

# CITY OF YUKON, OK

## FINAL SPECIFICATIONS AND SPECIAL PROVISIONS

### **Main Street (SH-66) LED Roadway Lighting Installation**

Project No. OK334.01



City of Yukon

Canadian County

ISSUE DATE: September 15, 2015

Prepared by:

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APPROVAL SHEET

MAIN STREET (SH-66) LED ROADWAY LIGHTING INSTALLATION

Prepared by:

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Recommended for Approval

\_\_\_\_\_  
City Manager

\_\_\_\_\_  
Public Works Director

## Main Street (SH-66) LED Roadway Lighting Installation

### STANDARD PROVISIONS

#### Project No. OK334.01

These Standard Provisions are included in and are a part of the Design Documents for this project.

1. **Standard Specifications.** The 2009 Oklahoma Standard Specifications for Highway Construction-English shall govern, approved by the U.S. Department of Transportation, Federal Highway Administration, January 4, 2010. The provisions of these Standard Specifications are applicable to and binding upon this project unless and except where specifically superseded by a provision(s) of the Technical Special Provisions for this project. The Technical Special Provisions shall prevail over any conflicting statement in or requirement of these Standard Provisions. Copies of the 2009 Oklahoma Standard Specifications for Highway Construction-English may be obtained from the Oklahoma Department of Transportation Central Office location.
2. **Time of Completion.** Work on this project shall be completed on or before the total contract time of **one-hundred eighty (180) calendar days** counted from the start date specified in the work order. The Contractor must begin work no later than ten (10) calendar days after the start date. The Contractor may not work on Saturdays, Sundays, or Official City of Yukon holidays. The rate of progress shall be such that the whole work will be performed and the premises be cleaned within the time stated herein and in accordance with the Contract, plans, specifications and other pertinent Bidding Documents unless an extension of time be made in the manner herein after specified.

If no start date is specified in the work order, the total contract time will be counted from the date of issuance of the work order.

The total contract time of **one-hundred eighty (180) CALENDAR DAYS** includes time to construct the project, a period of fourteen (14) calendar days to schedule a final inspection and a period of seven (7) calendar days after the final inspection to complete all the punch list items generated during the final inspection.

A final inspection with the Engineer may only be scheduled when the City Inspector concurs with the Contractor that the job is ready for the final inspection. The Contractor shall request a final inspection with the Engineer in writing to the City Inspector via fax, letter or email. No verbal or telephone requests for a final inspection will be accepted. From the date of the Contractor's request for a final inspection, the City Inspector will schedule a final inspection within fourteen (14) calendar days.

The Contractor will complete all items identified on the punch list generated during the final inspection to the satisfaction of the Engineer within seven (7) calendar days after the final inspection date, not to exceed the above referenced total contract time.

Time is of the essence for this project. Liquidated damages will be assessed in accordance local ordinances. The Maintenance Bond will become effective following the acceptance of the project by the City Council.

3. **Extension of Time of Completion.** The contractor shall be entitled to an extension in time only when: 1) The claim for such extension is submitted to the City Manager in writing by the contractor within seven calendar (7) days from and after the time when the alleged cause of delay shall occur; and 2) Then only when such claim is approved by the City Manager and the governing body of the contracting public entity. In adjusting the time for completion of the project, all strikes, lockouts, unusual delays in transportation or any condition over which the contractor has no control unless and except delays by a subcontractor deemed to be within the control of the contractor and any suspensions of activities ordered by the City Manager for causes not the fault of the contractor shall be excluded from the computation of the contract time for the completion of the work.

If the satisfactory execution and completion of the contract should require work or materials in greater amount or quantities than those set forth in the contract, then the contract time may be increased by the City Manager. No allowance shall be made for delays or suspensions of the prosecution of the work due to the fault of the contractor.

4. **Nondiscrimination.** Neither the Contractor nor any subcontractors employed on this project may discriminate against any employee or applicant for employment because of race, religion, creed, sex, color, national origin, ancestry, age or disability as defined by the Americans with Disabilities Act.

5. **Permits or Licenses.** The Contractor must, at his own cost, secure all permits and licenses and pay all fees required by City Ordinance or State Statute and give all notices necessary and incidental to the lawful prosecution of the work.

6. **Laws to be Observed.** The Contractor shall at all times observe and comply with all Federal and State laws and regulations and all City of Yukon Ordinances, Codes and regulations which in any manner affect the conduct of the work and shall observe and shall comply with all orders and decrees which exist at the present or which may be enacted later, of bodies or tribunals having jurisdiction or authority over the work and no plea of misunderstanding or ignorance thereof will be considered.

7. **Safety.** Contractor shall establish and implement safety measures, policies and standards conforming to those required or recommended by governmental and quasi-governmental authorities including, but not limited to, the requirements of the United States Occupational Safety and Health Act.

8. **Amendments and Change Orders.** The provisions of the Contract may be amended or changed only by an amendment or a change order approved by the City Council. As used herein, the terms "amendment" and "change order" shall have the following meanings.

**“Amendment”** shall mean a modification to a construction contract which was Bid on a unit price basis and which modifies the quantity of an item or items based on the unit price stated in the Bid. No amendment shall be effective until it has been approved by the City Council. (Amendments are not subject to the percent of contract cost limits set in the Oklahoma Competitive Bidding Act, 61 O.S. (1991) Section 121.)

**“Change Order”** shall mean a modification of a lump sum contract or a contract bid on a unit price basis where a unit price has not been established for a particular item or items of work. The change order may authorize an addition, deletion or revision in the work or an adjustment of the contract price or the contract time. However, the cumulative amount of

change orders shall not exceed the limit established by State law. No change order shall become effective until it has first been approved by the City Council.

9. **Pre-Work Conference.** The Owner shall hold a pre-work conference. The Contractor or his designee must attend the conference. The Contractor's superintendent and subcontractor(s) may attend. The City Manager or his designee and any consultant for the project will attend for the Owner. The conference will be at a time and place established by the City Manager.

10. **Contractor's Responsibility for the Work.** Until formal written acceptance by the City Council, the work shall be under the charge and care of the Contractor. The Contractor shall take every necessary precaution to prevent injury or damage to the work or any part thereof by the action of the elements or any other cause whatsoever, whether arising from the execution or non-execution of the work. The Contractor shall at his own expense rebuild, repair, restore, and make good all injuries or damage to any portion of the work occasioned by any of the forgoing causes before formal acceptance of the work by the City Council.

11. **Inspection.** The City Manager and his representatives and the consulting architect and his representatives or consulting engineer and his representatives shall at all times have access to the work. Contractor will provide proper and safe access for inspection. The Owner may maintain inspectors on the job site for the purpose of inspecting materials, workmanship and conditions of work and equipment. Contractor shall notify the City Inspector twenty-four (24) hours prior to pouring concrete and at any other times required in the Technical Special Provisions.

In addition to the above inspections, the Contractor shall provide proper and safe access for all inspections required by City of Yukon Ordinances and Technical Codes and any other inspections required by Federal or State laws or regulations.

It is the Contractor's responsibility to arrange for and have conducted any and all inspections required by the City of Yukon's Building, Plumbing, Electrical, Mechanical, Fire, and Zoning Codes and to comply with all the provisions of said Codes.

12. **Testing.** All tests shall be made in accordance with the appropriate specifications. All costs of material testing shall be at the expense of the Contractor.

13. **Payment and Retainage.** Partial payments must be made based on the work completed and/or material stored and inspected in accordance with the Contract. Five percent (5%) of the partial payments will be held as retainage throughout the entire project/contract. Applications for partial payment shall be made upon the City of Yukon standard payment forms and must be properly completed, signed and notarized. Applications for payments must also include the Contractor's invoice and all other supporting detail for which payment is claimed.

14. **Closing a Street.** Streets or lanes of streets in the construction zone may be closed only upon the prior approval of the City Manager or his designee.

15. **Barricades and Warning Signs.** Where work is carried on in, or adjacent to, any street, alley or public place, the Contractor shall, at his own expense, furnish, erect and maintain such barricades, fences, lights, warning signs and danger signals and shall provide such watchmen and take such other precautionary measures for the protection of persons or property and of the work as may be necessary.

