel. "Some change so infrequently that people no longer look for the change. That way you don't get that neck-craning effect." Planners in Bloomington, Minnesota, calculated that a 20-minute dwell time for digital billboard images would subject only five percent of passing motorists to the distraction of anticipating and viewing a change.

#### One for you, two for me

Because digitals are, in effect, several billboards stored in digital form in their controlling computers, one digital face rotating different ad messages can earn several times the revenue of its static cousin. Published estimates of what one well-placed board can earn in a major metro area have

## What's on Next?

Digital billboards are only one of the new display technologies that are vexing local regulators. With TV and print advertising reaching fewer eyeballs, advertisers are putting their ads wherever people are. Projection advertising can create an image on the side of a building as big as 15 stories tall and 150 feet wide. Guerilla Video Projection, which has placed large outdoor video advertising (product images, brand messages, even TV commercials) on buildings in 17 big U.S. cities, calls such technology "the best large-format outdoor advertising vehicle to connect with consumers in the evenings in major markets."

In 2006, Chase Manhattan Bank "branded" the sidewalks outside about two dozen of its New York City branches with lighted images of the bank's logo. City officials quickly noted that the images violated the city's ordinance banning any advertising on public sidewalks.

OfficeMax used a similar stunt in 2007 to show off the firm's new logo in Chicago. Using GPS and a projection system mounted in a vehicle, the firm's marketing consultant projected images of a multicolored ball that bounced onto sidewalks and the sides of such landmark buildings as the Sears Tower, the John Hancock Center, and the Art Institute of Chicago. As in Manhattan, the ad agency involved did not seek the city's approval.

Of course, these kinds of signs aren't really new. The sides of buildings have been painted for decades with advertisements; ghostly images from many of them can be seen. Similarly, banners have always been draped on buildings to promote special events. The fact that the banners now light up means that they can be changed more often and more cheaply, but the idea is the same.

Computers can print anything on anything, including vinyl billboards big enough to cover entire building facades. These "wall wraps" have been seen in New York City, Los Angeles, and San Francisco (and "they are coming to a smaller city near you," says Kevin Fry with a laugh). Few municipalities have regulations on the books to cover these supergraphics.

Digital screens are being made permanent parts of buildings, too. A moving 16-by-27-foot LED video screen was installed on the outside of San Francisco's Moscone Convention Center, where it displays an artwork titled Facsimile.

Visual displays aren't the only thing local officials worry about. In 2006, after some "Got Milk?" billboards started emitting the odor of chocolate chip cookies at San Francisco bus stops, many people complained, and the city told the sponsor, the California Milk Processing Board, to turn off the smell.

■ James Krohe Jr.

ranged from \$1 million to \$3 million a year, compared to tens of thousands for a conventional face.

To get these profitable signs up and earning, sign companies often argue that converting an existing, permitted sign to digital is merely a modification that requires no review. Attempts by city officials to remedy such actions usually lead to lawsuits, and the companies enjoy revenues for months or years while the case is argued in court.

The prudent community will add to its zoning code or sign ordinances a provision stating that both existing electronic and digital signs and billboards and signs that

might be converted are not grandfathered. "Local governments need to amend their ordinances to prohibit changing a standard sign to LED technology unless the new LED sign will conform to all applicable regulations," warns Kelly.

Sign companies' desire to go digital means that municipalities trade the removal of some of the firm's older static boards in return for the permission to install new ones. (Since the companies in effect trade a few obsolete billboards for one that can earn 10 times as much, many swaps are proposed by the companies themselves.) St. Paul worked out a typical deal in 2007, under which four to six square feet of

lighted billboard space or eight square feet of unlighted space were to be removed for every square foot of new electronic display space approved.

As part of a settlement of a 2002 lawsuit over the removal of thousands of illegal billboards, the LA city council agreed that each company would take down three percent of its existing signs (fewer than 100 combined) in return for the ability to upgrade 840 of their billboards to accommodate digital displays. Those terms were far more generous to the sign companies than most swaps allow.

Voluntary agreements of this sort would seem to be classic win-win deals. A city gets rid of old billboards (usually in residential areas) in exchange for granting sign companies the right to erect new ones, usually along major corridors.

However, billboard swaps are not as simple as they appear. Oakland, California, councilmember John Russo has warned his constituents that removal of the legal conforming billboards by one firm does not insure that a different firm won't put up a sign there in the future, since the billboard itself is still compliant. The terms of any swap also should include provisions for fines or other penalties for failure to comply.

### To ban or not to ban

A town could simply ban digitals. Concord, New Hampshire, banned all signs that "move or create the illusion of movement" and signs that "are or appear to be animated or projected," including electronic message centers.

A local jeweler affected by the ban sued. The U.S. District Court in 2007 upheld the ban since it was directed only at types of signs that the city "plausibly thinks will adversely affect traffic safety, or prove detrimental to aesthetic values the city seeks to promote." (APA and the New Hampshire Planners Association filed an amicus curiae brief in the case supporting the city's position. The decision was upheld on appeal early in 2008.)

Some towns think they have banned digital signs, but haven't. A local ordinance that prohibits "flashing" signs will do only that. Such language will not necessarily be interpreted to ban electronic message or graphic image signs. "These signs do not necessarily flash," explains Eric Kelly. "Most local sign ordinances

are inadequate to address this issue."

"The handful of communities that have banned all digital signs don't make a distinction between off- and on-premise signs," explains Fry. "That's legally defensible."

"Legally defensible" can also mean "expensive." Peter Pihos of EDG Research, a consultant and researcher in the field of large-area displays since 1982, says that many towns are in effect bullied into adopting industry-friendly rules by the fear of a costly lawsuit they are unlikely to win. (St. Paul is only one of the cities that decided to allow some digitals rather than risk the costs of defending a ban.)

"Defending a ban is certainly not cheap," explains Baker. "If a city is not expecting that, or hasn't insured themselves or set aside reserves to cover such costs, they may decide that the difference between banning electronic signs and allowing them under regulation is not worth it."

### Learning to not see

Will these dazzling new signs really dominate outdoor advertising, as the industry hopes, and so many neighborhood and environmental activists fear? "There is a romance with these displays for 18 to 24 months with advertisers," says Peter Pihos. "They're new and they're sexy. But just because everyone is doing it doesn't mean it's a good opportunity."

Pihos notes that on recent trips to Europe, which was ahead of the U.S. in adoption of electronic sign technology a few years ago, many of those pioneering displays have been turned off.

Part of the visceral reaction—positive and negative—to things like digital billboards is due to their newness. In time, digital signs are likely to become invisible, too, or at least less visible. And as they fade from public consciousness, the controversies about them will fade as well.

James Krohe Jr. is a Chicago-based writer.

## RESOURCES

### GLOSSARY

"Digital," "electronic," and "LED" (after the light-emitting technology used by them) are common generic terms, but they are vague. Some ordinances categorize these signs by what they display: changeable copy (the electronic message center, including time-and-temperature signs), graphic display (most electronic billboards), and video display (full-motion, TV-like images). Other ordinances refer to "electronic video display signs," "changeable electronic variable message signs," or "dynamic signs."

### FROM APA

See "Regulating Moving-Image Signs," Planning Advisory Service EIP-06, February 2007, and "Looking Ahead: How to Regulate Video Display and Electronic Message Signs," in the April 2008 *Zoning Practice*.

### REGULATION

A useful, if skeptical, source for information on regulating and prohibiting billboards is Scenic America ([www.scenic.org](http://www.scenic.org)); the "Issue Areas" section includes model ordinances and legislation.

The industry perspective is offered at the web site of the Outdoor Advertising Association of America: [www.oaaa.org](http://www.oaaa.org). Click "Legislative and Regulatory Center."

### REPORTS

A useful summary of the main issues is given in "Report to the Planning Commission October 26, 2006" by the Bloomington (Minnesota) Planning and Economic Development Division; see [www.ci.bloomington.mn.us](http://www.ci.bloomington.mn.us).

A similar report is the "Request for Council Action on 12/6/2007" from the City of San Antonio's Development Services. See <http://epay.sanantonio.gov>.

### ORDINANCES

Many local sign ordinances are available on the web. Among the more notable is Seattle's Ordinance Number 120466, August 6, 2001; see <http://clerk.ci.seattle.wa.us>.

## ATTACHMENT B

ZONING DISTRICT	ELECTRONIC MESSAGE BOARD SIGNS ALLOWED?	ADDITIONAL COMMENTS
<b>RS-8</b> Low-Density Single-Family Residential	No.	
<b>RS-7</b> Medium-Density Single-Family Residential	No.	
<b>RS-4</b> High-Density Single-Family Residential	No.	
<b>RML</b> Low-Density Multiple-Family Residential	No.	All wall signs shall be non-internally illuminated except for individual letter signs and signs with opaque sign face backgrounds that only allow letters and/or business logos or graphics to be visible at night. Wall signs on building facades oriented toward residences shall not be illuminated.
<b>RMM</b> Medium-Density Multiple-Family Residential	No.	See RML.
<b>RMH</b> High-Density Multiple-Family Residential	No.	See RML.

