

# Finding Common Ground

## Regulating Electronic Message Centers

Planning For Sign Code Success

Birmingham, Alabama

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# Speaker

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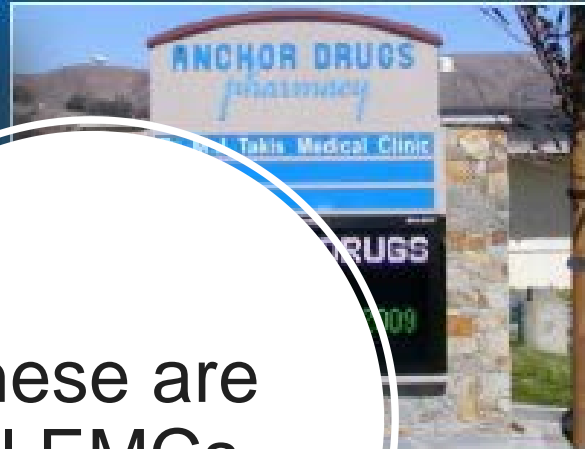
# What is an Electronic Message Center?

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- A sign that is capable of displaying words, symbols, figures or images that can be electronically changed by remote or automatic means.



These are all EMCs





**Why should governments  
embrace these signs?**



# Reduced Liability and Branding Concerns

## EMCs compared to Manual Changeable Copy

- Manual Changeable Copy
  - Yellow and Cracked in Months
  - Require Employees to Manually Change Messages Outside in all Weather Conditions
  - Risk of Letters being lost/mismatched
- EMCs
  - Appear Brand New for Years
  - Changed with a Click of a Button From the Comfort of a Computer

# Public Service Announcements

- More and more cities are using EMCs to display community information.
- Businesses are signing up to display AMBER alerts, fugitive alerts, severe weather warnings and other valuable public information.





# **Regulation Considerations**



# Capabilities and Concerns Overview

**Brightness**

**Animation/Video**

**Aesthetics**

**Driver's Safety**

# Concern #1: Brightness

**THE** most common concern we receive regarding EMCs and digital signs!

**Too Bright**



**Just Right**



# Specific Brightness Limitations

Always require automatic dimming in direct correlation with ambient light conditions.



Include specific regulations limiting brightness to 0.3 foot candles above ambient light when measured at an appropriate distance.

# Brightness is Relative

Ambient light plays a huge role in how brightness is perceived.



# Foot Candles Standard Overview

Measures Illuminance

Illuminance is essentially the amount of light striking a lit object at a given distance (in this case a passersby eye)



Measures light impact and appearance



Rather than a set limitation that may or may not be appropriate at any given time, foot candles above ambient light allow the display to adjust based on ambient light conditions.