In addition, a sufficient number of barricades shall be erected to keep pedestrians and vehicles from entering on or into any work zone(s). From sunset to sunrise, the Contractor shall furnish and maintain at least one light on each barricade. All devices shall be in conformance with the "Manual on Uniform Traffic Devices." The Contractor shall provide an "after hours" phone number to the City Manager and to the Engineer to be used for notification to the Contractor of the need to repair signs, barricades or other warning or control devices. Failure to comply with these requirements may result in the issuance of a Stop Work Order to remain in effect until the deficiencies are corrected. The issuance of a Stop Work Order shall not act to defer or suspend the counting of the calendar days for the project.

16. **Final Cleaning Up.** Upon completion of the work and before acceptance and final payment will be made, the Contractor shall clean and remove from the site of the work surplus and discarded materials, temporary structures, barricades and other warning devices, stumps and portions of trees and debris of any kind. The Contractor shall leave the site or the work in a neat and orderly condition. Waste materials removed from the site of the work shall be disposed of at locations satisfactory to the City Manager and which are in compliance with Federal, State and Local requirements.

17. **Insurance and Indemnity.**

(a) The Contractor shall indemnify, defend and save harmless the City and any participating public trust from any and all losses, expenses, costs, damages, penalties, or any injuries, including death, directly or indirectly resulting from acts or omissions of the Contractor and its agents, employees, and subcontractors and/or from any penalties for violation of any law, ordinance or regulation by the Contractor and its agents, employees and subcontractors. The presence of or inspections by employees or agents of the City and or participating public trust shall not limit, affect, waive, release or extinguish any duty, obligation, or responsibility of the Contractor. The obligations imposed by this paragraph shall not be limited, affected, waived, or extinguished by any obligation to provide insurance or by the provision or procurement of insurance.

(b) During the entire term of the Contract from the approval of the Contract to the final acceptance of the fully completed project by formal action of the City) and for such additional period thereafter as specifically required herein, the Contractor shall provide, pay for, and maintain the following types of insurance:

(i) **Worker's Compensation.** The Contractor must maintain, during the term of the Contract, Worker's Compensation Insurance as prescribed by the laws of the State of Oklahoma, and Employer's Liability Insurance for all of its employees at the project sites. If any work is subcontracted, the Contractor shall require the subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all the subcontractor's employees at the project sites, unless such employees are covered by the insurance purchased by the Contractor. In the event any class of employees engaged in work performed under the Contract or at the project sites are not protected under such insurance heretofore mentioned, the Contractor shall provide or shall cause each subcontractor to provide adequate insurance for the protection of the employees not otherwise protected.

(ii) **Commercial General Liability.** Contractor shall carry a policy of commercial general liability insurance. If the Contractor's Commercial General Liability coverage is written in a "claims-made" form, Contractor shall also provide tail coverage that extends a minimum of two years from the expiration of this Contract.

(iii) **Automobile Liability Insurance.** The Contractor shall maintain insurance coverage as to the ownership, maintenance, and use of all owned, non-owned, leased or hired vehicles.

(c) The Contractor must carry and maintain the required insurance policies and may not be cancelled, fail to be renewed, nor decrease its limits without 30 days written notice to the City and any participating public trust. The Contractor must provide properly executed Certificates of Insurance evidencing insurance coverage as required by the Contract for this project. The Certificates of Insurance must specifically state the project number and description. An authorized representative of the issuance companies listed on the Certificates of Insurance must sign the Certificates. The Contractor must attach to the Certificates of Insurance such documentation as will demonstrate the authority of the insurance agent to sign the Certificates. Additionally, the Contractor must provide a covenant from the insurance agent that the insurance agent will provide to the City and any participating public trust 30 days advanced written notice prior to any cancellation, lapse, reduction, limitation, or non-renewal of any insurance coverage or policy required for this project. The Contract will provide the Certificates of Insurance to the City with its signed Contract and Bonds. The City Manager will not issue Notice to Proceed and the Contractor may not commence work or occupancy of the project sites until the required Certificates of Insurance have been received and verified, however, working days may accrue or be accruing pending presentation of the required insurance certificates and documentation and the effectuation of the required insurance coverage. Certificates of Insurance must be standard industry forms, such as ACCORD, or in the form included in these specifications.

(d) The minimum liability coverage for each liability and each property insurance policy shall not be less than the greater of the following amounts: (i) \$1,000,000; (ii) the cumulative maximum liability limit for the City and each participating public trust under the Governmental Tort Claims Act (51 O.S. §§151 et seq.), or (iii) the minimum amount required by the Contractor's prequalification classification. All liability and property policies as to which the City is not a named insured must, to the extent allowed by law, provide by endorsement or appropriate coverage language to make the City and any participating public trust "additional insureds." The required policies of insurance must be enforceable in Oklahoma and will be construed in accordance with the laws of the State of Oklahoma.

(e) In the event of a reduction in any aggregate insurance coverage or limits below the coverage required by this specification, the Contractor shall take immediate steps to have the full amount of the required insurance coverage reinstated. If at any time the City requests a written statement from the insurance company(s) as to any impairment to the aggregate coverage or limits, the Contractor hereby agrees to promptly authorize and have delivered to the City such statement. The Contractor shall remove or cover any impairment to insurance coverage as soon as known to it. The Contractor authorizes the City to confirm with the Contractor's insurance agents, brokers, surety and insurance carriers all information necessary to confirm or evidence the Contractor's compliance with bonding and insurance requirements. The Contractor's insurance coverage shall be primary to any insurance or self-insurance program carried by the City or any participating public trust.

(f) Any deductibles or self-insured retentions in excess of \$25,000, or any other risk-

management scheme other than a fully insured program of commercial general liability and automobile liability insurance must be declared by the Contractor prior to contract award and must be addressed to the satisfaction of the City and any participating public trust in advance of contract award. At the option of the City and any participating public trust, the Contractor may be required to: (1) reduce or eliminate such deductibles or to establish self-insured retentions with respect to the liability coverage for the City and any participating public trust, or (2) procure and provide a bond or irrevocable letter of credit guaranteeing payment to the City and participating public trust for claims, losses, expenses, and other related costs of investigations, claims administration, and defense expenses not otherwise covered by Contractor's insurance because of deductibles or self-insurance retentions, or (3) provide owner's protection liability coverage with the City and any participating trust as the named insureds, for the commercial general liability requirements, in a combined single-limit bodily injury and property damage amount of One Million Dollars (\$1,000,000.00).

(g) All insurance policies shall be issued by companies licensed and authorized to do business in Oklahoma with an A.M. Best rating of A- VII or better. The Contractor must timely provide to the City certified, true and exact copies of all insurance policies required for this project whenever requested by the City. In addition, Contractor must require each insurance company that issues a certificate of insurance to the City to provide a copy of the policy to the City so the City, on a timely basis, if requested by the City. In addition, each insurer who issues a certificate of insurance to the City is obligated to provide a copy of the policy to the City upon request.

18. **Bonds.** As required by and in accordance with the specifications the successful Bidder shall furnish bonds. The bonds must be submitted on the forms, or photocopies thereof, provided in the specifications. All bonds must be provided by a Surety authorized to do business in the State of Oklahoma. The bonds are Performance Bond, Payment Bond, and Maintenance Bond.

A. **Performance Bond.** A properly executed Performance Bond in favor of the City of Yukon on the form provided in the specifications must be submitted with the Contract. Generally, the Performance Bond shall guarantee the Contractor's full and faithful execution of the work and performance of the Contract and provide for the protection of the City and all property owners against any damage by reason of acts or omissions of the Contractor or the improper execution of the work or the use of inferior materials.

B. **Payment Bond.** A properly executed Payment Bond on the form provided in the specifications must be submitted with the Contract. The Payment Bond shall provide that the Contractor will make payment for all labor, materials and equipment used in the construction of the project. The Payment Bond shall be made in favor of the State of Oklahoma.

C. **Maintenance Bond.** A properly executed Maintenance Bond on the form provided in the specifications must be submitted with the Contract. The Maintenance Bond shall be in favor of the City of Yukon and shall be for a period of one (1) year. The bond for the term of this Contract will be in an amount equal to one hundred percent (100%) of the Contract amount.

19. **Storm Water Construction Activities Permit.** In order for the City to remain in compliance with the Environmental Protection Agency (EPA), Oklahoma Department of Environmental Quality (ODEQ) regulations, and maintain its own NPDES permit, the City must ensure all construction activities within its corporate boundaries are in compliance under the following regulations.