<b>ZONING DISTRICT</b>	<b>ELECTRONIC MESSAGE BOARD SIGNS ALLOWED?</b>	<b>ADDITIONAL COMMENTS</b>
<b>B-4</b> Restricted Business	No.	All building signs shall be non-internally illuminated except for individual letter signs and signs with opaque sign face backgrounds that only allow letters and/or business logos or graphics to be visible at night. Wall signs on building facades oriented toward residences shall not be illuminated. (LMC 21.16.310(K)(3))
<b>B-3</b> Neighborhood Business	Yes	Electronic changing message signs permitted. No sign shall have blinking or flashing lights; provided, however, electronic changing message signs shall be allowed. (LMC 21.16.310(H)). These signs shall not change displays or images at a rate less than one very five seconds except for signs which provide alternate messages only as to times and temperature, which may change at a rate of not less than one message every two seconds. All such signs shall be equipped with a device which automatically dims the intensity of the lights during hours of darkness.
<b>B-2</b> Limited Business	Yes	See B-3 Above
<b>PCD</b> Planned Commercial Development	Yes.	See B-3 above
<b>B-1</b> Community Business	Yes	See B-3 above
<b>MU</b>	Yes	Signs shall be of high quality and shall be the minimum necessary to provide such identification. Excessively large signs and flashing or animated signs are

ZONING DISTRICT	ELECTRONIC MESSAGE BOARD SIGNS ALLOWED?	ADDITIONAL COMMENTS
Mixed Use/Business		recognized as being inconsistent with the existing character of the area and will be discouraged. Signs shall comply with the illumination regulations of this chapter (but none are given except that flashing or animated are inconsistent).
<b>CC-W</b> City Center – West End	Yes	No pole or roof signs. Projecting and wall allowed. Illumination not addressed. Neon allowed in creative ways but cannot just outline roof or building.
<b>CC-N</b> City Center – North End	Yes	No pole or roof signs. Projecting and wall allowed. Illumination not addressed. Neon allowed in creative ways but cannot just outline roof or building.
<b>CC-C</b> City Center – Core	Yes	No pole or roof signs. Projecting and wall allowed. Illumination not addressed. Neon allowed in creative ways but cannot just outline roof or building.
<b>CG</b> General Commercial	Yes	See B-3 above
<b>PRC</b> Planned Regional Shopping Center	Yes.	Electronic changing message signs are permitted, provided such signs shall be subject to the regulations of LMC 21.16.310(H), and that electronic changing message signs shall be located such that they: <ul style="list-style-type: none"> <li>1. Are predominantly not visible from a public right-of-way.</li> <li>2. Are located on a building elevation with a primary entrance and facing an area predominantly used by pedestrians.</li> <li>3. Are located on a building that is part of a larger building site as defined by LMC 21.02.175 that has at least 50 acres in area. <b>(See Note 1 below)</b></li> </ul>
<b>CDM</b>	Yes	Per commercial signage except with any provisions of overlay zone. Wall signs permitted. Can have freestanding “ground” signs along 68 <sup>th</sup> and 202 <sup>nd</sup> but cannot

ZONING DISTRICT	ELECTRONIC MESSAGE BOARD SIGNS ALLOWED?	ADDITIONAL COMMENTS
College District Mixed Use		have pole or freestanding. In the overlay zone, can have freestanding, roof, and pole fronting 196 <sup>th</sup> St. and Highway 99).
<b>CR</b> Commercial-Residential Zone	Would require interpretation. (The Commercial-Residential zone is not defined as either a commercial or a residential zone in LMC section 21.40.100).	There are no properties in the City zoned “Commercial Residential”.
<b>BTP</b> Business and Technical Park(s)	No. Only external with restrictions	Wall signs in Transitional zones cannot be internally illuminated but can be externally illuminated except signs on facades facing residential zones shall not be externally illuminated. Wall signs in general zones shall not be internally illuminated except for individual letter signs and signs with opaque sign face backgrounds that only allow letters and/or business logos or graphics to be visible at night. Signs on facades oriented toward residences shall not be illuminated.
<b>LI</b> Light Industrial	No. Only external with restrictions.	Wall signs in Transitional zones cannot be internally illuminated but can be externally illuminated except signs on facades facing residential zones shall not be externally illuminated. Wall signs in general zones shall not be internally illuminated except for individual letter signs and signs with opaque sign face backgrounds that only allow letters and/or business logos or graphics to be visible at night. Signs on facades oriented toward residences shall not be illuminated.
<b>P-1</b> Public and Semi-Public	Yes. Monument signs allowed by Conditional	All monument signs, illuminated or not illuminated, require a conditional use permit in the Public and Semi-Public Use Zone.

ZONING DISTRICT	ELECTRONIC MESSAGE BOARD SIGNS ALLOWED?	ADDITIONAL COMMENTS
Uses.	Use Permit, except that such signs shall not be illuminated if visible from nearby residential zones.	

**NOTES**

1. LMC 21.16.310(H) is specific to “Searchlights” and states,

“21.16.310 Commercial signs.

...

H. Searchlights. Searchlights shall only be permitted if they meet the following criteria:

1. That the duration of time for display of the searchlight shall not be more than 10 days;
2. That no permit for display of a searchlight shall have been approved for the same applicant during the six-month period prior to the most recent application;
3. That the searchlight be so located as to minimize interference of driver visibility at intersections or at points of ingress and egress;
4. That the searchlight be located 35 or more feet from the right-of-way; and directed away from traffic on nearby streets;
5. The intensity and color of light and the duration of its operation shall not constitute a nuisance as defined in LMC [10.08.200](#); and
6. That a fee as shown in Chapter [3.104](#) LMC shall be paid in connection with any such permit.”

It is unclear whether the reference should have been made to LMC 21.16.310(D), which is specific to Electronic Changing Message Signs, and states,

“D. Electronic Changing Message Signs. No sign shall have blinking or flashing lights; provided, however, electronically changing message signs shall be allowed. These signs shall not change displays or images at a rate less than one every five seconds except for signs which provide alternate messages only as to times and temperature, which may change at a rate of not less than one message every two seconds. All such signs shall be equipped with a device which automatically dims the intensity of the lights during hours of darkness.”



11/23/09

**TO: Lynnwood Planning Commission**  
**FROM: Paul Krauss AICP, Director**  
**RE: Dark Skies Ordinance, Discussion Paper #2**

Since the October 15<sup>th</sup> meeting Councilwoman Utter contacted MRSC (Municipal Research and Services Center of Washington), asking for more information on local Dark Skies ordinances. MRSC cited codes from Burien, Chelan, Fife, Redmond and Seattle along with several others. Pertinent sections of codes from Burien, Redmond and Woodinville are provided below. Burien's code is only applicable in their downtown area while the other two are enforced city-wide.

In reviewing these Codes I found a common thread. While each mentions Dark Skies in the objectives or findings given to support establishing the requirements, it is not the only supporting finding. Other factors include public and pedestrian safety, mitigation of off site impacts, conservation of energy, and promotion of coordinated and attractive site design. The Burien and Woodinville codes are reasonably straight-forward, easy to understand and utilize. Redmond's is unusually complex and cumbersome. The high level of expertise required to employ it is indicative of a city that does not have constraints on staffing.

After working through these Codes I think the Planning Commission should rethink the direction we should take in responding to this issue. I believe that what Lynnwood needs not a stand-alone ordinance that deals with Dark Skies issues. Rather, what is needed is a competent and comprehensive ordinance dealing with all manner of lighting-related design issues with Dark Skies being one of them. Lynnwood's current code requirements are inadequate and outdated (refer to Memo # 1)

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#### CITY OF BURIEN CODE

**Only applicable in their downtown area.**

**19.47.080 Site Lighting**

1. Objectives.

- A. Encourage the use of lighting as an integral design component to enhance *buildings*, landscaping, or other *site* features.
- B. Encourage night skies' visibility and to reduce the general illumination of the sky in Burien
- C. Screen light fixtures so that the light source is not visible off-site.
- D. Reduce horizontal light glare and vertical light trespass from a development *site* onto adjacent parcels.
- E. Encourage the judicious use of lighting in conjunction with other security methods to increase site safety.
- F. Discourage the use of lighting for advertising purposes.
- G. Provide adequate lighting levels in all areas used by pedestrians or automobiles, including *building* entries, walkways, parking areas, circulation areas, and other open space areas. [Ord. 273 § 1, 1999]

2. Design Standards.

- A. All public areas should be lighted with minimum and maximum levels as follows:
    - i. Minimum (for low or non-pedestrian and vehicular traffic areas): 0.5-foot candles
    - ii. Moderate (for moderate or high volume pedestrian areas): 1-2 foot candles
    - iii. Maximum (for high volume pedestrian areas and *building* entries): 4-foot candles
  - B. Lighting should be provided at consistent levels, with gradual transitions between maximum and minimum levels of lighting and between lit areas and unlit areas. Highly contrasting pools of light and dark areas shall be avoided.
  - C. Parking lot lighting fixtures should be non-glare and mounted no more than 25 feet above the ground. All fixtures over 15 feet in *height* shall be fitted with a full cut-off shield.
  - D. Pedestrian-scaled lighting is encouraged in areas of pedestrian activity.
  - E. Lighting shall enable pedestrians with normal vision to identify a face 15 yards away in order to promote safety.
- Chapter 19.47—Downtown Design Standards City of Burien, Washington  
**Page 47-9**
- F. All *building* lights should be directed onto the *building* itself and/or the ground immediately adjacent to it. The light emissions should not be visible above the roofline of the *building*.
  - G. Light fixtures other than traditional cobra heads are encouraged. [Ord. 273 § 1, 1999]

**CITY OF REDMOND**

**Applicable City-wide**

**20D.90 Exterior Lighting Standards**

- 20D.90.10-010 Purpose.
- 20D.90.10-020 Applicability.
- 20D.90.10-030 General Requirements.
- 20D.90.10-040 Lighting Standards for Uses within 50 feet of Residential Zones.
- 20D.90.10-050 Open-Air Parking Lot Lighting.
- 20D.90.10-060 Repealed.
- 20D.90.10-070 Canopy Lighting and Lighting of Service Stations.

- 20D.90.10-080 Lighting of Outdoor Performance, Sport and Recreation Facilities and Playfields.
- 20D.90.10-090 Security Lighting.
- 20D.90.10-100 Architectural Accent Lighting.
- 20D.90.10-110 Lighting of Landscaping.
- 20D.90.10-120 Temporary Lighting.