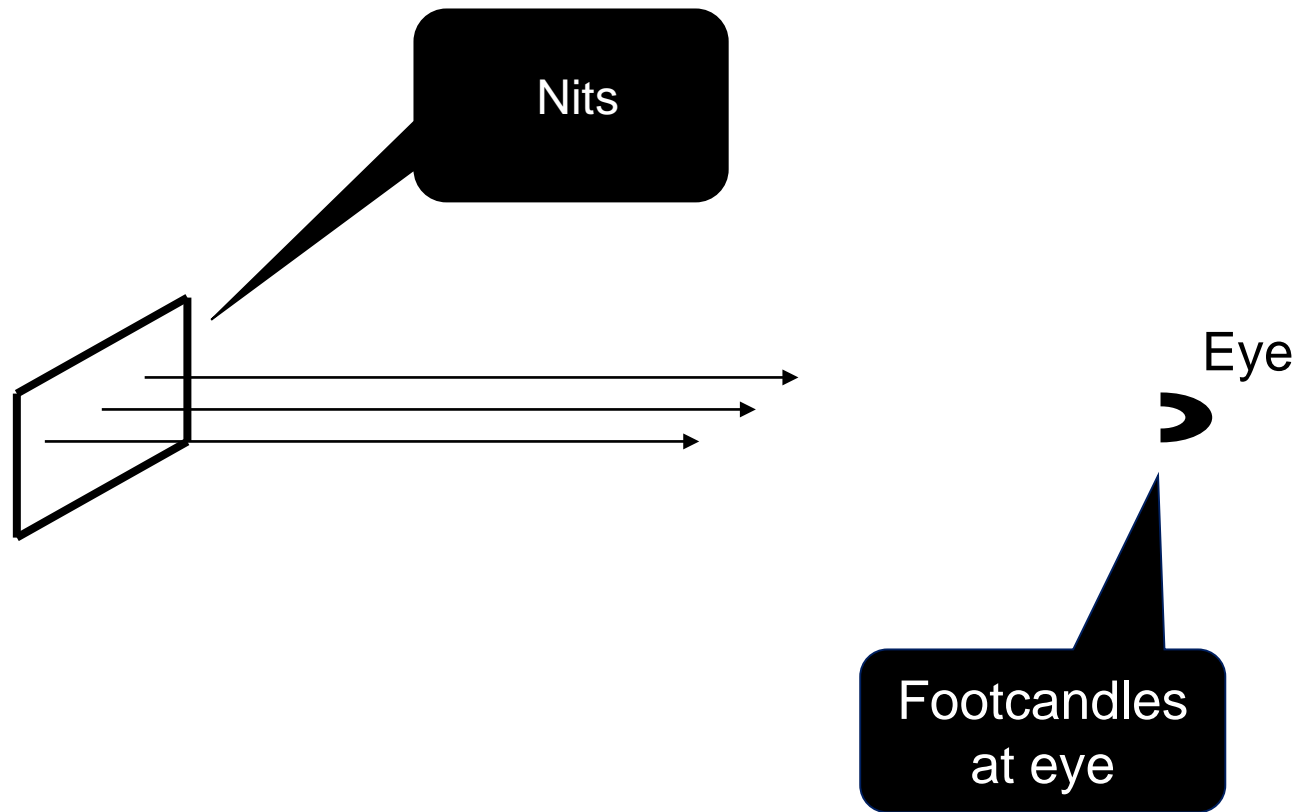
# Nits Standard Overview

Measure luminance.

- Luminance is essentially the amount or density of light emitted from a lit object (in this case an EMC)

Does not measure appearance.

- Ambient light changes perceived brightness of nits levels
- Different colors set at same nits levels appear very different



# Why Foot Candles & Not Nits?



## Foot Candles

Allow the sign to adjust  
appropriate in direct  
correlation with ambient light  
conditions

Measure appearance

Easy and inexpensive to  
measure



## Nits

Set numbers to not allow for  
adjustment based on ambient  
light measurement

Do NOT measure  
appearance

Expensive and difficult to  
measure



# Why Do You See Nits Regulations in Other Codes?

Many codes regulate in nits. WHY?

Nits was the primary brightness talking point during early development of these signs.

Prior to foot candles regulations nits were used because they are used by manufacturers to tout brightness capabilities

Typical standard is 5,000 day and 500 night. WHY?

