Questions and Answers
RFQ 17-09
Western Riverside County Streetlight LED Procurement

Date Prepared: November 21, 2017

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

1. Section Product Manufacturers and Approved Product, Item D, the RFP states that "WRCOG will provide AGI 32 models to determine best possible performance…" Can we please get these models for the analysis?

Response: *A total of 18 AGI32 models have been prepared, representative of the typical conditions throughout WRCOG's communities. The evaluation of bidders' proposed luminaires will be based on their performance compared to incumbent lighting. Specific instructions are provided along with the models. The models can be found as Exhibit D as part of Addendum No.3 on our website http://www.wrcog.us/253/Bid-OpportunitiesRFPs.*

2. This project appears to be two-fold, one in need of a "Project Consultant" throughout the duration of the project. Two, in need of materials. Please advise if these two requests must go hand in hand?

Response: *This RFQ is only for the procurement of LED luminaires.*

3. Or can this project bid as a "Supplier" only for just luminaires?

Response: *See response for Question #2.*

4. If so, "Supplier" would not have employees on project at any time. Would "Supplier" be required to post insurance for General Liabilities?

Response: *All proposers are required to meet insurance requirements as part of the RFQ, and WRCOG's template Equipment Purchase Agreement. The Equipment Purchase Agreement can be found on http://www.wrcog.us/253/Bid-OpportunitiesRFPs.*

5. Does WRCOG have a lay down facility that is secured for material?

Response: *Yes.*

6. If WRCOG has a secured facility, will someone be able to accept deliveries or is that the responsibility of the General Contractor?

Response: *WRCOG and/or its Contracting firm will be available to accept deliveries.*

7. Exhibit B asked bidders to furnish luminaire samples with testing from manufacturer. Did that not already occur when WRCOG did the test bed with approximately nine different manufacturers? Would this request in Exhibit B be duplicating efforts?

Response: *Manufacturers that participated in the Demonstration Area were required to furnish luminaires for installation, however, WRCOG does not believe Exhibit B duplicates efforts because product specifications are being asked of potential proposers, and information included in Exhibit B is above and beyond what was asked of Demonstration Area participants.*

8. It is our understanding that certain manufacturers were vetted out so wouldn't we be provided part numbers that were already approved?

Response: *Manufacturers with products that meet required specification listed within this RFQ are welcome to propose. No manufacturers have been vetted out of participation.*

9. Is it the intentions of WRCOG to have removed luminaires recycled?

Response: *Yes, all removed luminaires will be recycled and disposed of in accordance with California Recycle and Disposal Laws. Additionally, any hazardous materials including universal waste will be discarded according to the provisions set forth in California law.*

10. What are the photometric criteria for product selection? Exhibit B, LIGHTING SYSTEM PERFORMANCE, item B.1 mentions Table B (Exhibit C), but that is a product submittal form. Exhibit B, PRODUCT MANUFACTURERS, item D mentions AGI32 models not found on the bid webpage. Please provide the missing tables and/or AGI models.

Response: *See response to Question #1.*

11. Exhibit B, Part 2, LUMINAIRES, item J.1: What are the certain applications where 3000K CCT is allowed?

Response: *3000K CCT alternative is allowed in circumstances where proposing manufacturer is unable to provide a qualified 2700K product and is limited to proposed replacement luminaires for 135 watt and higher Low Pressure Sodium and 150 watt and higher High Pressure Sodium.*

12. Exhibit B, Part 2, LUMINAIRES, item L.2.b: When should alternate material info be submitted, pre-bid or with bid?

Response: *With Bid.*

13. Exhibit B, Part 2, LUMINAIRES, item A.2: Are products to be DLC listed at time of installation? Procurement? Bid date? (We have products going through standard DLC approval currently)

Response: *Products shall be either already DLC listed, or in DLC for approval, in either case as of the Bid Date. If awaiting DLC, WRCOG requests bidders to provide a complete copy of the DLC submission documents including test reports.*

14. Exhibit B, REQUIRED SUBMITTALS, item E: The indicated LLF will be quite low (around 0.68) for most proposed products. Given the slow depreciation rate of most LED luminaires, several areas could then be substantially over-lit for many years, which seems contrary to the objectives of the project. Are those the correct factors? Why not use actual lumen maintenance at a reasonable point in time (e.g. 50,000 or 60,000 hours)?

