



City of Tacoma  
Community and Economic Development Department

Agenda Item  
GB-1

TO: Planning Commission  
FROM: Shirley Schultz, Principal Planner, Current Planning Division  
SUBJECT: Billboard Regulations – Public Comment and Review Schedule  
DATE: March 30, 2011

The public comment period for the proposed changes to the billboard regulations closed at 5:00 p.m. on March 25. A total of 245 letters and e-mails were received, including letters from several Neighborhood Councils and business districts. Of these, about 93% were generally opposed to billboards (both digital and standard) and approximately 7% were written in support of Clear Channel and/or the proposal. Copies of the written testimony and supplemental materials that were submitted, as well as a summary of the testimony from the public hearing held on March 16, 2011, has been posted on the Planning Division website ([www.cityoftacoma.org/planning](http://www.cityoftacoma.org/planning)). A hard copy of the public comments will be provided to Commission members at your meeting.

While staff intends to provide a complete Comments and Staff Responses Report that addresses all of the issues raised for the Commission's April 20 meeting, to facilitate the Commission's discussion on April 6 staff have identified some of the most common themes from the testimony. While this is not intended to be a complete list it does provide a general sense of the recurring comments and key issues raised. The list is broken down into opposing and supportive comments and then in general order of frequency.

#### General Opposition to Digital Billboards

1. Aesthetics
  - All billboards are unattractive
  - Digital billboards, in particular, are garish and an eyesore and are contrary to livable communities and pedestrian orientation
2. Safety
  - Concerned about driver distraction and safety hazards created and/or exacerbated by digital billboards
3. Receiving areas
  - The "special receiving area" at Division/Sprague & 6th should be removed
  - Receiving areas should not include locations close to residential, historic, or X-districts
  - The "special receiving areas" should be eliminated
4. Illumination
  - Concerned about light pollution, brightness, hours of operation and energy use

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### 5. Settlement Agreement

- The reasoning behind the determination to settle the lawsuit is not clear and potentially not valid
- The proposed exchange is inadequate and favors Clear Channel
- There has been insufficient public process

### 6. Size

- The proposed 672 sq. ft. size for the first 10 digital billboards is too large

### 7. Image

- Concerned about the timing of images, the frequency and potential flashing and movement

### 8. Environmental issues

- Concerned about potential noise, energy use, and electronic waste

## Supportive Comments

### 1. Community benefits

- Billboard operators provide discounted and pro bono advertising to community organizations, as well as marketing and outreach assistance
- Clear Channel is committed to giving back to the community
- Digital billboards provide the ability to effectively communicate public service announcements, such as amber alerts

### 2. Effective communication

- Digital billboards provide a good way to communicate messages and provide time-sensitive information and support local business activity

### 3. Billboard reduction

- The proposal would result in a significant reduction in the number of billboards

Staff is seeking general direction from the Commission to assist in the review of the testimony and formulating a recommendation to the City Council. Attached is a tentative schedule for the remaining portions of this process, as well as a timely article from this month's Planning magazine concerning digital billboards.

If you have any questions, please contact Shirley Schultz at (253) 591-5121 or [shirley.schultz@cityoftacoma.org](mailto:shirley.schultz@cityoftacoma.org).

attachments

c Peter Huffman, Assistant Director



## BILLBOARD CODE REVISIONS

Tentative Schedule  
*April 6, 2011*

DATE	EVENT
<b>February 16</b>	<b>Planning Commission authorization and set hearing date</b>
March 9	Question and answer session
<b>March 16</b>	<b>Planning Commission Public Hearing</b>
April 6	Planning Commission overview of testimony and schedule
April 20	Planning Commission discussion of testimony
May 4	Planning Commission discussion of testimony
<b>May 18</b>	<b>Planning Commission recommendations</b>
<b>May 24</b>	<b>EDC/EPW Joint Meeting</b>
<b>June 14</b>	<b>City Council study session on draft amendments</b>
<b>June 21</b>	<b>City Council resolution to set hearing date</b>
<b>July 19</b>	<b>City Council public hearing on draft amendments</b>
<b>July 26</b>	<b>City Council study session</b>
<b>July 26</b>	<b>City Council-first reading of ordinance to adopt proposed amendments</b>
<b>August 2</b>	<b>City Council- second reading and adoption of draft amendments</b>
August 12	Submit final amendments to State
August 14	Effective date of amendments



# Digital Billboards, Distracted Drivers

Remember Burma Shave®? Large electronic signs distract drivers in new ways.