**Environmental Protection Agency**

Code of Federal Regulations (40 CFR, Part 122)

Clean Water Act

**Oklahoma Department of Environmental Quality**

Oklahoma Pollutant Discharge Elimination System Act (OPDES) 27A O.S. 2-6-201

ODEQ General Permit OKR10

**City of Yukon**

Yukon Municipal Code

Construction activities that result in land disturbance of equal to or greater than one (1) acre, or less than one (1) acre if they are part of a larger common plan of development or sale that totals at least one (1) acre must also obtain a permit from ODEQ (form 605-0021) for Storm Water Discharge from Construction Activities.

20. **Construction Staking and Survey.** All horizontal or vertical controls not specifically noted, but required for proper completion of the Work, shall be provided by the Contractor. The Contractor shall furnish staking unless otherwise provided in the Special Provisions.
- A. Construction staking shall consist of furnishing, placing and maintaining construction stakes or marks as necessary to establish lines and grades required for completion of the Work.
  - B. Field control shall be provided by the Engineer prior to the Work commencing. The Contractor shall exercise care in the preservation of previously placed stakes and bench marks and shall have them reset at the Contractor's expense when damaged, lost, displaced or removed. Bridge centerline, horizontal, and vertical control shall be set by the Contractor.
  - C. The Contractor shall use personnel and equipment suitable for all construction staking required. The Contractor shall provide all necessary stakes such as: offset, reference point, slope, pavement, curb line and grading stakes. Stakes for bridges, sewers, water lines, drainage facilities, gutter line, culverts, and other structures shall be provided to ensure correct layout of the Work. Stakes for line and grade shall be adequate to maintain the required tolerances for the Work. The station number and distance from the centerline of construction shall be marked on all grade stakes.
  - D. The Contractor shall notify the Engineer when plan errors require deviations from the specified elevations or horizontal locations.

**TECHNICAL SPECIAL PROVISIONS  
MAIN STREET (SH66) LED ROADWAY LIGHTING INSTALLATION  
PROJECT NO. OK334.01**

These Technical Special Provisions are included in and are a part of the Bidding Documents for this project.

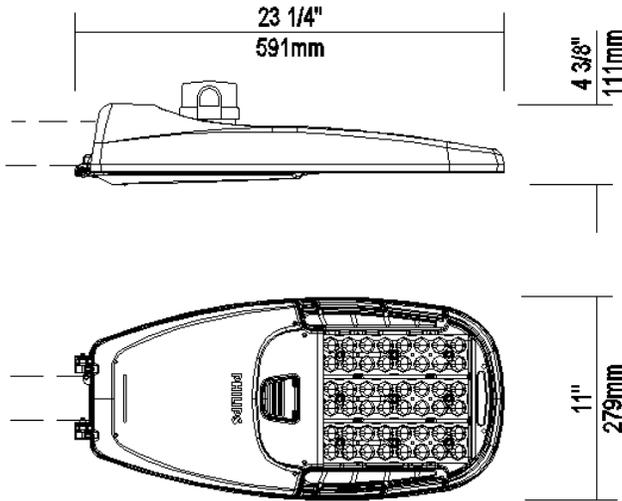
1. SCOPE

This project includes installation of LED roadway lighting along Main Street (SH-66) for approximately 5.5 miles from Richland Road to the eastern city limits approximately ½ mile west of Sara Road. Work includes installation of cobra-head style lighting, as well as decorative tear drop lighting, and all wiring, cable, conduit, and appurtenances.

2. GENERAL

The following specifications for Philips Lumec are to be used for roadway lighting. An approved equal may be considered if a Vendor submits equipment and material specifications and photometric analysis meeting all requirements of the Design Documents and these Technical Specifications at least ten (10) days prior to proposal submission. All LED Lighting shall conform to the Design Documents and these Technical Specifications for this project. The structural design of all poles, arms, poles, and other supports for luminaires, banners, as well as their connections shall be in accordance with the latest edition of the *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*.

3. Decorative Pole and Twin Mast Arm (30' MH Cobrahead)



**EPA: 0.523 sq ft / weight: 12.3 lb (5.6 kg)**  
**Note: 3D image may not represent color or option**

Luminaire **RFM-108W48LED4K-T-R2M-HVU-DMG-RCD-PH9-SP2-BK**

**Description of Components:**

**Housing:** Made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 5 1/2" (140mm) minimum long tenon. Comes with a zinc plated clamp fixed by 2 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. A clearance of 13" (330mm) at the rear is required in order to remove the door. Complete with a bird guard protecting against birds and similar intruders and an ANSI label to identify wattage and source (both included in box).

**Light Engine:** Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**

Electrical components are RoHS compliant, IP66 sealed light engine equipped with Philips Lumileds LUXEON T LEDs.

LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

**Heat Sink:** Built in the housing, designed to ensure high efficacy and superior cooling by natural vertical convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Wide openings enable natural cleaning and removal of dirt and debris. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

**LED Module:** LED type Philips Lumileds LUXEON T. Composed of 48 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

**Optical System:** (R2M), IES type II medium (asymmetrical). Composed of high-performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Dark Sky compliant with 0% uplight and U0 per IESNA TM-15.

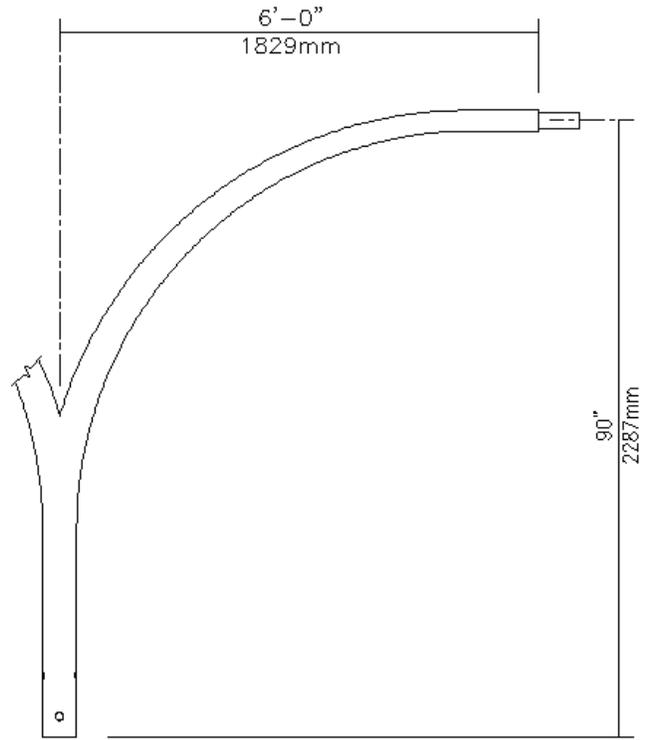
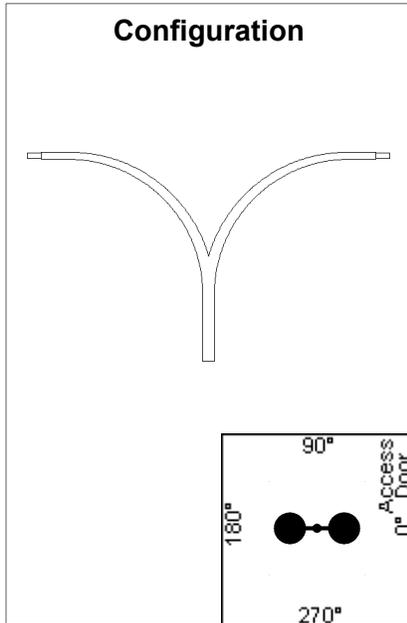
**Driver:** High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto-adjusting universal voltage input from 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. **(DMG)**, Dimming compatible 0 10 volts.

The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

**Driver Options: (DMG) Integrated Feature**, Dimming compatible 0-10 volts. For applicable warranty, certification and operation guide see Philips Lumec dimmable luminaire specification document for unapproved device installed by other. To get document, click on this link: [Specification document](http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips%20Lumec%20dimmable%20luminaire%20specification%20document%20for%20unapproved%20device%20installed%20by%20other.pdf) or go on web site on this address: <http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips Lumec dimmable luminaire specification document for unapproved device installed by other.pdf>

**Luminaire Options: PH9**, shorting cap with an input voltage of up to 480 VAC. Max rated load of 1000W/1800VA. Rated for operation in an ambient temperature of -40°C/-40°F up to +70°C/+158°F. **(RCD) Integrated Feature**, Receptacle with 5 pins enabling dimming, can be used with a twist-lock Starsense or photoelectric cell or a shorting cap. Use of photocell or shorting cap is required to ensure proper illumination. **(SP2)**, Integral surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure with elevated 20kV/20kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

**Luminaire Useful Life:** Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in-situ thermal testing in accordance with UL1598 and UL8750, Philips System Reliability Tool. Philips Advance data and Philips Lumileds LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.