Response: *Manufacturers are required to submit LM-80 to DLC, and therefore, it will be contained in the DLC listing and/or DLC application. WRCOG will determine the approximate LLF for each proposed luminaire and use it in its decision-making process.*

15. Exhibit B, Part 2, LUMINAIRES, item L.3.b: Typical streetlight leveling steps are +/-5 degrees, not 15 degrees. Was this meant to be 5 degrees?

Response: *Yes. Plus or minus 5 degrees.*

16. Exhibit B, Part 2, LUMINAIRES, item L.3.c: Typical streetlight mast arms are 1.5” or 2.0” IP (1.66” or 2.38” O.D.). Please advise if typical streetlight mounting is required.

Response: *Yes. Typical streetlight mounting of 2-3/8” OD is required.*

17. Exhibit B, Part 2, LUMINAIRES, item L.4.b: Exhibit B, WARRANTY requiring full fixture replacement (which is our company’s standard replacement process) seems to make driver accessibility a non-issue. Would fixtures with the driver protected in a sealed IP66 chamber and tool-less accessible terminal block for installation be accepted?

Response: *No. Given that diodes are expected to maintain L70 for over 100,000 hours (over 20 years) and that the warranty is ten years, we believe that after the end of the warranty period it may be most cost effective to replace drivers than luminaires.*

18. Exhibit B, Part 2, LUMINAIRES, item L.7.a: IP54 is not common among streetlight housings, which are typically UL listed suitable for wet locations. The *optical chambers* are typically IP rated but not the entire housing. Is this the intent of the IP rating language?

Response: *The intent is that the entire luminaire is UL listed for wet locations and that the optical chamber is IP rated to prevent ingress. For the purposes of the specification, IP54 and Wet Label are the same.*

19. Exhibit B, Table A: Streetlight products are designed with an optic scaled as required for different lumen levels. This means CU will be fixed by product type across the full range of lumens, so many products will not meet the changing CU requirements in the table. Photometric layouts will determine which products most efficiently light a given road, anyway. Does this requirement need to be revised?

Response: *See response for Question #1. The CU table should be considered a guideline and the actual performance borne out by the AGI32 calculations will take precedence.*

20. Exhibit B, Table A: Are Cul-de-sac shields required for the full range of products? It would seem unusual to have anything larger than the 5-7.5kLm category on a residential street.

Response: *Cul-de-sac shields are only required for residential cul-de-sacs and therefore for the smaller/lower wattage luminaires, typically under 7.5 KL as you suggest.*

21. Exhibit B, Table A: The BUG specs may not be realistic. Since the B and G are influenced by total lumens, it is likely 30k lumen products will be a G4 or G5.

Response: *Optics are constantly evolving, and G values seem to change the most. WRCOG will consider luminaires with G ratings higher than called for in Exhibit B Table A.*

22. PART 2, PRODUCTS, LUMINAIRES, A, 2 Luminaire shall be specified as a qualified lighting project on the DesignLights Consortium (DLC). **Question**: The word project appears to be a typographic error and should be “product”. Is that correct?

Response: *That is correct.*

23. PART 2, PRODUCTS, LUMINAIRES, C, Luminaire shall meet the “Elevated” requirements. Manufacturer shall indicate on submittal form Table B (Exhibit C). **Question**: What is the technical rationale (i.e. statistical basis or characterization of

surge environment) for using the “Elevated” surge protection level in the intended regions of installation?

Response: *In the case “elevated” surge protection is not recommended, proposers are encouraged to provide alternative submittals for “standard” surge protection.*

24. PART 2, PRODUCTS, LUMINAIRES, J, 2-3 - Allowable 2580 to 2870K per IES LM-79. Allowable -.006 to .006 Duv per IES LM-79 **Question**: It appears that LM-79 is improperly referenced in these items. CCT and Duv tolerances would normally be defined by ANSI C78.377 and verified in LM-79 testing. Should the referenced standard be changed to C78.377?