**20D.90.10-010 Purpose.**

This division is established for the following purposes:

- (1) To regulate exterior lighting in order to avoid unsafe and unpleasant conditions as the result of poorly designed or installed exterior lighting.
- (2) To implement the light and energy conservation policies of the Comprehensive Plan.
- (3) To discourage excessive lighting.
- (4) To regulate the type of light fixtures, lamps and standards.
- (5) To protect low and low moderate density residential zones from the ill affects associated with nonresidential and multi-family exterior lighting.
- (6) To create a safe environment during hours of darkness.
- (7) To avoid excessive lighting in order to promote the City's dark night sky policies. (Ord. 2109)

**20D.90.10-020 Applicability.**

- (1) When an exterior lighting installation is part of a new development proposal requiring Site Plan Review, a General Development Permit or a Special Development Permit, the Technical Committee shall review and approve the lighting design as part of the permitting process.
- (2) The Technical Committee shall review and approve the lighting design as part of the permitting processing for projects undergoing redevelopment or expansion when the redevelopment increases the gross floor area or valuation by the criteria established in RCDG 20F.10.50-090.
- (3) These regulations do not apply to individual dwelling units, with the exception of common areas, which are regulated. Examples of common areas include, but are not limited to, pathways, clubhouses, shared driveways, parking lots and play areas.
- (4) These regulations do not apply to Public Right-of-Way and shall not conflict with City Street Light standards and design criteria.
- (5) These regulations do not apply to lighting necessary for emergency equipment and work conducted in the interests of law enforcement or for the safety, health, or welfare of the community.
- (6) The regulation of sign lighting is governed by Chapter 20D.160 RCDG.
- (7) Standards for properties in Transition Overlay Areas can be found in Chapter 20D.230 RCDG, Transition Overlay Areas. (Ord. 2390; Ord. 2109)

**20D.90.10-030 General Requirements.**

- (1) Site lighting trespass onto adjacent residential zones shall be minimized.

- (2) **Site lighting shall minimize light spill into the dark night sky.**
- (3) Where practical, exterior lighting installations shall include timers, dimmers, sensors, or photocell controllers that turn the lights off during daylight hours or hours when lighting is not needed, to reduce overall energy consumption and eliminate unneeded lighting.
- (4) Exterior lighting installations shall be designed to avoid harsh contrasts in lighting levels.
- (5) Fixtures and lighting systems used for safety and security shall be in good working order and shall be maintained in a manner that serves the original design intent of the system.
- (6) Vegetation and landscaping shall be maintained in a manner that does not obstruct security lighting and minimizes possible entrapment spaces.
- (7) The applicant shall submit to the Technical Committee sufficient information, in the form of an overall exterior lighting plan, to enable the Technical Committee to determine that the applicable provisions will be satisfied. The exterior lighting plan shall include at least the following:
  - (a) Manufacturer specification sheets, cut-sheets or other manufacturer provided information for all proposed lighting fixtures.
  - (b) The proposed location, mounting height, and aiming point of all exterior lighting fixtures.
  - (c) If building elevations are proposed for illumination, drawings shall be provided for all relevant building elevations showing the fixtures, the portions of the elevations to be illuminated, the illuminance levels of the elevations, and the aiming point for any remote light fixture.
  - (d) If needed to review proposed exterior lighting installations, the Technical Committee may request additional information following the initial lighting plan submittal, such as:
    - (i) A brief written narrative, with accompanying plan or sketch, which demonstrates the objectives of the lighting.
    - (ii) Photometric data, Color Rendering Index (CRI) of all lamps (bulbs), and other descriptive information on the fixtures, and if applicable or required, designation as Illuminating Engineering Society of North America (IESNA) "cutoff" fixtures.
    - (iii) Computer generated photometric grid showing footcandle readings every 10 feet within the property or site, and 10 feet beyond the property lines at a scale specified by the Administrator. Iso-footcandle contour line style plans are also acceptable.
    - (iv) Landscaping information that indicates mature tree size, shrubbery and other vegetation in order to evaluate the long-term and seasonal effectiveness of lighting or screening of lighting. (Ord. 2109)

#### **20D.90.10-040 Lighting Standards for Uses within 50 feet of Residential Zones.**

- (1) For exterior lighting installations and fixtures within 50 feet of low and low-moderate density residential zones (densities less than or equal to R-6), the following requirements shall apply:
  - (a) Lighting fixtures shall be no higher than 15 feet above grade.

(b) Lighting fixtures shall be aimed and shielded in a manner that shall not direct illumination on adjacent residential zones. Fixtures should be of a type or adequately shielded so as to prevent glare from normal viewing angles.

(c) Where feasible, additional landscaping may be required by the Technical Committee to provide light screening between commercial zones and residential zones to help prevent light trespass. Where landscaping is used for light screening, the Technical Committee shall take into consideration the applicable landscaping standards found elsewhere in these regulations, the design standards found elsewhere in these regulations, the creation of excessive shadows or dark spaces, and views into and out of a site.

(2) The height restrictions of this section [item 1(a) above] shall not apply to lighting used to illuminate outdoor performance areas, sport and recreation facilities, and playfields, except where such lighting fixtures are located within 50 feet of the property line of a low and low-moderate density residential use or vacant residential lot (densities less than or equal to R-6). Lighting of outdoor performance areas, sport and recreation facilities, and playfields shall also meet the standards in RCDG 20D.90.10-080. (Ord. 2109)

#### **20D.90.10-050 Open-Air Parking Lot Lighting.**

(1) Open-air parking lots shall comply with the standards of this section in addition to the other requirements of this division.

(2) For multilevel parking facilities, the roof level shall be considered an open-air parking lot.

(3) Open-air parking lot lighting shall be designed to provide adequate vision, comfort and safety.

(4) Open-air parking lot lighting shall be designed to provide for uniform lighting throughout the facility with no dark patches or pockets.

(5) Open-air parking lot lighting shall be designed to provide a minimum value of lighting necessary for the safety and identification of features.

(6) Open-air parking lot lighting shall not cause direct illumination on adjacent and nearby properties or streets. Fixtures should be of a type or adequately shielded so as to prevent glare from normal viewing angles.

(7) In order to direct light downward and minimize the amount of light spilled into the dark night sky, all lighting fixtures serving open-air parking lots, except as allowed in subsection (8) of this section, shall be full cutoff fixtures as defined by the Illuminating Engineering Society of North America (IESNA).

(8) If the design of an area suggests the use of parking lot lighting fixtures of a particular "period" or architectural style, the Technical Committee may permit alternatives or supplements to the lighting described above. In order to minimize the amount of light spilled into the dark night sky the following shall apply:

(a) Mounting heights of such alternative fixtures shall not exceed 15 feet above grade or pavement.

(b) The Technical Committee shall require reasonable measures to minimize light trespass and light spill into the dark night sky.

(9) The following mounting height regulations shall apply to open-air parking lot lighting fixtures. Mounting height shall be measured as the vertical distance between the parking surface and the bottom of the lighting fixture.

(a) The maximum permissible mounting height of open-air parking lot lighting fixtures within 50 feet of low and low-moderate density residential zones (densities less than or equal to R-6) shall be 15 feet.

(b) The maximum permissible mounting height for open-air parking lot lighting fixtures, on top levels of structures, shall be 15 feet.

(c) The maximum permissible mounting height of open-air parking lot lighting fixtures, not listed in (a) and (b) above, shall be 25 feet.

(10) The Technical Committee may allow increases from Basic to Enhanced Security lighting levels (see table below), when personal security is an issue, such as where the parking facility is used during all hours of the day and night, where special security needs exist, or where vandalism or crime are possible. The Technical Committee may consider specific site characteristics, level of vehicle and pedestrian conflict, special security needs, and history or likelihood of crimes in making its determination.

(11) The table below establishes open-air parking lot lighting standards.

	Basic <sup>1</sup>	Enhanced Security <sup>2</sup>
Minimum Footcandles on Pavement <sup>3</sup>	0.2 fc	0.5 fc
Maximum Footcandles on Pavement	4.0 fc	7.5 fc
Uniformity Ratio Maximum:Minimum <sup>4</sup>	20:1	15:1
Minimum Footcandles at five (5) feet Above Pavement <sup>5</sup>	0.1 fc	0.25 fc

Notes:

fc = footcandle

<sup>1</sup> For typical conditions. During periods of nonuse, the illuminance of certain parking facilities should be turned off or reduced to conserve energy. If reduced lighting is to be used only for the purpose of property security, it is desirable that the minimum (low point) value not be less than 0.1 footcandle. Reductions should not be applied to facilities subject to intermittent night use, such as at apartments, hospitals and transportation terminals.

<sup>2</sup> The Technical Committee may allow increases from Basic to Enhanced Security lighting levels, when personal security is an issue, such as where the parking facility is used during all hours of the day and night, where special security needs exist, or where vandalism or crime are possible. The Technical Committee may consider specific site characteristics, level of vehicle and pedestrian conflict, special security needs, and history or likelihood of crimes in making its determination.

<sup>3</sup> Measured on the parking surface, without any shadowing effect from parked vehicles or trees at points of measurement.

<sup>4</sup> The highest horizontal illuminance point at grade, divided by the lowest horizontal illuminance point or area should not be greater than the values shown.

- ° Measured at 1.5 meters (5.0 feet) above parking surface at the point of the lowest horizontal illuminance, excluding facing outward along boundaries.

(Ord. 2109)

**20D.90.10-060 Exterior and Parking Lot Lighting in Transition Overlays.**

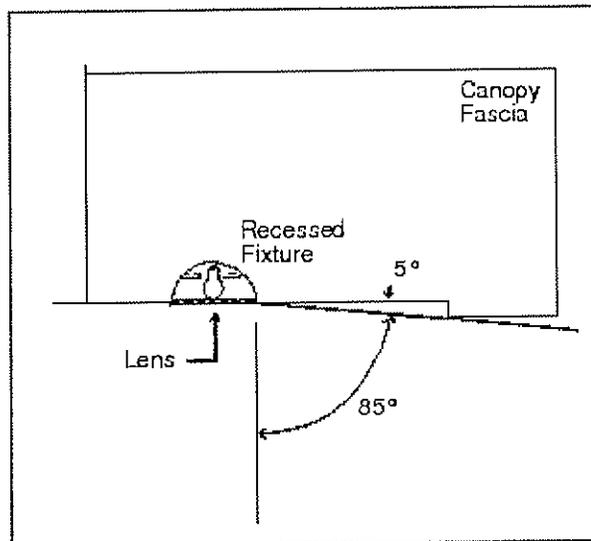
Repealed by Ord. 2390. (Ord. 2109; Ord. 2027)

**20D.90.10-070 Canopy Lighting and Lighting of Service Stations.**

(1) Lighting of such areas shall not be used to attract attention to the business. Signs allowed under the appropriate section of these regulations shall be used for that purpose.