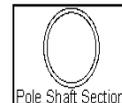
Bracket **DV6-2-BK**

**Description of Components:**

**Tenon:** Arm shall end in an aluminum straight tenon, 2 3/8" x 6" (60mm x 152mm ) outside diameter for luminaire attachment.

**Arm:** Made of aluminum tubing, outside diameter to match top of pole. **Slip-fits 12" (305mm) over the pole or tenon.** Mechanically assembled using two 1/2-13 UNC thru-bolt one at 0 degree and one at 90 degree.

**Bracket Weight:** 66 lbs (30 kg)



**Base & Bolts Information**

**Comes with** 4 steel anchor bolts, 1" X 33" + 3" J Type Bolts, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

- Bolt Circle:  $7 \frac{5}{8}"$  194mm  
11 1/2" (292mm)

- Material:  
Cast Aluminum

- NOTE:  
Bolt Circle Allowed:  
11" to 12"

Pole **USS8050D-23-BK**

**Description of Components:**

**Pole Shaft:** Shall be made from spun aluminum 6063-T4, tempered to T6 after welding, having a base diameter of 8" (203mm) and top diameter of 5" (127mm), wall thickness of 0.250" (6.4mm) welded to both the bottom and top of the anchor plate.

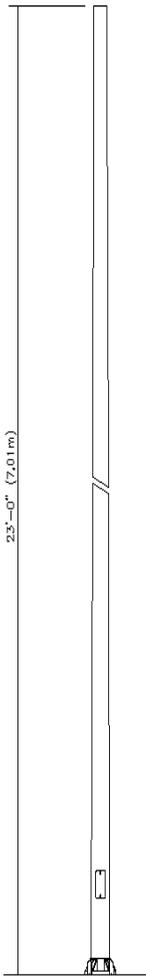
**Maintenance Opening:** The pole shall have a 4" x 8" (102mm x 203mm) reinforced maintenance opening centered 20" (508mm) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a ground lug.

**Nut cover:** Made from cast 356 aluminum, mechanically fastened with stainless steel screws.

**Note:** A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

**IMPORTANT:** Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

**Pole Weight:** 131 lbs (59.5 kg)



**Description of Components:**

**Wiring:** The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a 10Amp time delay fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses.

**Hardware:** All exposed screws shall be stainless steel.

**Finish:** Color to be **black RAL9005 (BK)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with  $\pm 1$  mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 3000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

**LED products manufacturing standard:** The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

**Vibration Resistance:** The RFM meets the **ANSI C136.31**, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications (Tested for 3G over 100 000 cycles by an independent lab).

The RFM meets the **California Test 611, Testing durability of mast arm mounted luminaires**, specifications (a 2 000 000 cycle test by an independent lab).

**Warranty:** Luminaire comes with a warranty of 10 years on product and finish. See <http://www.usa.lighting.philips.com/support/support/warranty> for details.

**Certifications and Compliance:** Complied with good engineering practices of **NESC**. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires. RoadFocus LED Cobrahead luminaires are DesignLights Consortium qualified. Luminaire complies with or exceeds the following ANSI C136 standards: .2, .3, .10, .14, .15, .22, .25, .31, .37, .41.

**Web site information details:** Click on any specific information details you need: / [cULus Certification](#) / [CSA Pole Certification](#) / [Warranty](#)

## LED light engine technical information for RFM

System (LED + driver) rated life = 100,000 hrs<sup>1</sup>

LED Module	Typical delivered lumens	Typical system wattage <sup>2</sup> (W)	Typical current @ 120 V (A)	Typical current @ 208 V (A)	Typical current @ 240 V (A)	Typical current @ 277 V (A)	Typical current @ 347 V (A)	Typical current @ 480 V (A)	LED current (mA)	Luminaire Efficacy Rating (lm/W)	BUG rating
72W32LED4K-T-5	7496	73	0.62	0.36	0.31	0.28	0.21	0.15	700	103	B3-U0-G2
72W32LED4K-T-R2M	8140	73	0.62	0.36	0.31	0.28	0.21	0.15	700	112	B2-U0-G2
72W32LED4K-T-R2S	8330	73	0.62	0.36	0.31	0.28	0.21	0.15	700	114	B2-U0-G1
72W32LED4K-T-R3M	8178	73	0.62	0.36	0.31	0.28	0.21	0.15	700	112	B2-U0-G2
72W32LED4K-T-R3S	8085	73	0.62	0.36	0.31	0.28	0.21	0.15	700	111	B1-U0-G2
108W48LED4K-T-5	11255	106	0.93	0.53	0.46	0.40	0.32	0.23	700	107	B4-U0-G2
108W48LED4K-T-R2M	12222	106	0.93	0.53	0.46	0.40	0.32	0.23	700	115	B2-U0-G2
108W48LED4K-T-R2S	12507	106	0.93	0.53	0.46	0.40	0.32	0.23	700	118	B3-U0-G2
108W48LED4K-T-R3M	12279	106	0.93	0.53	0.46	0.40	0.32	0.23	700	116	B2-U0-G2
108W48LED4K-T-R3S	12140	106	0.93	0.53	0.46	0.40	0.32	0.23	700	115	B2-U0-G2

<sup>1</sup> L70 = 100,000 hrs (at ambient temperature = 25°C).

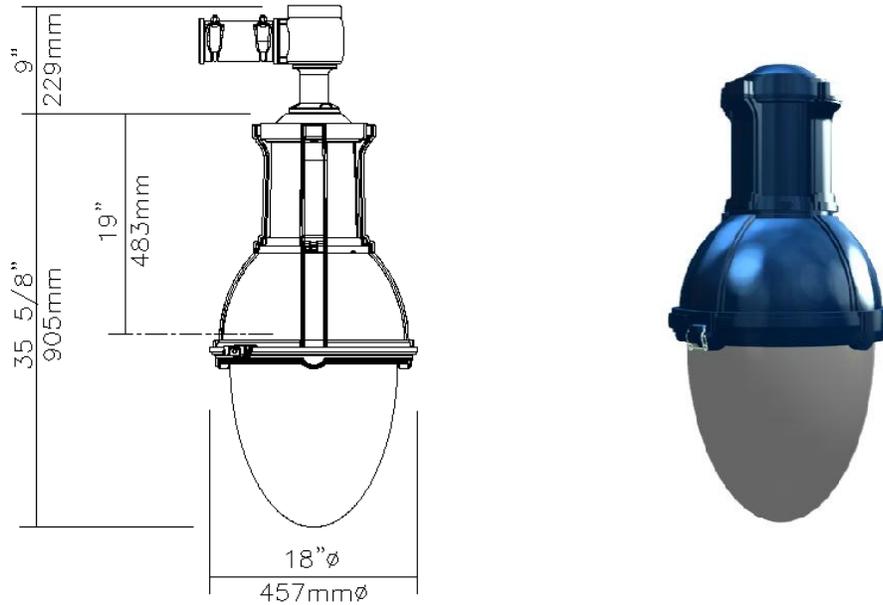
<sup>2</sup> System wattage or total luminaire wattage includes the LED module and the LED driver.

Note : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.

### FAWS multiplier chart

FAWS position	Typical delivered Lumens multiplier	Typical system wattage and typical current
1	0.37	0.29
2	0.55	0.50
3	0.62	0.58
4	0.71	0.69
5	0.77	0.75
6	0.81	0.81
7	0.84	0.87
8	0.94	0.91
9	0.98	0.96
10	1.00	1.00

4. Decorative Pole and Mast Arm/Twin Mast Arm (30' MH Teardrop)



**EPA: 2.08 sq ft / weight: 64 lb (29.1 kg)**  
**Note: 3D image may not represent color or option**

Luminaire **RN30-135W80LED4K-R-GL-LE2R-480-SMB-BK**

**Description of Components:**

**Hood:** Injection die cast A360.1 aluminium dome, mechanically assembled on the luminaire housing.

**Housing:** In a round shape, this housing is made of injection die cast A360.1 aluminium, complete with a weatherproof door giving a tool-free access to the ballast, without disconnection of wiring, mechanically assembled. This suspension system permits a full rotation of the luminaire in 90 degree increments.

