How to Live Through the Dark Side of Hot Mix Asphalt

Illinois Asphalt Paving Association
Annual Meeting
March 2005
How many like night?
Guiding Light

- Challenge
- Recommendations
- New technology
Why in the Dark

- Minimizes disruption to traffic
- Reduces delay and accidents
- Significant benefit to traveling public
Reduced Congestion
Interstate Traffic Growth

Traffic Growth

YEAR

Growth

20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0


YEAR

Growth
Research Advantages

- Material delivery
- Effect on surrounding businesses
- Minimize pollution
- Safety
Safety

- Lower levels of traffic
- However....
Specs

• IDOT specifications 701.04(c)6: The flagger station shall be lit by additional overhead lighting other than street lights

• April 2005: Flagger garment meeting ANSI/ISEA 107-1999 for Conspicuity Class 3
Dangerous Job
Building a Specification

• Radiance - what we are used to

• Luminance - the result
Luminance

• Birthday cake candle
• On one end of a one-foot ruler
• One foot candle
• In metric, one lux
Eight Candles
Eight Feet
Shedding a Little Light

- NCHRP 476 in 2002
- NCHRP 498 in 2003
- Il Trans Research Cooperative in 2002
- Others
### Other States At Paving Site

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<tr>
<th>State</th>
<th>Foot-candles</th>
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<td>Calif</td>
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<td>Oregon</td>
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Workers at night
Specification

- Draft specification under development
- Follows national guidelines
- Oriented toward worker needs
- Bureau of Design (Mark Seppelt)
Background Light

- Less adjustment for driver
- Enough light to keep sanity
- Difficult to achieve
- Driver aware of workers
2 foot candles
Recommendations

• Problem jobs
• Police presence
• Lighting specification
• Personal actions
Lighting Specification

LIGHTING FOR NIGHTTIME HIGHWAY CONSTRUCTION

DESCRIPTION

This work shall consist of furnishing, installing, operating, maintaining, moving and removing all necessary lighting equipment and materials for the duration of nighttime operations on the contract. Nighttime operations consist of work specifically scheduled during the hours of darkness, which occur shortly before sunset until shortly after sunrise. All work shall be done according to the "Standard Specifications for Road and Bridge Construction" and as further defined herein.

Mark Seppelt
District Two
Personal Actions

- Vests clean
- Hat and arm band
- Use common sense
Images in Illumination
Summary

• Pay attention to problem jobs
• Police presence
• Take every possible personal precaution
• Lighting specification
Its Up to Us