



**Questions and Answers on Exhibit E  
RFQ 17-09  
Western Riverside County Streetlight LED Procurement**

Date Prepared: December 8, 2017

Following are responses to questions that have been received pursuant to the release of RFQ 17-09: Western Riverside County Streetlight LED Procurement.

1. Exhibit E page 2 "Rules" 2.c. "Light Loss Factor to be set at 1.0". – this comment contradicts the original RFQ specifications regarding Light Loss factor and can have a substantial effect on offering the most appropriate fixture and most importantly fixture wattage which equates to total life cycle cost of ownership.

Please refer to the RFQ No. 17-09, Exhibit B under Required submittal for each luminaire type defined in table A and each proposed manufacture:

- a. Paragraph D - "predicted dirt depreciation per IES RES1-16
- b. Paragraph E 1.a., b., c., – Computer generated point by point photometric analysis and "Light Loss Factor". Depending on manufacture test data (i.e. TM21 data, Optical type and over all life dirt depreciation etc.), the variable can be substantial when these data/calculations are applied to overall cost of ownership.

Can you please offer direction on this?

**Response:** *WRCOG determined that various manufacturers might apply the light loss factor differently resulting in different outcomes from manufacturer to manufacturer. For this reason, in the evaluation of submissions, light loss factors will be applied in a consistent manner by WRCOG. For this reason, submitted AGI32 files should use a Light Loss Factor equal to 1.0*

2. The "a." option requires we offer a fixture "to maintain minimum light levels" as the incumbent. Upon review of many of the AGI files many existing "minimums" are at "0". Can you please comment on what criteria we are then to meet if the existing incumbent fixture minimum is "0"?

**Response:** *Only points in the incumbent calculation having a light level equal to or greater than 0.1 footcandle will be considered in evaluating AGI32 calculations of submissions.*



3. On all suggested lighting calculations (a., b., and c.) we are asked to provide data “per IES” - we are being asked to provide “avg” data and “uniformity” data. Is this data to be provided in Illuminance? Or Luminance?

**Response:** *In RP-8-14, IES recommendations for streets and roadways are expressed in luminance ( $Cd/m^2$  or nits) and for intersections, in illuminance (fc or lux). However, the incumbent lighting was not designed to meet RP-8-14, and in many cases, no former version of RP-8. Therefore, do not alter the AGI32 calculations as they are prepared to provide the appropriate calculations to be used in the evaluation, which may include luminance, illuminance, and/or RP-8-14 summaries, depending on the specific AGI32 file.*

4. 18 different layout scenarios, each requiring 3 different photometric performance metrics = 54 different layouts and fixtures (granted some of these fixtures are likely to be duplicated). Even AGI specialists (which most major manufacturers have on staff) will take some time to do 54 layouts. Then the part# selection is created from that, which then needs to be priced and submittals generated.

- A. There is much subjectivity in play with the criteria presented. Just one example: Hitting the min value of the existing HID with no specific distance/scale means we either choose 0 (which is not realistic or practical) OR each mfr decides arbitrarily what the min value of the existing is. This is going to result in inconsistent photometrics and related product selection from the different mfrs.
- B. Exhibit D (product price sheet) does not allow for all 54 different fixtures being asked for on the AGI32 work. Also, several of the existing lamp types/wattages on the schedule are not reflected in the AGI work (only 6 of the 11). So can we ask for clarification on matching up the photometry work to the price sheet?

**Response:**

- A. *Incumbent street lighting in the Western Riverside County communities does not appear to meet any standards. Existing luminaires, their wattages and their layouts vary even within the same community and street or roadway type.*

*To achieve project goals in a systematic way among a number of participating communities with differing goals that affect light level choices, WRCOG established three different primary criteria for each location:*

- a) *MAXIMUM ENERGY SAVINGS: the proposed lighting should achieve approximately the same minimum illuminance levels at points in the incumbent model having at least 1 lux (0.1 footcandle). The uniformity of the illumination should be similar or better, i.e. the ratio of the maximum illuminance to the minimum illuminance at points 1 lux or more should be smaller (i.e. more uniform) for the proposed LED lighting than for the incumbent lighting (better uniformity).*



b) *NOMINAL BLEND OF EFFICIENCY AND ILLUMINATION: the proposed lighting should achieve approximately the same average illuminance at points in the incumbent model having at least 1 lux. The uniformity of the illumination should be similar or better, i.e. the ratio of the maximum illuminance to the minimum illuminance at points 1 lux or more should be smaller for the proposed LED than for the incumbent luminaire*

c) *CONSERVATIVE SOLUTION: the proposed lighting should achieve average illuminance at least 15% greater than the same average illuminance at points in the incumbent model having at least 1 lux. The uniformity of the illumination should be similar or better, i.e. the ratio of the maximum illuminance to the minimum illuminance at points 1 lux or more should be smaller for the proposed LED than for the incumbent luminaire.*

*For each layout scenario, bidders should submit AGI32 models of designs using proposed lighting products for each of these primary criteria. Please note that the modeled light loss factor for the incumbent lighting system and for the proposed lighting systems shall all be set to 1.0.*

B. *The models were selected to be representative of the largest number of luminaires by wattage as well as by situation. The 18 models employ luminaire types by type and wattage that represent over 98% of all luminaires in the WRCOG region.*

*Second, WRCOG and its consultants know that to a certain extent, the ratio of LED watts to High Pressure Sodium (HPS) watts (including ballast loss) or LED watts to Low Pressure Sodium (LPS) watts (including ballast loss) is scalable. For example, if a 130-watt LED acceptably replaces a 200-watt high pressure sodium (246 watts) under (b.) criteria, the ratio is about .528, then a 400-watt high pressure sodium (485 watts) luminaire could probably be replaced with a 253-watt LED. For the 2% of luminaires not addressed by the models, this will be an acceptable method to be implemented by the bidder in determining the replacement being quoted.*

*Therefore, please bid a luminaire for each condition (a.), (b.) and (c.) for each luminaire lamp type and wattage.*

5. In the Exhibit E instructions it says that submittals should be on a thumb/junk drive, while the bid is to be emailed to you? Distributors are asking what is the best method of getting the quotes to you (Tyler Masters, WRCOG)? They are going to be large files.

**Response:** *The RFQ states that an electronic form of submission is to be provided. Whether this is email, dropbox (or other FTP alternatives), or thumb drive, this will be left*



*up to submitters. Bidders are urged to ensure that submissions are received in their entirety. WRCOG will provide email receipt of submissions when received. Incomplete submissions will not be evaluated or considered, so email submissions are discouraged due to file size limits.*