By Jerry Wachtel



Jerry Wachtel

**T**he principal purpose of the 1965 Highway Beautification Act was to preserve scenic beauty by removing and regulating billboards along the nation's roadways. Today, however, the law is widely considered a failure. Not only did it fail to regulate traditional billboards; it promises to have little impact on the newest version, digital billboards.

It's driver distraction that gives DBBs such a bad name. Some distraction is unavoidable, even necessary, on modern roads. Everyone must occasionally look away from the road to heed a dashboard alert, or attend to a warning sign or traffic light. When driving conditions are good, some distractions can be tolerated with no ill effect. But billboards are the only roadside objects that are both intentionally distracting and irrelevant to the task at hand. They are typically placed where driving conditions are challenging, and distraction can cause drivers to drift into another lane or fail to notice a car stopping ahead.

According to an important recent study,

a two-second distraction of any kind more than doubles the risk of a crash or near crash. Another study, this one done for the outdoor advertising industry itself, showed that drivers take their eyes off the road for two seconds or longer twice as often when they are looking at digital advertising signs than when they are looking at traditional billboards—or no billboards at all. This study was conducted in daylight. The researchers predicted that driver distraction from digital roadside ads would be far worse at night, but the sponsor said no to a nighttime study.

### It's human nature

Much of the focus on distracted driving has been on distraction inside the vehicle, particularly that caused by cell phones and text messaging. But research in the U.S. and three other countries over the past five years suggests a real concern with external

distractions (not just billboards but also rubbernecking at crash scenes and searching for street names or addresses).

So why do we look? A lot of it has to do with physiology and the ease with which human beings can be enticed by bright lights. This is the so-called "moth effect," technically a variant of phototropism. We must put up with some distraction from official highway signs, but unlike most billboards, they provide necessary regulatory, warning, and guidance information. Moreover, there are substantial differences in the design and placement of the two types of signs.

Official signs adhere to the standards of the *Manual of Uniform Traffic Control Devices* and the FHWA sign design handbook. They

use specified colors, contrasts, and fonts that make them easily legible and their message unambiguous. In addition, official signs are uniform nationally and employ standard coding in their shapes, colors, and symbols. They are carefully placed where they will be most needed—avoiding curves and interchanges where the demands on the driver may be heightened. And they are separated from one another so as not to overload the driver with too much information at once.

Billboard designers have access to the same human factors studies that guide the makers of official signs. But their motives are different. They want to attract the driver's attention long enough to get their (sometimes complex) message across, with bright colors and splashy typography. They may include telephone numbers, web addresses, even text message codes—all requiring longer and more frequent glances. And, since the billboards are designed to attract as many viewers as possible, they tend to be placed at the very locations where official signs are avoided, such as the apex of a curve or the intersection of two roadways. Finally, they are often placed very close together, making it hard for drivers to focus on the task at hand.

### When are DBBs okay?

Is it possible to erect and operate a digital billboard consonant with traffic safety? Our research suggests that the answer is yes. We have isolated four DBB characteristics that are major contributors to distraction. Each can be modified by a simple operational change—if the owner or operator is willing. These are our recommendations:

- *Control the lighting.* The light-emitting diodes typically used with digital signs must be turned up to be visible in daylight. But if the levels are not substantially reduced when it gets dark, drivers are inevitably attracted to the DBB's light from far away. Recent research in the Netherlands suggests that it is difficult to look away from a bright light source despite conscious efforts to do so. Moreover, the glare that may result makes it easy to miss critical cues such as pedestrians or the brake lights of vehicles that are ahead. Older drivers are particularly susceptible to the debilitating effects of glare.

Although some DBBs have sensors that automatically reduce nighttime luminance, there is no requirement for their use. There are also strong disagreements between traffic safety and lighting experts (one camp), and billboard industry representatives (the

DBB companies are proud of their public service messages like this AMBER alert, which appeared on a Wisconsin billboard last July (this photo blurs revealing details). Previous page: a DBB advertising a new game.



other camp) about acceptable nighttime light levels and measurement methods. The problem could be solved by adopting a measurement protocol and setting an upper luminance level that is acceptable to both the billboard industry and traffic safety experts.

- *Lengthen dwell time.* Messages on DBBs in the U.S. are typically changed every six to eight seconds. Such short “dwell times” yield more displays per day—more revenue for the billboard owner. But because it's the message change itself that captures the driver's attention, these quick changes increase the risk of distraction.