5,000 nits used to be the maximum brightness of most LED displays

500 nits used to be the minimum brightness of most LED displays

No longer the case

## Concern #2: Movement Allowances

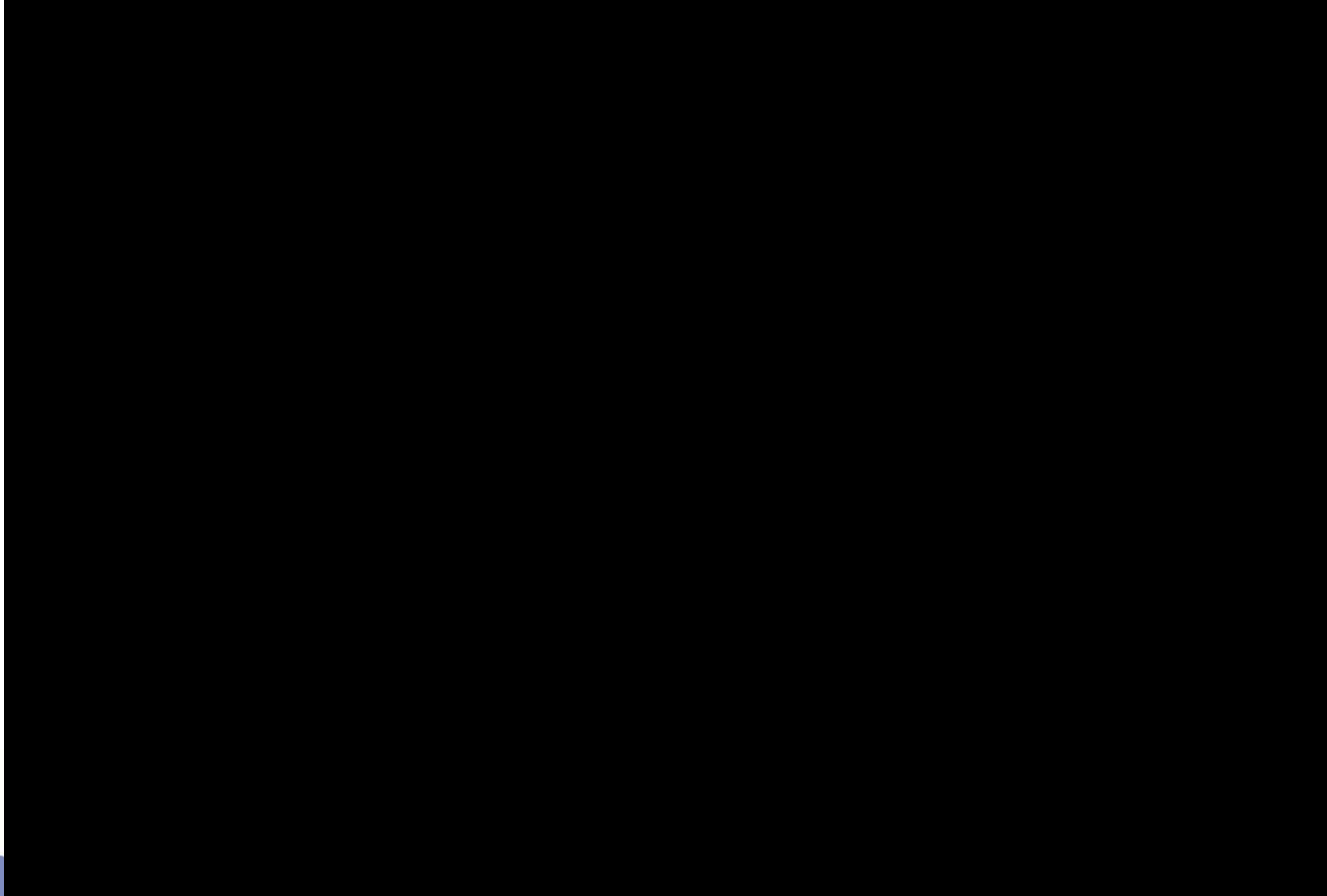
### **Common Assumption:**

- Cities that have never allowed EMCs previously often think that static images with a long message duration is the only way their community will even consider such signs.

### **Reality:**

- Most concerns from the community arise from brightness, flashing and animation in inappropriate areas.

# Example: 5-second Hold Time with Static Transition



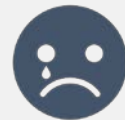
# About Animation



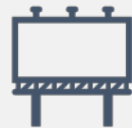
Animation is very beneficial for businesses in heavy commercial and urban areas.