Response: *Yes, per ANSI C78.377 verified in LM-79 testing.*

25. PART 2, PRODUCTS, LUMINAIRES, L, 2,h-i - Permanently affixed easily-viewable nameplate inside of each luminaire housing containing the manufacturer’s name, manufacturer’s catalog number, date of manufacture (month and year), plant location, input power consumption, driver output current, IEC IP Rating, correlated color temperature (CCT), IES light distribution type, IESNA TM-15 BUG ratings, and serial number **Question**: The requested internal labeling content does no adhere to the ANSI C136.22-2014 defined content. Most Mfgr’s adhere to C136.22. This will require custom labeling to comply. Is that the spec intent?

Response: *WRCOG would prefer specifications listed in the RFQ, however, ANSI C136.22 at a minimum will suffice.*

26. PART 2, PRODUCTS, LUMINAIRES, L, 2,h-i - City approved luminescent name plate meeting American National Standard for Roadway and Area Lighting Equipment-Luminaire Field Identification (ANSI C136.15-2015) shall be permanently affixed on the exterior of the Luminaire to be visible from the ground. In addition, the name plate shall indicate nominal lumen package rounded to the nearest thousand lumens, e.g. 2800 lumens would read as “3KL” and 11200 lumens would read as “11KL”. **Question**: The requested external labeling content does not adhere to the ANSI C136.22-2014 defined content. Most Mfgr’s adhere to C136.22. This will require custom labeling to comply. Is that the spec intent? **Question**: Also, it appears that “luminescent” is a typo and should be “luminaire”. Correct?

Response: *As specified in the RFQ, WRCOG would prefer the exterior name plate indicate nominal lumen packages, but ANSI 136.15 at a minimum will suffice. In addition, “luminescent” is a typo and should be referencing “luminaire” instead.*

27. PART 2, PRODUCTS, LUMINAIRES, L, 3, b - Leveling adaptor to permit at least 15 degrees of correction to level luminaire with respect to normal to photometric nadir (straight down). **Question**: Is the requested leveling range to be interpreted as +/- 7.5

degrees or +- 15 degrees? The requested leveling range is 1.5 to 3X the industry norm of +/- 5 degrees for leveling range with built-in leveling features. In most cases this would require luminaire housing redesigns to accommodate the requested range or a secondary adaptor to support the range. Is secondary adaptor acceptable to accommodate the requested range?

Response: *See response to Question #15.*

28. PART 2, PRODUCTS, LUMINAIRES, L, 7,a - Electric compartment housing must have an ingress protection rating of IP54 or better as described in ANSI C136.25-2013. **Question**: Most US products achieve UL Wet Location rating for the electrical gear compartment. Sometimes this is interpreted as IP54. But testing frequently demonstrated that it not ratable as IP54, but has served as the legacy capability for HID fixtures which have commonly demonstrated 20 year service life for features such as electrical interconnects, terminal blocks, and treated ballasts. Is IP54 required or was the IP54 an attempt to provide and IP equivalent to the UL Wet Location standard?

Response: *See response to #18.*

29. PART 2, PRODUCTS, LUMINAIRES, L ,9, b - Within the water tight part of the housing in a readily accessible location **Question**: The electrical gear compartment would not be considered "water tight" regardless of IP 54 or UL Wet Location rating. Should this be changed to read "electrical gear compartment"?

Response: *See response to #18.*

30. PRODUCT MANUFACTURERS AND APPROVED PRODUCTS, A - Minimum photometric performance of products shall comply with Table A. **Question**: Table A details general photometric performance criteria in the form of CU, TM-15 BUG ratings, and Shielding options for B1 solutions. While the CU value is a useful scree, the selection of a photometric type and the associated CU minimums will depend on application criteria. In order to suggest/provide appropriate HID to LED replacement product, **Can or will representative applications in AGI32 format for the stated flux classes be provided to allow preselection of the best photometric offering and a screen of the CU status of the proposed solution?** Additionally, products that may marginally fail the CU guidance could possibly be better (lower net wattage per square foot of application) in "application CU" versus a solution that "passes" the conventional CU criteria. This based on LPW or other distribution factors. Do you really want the spec to exclude potentially "better" solutions based on a CU criteria or would you be better served creating an "application CU" criteria for the specification?