(2) Lighting levels shall be adequate to facilitate the activities taking place in such locations.

(3) In order to minimize the extent of direct glare, light fixtures mounted on canopies shall be recessed so that the lens cover is recessed or flush with the bottom surface (ceiling) of the canopy or shielded by the fixture or the edge of the canopy so that light is restrained to 85 degrees or less from vertical. The figure below, entitled Recessed Fixture, illustrates this.



**Recessed Fixture**

(4) As an alternative (or supplement) to recessed ceiling lights, indirect lighting may be used where light is beamed upward and then reflected down from the underside of the canopy. When this method is used, light fixtures must be shielded so that direct illumination is focused exclusively on the underside of the canopy.

(5) Lights shall not be mounted on the top or sides (fascias) of the canopy. The sides (fascias of the canopy) shall not be illuminated in a manner other than that prescribed under the section of these regulations regulating signs.

(6) Areas around service station pump islands shall be illuminated so that the minimum horizontal illuminance at grade level is at least 1.0 footcandle and no more than 5.0 footcandles. The uniformity ratio (average illumination to

minimum illumination) shall be no greater than 4:1. At the discretion of the Technical Committee, increased lighting levels may be permitted for enhanced security purposes only. (Ord. 2109)

**20D.90.10-080 Lighting of Outdoor Performance, Sport and Recreation Facilities and Playfields.**

(1) Lighting levels for outdoor performance areas, sport and recreation facilities, and playfields shall not exceed by more than five percent the Illuminating Engineering Society of North America (IESNA) published standards for the proposed activity.

(2) Where playing fields or other special activity areas are to be illuminated, lighting fixtures shall be mounted, aimed and shielded so that their beams fall within the primary playing area and immediate surroundings, and so that no direct illumination is directed off the site.

(3) The main lighting shall be turned off as soon as possible following the end of the event. The main lighting shall not remain on longer than 30 minutes following the end of the event. Where feasible, a low level lighting system shall be used to facilitate patrons leaving the facility, cleanup, nighttime maintenance and other closing activities. The low level lighting system shall provide an average horizontal illumination level at grade of no more than 3.0 footcandles, with a uniformity ratio (average illumination to minimum illumination) not exceeding 4:1. (Ord. 2109)

**20D.90.10-090 Security Lighting.**

(1) Security Lighting is defined as lighting designed and used to discourage crime and undesirable activity.

(2) Security Lighting should use the lowest possible illumination to effectively allow surveillance.

(3) The use of sensor technologies, timers or other means to activate lighting during times when it will be needed may be required by the Technical Committee to conserve energy, provide safety, and promote compatibility between different land uses.

(4) In order to direct light downward and minimize the amount of light spill into the dark night sky, all security lighting fixtures shall be full cutoff fixtures as defined by the Illuminating Engineering Society of North America (IESNA).

(5) Security lighting shall be shielded and aimed so that illumination is directed to the designated areas.

(6) Where security lighting is proposed, the table below shall govern the range of permissible light levels for the listed applications. Where a proposed security lighting application is not identified in the table below, the table shall be used as a guide for establishing the range of permissible light levels.

Security Lighting Application	Average Horizontal Illumination Level on Ground
Large Open Areas	0.5 – 2.0 fc <sup>1</sup>
Buildings	0.5 – 2.0 fc <sup>1</sup>

Perimeter Fence	0.5 fc <sup>2</sup>
Entrances	10 fc <sup>3</sup>
Gatehouses	30 fc <sup>4</sup>
Pedestrian Pathways and Access Routes	4 – 6 fc

Notes:

fc = footcandle

- <sup>1</sup> The greater the brightness of the surrounding area, the higher the illuminance required to balance the brightness.
- <sup>2</sup> Illuminance on the ground.
- <sup>3</sup> Illuminance on the ground in the inspection area.
- <sup>4</sup> Illuminance on the work-plane in the gatehouse. This lighting must be dimmable to low levels at night so the guard can see outside the gatehouse.

(Ord. 2109)

**20D.90.10-100 Architectural Accent Lighting.**

(1) Fixtures used to accent architectural features, materials, colors, style of buildings, or art shall be located, aimed and shielded so that light is directed only on those features. Such fixtures shall be aimed or shielded so as to minimize light spill into the dark night sky. The Technical Committee may allow exceptions to this provision if minimal light escapes into the dark night sky or onto adjacent properties.

(2) Lighting fixtures shall not generate excessive light levels, cause glare, or direct light beyond the facade onto neighboring property, streets or the night sky.

(3) The maximum illumination of any vertical surface or angular roof surface in dark surroundings shall not exceed three footcandles.

(4) The maximum illumination of any vertical surface or angular roof surface in light surroundings shall not exceed five footcandles.

(5) Flags of the United States or Washington State may be illuminated from below provided such lighting is focused primarily on the individual flag or flags so as to limit light trespass and spill into the dark night sky. (Ord. 2109)

**20D.90.10-110 Lighting of Landscaping.**

Illumination of landscaping shall utilize diffused or muted lighting, avoid glare, and minimize light trespass and escape beyond landscaping onto neighboring property, streets, or the night sky. (Ord. 2109)

**20D.90.10-120 Temporary Lighting.**

(1) Lighting used to illuminate temporary uses shall be reviewed, and if necessary conditioned, through the Temporary Use Permitting Process.

(2) The Technical Committee may impose specific conditions for the lighting of temporary uses consistent with the purposes of this title. (Ord. 2109)



## CITY OF WOODINVILLE

### Applicable City-wide

#### 21.14.700 Commercial Design Standards - Site Lighting.

(1) Intent.

(a) To encourage the use of lighting as an integral design component to enhance buildings, landscaping, or other site features;

(b) To encourage night sky visibility and to reduce the general illumination of the sky in Woodinville;

(c) To reduce horizontal light glare and vertical light trespass from a development onto adjacent parcels and natural features;

(d) To encourage the judicious use of lighting in conjunction with other security methods to increase site safety; and

(e) To discourage the use of lighting for advertising purposes.

(2) Design Principle. Provide adequate lighting levels in all areas used by pedestrians or automobiles, including building entries, walkways, parking areas, circulation areas, and other open space areas.

New developments shall provide site lighting that meets the following design criteria through implementing measures such as:

(a) All public areas shall be lighted with average minimum and maximum levels as follows:

(i) Minimum (for low or non-pedestrian and vehicular traffic areas) of 0.5 foot candles;

(ii) Moderate (for moderate or high volume pedestrian areas) of 1-2 foot candles; and

(iii) Maximum (for high volume pedestrian areas and building entries) of 4 foot candles.

(b) Lighting shall be provided at consistent levels, with gradual transitions between maximum and minimum levels of lighting and between lit areas and unlit areas. Highly contrasting pools of light and dark areas shall be avoided.

(c) Parking lot lighting fixtures shall be non-glare and mounted no more than 25' above the ground, with lower fixtures preferable so as to maintain a human scale. Requests for higher lighting fixtures may be considered with the approval of the Director. All fixtures over 15' in height shall be fitted with a full cut-off shield.

Revised 01/09 per Ordinance 465 14-41 Woodinville Municipal Code Chapter 21. Zoning Code **Figure 26. Acceptable and unacceptable parking lot lighting.**

(d) Pedestrian-scaled lighting (light fixtures no taller than 15') is encouraged in areas of pedestrian activity. Lighting shall enable pedestrians to identify a face 45' away in order to promote safety.

(e) Lighting should not be permitted to trespass onto adjacent private parcels nor shall light source (luminaire) be visible at the property line. All building lights shall be directed onto the building itself and/or the ground immediately adjacent to it. The light emissions should not be visible above the roofline of the building. Light fixtures other than traditional cobra heads are encouraged.

Revised 01/09 per Ordinance 465 14-42 Woodinville Municipal Code Chapter 21. Zoning Code

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**September 29, 2009**

**MEMO**

**TO: Planning Commission**  
**FROM: Paul Krauss, Community Development Director**  
**RE: Council Request to Research "Dark Skies" Ordinance**

**Background**

At the September 14 Council Work Session staff was asked to research "Dark Skies" ordinances. Council would then have the opportunity to discuss the matter and refer it to the Planning Commission if there is a desire to proceed.

Dark Skies ordinances have been implemented in response pervasive light pollution most often associated with concentrations of urban development. Light pollution blocks views of the night sky impacting quality of life, scientific institutions.

On Monday, September 28<sup>th</sup>, the Council adopted Reso. # 2009-18 (attached) that directs the Planning Commission to study the matter and return to the Council with a draft Dark Skies ordinance by no later than June 1, 2010.

**Discussion**

**Lynnwood Code**

**17.05.110 Light and glare.**

It is the policy of the city that any activity shall not produce light or glare so as to create a nuisance beyond the parcel within which the use is located. In particular:

- A. Building materials with high light reflective qualities should not be used in construction of buildings where reflected sunlight or artificial light would throw intense glare on adjacent areas or streets.
- B. Sources of artificial illumination, including signs, shall be hooded or shaded in those instances where direct light from high-intensity lamps would result in glare upon surrounding areas or cast excessive light upon any residential use or street. Where necessary, the height or location of light sources shall be modified in order to reduce the impact of light or glare, or to enhance the capability of shielding or screening light sources, and the intensity and/or orientation of light sources shall be modified where necessary to reduce light and glare to tolerable levels.