We suggest that dwell time be calculated in this way: Multiply the sight distance to the DBB (in feet) by the speed limit (in feet per second). That allows you to determine the number of seconds that the message will be visible to an approaching driver. Setting this value as the minimum dwell time ensures that no motorist will see more than one message change, thus reducing distraction.

- *Keep it simple.* Designing the message display to ensure minimum standards of legibility and readability is another way to limit distraction. Some controls are already in place, including a ban on displaying images that may be confused with official traffic control devices. But even these minimal controls are rarely enforced. Outside the U.S., the display of telephone numbers or website addresses is commonly banned. And some countries further minimize distraction by limiting the number of words and symbols allowed.

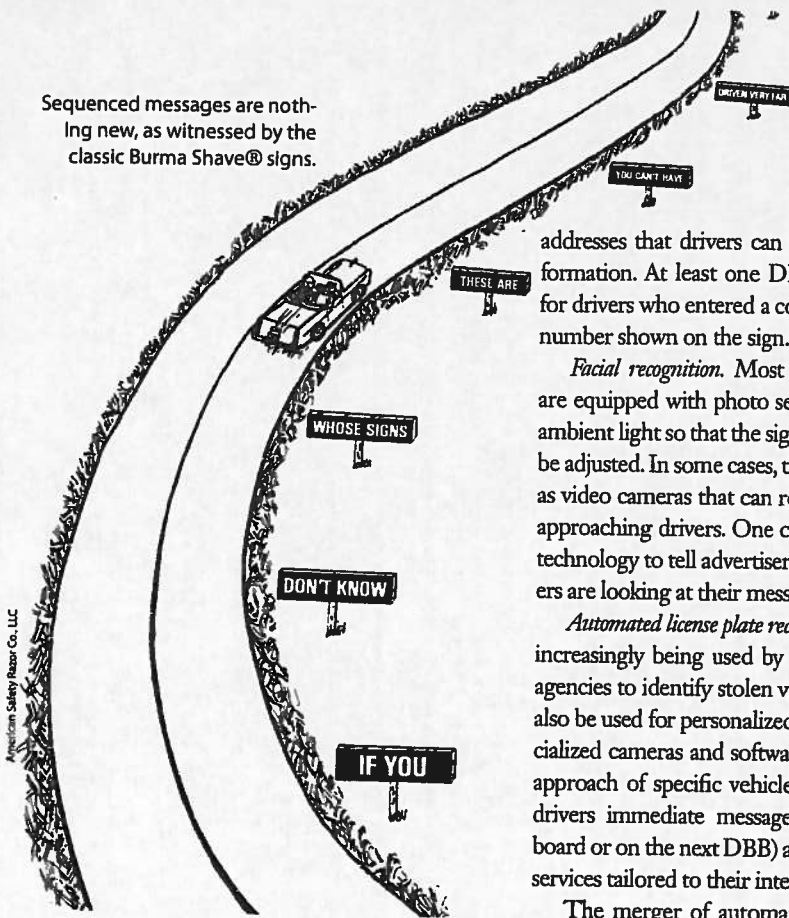
- *Prohibit message sequencing.* Using multiple, sequential messages to present a single ad is a common advertising technique. Each screen depicts only part of the whole message, keeping viewers' eyes glued to the billboard(s) to figure out what comes next. It's the modern equivalent of the iconic “Burma Shave” signs from nearly a century ago. (“Although insured/Remember kiddo/They don't pay you/They pay/Your widow/Burma Shave®.”) Today, a sequential message can be presented over time on a single sign or on a series of DBBs in close proximity—or even on billboards on both sides of the highway.

### A role for the public?

Planners are accustomed to presenting their ideas, concepts, and proposals to the public, and to responding to public comment. And many planners have been vocal in commenting on billboards of all types. In the U.S., however, public opinion is rarely sought as part of the billboard application and permitting process. In several other countries—notably Australia, the United Kingdom, and Japan—the public's views are generally considered as part of the billboard permitting process.

These efforts were studied firsthand during the recently completed International Scan on Outdoor Advertising Control, undertaken by the Federal Highway Administration and the American Association of State Highway and Transportation Officials. (I performed the first part of this process, the “desk scan” of control efforts in various

Sequenced messages are nothing new, as witnessed by the classic Burma Shave® signs.



addresses that drivers can text for more information. At least one DBB offered prizes for drivers who entered a contest by texting a number shown on the sign.

