



PLEASE PROVIDE YOUR COMMENTS
Public Questionnaire
October 19, 2009

Step 1: Review Project Materials

Visit http://www.azdot.gov/highways/districts/flagstaff/Projects/Current_Projects.asp

- Review "Presentation to City Council Oct 28, 2009"
- "Public Information Packet on Lighting System Alternatives"
- "Nighttime Light Information"
- "Public Questionnaire"

Step 2: Help us stay in touch with you!

Name _____

Address _____ Zip _____

Email _____

Step 3: Give us your feedback!

QUESTION #1: Do you feel lighting is important for this stretch of highway? Why?

QUESTIONS #2 through #4: Pole height and configuration (placement of poles along the roadway) are closely related. Please answer the following questions:

QUESTION #2: Mounting heights of between 20 and 25 feet (a mounting height less than 20 feet is not feasible), mean closer pole spacing and more poles. It also means that poles will need to be installed on both sides of the road directly across the street from one another (two sided opposite). Do you think mounting height range with a two sided opposite pole arrangement like this should be considered further? Yes No



QUESTION #3: Mounting heights of 30 feet to 50 feet mean fewer poles and longer spacing, with poles installed on both sides of the roadway in a staggered arrangement (two-sided staggered). This mounting height range and pole arrangement works with the greatest variety of different types of lighting system types, including ADOT Standard High-Pressure Sodium (HPS), Flagstaff Low-Pressure Sodium (LPS), light emitting diode (LED), Monterey style HPS or metal halide (MH,) Shoe box HPS). Do you think a mounting height range with a two sided staggered arrangement like this should be considered further? Yes No

QUESTION #4: An ADOT Standard HPS lighting system with long mast arm and pole with a mounting height 45 feet to 50 feet allows for lighting systems with the fewest number of poles and the most space between poles. It also allows for an additional option of placing the poles on only one side of the roadway. Do you think a system like this should be considered further? Yes No

QUESTION #5: Mast arm length is either short (2 feet), not very long (8 feet +/-) or long (20 feet). Rank the size you prefer. (Mark 1 for most preferable and 3 for worst).

- Short
- Not Very Long
- Long
- No preference

QUESTION #6: Fixture type is either ADOT standard type cobra head, Flagstaff standard low pressure sodium fixture, shoe box, or architectural Monterey Style (as seen on SR 179). All fixtures analyzed are dark sky compliant. What fixture type do you prefer? (Select One)

- ADOT standard/Cobra head
- Flagstaff standard low pressure sodium fixture
- Shoe Box
- Architectural Monterey Style
- LED Roadway Style
- No preference

QUESTION #7: Energy used is a function of mounting height. Typically the higher the mounting height the less energy a lighting system will use. What is more important to you: energy usage or mounting height?



QUESTION #8: Light Source Preference—Four light sources have been analyzed. They are high-pressure sodium (HPS), low pressure sodium (LPS), metal halide (MH) and light emitting diode (LED) sources. All of the light sources have been designed to the same illuminance level and uniformity. However, the appearances of these light sources will be different.

HPS has a yellowish type of light. The signalized intersections on 89A are currently lighted with HPS. It is ADOT’s standard street lighting source. The new lighting system for SR 179 is HPS.

LPS is an all yellow light, and it is Flagstaff’s standard street lighting source. Astronomers prefer LPS because they can filter it out better.

Both metal halide and LED light sources are white. Metal halide is the outdoor light source most commonly used for ball fields and areas where seeing color and fine detail are important. It is not used very often for street lighting. LED is an emerging technology for street lighting. Currently it is very expensive as the market is still developing. The basic appearance of the LED light will be very similar to the appearance of metal halide light.

White light sources are generally discouraged by astronomers because they interfere with the night sky more than LPS and HPS. However, the potential of LEDs in terms of saving energy may offset this impact.

HPS will be the less expensive light source to maintain, LPS is second, LED probably 3rd with Metal Halide 4th (or tied with LEDs until the time LEDs are better defined). The City of Sedona will be responsible for paying all energy and maintenance charges for this lighting system.

Based on this discussion please rate your preferred light source (Mark 1 for most preferable and 4 for worst):

- HPS
- LPS
- Metal Halide
- LED
- Does not matter

QUESTION #9: How much money do you think the City of Sedona should contribute to the lighting system construction?

- \$0
- Less than \$150,000
- \$150,000 - \$250,000
- \$250,000 - \$500,000
- \$500,000 - \$1,000,000
- Doesn’t matter as long as I get the type of system I want



SR 89A West Sedona Lighting Project

QUESTION #10: Installing poles on one side of the highway would require the use of taller poles and/or longer mast arms. Which do you prefer? Select one.

- Installing poles on both sides of the highway.
- Installing poles on south side of the highway only.
- Installing poles on the north side of the highway only.

QUESTION #11: What are your main priorities with regard to the new lighting system? (Please rank the following categories from 1-6, with 1 being most important and 6 being the least important.)

- Aesthetics of fixtures, mast arms, poles and their color
- Type of Light (LPS, HPS, LED, or MH)
- Night Sky Impact (Light Pollution)
- Electrical Energy Used Environmental Impact (greenhouse gases)
- Construction Cost
- Maintenance and Energy Cost

QUESTION #12: After reviewing the information provided, which alternative do you prefer? (Please identify by number)

Any other comments:

Step 4: Return this comment form to our study team by November 25, 2009.

Please return this form to a team member at the open house or to:
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 4545 E Shea Blvd, Suite 210, Phoenix, AZ 85028
 602.368.9645 (fax)