**Access-Mechanism:** Injection die cast A360.1 aluminium frame with latch and hinge, complete with cast-in security block for frame's open position. The mechanism shall offer tool-free access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

**Light Engine: LEDgine** composed of 5 main components: **Globe / LED lamp / Optical System / Heat Sink / Driver**

Electrical components are RoHS compliant.

**Heat Sink:** Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

**Globe: (GL),** Made of one-piece seamless injection-molded clear borosilicate glass globe having an inner prismatic surface. Complete with a semi-prismatic house side shield and external glare softening prisms. The globe is mechanically assembled and sealed onto the lower part of the heat sink.

**Lamp: LED Module (Included)**, LED type Philips Lumileds LUXEON R. Composed of 80 high-performance white LEDs. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan based on TM-21 extrapolation to get results after which 50% of LEDs still emits over 70% (L70) of its original lumen output. Use of metal core board ensures greater heat transfer and longer lifespan of the light engine. The LED circuit board is included with a quick disconnect wiring connection for ease of replacement.

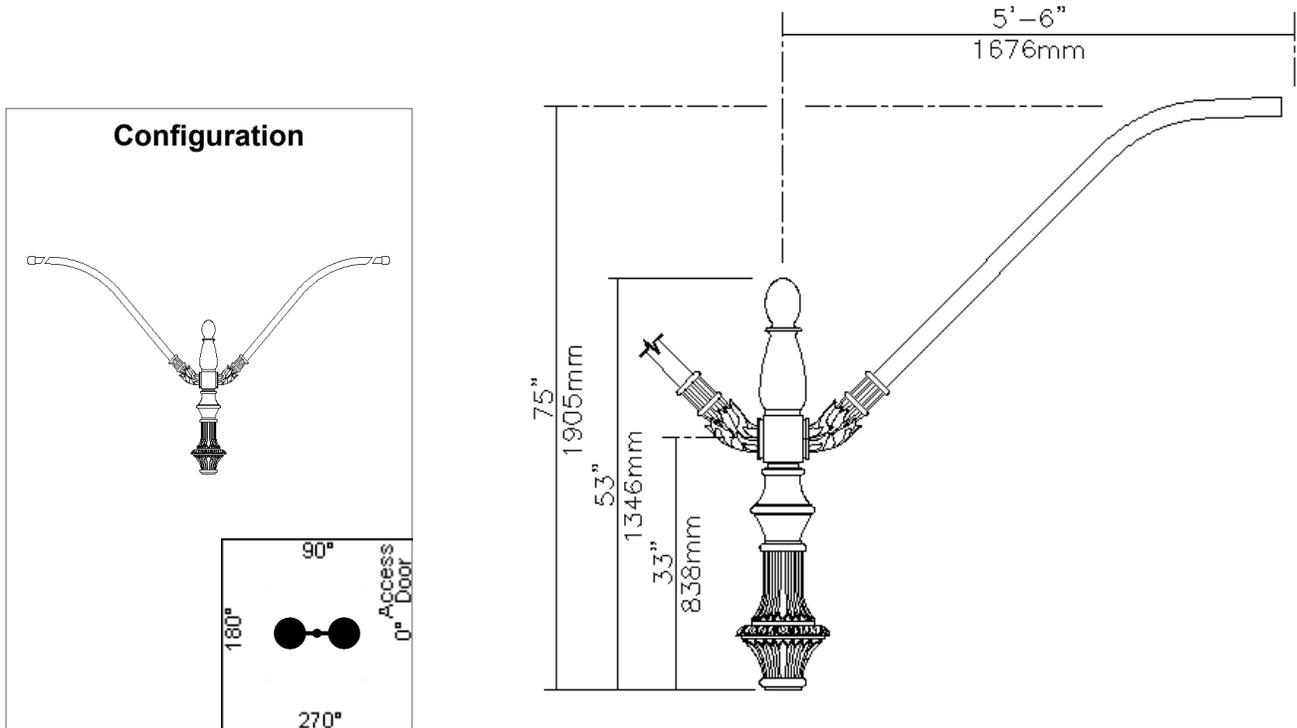
**Optical System:** (LE2R), IES type II (asymmetrical). Composed of high-performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated.

**Driver:** High power factor of 95%. Electronic driver, operating range 50/60 Hz. **Auto-adjusting to a voltage between 347 and 480 volt AC, Class I**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Dry and damp location.

The current supplying the LEDs will be reduced by the driver if the internal driver temperature exceeds 176F(80C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

**Surge Protector:** Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

**Adaptor:** (SMB), Made of cast 356 aluminum, complete with a block connector, mechanically assembled to the bracket. Can be mounted on a 1.66"(42mm) to 2.38"(60mm) outside diameter bracket arm tubing that slip fits 6.5" (165mm) long inside the adaptor, permits an adjustment of  $\pm 5^\circ$ .



Bracket **CJL5.5-2-BK** (Dual Arm)  
 Bracket **CJL-5.5-1-bk** (Single Arm)

**Description of Components:**

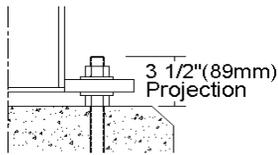
**Arm:** Shall be made from bent steel tubing, 2 3/8" (60mm) outside diameter, welded to the central housing.

**Decorative Element:** Decorative cast 356 aluminum cover, mechanically assembled.

**Central Adaptor:** Made of steel tubing, 3 1/2" (89mm) outside diameter. Mechanically assembled to the pole tenon.

**Bracket Weight:** 69 lbs (31.4 kg)

**Base & Bolts Information**

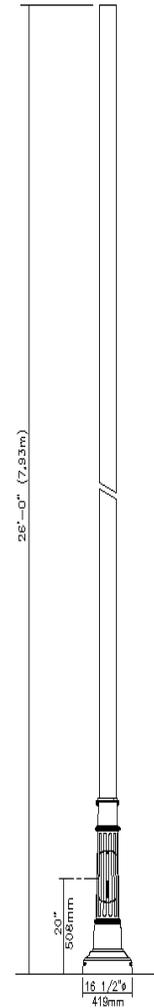
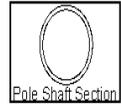
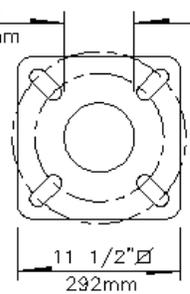


**Comes with** 4 steel anchor bolts, 1" X 33" + 3" J Type Bolts, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

-Bolt Circle:  $\frac{5"}{127\text{mm}}$   
12 1/2" (318mm)

- Thickness:  
1"(25mm)

- NOTE:  
Bolt Circle Allowed:  
8 1/2" to 13"  
216mm to 330mm



Pole **RS856V-26-BK**

**Description of Components:**

**Pole Shaft:** Shall be made from a 5 9/16" (141mm) round high tensile steel tubing, having a 0.250" (6.4mm) wall thickness, welded to both the bottom and top of the anchor plate.

**Maintenance Opening:** The pole shall have a 2" x 4 1/2" (51mm x 114mm) maintenance opening centered 20" (508mm) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a copper ground lug.

**Base Cover:** Two piece round base cover made from cast 356 aluminum, complete with a cast-in access door, mechanically fastened with stainless steel screws.