1 C. Landscaping shall be the preferred means of screening emission of light and  
2 glare to nearby properties, but should be supplemented where necessary by  
3 solid or other sight and glare barriers. (Ord. 1416 § 2, 1984)

4

5 **Bellevue**

6 **20.20.522 Light and glare.**

7 To protect adjoining uses and vehicular traffic in the right-of-way, the following  
8 provisions shall apply to the generation of light and glare in multifamily and  
9 commercial land use districts:

10 **A. Applicability.**

11 The requirements of this section shall be imposed for all new construction  
12 and each time a project requires a discretionary land use permit approval.

13 B. All exterior lighting fixtures in parking areas and driveways shall utilize cutoff  
14 shields or other appropriate measures to conceal the light source from adjoining  
15 uses and rights-of-way. Other lights shall be designed to avoid spillover glare  
16 beyond the site boundaries.

17 C. Interior lighting in parking garages shall utilize appropriate shielding to  
18 prevent spillover upon adjacent uses and the right-of-way. (Ord. 4654, 6-6-94, §  
19 31)

20

21

22 **Bainbridge Island**

23

24 **ORDINANCE NO. 2002 - 15**

25 AN ORDINANCE of the City of Bainbridge Island,  
26 Washington, relating to outdoor lighting on public and private  
27 property; adding a new Chapter 15.34 to the Bainbridge Island  
28 Municipal Code; amending Section 1.26.010; and repealing  
29 Section 16.08.080 of the Bainbridge Island Municipal Code.

30 WHEREAS, the City has determined that the provisions contained in this  
31 Ordinance

32 will protect the historical legacy of the night sky, and provide enjoyment of the  
33 night sky in

34 the City for future generations; and

35 WHEREAS, the City has determined that the provisions contained in this  
36 Ordinance

37 are intended to encourage through the regulation of the types, kinds,  
38 construction, installation,

39 and uses of outdoor electrically powered illuminating devices, lighting practices,  
40 and lighting

1 systems that reduce costs and conserve energy and resources, and help protect  
2 natural  
3 resources; and  
4 WHEREAS, the City wishes to maintain safety, health, security, and productivity,  
5 while enhancing nighttime enjoyment of property within its jurisdiction; and  
6 WHEREAS, the City has determined that the provisions contained in this  
7 Ordinance  
8 will encourage awareness by improving access to the City's lighting codes,  
9 through code

10 coordination and consolidation into one Ordinance; now therefore,

11 THE CITY COUNCIL OF THE CITY OF BAINBRIDGE ISLAND,

12 WASHINGTON, DO ORDAIN AS FOLLOWS:

13 Section 1. A new Chapter 15.34 is added to the Bainbridge Island Municipal  
14 Code as

15 follows:

16 **Chapter 15.34**

17 **OUTDOOR LIGHTING ON PUBLIC AND PRIVATE PROPERTY**

18 15.34.010 Purpose

19 15.34.020 Definitions

20 15.34.030 Applicability

21 15.34.040 Exemptions - Decision Criteria

22 15.34.050 General Standards

23 15.34.060 Further Restrictions

24 15.34.070 Submittals

25 15.34.080 Penalties for Violations

26 15.34.090 Severability

27 15.34.100 Figures

28 **15.34.010 Purpose.** The purpose of this Chapter is to provide regulations that  
29 preserve and enhance the view of the dark sky; promote health, safety, security,  
30 and

31 productivity; and help protect natural resources. The provisions of this Chapter  
32 are

33 intended to control glare and light trespass. It is the intent of this Chapter to  
34 provide

35 standards for appropriate lighting practices and systems that will enable people  
36 to see

37 essential detail in order that they may undertake their activities at night, facilitate  
38 safety and security of persons and property, and curtail the degradation of the  
39 nighttime visual environment.

40 **15.34.020 Definitions.** The following terms have the following definitions for  
41 purposes of this Chapter:

42 A. "Accent lighting" means any luminaire that emphasizes a particular object or  
43 draws attention to a particular area for aesthetic purposes.

44 B. "Cut-off angle" (of a luminaire) means the angle, measured from the lowest  
45 point between a vertical line from the center of the lamp extended to the  
46 ground and the first line of sight at which the bare source is not visible.

- 1 C. "Director" means the Director of the Department of Planning and Community  
2 Development.
- 3 D. "Fixture" (also called a "Luminaire") means a complete lighting unit including  
4 the lamps, together with the parts required to distribute the light, to position  
5 and protect the lamps, and to connect the lamps to the power supply.
- 6 E. "Foot-candle" means a measure of illuminance or a measure of how bright a  
7 light appears to the eye. One foot-candle is equal to one Lumen/ft<sup>2</sup>. As an  
8 example, a typical 60-watt incandescent lamp (840 lumens) produces an  
9 illuminance of 0.1 foot-candles at a distance of about 25 feet.
- 10 F. "Fossil fuel light" means any outdoor lighting fixture producing light directly  
11 by the combustion of natural gas or other fossil fuel.
- 12 G. "Lamp" means the light-producing source installed in the socket portion of a  
13 luminaire.
- 14 H. "Light pollution" means general sky glow caused by the scattering of artificial  
15 light in the atmosphere and resulting in decreased ability to see the natural  
16 night sky.
- 17 I. "Light trespass" means any light emitted by an outdoor luminaire that shines  
18 directly beyond the property on which the luminaire is installed, or indirectly  
19 shines beyond the property on which the luminaire is installed at a brightness  
20 (illuminance) that exceeds 0.1 foot-candles at the property line.
- 21 J. "Luminaire" - see definition for "Fixture. "
- 22 K. "Outdoor lighting fixture" means a luminaire outside of an enclosed building  
23 or structure or any luminaire directed such that it primarily illuminates  
24 outdoor areas.
- 25 L. "Shielding" means that no light rays are emitted by a fixture above the  
26 horizontal plane running through the lowest point of the fixture.
- 27 M. "Spotlight" means any lamp that incorporates a reflector or a refractor to  
28 concentrate the light output into a directed beam in a particular direction.
- 29 **15.34.030 Applicability.**
- 30 A. All outdoor lighting fixtures installed on private and public property shall  
31 comply with this Chapter. This Chapter does not apply to interior lighting;  
32 provided,  
33 that if it is determined by the Director that any interior lighting emitting light  
34 outside  
35 of the building or structure in which it is located creates a light trespass, the  
36 interior  
37 lighting shall be subject to the requirements of this Chapter. Types of outdoor  
38 lighting  
39 to which this Chapter applies include, but are not limited to lighting for:  
40 1. Building and structures including, but not limited to, overhangs and  
41 canopies.  
42 2. Recreational areas.  
43 3. Parking lot lighting.  
44 4. Landscape lighting.  
45 5. Lighting on docks and piers, unless otherwise regulated by BIMC 16.12  
46 6. Street lighting.

1 B. The City's Department of Planning and Community Development shall  
2 administer and enforce this Chapter.  
3 C. In the event of a conflict between the requirements of this Chapter and any  
4 other requirement of the Bainbridge Island Municipal Code the more restrictive  
5 requirement shall apply.

6 **15.34.040 Exemptions.**

7 A. The following are exempt from the provisions of this Chapter:

8 1. Traffic control signals and devices.

9 2. Street lights installed prior to the effective date of this Chapter, provided that  
10 when a street light fixture becomes inoperable, any replacement street light  
11 fixture shall be subject to the provisions of this Chapter.

12 3. Temporary emergency lighting (i.e. fire, police, repair workers) or warning  
13 lights.

14 4. Moving vehicle lights.

15 5. Navigation lights (i.e. radio/television towers, docks, piers, buoys) or any  
16 other lights where state or federal statute or other provision of the Bainbridge  
17 Island Municipal Code requires lighting that cannot comply with this Chapter.  
18 In such situations, lighting shall be shielded to the maximum extent possible,  
19 and lumens shall be minimized to the maximum extent possible, while still  
20 complying with state or federal statute.

21 6. Seasonal decorations do not have to be shielded, provided that they do not  
22 have a brightness of more than 0.1 foot-candles at the property line on which  
23 they are installed.

24 7. Outdoor lighting approved by the Director for temporary or periodic events  
25 (e.g. fairs, nighttime construction).

26 8. Internally and externally illuminated signs regulated by BIMC 15.08.

27 9. Fossil fuel lights.

28 10. Existing lights in use before 9:00 p.m., provided that no more than .1  
29 footcandle

30 of direct light shines off the subject property, as measured at the  
31 property line.

32 **15.34.050 General Standards.** The following general standards shall apply to  
33 all non-exempt outdoor lighting fixtures and accent lighting:

34 A. All light trespass is prohibited.

35 B. Outdoor lighting fixtures and accent lighting must be shielded and aimed  
36 downward. Examples of acceptable and unacceptable light pollution control  
37 shielding

38 are shown in Figures 1 through 4 in BIMC 15.34.100. The shield must mask the  
39 direct horizontal surface of the light source. The light must be aimed to insure  
40 that the

41 illumination is only pointing downward onto the ground surface, with no escaping  
42 direct light permitted to contribute to light pollution by shining upward into the sky.

43 C. All outdoor lighting fixtures and accent lighting shall be designed, installed,  
44 located and maintained such that there is no light trespass (See Figure 3 in BIMC  
45 15.34.100).

46 D. Outdoor lighting fixtures and accent lighting shall not directly illuminate

1 public waterways such as Puget Sound, even if the tidelands are privately  
2 owned,  
3 unless it is a navigational light subject to state or federal regulations.  
4 E. Accent lighting shall be directed downward onto the illuminated object or area  
5 and not toward the sky or onto adjacent properties (See Figure 4 in BIMC  
6 15.34.100).  
7 Direct light emissions of such accent lighting shall not be visible above the roof  
8 line or  
9 beyond the building, structure, or object edge.  
10 F. Spotighting on landscaping and foliage shall be limited to 150 watts  
11 incandescent (2220 lumens output).