**Facial recognition.** Most digital billboards are equipped with photo sensors to measure ambient light so that the sign's luminance can be adjusted. In some cases, the sensors double as video cameras that can record the faces of approaching drivers. One company uses this technology to tell advertisers how many drivers are looking at their message.

**Automated license plate recognition.** ALPR is increasingly being used by law enforcement agencies to identify stolen vehicles, but it can also be used for personalized marketing. Specialized cameras and software can detect the approach of specific vehicles and send their drivers immediate messages (on the dashboard or on the next DBB) about products or services tailored to their interests.

The merger of automated license plate recognition, vehicle identification, driver facial recognition, and vehicle location data provides a powerful new tool for advertisers—and raises new concerns about privacy for drivers.

### The debate continues

In responding to critics, the billboard industry has taken two tacks. First, it insists that research (which it sponsored) shows that DBBs do not increase the number of crashes. This claim is unsupported, and the research has been discredited by independent peer review.

Second, they promote the public service benefits of DBBs—that they post messages

about missing children, wanted criminals, and hazardous road conditions. And such benefits can be real. But the fact is that highway agencies increasingly operate their own, growing networks of changeable message signs for traffic control and safety. These changeable message signs are sited in accord with positive guidance principles and thus are in a better position (literally) than DBBs to convey timely information to drivers. In addition, when DBBs provide service messages such as AMBER alerts, they typically use the same excessively demanding display features as many commercial messages, with the same distracting results.

The billboard industry contends that DBBs have become a mainstream, widely accepted form of roadside advertising. This is far from the case. We know that the technology isn't going away, but study after study provides evidence of distraction. Motorists continue to attribute some of their own driving errors and crashes to distraction from billboards. And government agencies are beginning to consider the views of the affected communities in their permitting processes.

Meanwhile, the billboard industry has steadfastly refused to make even minor adjustments in DBB operations—adjustments that could effectively resolve both the safety concerns and the community issues that generate such controversy. Add to this new technology that will make it possible for DBBs to access and use personal information from drivers, and it seems likely a new era of litigation will soon begin.

■ Jerry Wachtel is an engineering psychologist and president of The Veridian Group, a consulting firm in Berkeley, California. He has worked for both the billboard industry and public agencies, and has assisted several local governments in redesigning their sign ordinances to address new technologies.

countries. The second part involved site visits.) As a followup, FHWA and AASHTO are now beginning to study ways of increasing community and citizen involvement in the outdoor advertising planning process here in the U.S.

But DBB technology is advancing faster than policy makers can deal with it. Until recently, these advances were limited to sign size, brightness, and image fidelity. The newest technologies focus on capturing the motorist's attention in ever more sophisticated ways, thus raising new questions for regulators and privacy advocates. Among the new technologies are these:

**Personalized messages.** Billboards (as forecast in the film *The Minority Report*) can now extend personal greetings to drivers. A Mini buyer, for instance, might enter an electronic key code into the company's database. "Hi Kate—Nice day for your convertible" will flash whenever Kate's car approaches a Mini USA billboard.

**Interactive displays.** Secretary of Transportation Ray LaHood has made driver distraction a high priority, but his focus has been on cell phone calls and texting. Yet recent research indicates that there is a considerable problem with visual distraction from sources outside the vehicle, including billboards. As interactive billboards continue to multiply, they will exacerbate this problem. Some even provide

## RESOURCES

### ONLINE

The final reports of FHWA's International Scan on Outdoor Advertising Control and Driver Visual Distraction in the Presence of Commercial Electronic Variable Message Signs will be available at [www.fhwa.dot.gov/realestate/out\\_ad.htm](http://www.fhwa.dot.gov/realestate/out_ad.htm). For the sign industry's take on digital billboards, see the "Digital Signage" section of the articles archive at [www.signindustry.com](http://www.signindustry.com). Comprehensive regulations controlling outdoor advertising in Queensland, Australia's Department of Main Roads are at [www.tmr.qld.gov.au/~media/a3fd17d1-2b31-499a-83f6-1cbe25ea96a3/roadsideadvertisingguideaugust2009.pdf](http://www.tmr.qld.gov.au/~media/a3fd17d1-2b31-499a-83f6-1cbe25ea96a3/roadsideadvertisingguideaugust2009.pdf).

A 2009 report by Jerry Wachtel on "Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs" is available at: [www.scenic.org/pdfs/NCHRP%20Digital%20Billboard%20Report.pdf](http://www.scenic.org/pdfs/NCHRP%20Digital%20Billboard%20Report.pdf).