**Note:** A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

**IMPORTANT:** Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

**Pole Weight:** 364 lbs (165.5 kg)

Miscellaneous
---------------

**Description of Components:**

**Wiring:** Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding the bracket.

**Hardware:** All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

**Finish:** Color to be **black RAL9005 (BK)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with  $\pm 1$  mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

**Surface Finish:** *The above mentioned product has been specified in a smooth finish. We wish to inform you that we cannot guarantee a finish without imperfections (e.g. apparent grinding marks and porosity). We strongly recommend the use of a textured finish which provides better uniformity of surface finish. No return of merchandise showing above mentioned imperfection will be granted.*

**LED products manufacturing standard:** The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

**Quality Control:** The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

**Web site information details:** Click on any specific information details you need:

[Paint finish](#) / [Warranties](#) / [Installation pictures](#) / [ISO 9001-2008 Certification](#) / [ISO 14001-2004 Certification](#) / [CSA Pole Certification](#)

## LED light engine technical information for RN20 RN30 with prismatic globe

LED = Philips Lumileds Luxeon R, CRI = 75, CCT = 4000K (+/- 350K)

System (LED + driver) rated life = 100,000 hrs<sup>1</sup>

Lamp	Typical delivered lumens	Typical system wattage <sup>2</sup> (W)	Typical current @ 120 V (A)	Typical current @ 208 V (A)	Typical current @ 240 V (A)	Typical current @ 277 V (A)	Typical current @ 347 V (A)	Typical current @ 480 V (A)	LED current (mA)	HID equivalent <sup>3</sup>	Luminaire Efficacy Rating (Lm/W)	BUG rating
35W32LED4K-R-LE2R	3898	35	0.29	0.17	0.16	0.15	N/A	N/A	350	70-100W	111.4	B1-U0-G1
35W32LED4K-R-LE3R	3816	35	0.29	0.17	0.16	0.15	N/A	N/A	350	70-100W	109.0	B1-U0-G1
35W32LED4K-R-LE4R	3844	35	0.29	0.17	0.16	0.15	N/A	N/A	350	70-100W	109.8	B1-U0-G1
35W32LED4K-R-LE5R	3867	35	0.29	0.17	0.16	0.15	N/A	N/A	350	70-100W	110.5	B3-U0-G1
55W32LED4K-R-LE2R	5510	52	0.40	0.23	0.21	0.19	N/A	N/A	530	70-100W	106.0	B1-U0-G1
55W32LED4K-R-LE3R	5388	52	0.40	0.23	0.21	0.19	N/A	N/A	530	70-100W	103.6	B2-U0-G2
55W32LED4K-R-LE4R	5435	52	0.40	0.23	0.21	0.19	N/A	N/A	530	70-100W	104.5	B1-U0-G2
55W32LED4K-R-LE5R	5467	52	0.40	0.23	0.21	0.19	N/A	N/A	530	70-100W	105.1	B3-U0-G1
55W48LED4K-R-LE2R	5779	55	0.38	0.22	0.23	0.21	0.17	0.13	350	70-100W	105.1	B2-U0-G2
55W48LED4K-R-LE3R	5588	55	0.38	0.22	0.23	0.21	0.17	0.13	350	70-100W	101.6	B2-U0-G2
55W48LED4K-R-LE4R	5700	55	0.38	0.22	0.23	0.21	0.17	0.13	350	70-100W	103.6	B1-U0-G2
55W48LED4K-R-LE5R	5733	55	0.38	0.22	0.23	0.21	0.17	0.13	350	70-100W	104.2	B3-U0-G1
80W48LED4K-R-LE2R	8198	79	0.63	0.36	0.34	0.31	0.24	0.18	530	100-150W	103.8	B2-U0-G2
80W48LED4K-R-LE3R	7863	79	0.63	0.36	0.34	0.31	0.24	0.18	530	100-150W	99.5	B2-U0-G2
80W48LED4K-R-LE4R	8086	79	0.63	0.36	0.34	0.31	0.24	0.18	530	100-150W	102.4	B2-U0-G2
80W48LED4K-R-LE5R	8133	79	0.63	0.36	0.34	0.31	0.24	0.18	530	100-150W	102.9	B3-U0-G2
70W64LED4K-R-LE2R	7768	71	0.58	0.34	0.32	0.30	0.24	0.20	350	100-150W	109.4	B2-U0-G2
70W64LED4K-R-LE3R	7722	71	0.58	0.34	0.32	0.30	0.24	0.20	350	100-150W	108.8	B2-U0-G2
70W64LED4K-R-LE4R	7821	71	0.58	0.34	0.32	0.30	0.24	0.20	350	100-150W	110.2	B2-U0-G2
70W64LED4K-R-LE5R	7867	71	0.58	0.34	0.32	0.30	0.24	0.20	350	100-150W	110.8	B3-U0-G2
110W64LED4K-R-LE2R	10935	103	0.80	0.46	0.42	0.38	0.34	0.28	530	150-175W	106.2	B3-U0-G3
110W64LED4K-R-LE3R	10798	103	0.80	0.46	0.42	0.38	0.34	0.28	530	150-175W	104.8	B3-U0-G3
110W64LED4K-R-LE4R	10870	103	0.80	0.46	0.42	0.38	0.34	0.28	530	150-175W	105.5	B2-U0-G2
110W64LED4K-R-LE5R	10933	103	0.80	0.46	0.42	0.38	0.34	0.28	530	150-175W	106.1	B4-U0-G2
90W80LED4K-R-LE2R	9677	87	0.78	0.43	0.40	0.34	0.30	0.25	350	100-150W	111.2	B2-U0-G2
90W80LED4K-R-LE3R	9429	87	0.78	0.43	0.40	0.34	0.30	0.25	350	100-150W	108.4	B2-U0-G2
90W80LED4K-R-LE4R	9544	87	0.78	0.43	0.40	0.34	0.30	0.25	350	100-150W	109.7	B2-U0-G2
90W80LED4K-R-LE5R	9600	87	0.78	0.43	0.40	0.34	0.30	0.25	350	100-150W	110.3	B4-U0-G2
135W80LED4K-R-LE2R	13440	128	1.15	0.61	0.58	0.50	0.43	0.35	530	200-250W	105.0	B3-U0-G3
135W80LED4K-R-LE3R	13061	128	1.15	0.61	0.58	0.50	0.43	0.35	530	200-250W	102.0	B3-U0-G3
135W80LED4K-R-LE4R	13256	128	1.15	0.61	0.58	0.50	0.43	0.35	530	200-250W	103.6	B3-U0-G3
135W80LED4K-R-LE5R	13333	128	1.15	0.61	0.58	0.50	0.43	0.35	530	200-250W	104.2	B4-U0-G2

<sup>1</sup> L70 = 100,000 hrs (at ambient temperature = 25°C)

<sup>2</sup> System wattage includes the lamp and the LED driver.

<sup>3</sup> Equivalence should always be confirmed by a photometric layout

**Note** : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.

## **Main Street (SH-66) LED Roadway Lighting Installation**

### **CONTRACT DOCUMENTS**

**Project No. OK334.01**

The following pages provide required forms to be filled out by the Proposer at the time specified on the individual documents. Contract documents for this project include:

1. Contract
2. Performance Bond
3. Payment Bond
4. Maintenance Bond
5. Certificate of Non-Collusion
6. Business Relationship Affidavit
7. Unit Price Proposal

## CONTRACT

The following bond is to be submitted by the successful Proposer, or Proposer's Authorized Agent:

THIS CONTRACT AND AGREEMENT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the City of Yukon, party of the first part, hereinafter termed "Municipality" and \_\_\_\_\_, party of the second part, hereinafter termed "Contractor".

WITNESSETH:

WHEREAS, the City of Yukon has caused to be prepared in accordance with law certain specifications, and other bidding documents for the work hereinafter described and has approved and adopted all of said bidding documents, and has caused Solicitation for Proposals to be given and advertised as required by law, and has received sealed proposals for the furnishing of all labor and materials for:

**Main Street (SH-66) LED Roadway Lighting Installation  
Project No. OK334.01**

as outlined and set out in the bidding documents and in accordance with the terms and provisions of said contract: and,

WHEREAS, Contractor, in response to said Solicitation for Proposals, Submitted to the Municipality in the manner and at the time specified, a sealed proposal in accordance with the terms of this contract; and,

WHEREAS, the Municipality in the manner provided by law, has publicly opened, examined, and canvassed the proposals submitted and has determined and declared the above named Contractor to be the Best Value proposer on the above described project, and has duly awarded this contract to said Contractor for the sum named in the proposal, to wit: \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

NOW, THEREFORE, for and in consideration of the mutual agreements and covenants herein contained, the parties to this contract have agreed and hereby agree as follows:

1. The Contractor shall, in a good and first-class, workmanlike manner, at his own cost and expense, furnish all labor, materials, tools, and equipment required to perform and complete said work in strict accordance with this contract and the plans adopted and approved by the City of Yukon, all of which documents are on file in the Office of the City Manager and are made a part of this contract as fully as if the same were herein set out at length.

2. The Municipality shall make payments to the Contractor in the following manner: On or about the first day of each month, the City Manager, or other appropriate person, will make accurate estimates of the value, based on contract prices of work done and materials incorporated in the work and of materials suitably stored at the site thereof during the preceding calendar month. The Contractor shall furnish to the City Manager, or other appropriate person, such detailed information as he may request to aid him as a guide in the preparation of the monthly estimates.