Response: *See response to Question #1.*

31. EXHIBIT C, Product Submittal Form – Luminaire input power – maintained** **Question**: There is no generally accepted definition or test method for maintained power. The asterisk do not appear to reference anything in the spec. What are the asterisks for?

Response: *The luminaire power in reported in the photometric report will be used. See response to Question #1.*

32. EXHIBIT C, Product Submittal Form – LED drive current – maintained** **Question**: There is no generally accepted definition or test method for maintained LED drive current. The asterisk do not appear to reference anything in the spec. What are the asterisks for?

Response: *See response to Question #31. In lieu of measurement by the testing laboratory, the bidder may submit the input power versus drive current curve of the driver as furnished by its manufacturer.*

33. EXHIBIT C, Product Submittal Form – LED Lumen Maintenance**

Question: The form appears to be asking for LED Lumen Maintenance as a simple percentage. If so, it is necessary to define the desired time interval for the lumen maintenance value. What is the desired time interval? The asterisk do not appear to reference anything in the spec. What are the asterisks for?

Response: *Please see response to Question #14.*

34. EXHIBIT C, Product Submittal Form – Operational Life per LM-80-16 **Question**: LM-80 is a test method and does no define “operational life”. TM-21 is typically used to project lumen maintenance over time. Operational life needs to be defined as some system level performance requirement in terms of lumen maintenance vs time, reliability vs time, or other parameters. What standard or method is used to define operational life for the purposes of this RFQ?

Response: *Bidders to provide the results of the LM-80 test as submitted to DLC. In reviewing proposals, WRCOG’s technical team will determine the “operational life” and LLF of each proposed luminaire on a consistent basis, directly based on LM-80 data and as advised by TM-21 to ensure equitable evaluation of all proposals.*

35. EXHIBIT C, Product Submittal Form – Average Night Time Temperature **Question**: Average Night Time Temperature is a regional operating assumption used to assign LATF factors and adjust lumen depreciation assumptions. This should be supplied by the end user or RFQ issuer. What is or are the desired Average Night Time Temperature values for which the RFQ is requested?

Response: *For general reference, average temperatures within the region are High: 81 F. Low: 53 F.*

36. Section Product Manufacturers and Approved Product, Item D, the RFP states that "WRCOG will provide AGI 32 models to determine best possible performance…" also stated in Required Submittals for each luminaire type defined in table A, E4 Software shall be AGI32 using roadway methods and insofar as possible, on WRCOG standard test designs. **Question**: Can we please get these models for the analysis?-We need these models in AGI32 in order to select the fixtures that best meet the criteria, and move forward with DLC listing.

Response: *See response to Question #1.*

37. On Exhibit B Quality Assurance. B. Product shall be specified as a qualified lighting project on the DLC and for 14. Evaluation Criteria. DLC takes 8 to 12 weeks for the approval process. Will WRCOG allow DLC listing prior to shipment, provided the manufacture certifies DLC on bid date that they will provide full DLC listing for the items bid, prior to shipment? Will WRCOG also extend the bid time to allow for proper analysis of the AGI32 models and product selection can be done or for DLC listing if manufacturer certification is not acceptable?

Response: *See response to Question #13.*

38. Is WRCOG purchasing the material for each City?

Response: *Yes. Purchasing orders will come through WRCOG for each participating jurisdiction.*

39. If WRCOG is not purchasing for the cities, will each city place a separate order for material?

Response: *See response to Question #38.*

40. Will shipping for all cities be at the same time or will purchases be staggered by City?

Response: *Purchases will be staggered by City.*

41. Will WRCOG be selecting product by line item using multiple manufacturers and selecting by price?

Response: *WRCOG's participating jurisdictions will be using Exhibits C, D, and E to support product selection. Pricing is only one factor.*

42. Currently we are only manufacturing 3,000, 4,000 and 5,000k fixtures. Will you accept 3,000 fixtures for this bid?

Response: *See response to Question #11.*

43. Is the Submittal required in hard copy or electronic copy?

Response: *Electronic copy as indicated in Section 2 (Submissions) of this RFQ.*

44. If hard copy how many copies of each? Is it possible to extend the due date beyond Oct 18th as that date is very close to the return of question response on Oct 11th?