May not be appropriate in proximity to residential zoning

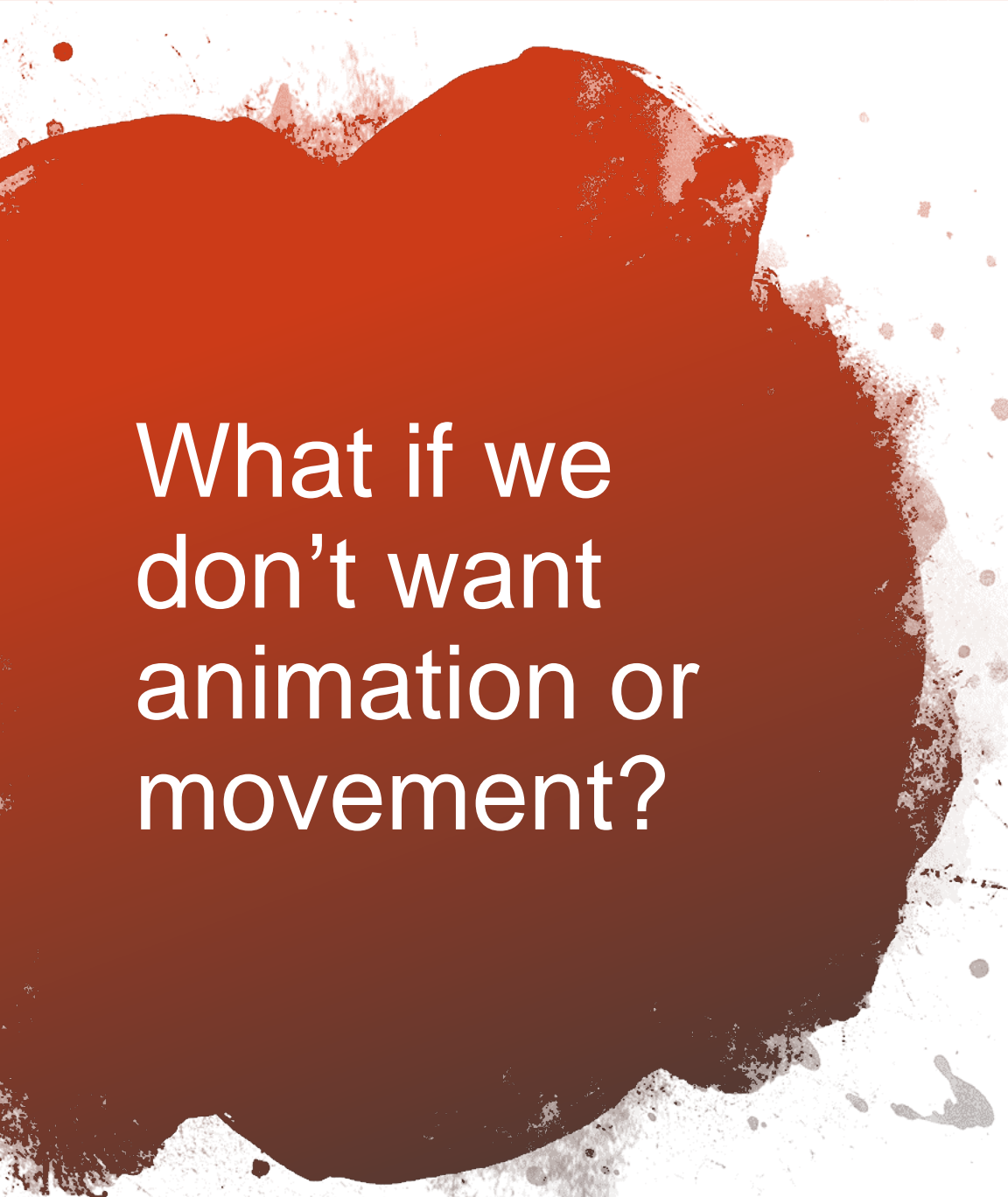


May not be considered appropriate in your community.



How do you address animation?

Determine what areas such signs should be permitted and what types of usage are appropriate



What if we  
don't want  
animation or  
movement?

- Hold times (or message duration)
  - Duration in which a message remains static prior to changing to another static message.
  - Average DOT times:
    - 5-10 seconds (for billboards)
    - Remember on-premise EMCs are smaller so need a bit more lenience

**Note:** Longer hold times don't mean better codes.

# Concern #3: Aesthetics

## Common Concern:

- *“EMCs increase visual clutter.”*

## The Facts:

- EMCs reduce clutter.
- Information that used to take multiple signs to display can be consolidated into a single display.