12 **15.34.60 Prohibited**

- 13 A. The following fixtures (luminaires) are prohibited:
- 14 1. Searchlights for any other purpose other than temporary emergency lighting.
  - 15 2. Laser lights or any similar high-intensity light for outdoor use or  
16 entertainment, when projected above the horizontal plane.
  - 17 3. Quartz lamps
  - 18 4. Mercury vapor lamps

19 B. The City reserves the right to further restrict outdoor lighting including, but  
20 not limited to, pole height, and level of illumination, when it is deemed to be in the  
21 best public interest consistent with the purpose of this Chapter.

22 **15.34.070 Submittals.** All building permit applications including the  
23 installation of outdoor lighting fixtures shall provide evidence of compliance with  
24 the  
25 requirements of this Chapter on a form provided by the Department of Planning  
26 and  
27 Community Development.

28 **15.34.080 Penalties for violation.** Any violation of the provisions of this  
29 Chapter shall constitute a civil infraction, enforceable pursuant to BIMC 1.26,  
30 Code  
31 Enforcement.

32 **15.34.090 Severability.** If any clause, sentence, paragraph, section or part of  
33 this  
34 Chapter or the application thereof to any person or circumstances shall be  
35 adjudged by  
36 any court of competent jurisdiction to be invalid, such order or judgment shall be  
37 confined in its operation to the controversy in which it was rendered and shall not  
38 affect or invalidate the remainder of any part thereof to any other person or  
39 circumstances.

40 **Section 15.34.100 Figures of acceptable shielding and direction of outdoor**  
41 **light fixtures.** The following four figures illustrate acceptable and unacceptable  
42 outdoor lighting fixtures in the City.

- 43 Figure 1: Wall mounted lights.
- 44 Figure 2: Free standing outdoor lighting fixtures.
- 45 Figure 3: Outdoor lighting fixtures - Street and lot light cut-off at property line.
- 46 Figure 4: Accent lighting.

1 Figure 1. Wall mounted lights.  
2 Figure 2. Free standing outdoor lighting fixtures.  
3 Figure 3. Outdoor lighting fixtures - Street and lot light cut-off at property line.  
4 Figure 4. Accent lighting.  
5 Section 2. BIMC 16.08.080 is repealed.  
6 Section 3. Section 1.26.010 of the Bainbridge Island Municipal; Code is amended  
7 to read as follows:  
8 **1.26.010 Applicability of chapter.** The provisions of this chapter shall apply to  
9 enforcement of Title 18 and Chapters 16.20, 16.22, 15.34 and 15.04 of this code,  
10 with  
11 the exception of Sections 15.04.090 and 15.04.110 and the Uniform Fire Code  
12 adopted  
13 by reference in Section 15.04.020. For purposes of this chapter, such titles and  
14 chapters shall be referred to as "the applicable chapters and titles of this code."  
15 Section 4. This ordinance shall be effective on January 1, 2003.  
16 PASSED by the City Council this 14th day of August, 2002.  
17 APPROVED by the Mayor this 15th day of August, 2002.

18 /s/  
19 Darlene Kordonowy, Mayor  
20 ATTEST/AUTHENTICATE:  
21 /s/  
22 Susan P. Kasper, City Clerk  
23 APPROVED AS TO FORM:

24 \_\_\_\_\_  
25 Rod P. Kaseguma, City Attorney  
26 FILED WITH THE CITY CLERK :  
27 PASSED BY THE CITY COUNCIL : August 14, 2002  
28 PUBLISHED : August 21, 2002  
29 EFFECTIVE DATE : January 1, 2003  
30 ORDINANCE NO. 2002-15

31  
32  
33 **International Dark Sky Association**  
34

35 **Vision Statement**

36 The IDA, through its policies and efforts, seeks to:

37  
38 1. Improve the nighttime environment by reducing light pollution through better  
39 lighting practices that provide:

- 40 • Energy savings resulting in economic benefits
- 41 • Superb nighttime ambience and quality of life
- 42 • Conservation of nocturnal wildlife and ecosystems
- 43 • Safeguarding of scientific and educational opportunities, such as
- 44 astronomy

- 1       • Preservation of cultural heritage and inspiration for the arts
- 2       • Increased visibility, safety, and security at night by reducing glare
- 3       • Protection of human health;
  
- 4
- 5   2. Raise awareness about curtailing light pollution, the beneficial effects of doing
- 6   so, and its solutions;
- 7
- 8   3. Educate about the values of environmentally responsible outdoor lighting
- 9   while collaborating with other like-minded organizations;
- 10
- 11   4. Promote responsible legislation, public policy, research, and standards in a
- 12   professional and scientifically sound manner; and
- 13
- 14   5. Seek specific solutions that mitigate light pollution, including:
  - 15       • Reduce total light in the nocturnal environment (total lumens in use)
  - 16       through;
    - 17           ○ Densities (i.e. lumens per square foot or square meter)
    - 18           ○ Warranting
    - 19           ○ Controls (e.g. on/off capabilities, time-of-night sensors)
    - 20           ○ Energy Codes
  - 21       • Shielding and directionality
  - 22       • Consideration of spectral distribution

23  
24 To achieve these goals, IDA takes an [award-winning](#) unified approach that  
25 supports the individual efforts of our members and of others who advocate  
26 quality outdoor lighting. In fighting light pollution we work with communities,  
27 astronomers, ecologists, and lighting professionals. We are active on local,  
28 national, and international stages and have already accomplished much, but our  
29 work is not yet done.

30  
31 **Learn more about IDA and how you can become a protector of the natural**  
32 **night by visiting the [Frequently Asked Questions page](#).**

33  
34 For media or press, or for more general information, please view the IDA [Press](#)  
35 [Kit](#) for information.

---

36  
37  
38 **The purpose of the regulation is to:**

- Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, and enjoyment while preserving the ambiance of the night;
- Curtail and reverse any degradation of the nighttime visual environment

- and the night sky;
- Minimize glare and obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary;
- Conserve energy and resources to the greatest extent possible;
- Help protect the natural environment from the damaging effects of night lighting.

All outdoor lighting fixtures (luminaires) shall be installed in conformance with this Regulation and with the provisions of the Building Code, the Electrical Code, and the Sign Code, as applicable and under permit and inspection, if such is required.

**Comment: Practical Considerations:**

1. The idea that more light always results in better safety and security is a myth. One needs only the right amount of light, in the right place, at the right time. More light often means wasted light and energy.
2. Use the lowest wattage of lamp that is feasible. The maximum wattage for most commercial applications should be 250 watts of high intensity discharge lighting should be considered the maximum, but less is usually sufficient.
3. Whenever possible, turn off the lights or use motion sensor controlled lighting.
4. Incorporate curfews (i.e. turn lights off automatically after a certain hour when businesses close or traffic is minimal). This is an easy and fast way to initiate dark sky practices.

**Maximum Lamp Wattage and Required Luminaire or Lamp Shielding:**

All lighting installations shall be designed and installed to be fully shielded (full cutoff), except as in exceptions below, and shall have a maximum lamp wattage of 250 watts HID (or lumen equivalent) for commercial lighting, 100 watts incandescent, and 26 watts compact fluorescent for residential lighting (or approximately 1,600 lumens). In residential areas, light should be shielded such that the lamp itself or the lamp image is not directly visible outside the property perimeter.

**Lighting that is exempt from these regulations:**

1. Lighting in swimming pools and other water features governed by Article 680 of the National Electrical Code.
2. Exit signs and other illumination required by building codes.
3. Lighting for stairs and ramps, as required by the building code.
4. Signs are regulated by the sign code, but all sign lighting is recommended to be fully shielded.

5. Holiday and temporary lighting (less than thirty days use in any one year).
6. Football, baseball, and softball field lighting; only with permit from the authority recognizing that steps have been taken to minimize glare and light trespass, and utilize sensible curfews.
7. Low voltage landscape lighting, but such lighting should be shielded in such a way as to eliminate glare and light trespass.

**Additional requirements:**

- Lighting attached to single-family home structures should not exceed the height of the eave.
- Residential pole height restrictions can be considered to control light trespass on adjacent properties.

**Notes:**

1. The general belief that more light means better safety and security is just a myth. All that is needed is the right amount, in the right place, at the right time. More light just means wasted light and energy.
2. Use the lowest wattage of lamp as possible. For cost saving purposes, consider compact fluorescent lamps rather than incandescent, as they use much less energy and have a much longer lifetime.
3. Whenever possible, turn off the lights.

**Definitions:**

**Glare**

Intense and blinding light. Causes visual discomfort or disability.

**Landscape lighting**

Luminaries mounted in or at grade (but not more than 3 feet above grade) and used solely for landscape rather than any area lighting.

**Obtrusive light**

Spill light that causes glare, annoyance, discomfort, or loss of visual ability. Light Pollution.

**Luminaire (light fixture)**

A complete lighting unit consisting of one or more electric lamps, the lamp holder, any reflector or lens, ballast (if any), and any other components and accessories.

**Fully shielded (full cutoff) luminaire**

A luminaire emitting no light above the horizontal plane.

**Spill light**

Light from a lighting installation that falls outside of the boundaries of the property on which it is located. Usually results in obtrusive light.

**Other Resources for  
Establishing Outdoor  
Lighting Guidelines**

1. [Model Lighting Ordinance \(MLO\)](#)
2. [Recommended Outdoor Lighting Zones](#)
3. [IDA Lighting Code Handbook](#)
4. [Directory of Ordinances and Other Regulations](#)
5. [Glossary of Basic lighting Terms and Definitions](#)

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H-1577.2  
**SUBSTITUTE HOUSE BILL 1069**

**State of Washington 61st Legislature 2009 Regular Session**

**By** House Local Government & Housing (originally sponsored by Representatives Hunt, Kagi, Nelson, Van De Wege, Hasegawa, Williams, Dunshee, McCoy, Appleton, Liias, Takko, Simpson, Darneille, Rolfes, Dickerson, Kenney, White, and Chase)

READ FIRST TIME 02/10/09.