Response: *See response to Question #43. Additional Addenda was released extending quotation due date to December 11, 2017.*

45. Under Section 12. Terms and Conditions C. Compensation, can you provide more detail? Generally, compensation is limited to fixture sales. Are there other items that would be negotiated? Please specify.

Response: *Compensation will be limited to fixture pricing, no other items will be negotiated.*

46. Under Exhibit B Section "Required Submittals" E.1.a.i Lamp Lumen Depreciation a .8 LLD is specified. Can a higher LLD be provided if supported by TM-21?

Response: *See response to question #34.*

47. Please specify time criteria for TM-21 calculations? Should we use 50,000 hours?

Response: *See response to Question #34.*

48. Under Exhibit B Section "Required Submittals" L. Luminaire Construction 3. Mounting Provisions b. and c. a 15-degree correction is specified. This will eliminate most manufacturers as it is standard for most fixtures to have a 10-degree correction, ± 5°. Also under c. are the mast arm sizes measured as pipe sizes or O.D.?

Response: *See response to Question #15*

49. Under Exhibit B Section "Required Submittals" L. Luminaire Construction A. Access Door Panel. Aluminum is specified, would polycarbonate be accepted?

Response: *As mentioned in Exhibit B, alternative materials may be considered but shall be submitted for review and approval. It is incumbent upon proposers to illustrate how alternative materials are suitable alternatives.*

50. Under Exhibit B Section "Required Submittals" L. Luminaire Construction 7. Ingress Protection. The electrical compartment is specified as IP54 but also as wet location. Is wet location only acceptable? That is generally industry standard.

Response: *See response to Question #18.*

51. Manufacturer Services A. please enumerate the requirements for the manufacturer to produce lighting calculations. It was our understanding the specific lighting analysis had already been completed by a consultant. This could be a significant financial impact to the project depending on the scope required.

Response: *See instructions for AGI32 calculations. The manufacturer is only required to provide the calculations delineated therein for the 18 model conditions. There will be no further calculations required of the manufacturer.*

52. Is it possible to get a copy of Exhibit D in Excel? The boxes autofill but the model numbers are long so come out very tiny when completed.

Response: *Yes. Exhibit D on WRCOG's website has been updated in Excel format.*

53. In Exhibit B it is requested to provide "Computer-generated point-by-point photometric analysis of maintained photopic light levels." This is to show how our luminaire performs but for that we have to have a scenario or type of road it will be used on, such as:

Scenario A

Replacement of 100W HPS luminaires in local/residential applications with a low pedestrian conflict classification.
Road width - 40'
Pole Mounting Height - 25'
Pole Spacing's - 150' Single side of street.
Mounting Arm - 6'
Pole Set Back from Street - 2'
Light Loss Factor in Calculations - .85
Minimum Required Average Illuminance - .4 fc
Average to Minimum Uniformity - 6 to 1

Scenario B

Replacement of 150W HPS luminaires in collector/commercial applications with a medium pedestrian conflict classification.
Road width - 60'
Pole Mounting Height: - 30'

Pole Spacing's - 175' Staggered opposite sides of street.
Mounting Arm - 8'
Pole Set Back from Street - 3'
Light Loss Factor in Calculations - .85
Minimum Required Average Illuminance - .9 fc
Average to Minimum Uniformity - 4 to 1

Response: *See response to Question #1.*

54. Also in exhibit B under lighting system performance it states "See section 2.1-K below for photocontrol receptacle requirements." This section does not include what type of controls are being sought just the receptacle type. Are lighting controls part of this procurement?

Response: *No.*

55. How many LED manufacturers are bidding this bid? Or is it just the companies that participated in the test bed last year? Will the LED companies that bid have the chance to win some of the application needs rather than all applications?

Response: *As the quotation due date has not yet occurred, it is unknown at this time how many LED manufacturer are bidding on this RFQ. This RFQ is open to any LED manufacturer that have products that meet specifications. It is unknown until product selection occurs, whether one or multiple company will be selected to provide products.*