Before





After





# EMCs are an Aesthetic Improvement

EMC versus Manual Copy Board



# #4 Concern: Safety

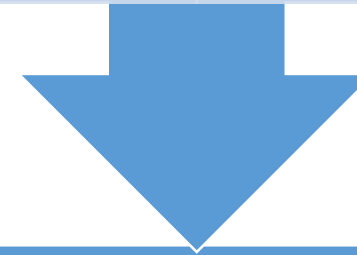
EMCs have been studied for OVER 30 years and have never been found to be hazardous.

FWHA: 1980,  
2001, 2009,  
2013

Virginia Tech:  
2007

Tantala  
Associates:  
2007-2010

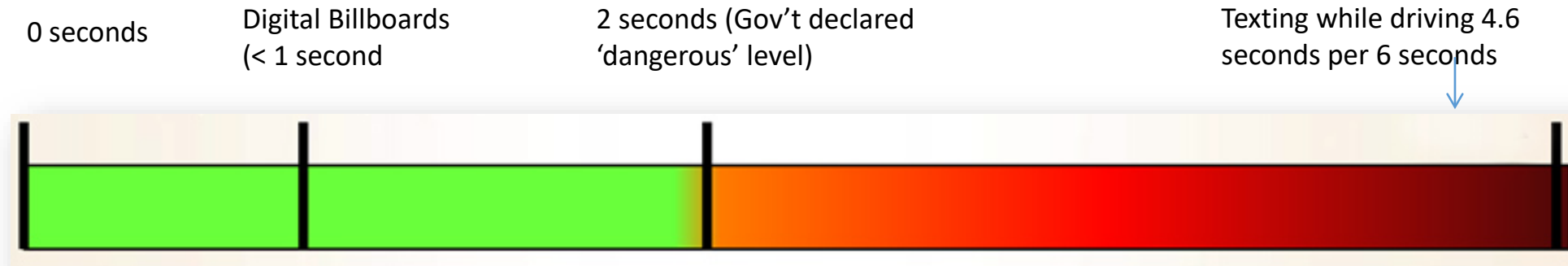
Texas A&M:  
2012 Deals  
specifically with  
on-premise