3. On completion of the work, but prior to the acceptance thereof by the Municipality, it shall be the duty of the City Manager, or other appropriate person, to determine that said work has been completely and fully performed in accordance with said Contract Documents, and upon making such determination, said official shall make his final certificate to the City Council. The Contractor shall furnish proof that all claims and obligations incurred by him in connection with the performance of said work have been fully paid and settled; said information shall be in the form of an affidavit, which shall bear the approval of the surety on the contract bonds for payment of the final estimate to the Contractor; thereupon, the final estimate (including retainages) will be approved and paid and the same shall be in full for all claims of every kind and description said Contractor may have by reason of having entered in to or arising out of this contract.

4. The sworn and notarized statement below must be signed and notarized before this contract will become effective.

**IN WITNESS WHEREOF**, the parties hereto have caused this instrument to be executed in the day and year first above written.

IN WITNESS WHEREOF this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**ATTEST:**

**PRINCIPAL:**

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Company Name  
By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

\_\_\_\_\_  
Phone Fax

**ATTEST:**

**SURETY:**

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

\_\_\_\_\_  
Phone Fax

The Resident Agent of the Surety in Oklahoma, for delivery of notice and service of the process is:

NAME: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_

## PERFORMANCE BOND

The following bond is to be submitted by the successful Proposer, or Proposer's Authorized Agent:

STATE OF OKLAHOMA )

CANADIAN COUNTY )

**KNOW ALL MEN BY THESE PRESENTS:** That (Authorized Agent) \_\_\_\_\_  
whose address is \_\_\_\_\_, hereinafter  
called Principal, and \_\_\_\_\_, a corporation organized and  
existing under the laws of the State of \_\_\_\_\_, and fully licensed to transact business  
in the State of Oklahoma, as Surety, are held and firmly bound unto the City of Yukon, a municipality organized and  
existing under the laws of the State of Oklahoma, hereinafter called "Beneficiary", in the penal sum of  
\_\_\_\_\_ Dollars (\$\_\_\_\_\_), lawful money of the United States,  
to be paid for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors,  
administrators and successors, jointly and severally, firmly by these presents. The penal sum of this Bond shall  
automatically be increased by the amount of any Change Order or Supplemental Agreement, which increases the  
Contract price, but in no event shall a Change Order or Supplemental Agreement, which reduces the Contract  
price, decrease the penal sum of this Bond.

**THE OBLIGATION TO PAY SAME** is conditioned as follows: Whereas, the Principal entered into a certain  
Construction Agreement with the Beneficiary, dated on or about the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
("Agreement") a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment,  
labor, supervision, and other accessories necessary for the construction of:

### **Main Street (SH-66) LED Roadway Lighting Installation, Project No. OK334.01**

in the City of Yukon, Oklahoma, as more particularly described and designated in the above-  
referenced contract such contract being incorporated herein and made a part hereof as fully and to  
the same extent as if written herein word for word.

**NOW, THEREFORE**, if the Principal shall well, truly and faithfully perform and fulfill all of the undertakings,  
covenants, terms, conditions and agreements of said Construction Agreement in accordance with the Plans,  
Specifications and Contract Documents during the original term thereof and any extension thereof which may be  
granted by the Beneficiary, with or without notice to the Surety, and during the life of any guaranty or warranty  
required under this Contract, and shall also well and truly perform and fulfill all the undertakings, covenants,  
terms, conditions and agreements of any and all duly authorized modifications of said Construction Agreement  
that may hereafter be made, notice of which modifications to the Surety being hereby waived; and, if the Principal  
shall repair and/or replace all defects due to faulty materials and workmanship that appear within a period of one  
(1) year from the date of final completion and final acceptance of the Work by City; and, if the Principal shall fully  
indemnify and save harmless the Beneficiary from and against all costs and damages which Beneficiary may suffer  
by reason of failure to so perform herein and shall fully reimburse and repay Beneficiary all outlay and expense  
which the Beneficiary may incur in making good any default or deficiency, then this obligation shall be void;  
otherwise, it shall remain in full force and effect.

**PROVIDED FURTHER**, that if any legal action were filed on this Bond, exclusive venue shall lie in Yukon,  
Oklahoma, Canadian County.

**AND PROVIDED FURTHER**, that the said Surety, for value received, hereby stipulates and agrees that no  
change, extension of time, alteration or addition to the terms of the Construction Agreement or to the Work to be  
performed thereunder or the Plans, Specifications and Drawings, etc., accompanying the same shall in anywise

affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Construction Agreement, or to the Work or to the Specifications.

This Bond is given pursuant to the provisions of Oklahoma State Code, and any other applicable statutes of the State of Oklahoma. The undersigned and designated agent is hereby designated by the Surety herein as the Resident Agent in Oklahoma for service of process to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

ATTEST:

**PRINCIPAL:**

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Company Name  
By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

\_\_\_\_\_  
Phone Fax

ATTEST:

**SURETY:**

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

\_\_\_\_\_  
Phone Fax

The Resident Agent of the Surety in Oklahoma, for delivery of notice and service of the process is:

NAME: \_\_\_\_\_  
STREET ADDRESS: \_\_\_\_\_  
CITY, STATE, ZIP: \_\_\_\_\_

**NOTE:** Date on **Page 1** of Performance Bond must be **same date as the Contract**. Date on **Page 2** of Performance Bond must be **after date of the Contract**. If Resident Agent is not a corporation, give a person's name.

## PAYMENT BOND

The following bond is to be submitted by the Proposer, or Proposer's Authorized Agent:

STATE OF OKLAHOMA     )

CANADIAN COUNTY     )

**KNOW ALL MEN BY THESE PRESENTS:** That (Authorized Agent) \_\_\_\_\_ whose address is \_\_\_\_\_, hereinafter called Principal, and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and fully licensed to transact business in the State of Oklahoma, as Surety, are held and firmly bound unto the City of Yukon, Oklahoma, a municipality organized and existing under the laws of the State of Oklahoma, hereinafter called "Owner", and unto all persons, firms, and corporations who may furnish materials for, or perform labor upon the building or improvements hereinafter referred to in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. The penal sum of this Bond shall automatically be increased by the amount of any Change Order or Supplemental Agreement, which increases the Contract price, but in no event shall a Change Order or Supplemental Agreement, which reduces the Contract price, decrease the penal sum of this Bond.

**THE OBLIGATION TO PAY SAME** is conditioned as follows: Whereas, the Principal entered into a certain Construction Agreement with the Owner, dated on or about the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, ("Agreement") a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment, labor, supervision, and other accessories necessary for the construction of:

### Main Street (SH-66) LED Roadway Lighting Installation, Project No. OK334.01

**NOW THEREFORE**, if the Principal shall well, truly and faithfully perform its duties and make prompt payment to all persons, firms, subcontractors, corporations and claimants supplying labor and/or material in the prosecution of the Work provided for in the above-referenced Agreement and any and all duly authorized modifications of said Agreement that may hereafter be made, notice of which modification to the Surety is hereby expressly waived, then this obligation shall be void; otherwise it shall remain in full force and effect.

**PROVIDED FURTHER**, that if any legal action were filed on this Bond, exclusive venue shall lie Yukon, Oklahoma, Canadian County.

**AND PROVIDED FURTHER**, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, or to the Work performed thereunder, or the Plans, Specifications, Drawings, etc., accompanying the same, shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement, or to the Work to be performed thereunder.

This Bond is given pursuant to the provisions of the Oklahoma State Code, and any other applicable statutes of the State of Oklahoma.

The undersigned and designated agent is hereby designated by the Surety herein as the Resident Agent in Oklahoma for service of process to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ATTEST:

PRINCIPAL:

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

\_\_\_\_\_  
Phone Fax

ATTEST:

SURETY:

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

\_\_\_\_\_  
Phone Fax

The Resident Agent of the Surety in Oklahoma, for delivery of notice and service of the process is:

NAME: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_

**NOTE:** Date on **Page 1** of Payment Bond must be **same date as the Contract**. Date on **Page 2** of Payment Bond must be **after date of the Contract**. If Resident Agent is not a corporation, give a person's name.