1 AN ACT Relating to light pollution; and creating new sections.

2 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

3 NEW SECTION. **Sec. 1.** The increased use of ineffective and 4 inefficient exterior lighting in Washington has generated unnecessary 5 light pollution and wasteful energy consumption. With the application 6 of the best available science, engineering knowledge, and technology 7 available, Washington will be able to reduce sky glow, create 8 substantial reductions in energy consumption, and protect the nighttime 9 environment.

10 Light pollution may be greatly reduced by using properly designed 11 light fixtures that direct light downward, are properly installed, and 12 avoid glare and light trespass. These fixtures are called fully 13 shielded luminaires. With improved optical control and reflector 14 design, modern fully shielded luminaires deliver the same amount of 15 light to the ground as older wasteful designs, but use less power, thus 16 reducing the amount of energy used. This saves money and reduces the 17 quantity of greenhouse gases released into the environment. 18 Therefore, in response to these recognized benefits and

1 p. 1 SHB 1069  
2 1 circumstances, it is the intent of the legislature to require the state  
3 2 building code council to convene a technical advisory group to examine  
4 3 issues and barriers pertaining to these lighting issues.  
5 4 The legislature further intends the building code council to  
6 5 develop recommendations for reducing light pollution and to report the  
7 6 findings of the advisory group. The legislature does not intend to  
8 7 establish an actual or implied mandate, nor does the legislature intend  
9 8 to diminish or otherwise affect the regulatory authority of local  
10 9 governments.  
11 10 NEW SECTION. **Sec. 2.** The director of the state building code  
12 11 council shall:  
13 12 (1) Work with interested parties to develop recommendations for a  
14 13 draft code to address light pollution from luminaires; and  
15 14 (2) Report these recommendations to the appropriate committees of  
16 15 the house of representatives and the senate by November 25, 2009.  
17 16 NEW SECTION. **Sec. 3.** The recommendations developed under section  
18 17 2 of this act do not apply to:  
19 18 (1) Temporary lighting required for construction projects and  
20 19 related to road construction and repair, installation of sewer and  
21 20 water facilities, and other public infrastructure;  
22 21 (2) Temporary emergency lighting used by police, fire departments,  
23 22 or other emergency services;  
24 23 (3) Hazard warning luminaires required by federal law and federal  
25 24 regulatory agencies;  
26 25 (4) Seasonal and decorative lighting displays that use multiple low  
27 26 wattage bulbs;  
28 27 (5) Navigation lights used for marine and aviation safety; or  
29 28 (6) Historical buildings that meet the requirements of RCW  
30 29 19.27.120.

31 --- END ---  
32 SHB 1069 p. 2

33  
34 **HOUSE BILL REPORT**  
35 **HB 1069**

36 **As Reported by House Committee On:**  
37 Local Government & Housing

38 **Title:** An act relating to light pollution.

39 **Brief Description:** Restricting light pollution.

40 **Sponsors:** Representatives Hunt, Kagi, Nelson, Van De Wege, Hasegawa,  
41 Williams, Dunshee,  
42 McCoy, Appleton, Lias, Takko, Simpson, Darnelle, Rolfes, Dickerson, Kenney,  
43 White and  
44 Chase.

45 **Brief History:**

46 **Committee Activity:**

1 Local Government & Housing: 1/15/09, 2/5/09 [DPS].

2 **Brief Summary of Substitute Bill**

3

4

5 Declares an intent to require the best technology available in all exterior  
6 lighting in order to reduce energy consumption and protect the nighttime  
7 environment.

8 Requires the State Building Code Council to work with interested parties to  
9 develop recommendations to address light pollution and present findings to  
10 the Legislature.

11 **HOUSE COMMITTEE ON LOCAL GOVERNMENT & HOUSING**

12 **Majority Report:** The substitute bill be substituted therefor and the substitute bill  
13 do pass.

14 Signed by 7 members: Representatives Simpson, Chair; Nelson, Vice Chair;  
15 Miloscia,

16 Springer, Upthegrove, White and Williams.

17 **Minority Report:** Do not pass. Signed by 3 members: Representatives Angel,  
18 Ranking

19 Minority Member; Cox and Short.

20 **Staff:** Sara del Moral (786-7291) and Thamas Osborn (786-7129)

21 **Background:**

22 \_\_\_\_\_  
23 *This analysis was prepared by non-partisan legislative staff for the use of*  
24 *legislative*  
25 *members in their deliberations. This analysis is not a part of the legislation nor*  
26 *does it*  
27 *constitute a statement of legislative intent.*

28 House Bill Report - 1 - HB 1069

29 State Building Code Council.

30 The State Building Code Advisory Council (Council) was created by statute in  
31 1974 to

32 provide analysis and advice to the Legislature and the Office of the Governor on  
33 state

34 building code issues. The Council establishes the minimum building, mechanical,  
35 fire,

36 plumbing, and energy code requirements in Washington by reviewing,  
37 developing, and

38 adopting the state building code.

39 Outdoor Lighting Regulations.

40 To conserve energy consumed by new and replacement exterior lighting, state  
41 law prohibits:

42

43

44 signs illuminated by flashing or moving lights in commercial or industrial areas;  
45 and

46 signs which cause glare or impair the vision of drivers of motor vehicles.

1 \_\_\_\_\_  
2 **Summary of Substitute Bill:**  
3 The Director of the State Building Code Council (Council) must:  
4   
5   
6 work with interested parties to develop recommendations for a draft code to  
7 address  
8 light pollution from luminaires; and  
9 report these recommendations to the Legislature by November 25, 2009.  
10 However, the Council is not required to develop recommendations addressing:  
11   
12   
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16   
17 temporary lighting for construction projects;  
18 temporary emergency lighting used by emergency services;  
19 hazard warning luminaires required by federal law and federal regulatory  
20 agencies;  
21 seasonal and decorative lighting displays using multiple low-wattage bulbs;  
22 navigation lights used for marine and aviation safety; or  
23 historical buildings.

24 **Substitute Bill Compared to Original Bill:**  
25 The substitute bill:  
26   
27   
28   
29 deletes all sections except the intent section, which is modified;  
30 lists types of lighting exempted from the council's consideration; and  
31 requires the State Building Code Council to:  
32   
33   
34 work with interested parties to develop recommendations for a draft code  
35 addressing light pollution; and  
36 present a report on findings to the Legislature by November 25, 2009.

37 \_\_\_\_\_  
38 House Bill Report - 2 - HB 1069  
39 **Appropriation:** None.  
40 **Fiscal Note:** Available. New fiscal note requested on February 6, 2009.  
41 **Effective Date of Substitute Bill:** The bill takes effect 90 days after adjournment  
42 of the  
43 session in which the bill is passed.  
44 **Staff Summary of Public Testimony:**  
45 (In support) Astronomy is a way to interest kids in science. The educational  
46 system is

1 deficient in this area. Kids are amazed and interested when they see a planet for  
2 the first  
3 time. They can't see stars and planets in urban areas because of light pollution.  
4 Large amounts of money are wasted each year illuminating the sky. The cost of  
5 shielded  
6 fixtures is minimal compared to the cost of energy to operate a fixture. Money  
7 already  
8 budgeted for energy costs could be used for installation of shielded fixtures.  
9 Amateur astronomers have a hard time seeing the stars. Most Americans can't  
10 see the Milky  
11 Way. Skies are getting brighter and brighter. Without regulation, this won't stop.  
12 Light pollution causes problems for wildlife. It disrupts migration and breeding,  
13 especially  
14 for birds. Compared to other pollution problems, this problem is easily remedied.  
15 (With concerns) Standards shouldn't be overly restrictive. When lighting athletic  
16 facilities,  
17 park owners should also be community stewards. Large play areas in city parks  
18 would be  
19 hard to light under the proposed standards.  
20 (Opposed) The Department of Transportation (DOT) is already taking steps to  
21 reduce energy  
22 use. Safety would be a concern. Lower levels of light are a problem for older  
23 drivers. It  
24 would cost the DOT over \$15 million to replace lighting to standards. There isn't  
25 enough  
26 time for the DOT to replace all lighting by 2020.  
27 Ball parks have taken voluntary steps to reduce energy use. Upwardly directed  
28 lighting is  
29 necessary for safety and to keep light on the ball. Ads in ball parks require  
30 backlighting; ad  
31 money would be lost. Hours for games would be limited. Workers stay all night  
32 after  
33 games; they need light to work.  
34 There would be a strong fiscal impact on city parks departments. In this  
35 recession, city parks  
36 departments don't have money to replace lights.  
37 Construction and operating costs would increase for retail stores.  
38 This would greatly increase costs for advertising sign companies. Fully shielded  
39 lights don't  
40 work on ad signs. The ad industry would lay off workers.  
41 The state should adopt the International Conservation Energy Code, rather than  
42 its own  
43 energy code.  
44 House Bill Report - 3 - HB 1069  
45 This would greatly increase costs for banks that light automated teller machines  
46 at night.