Copies of these studies available

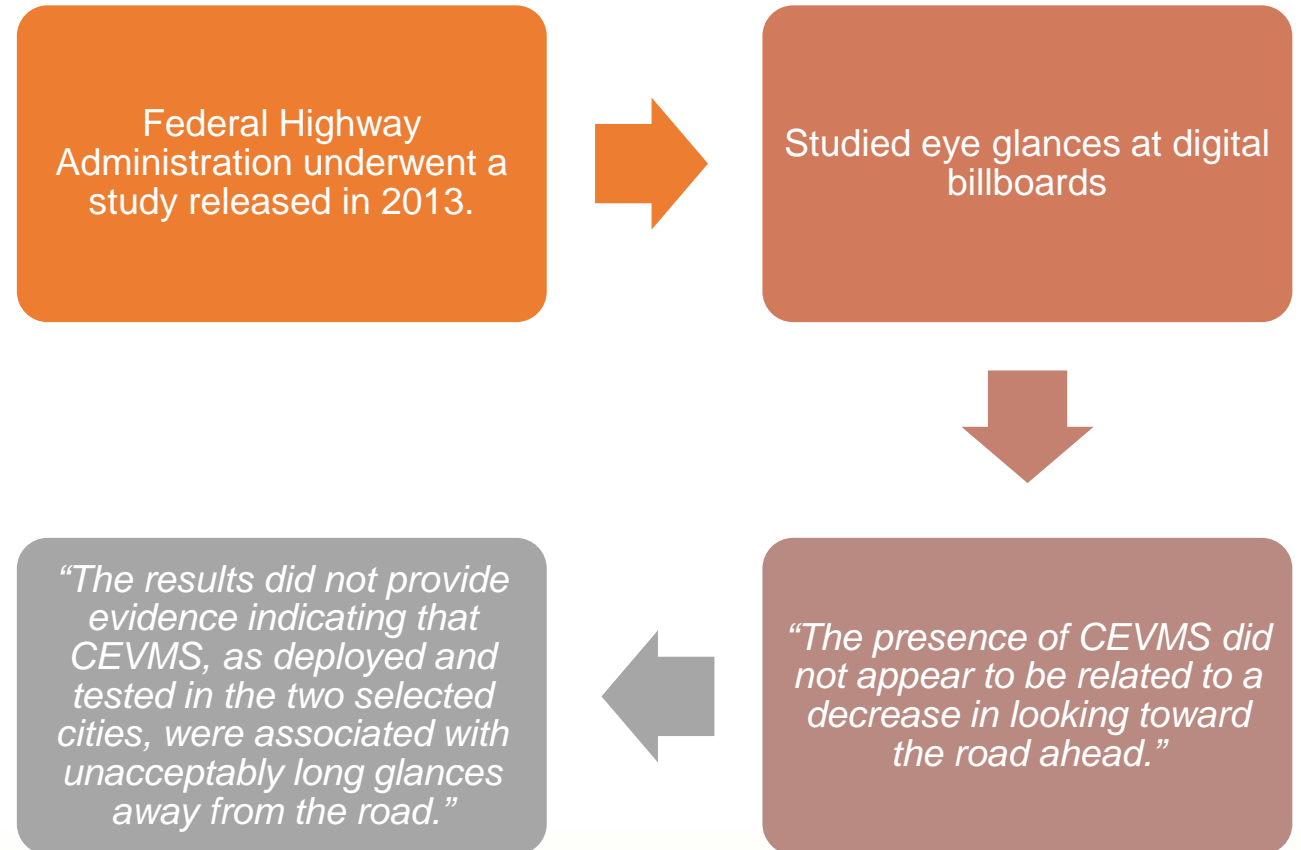
# What the Studies Tell Us

## Eye Glance Duration



- Drivers DID NOT glance more frequently at digital signs than at other “event” types
- The glance times at digital signs were far less than what is considered the threshold for traffic safety concerns
- Glances at digital signs were about 0.5 seconds
- Glances over two seconds significantly increase the possibility for traffic accidents
- Texting glance durations are 4.6 seconds during a 6 second period

# What Does the FHWA Say?



# Moving forward with EMC regulations

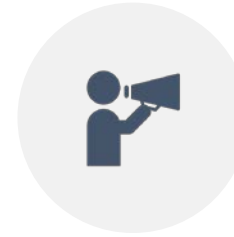
# Initiating Change

- It is very likely that a business will be the one to get the ball rolling
- Take a proactive approach
  - Be prepared
  - Meet with businesses and sign representatives
  - Find out what are the issues (movement, brightness, aesthetics, etc.?)
  - Offer to facilitate an educational meeting with the elected and planning officials and/or the public
  - Consider working with a focus group on sign changes

# Aspects to Remember



UNDERSTAND THE  
ISSUES



TAILOR REGULATIONS  
WITH STAKEHOLDERS IN  
MIND



LOOK AT MODEL  
REGULATIONS. (DON'T  
COPY VERBATIM)



ALWAYS REQUIRE  
AUTOMATIC DIMMING  
BASED ON AMBIENT  
LIGHT CONDITIONS



CONSIDER REGULATIONS  
BASED ON THE AMOUNT  
OF COMMERCIAL  
ACTIVITY WITHIN THE  
ZONING DISTRICTS

# Aspects To Be Weary Of



- DO NOT borrow from other sign codes “just because”
- DO NOT assume a longer hold time is better
- DO NOT require separate area limitations, setbacks, etc. on EMCs
- DO NOT forget the needs of your business community





**Thank you**

**Deacon**

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**NEVER TRUST A PERSON**



**WHO DOESN'T SING ALONG TO  
BOHEMIAN RHAPSODY WHEN IT COMES  
ON THE RADIO.**