1 Dim lighting would be unsafe for customers.  
2 This issue is better addressed at the local level.  
3 **Persons Testifying:** (In support) Representative Hunt, prime sponsor; Ray  
4 Stinson, Jim  
5 Pletsch and Dave Armstrong, Tacoma Astronomical Society; Chad Ellington,  
6 Pierce College;  
7 John Schneider, Acuity Lighting; Edward Mannery, Friends of Gas Works Park;  
8 Bruce  
9 Weertman, Dark Skies Northwest; Chris Fote, Sparling Seattle; and Miguel  
10 Perez-Gibson,  
11 Climate Solutions and Audubon Washington.  
12 (With concerns) John Neff, Washington State Building Code Council; Mark Allen,  
13 Washington Association of Broadcasters; Bart Waldman, Seattle Mariners;  
14 Genesee Adkins,  
15 City of Seattle; and Andrea Clay, Washington Recreation and Parks Association.  
16 (Opposed) Dillon Auyoung, Washington State Department of Transportation;  
17 Mark Johnson,  
18 Washington Retail Association; Olivia Voigts, Clear Channel; Michael Lane,  
19 Lighting  
20 Designs Lab; Paul Bevendt, Icone Group; Holly Chisen, Ski Washington; and  
21 Robin  
22 Appleford, First and Goal.  
23 **Persons Signed In To Testify But Not Testifying:** None.  
24 House Bill Report - 4 - HB 1069  
25

## **2009 REGULAR SESSION**

- Jan 6 Prefiled for introduction.
- Jan 12 First reading, referred to Local Government & Housing. ([View Original Bill](#))
- Jan 15 Public hearing in the House Committee on Local Government & Housing at 10:00 AM.
- Feb 5 Executive action taken in the House Committee on Local Government & Housing at 10:00 AM.  
LGH - Executive action taken by committee.  
**LGH - Majority; 1st substitute bill be substituted, do pass.**  
([View 1st Substitute](#))  
Minority; do not pass.
- Feb 10 Referred to General Government Appropriations.

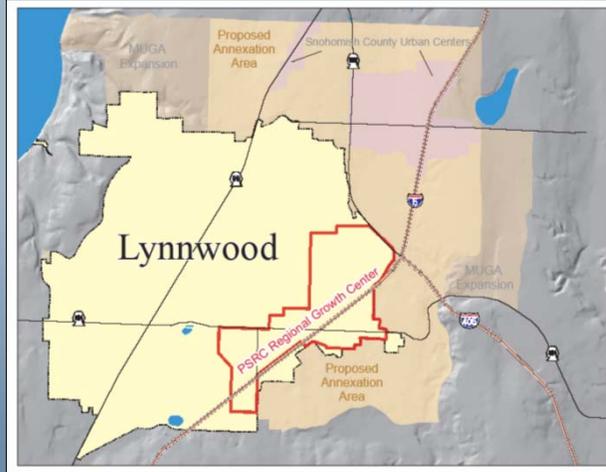




## PSRC Regional Growth Center

In 2007 Lynnwood Urban Center represents:

- 12% total acreage
- 4% total population
- 48% total jobs
- 5% total housing units



3

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## Lynnwood Regional Growth Center

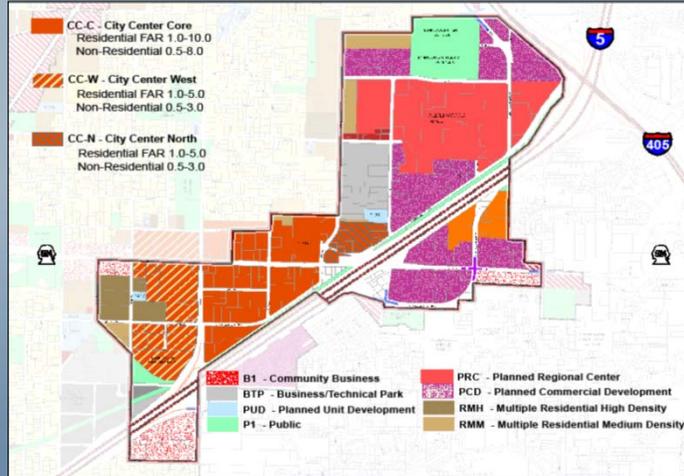
	Lynnwood City-Wide			Regional Growth Center		
	Year 2000	Current Date (2007)	Target/Plan (2025)	Year 2000	Current Date (2007)	Target/Plan (2025)
Area (acres)	6,347.80	6,347.80	6,347.80	763.61	763.61	763.61
Population	33,847	35,490	43,000	1,351	1,284	6,100
Population Per Gross Acre	5.33	5.59	6.8	1.77	1.68	8.0
Employment	22,904	25,973	33,400	10,955	12,577	18,500
Employment Per Gross Acre	3.61	4.09	5.3	14.35	16.47	24.2
Housing Units	13,808	14,629	18,200	723	716	3,800
Employees Per Housing Unit	1.66	1.78	1.84	15.15	17.57	4.9

4

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# Urban Growth Center Zoning



vision

5



# Catalyst Projects 2002-2006



Alderwood Mall



Lynnwood Convention Center



New I-5 Ramps



Heritage Park



Transit Center

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6



## Alderwood

- Completion: November 2004
- Expanded to 1,386 million sf
- 50 new upscale shops / restaurants
- \$150+ million investment
- Macy's 26,000 sf expansion August 2009



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## Lynnwood Convention Center

- 55,000 total sq ft
- 34,000 sq ft of meeting space
- \$32.4 million PFD project
- Open 2005



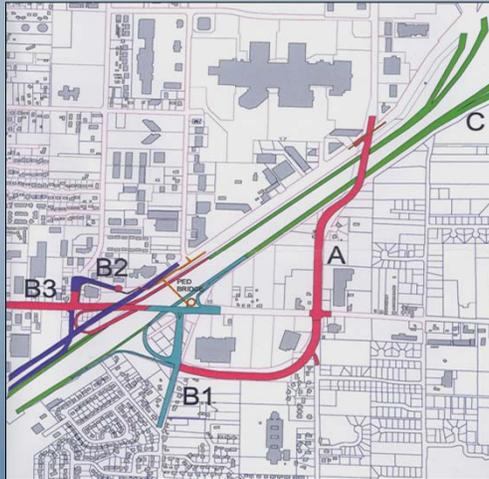
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## I-5/SR 524 Access Ramps

- I-5 and 196<sup>th</sup> Street Interchange Project
- Pedestrian Bridge @ I-5 and 196<sup>th</sup> Street
- I-5 ramp project 2010
- Citywide Transportation Business Plan



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## Transit Center

### Lynnwood Transit Center & HOV Access Ramps

- First HOV access ramps in state
- Express Bus Service for commuters
- Proposed LRT station



10

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## Catalyst Projects 2006 --->

- Alderwood area & LRT
- Transition Area
- ESD Properties
- Transportation
- Storm Drainage
- City Center
- LRT & BRT



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11



## Transition Area: Alderwood - City Center

- Transitional area between City Center and Alderwood Mall
- Mix of land uses and linkages to complement the City Center and Alderwood
- Minimize impact on residential neighborhoods to the west
- Study underway to determine land use and zoning



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12



## Edmonds School District Properties

1. 40 acres, adjacent to Alderwood mall; suitable for mixed use project;
2. 9.1 acres, adjacent to Alderwood mall, suitable for retail/commercial/ mixed use
3. 1.09 acres, jointly owned by School District and City, across from Lynnwood Convention Center in City Center



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## Transportation

- Citywide Transportation Business Plan
- Access Studies
- Poplar Way Extension Bridge Project
- Sidewalks Network
- Trails and Bicycle Network
- Intelligent Transportation System

14

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## Transportation: Access Study

- Identify improvements needed to provide access to City Center
- Identify improvements needed to support future growth
- Identify projects that address I-5 congestion
- Project Partners
  - FHWA
  - WSDOT
  - Snohomish County
  - Community Transit
  - PSRC
  - Neighboring Cities



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## Transportation: Poplar Way / I-5 Bridge Extension

- City Center Access Study conclusion
- Construct a new 5 to 6 lane bridge over I-5
- Connect existing intersections of Poplar Way/196th Street SW and 33rd Avenue West/Alderwood Mall Boulevard
- Significantly relieve traffic
- Provide an alternative crossing of I-5 to the nearby 196th Street SW bridge crossing
- Received \$2,600,000 in federal grants to complete design and acquire right-of-way for this project

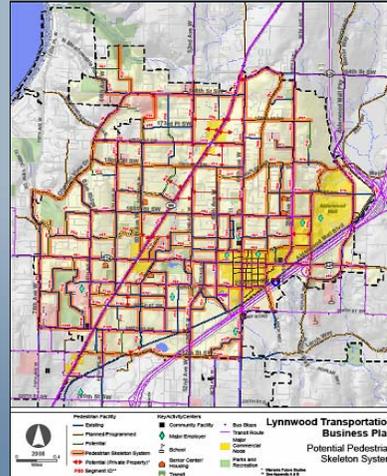
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## Transportation: Sidewalks Network

- Study underway
- Develop Sidewalk "Skeleton System"
- Develop Ranking Criteria/ System/Funding



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## Transportation: Trails & Bicycle Networks

- Study underway
- Develop Trails and Bicycle "Skeleton System"
- Develop Ranking Criteria / System / Funding



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18



## Transportation: Intelligent Transportation System

- 57 Signals
- 470 Cameras
- 10,370 miles of fiber strands
- TMC funded, under construction
- Edmonds and MLT work stations



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19



## Storm Water Master Plan

- NPDES Requirements
- New Development Standards
- Project Feasibility
- Implement Sustainable Solutions



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20



## City Center: Vision

- Restructuring growth towards a concentrated, mixed-use, pedestrian friendly and transit supportive center
- Creatively implementing the City Center's Comprehensive Plan
- Validating and advancing the long term vision of the City Center Task Force
- Developing a distinct, strong identity for Lynnwood and the City Center
- Creating an attractive, functional and comfortable place for Lynnwood citizens
- Establishing a set of strategies to guide Lynnwood's transformation



vision

21



## City Center: Policy Framework

- Complies with and is consistent with the Washington State Growth Management Act
- Consistent with the PSRC Vision 2020
- Consistent with PSRC 2040
- Aligns with PSRC Transportation 2040
- Implement Lynnwood's Comprehensive Plan

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## City Center: Sub-Area Plan

- Adopted March 2005
- Amended the Lynnwood Comp Plan
- Development Regulations
- Adopt plans for street and park improvements within the City Center



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## City Center: Zoning

City Center Zoning Adopted:  
March 14, 2005

Regulations address:

- Districts within the City Center
- Prohibited Uses
- Height
- Floor Area Ratios
- Min/Max parking
- Street Types



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