**MAINTENANCE BOND**

The following bond is to be submitted by the Proposer, or Proposer's Authorized Agent:

STATE OF OKLAHOMA )

CANADIAN COUNTY )

**KNOW ALL BY THESE PRESENTS:** That \_\_\_\_\_ whose address is \_\_\_\_\_, hereinafter referred to as "Principal," and \_\_\_\_\_, a corporate surety/sureties organized under the laws of the State of \_\_\_\_\_ and fully licensed to transact business in the State of Oklahoma, as Surety, hereinafter referred to as "Surety" (whether one or more), are held and firmly bound unto the City of Yukon, a municipality, hereinafter referred to as "Owner," in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), in lawful money of the United States to be paid to Owner, its successors and assigns, for the payment of which sum well and truly to be made, we bind ourselves, our successors, heirs, executors, administrators and successors and assigns, jointly and severally; and firmly by these presents, the condition of this obligation is such that:

**WHEREAS,** Principal entered into a certain written Contract with the Owner, dated on or about the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, ("Agreement") to furnish all permits, licenses, bonds, insurance, products, materials, equipment, labor, supervision, and other accessories necessary for the construction of:

**Main Street (SH-66) LED Roadway Lighting Installation, Project No. OK334.01**

in the Yukon, Oklahoma as more particularly described and designated in the above-referenced Contract, such contract being incorporated herein and made a part hereof as fully and to the same extent as if written herein word for word:

**WHEREAS,** in said Contract, the Principal binds itself to use first class materials and workmanship and of such kind and quality that for a period of one (1) year from the completion and final acceptance of the improvements by Owner the said improvements shall require no repairs, the necessity for which shall be occasioned by defects in workmanship or materials and during the period of one (1) year following the date of final acceptance of the Work by Owner, Principal binds itself to repair or reconstruct said improvements in whole or in part at any time within said period of time from the date of such notice as the Owner shall determine to be necessary for the preservation of the public health, safety or welfare. If Principal does not repair or reconstruct the improvements within the time period designated, Owner shall be entitled to have said repairs made and charge Principal and/or Surety the cost of same under the terms of this Maintenance Bond.

**NOW, THEREFORE,** if Principal will maintain and keep in good repair the Work herein contracted to be done and performed for a period of one (1) year from the date of final acceptance and do and perform all necessary work and repair any defective condition (it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by Principal) then this obligation shall be void; otherwise it shall remain in full force and effect and Owner shall have and recover from Principal and its Surety damages in the premises as provided in the Plans and Specifications and Contract.

**PROVIDED, however, that Principal hereby holds harmless and indemnifies Owner from and against any claim or liability for personal injury or property damage caused by and occurring during the performance of said maintenance and repair operation.**

**PROVIDED,** further, that if any legal action be filed on this Bond, exclusive venue shall lie in Canadian County, Oklahoma.

**AND PROVIDED FURTHER,** Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the Work performed thereunder, or the Plans, Specifications, Drawings, etc. accompanying same shall in any way affect its obligation on this Bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed thereunder.

The undersigned and designated agent is hereby designated by Surety as the resident agent in Oklahoma for service of process to whom all requisite notice may be delivered and on whom service of process may be had in matters arising out of this suretyship.

**IN WITNESS WHEREOF** this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ATTEST:

**PRINCIPAL:**

\_\_\_\_\_  
Company Name

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Title

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Title

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Address

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Address

\_\_\_\_\_  
City State Zip

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City State Zip

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Phone Fax

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Phone Fax

ATTEST:

**SURETY:**

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

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Title

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Address

\_\_\_\_\_  
City                      State                      Zip

\_\_\_\_\_  
City                      State                      Zip

\_\_\_\_\_  
Phone                      Fax

\_\_\_\_\_  
Phone                      Fax

The Resident Agent of the Surety in Oklahoma, for delivery of notice and service of the process is:

NAME: \_\_\_\_\_  
STREET ADDRESS: \_\_\_\_\_  
CITY, STATE, ZIP: \_\_\_\_\_

**CERTIFICATE OF NON-COLLUSION**

The following certificate is to be submitted by the Proposer, or Proposer's Authorized Agent:

The undersigned of lawful age, being first duly sworn on oath, affirms and says:

1. The undersigned is the Bidder or the duly authorized agent of the Bidder submitting this competitive bid and has the lawful authority to execute this Affidavit and the attached Bid.

For the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and City officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the Bid to which this statement is attached:

2. The undersigned is fully aware of the facts and circumstances surrounding the making of the Bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such Bid; and

- 3. Neither the Bidder nor anyone subject to the Bidder's direction or control has been a party:
  - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding;
  - b. to any collusion with any City official, agent or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract; nor
  - c. in any discussion between bidders and any City official, agent or employee concerning exchange of money or other thing of value for special consideration in the letting of a contract.

4. The undersigned certifies, if awarded this contract, whether competitively bid or not, neither the Bidder nor anyone subject to Bidder's direction or control has paid, given, or donated or agreed to pay, give or donate to any officer or employee of the City any money or other thing of value, either directly or indirectly, in procuring this contract.

***This Bid will not be considered unless this form has been fully completed, signed and certified by the Bidder.***

Certified this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

\_\_\_\_\_  
Name of Individual, Partnership, Limited Liability  
Company, or Corporation herein called Bidder

\_\_\_\_\_  
Signature of Bidder or Bidder's Authorized Agent

\_\_\_\_\_  
Type or print name and title of person who signed above

This Certificate required for Public Improvement Projects by 61 Okla. Stat. Supp. 2008 § 115.

**BUSINESS RELATIONSHIP AFFADAVIT**

This form is to be completed and submitted with the Proposal.

The undersigned as Proposer or Proposer’s Authorized Agent, being of lawful age and being first duly sworn on oath, hereby swears, affirms and states that the undersigned has thoroughly read and understands the provisions and terms of this Business Relationship Affidavit and is fully knowledgeable of Proposer's and its officers’ and directors’ business relationships and associations and hereby affirmatively so states that as a part of this Proposal.

The undersigned as Proposer or Proposer’s Authorized Agent further swears, affirms, and states that the Proposer does not have any partnership, joint venture, or other business relationship presently in effect or which existed within one (1) year prior to the date of this sworn statement and has not had any such relationship with the architect, the engineer, or any other party to this project **except, if any, as stated on the lines below.**

The undersigned as Proposer or Proposer’s Authorized Agent further swears, affirms, and states that no officer or director of the Proposer has a partnership, joint venture, or other business relationship presently in effect and no officer or director of the Proposer has had any such relationship within one (1) year prior to the date of this sworn statement with any officer or director of the architectural or engineering firm or other party to this project **except, if any, as stated on the lines below.**

If Proposer or any of its officers or directors has or within the one (1) year prior to the date of this statement has had any such relationships, the as Proposer or Proposer’s Authorized Agent must state the names of all persons having such business relationships and the positions they hold or held with the Proposer and/or their respective companies or firms **on the lines provided below:**

\_\_\_\_\_

**(THE PROPOSER MUST STATE ANY BUSINESS RELATIONSHIP MEETING THE ABOVE DESCRIPTION ON THE LINES ABOVE, IF NO DISCLOSURE IS MADE ON THE ABOVE LINES THEN PROPOSER WILL BE IRREFUTABLY DEEMED TO HAVE STATED AND SWORN UNDER PENALTY OF LAW THAT PROPOSER AND ITS OFFICERS OR DIRECTORS HAS NO SUCH RELATIONSHIPS.)**

***This Proposal will not be considered unless this form has been fully signed by the Proposer, and notarized, dated and completed by the Notary Public.***

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

The undersigned, as Proposer or Proposer’s Authorized Agent, hereby expressly adopts and affirmatively incorporates herein by reference the above recitation as the sworn statement of the Proposer and the signatory.

\_\_\_\_\_  
Name of Individual, Partnership, Limited Liability  
Company, or Corporation herein called Proposer

\_\_\_\_\_  
Signature of Proposer or Proposer’s Authorized Agent

\_\_\_\_\_  
Type or print name and title of person who signed above

Signed and sworn to or affirmed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
by the above named Proposer or Proposer’s Authorized Agent.

My Commission expires \_\_\_\_\_  
Notary Public

My Commission number \_\_\_\_\_

## UNIT PRICE PROPOSAL

This form is to be completed and submitted with the Proposal.

Additional pricing information including, but not limited to, cost of maintenance, cost of implementation, potential tax deductions and energy rebates, finance options, and financial impact analysis shall be submitted by the Vendor in a format chosen by the Vendor.

### CITY OF YUKON MAIN STREET (SH-66) LED ROADWAY LIGHTING INSTALLATION PROJECT NO. OK334.01

Unit Prices: Bidder hereby guarantees the following unit prices to apply throughout the project for changing work upon written instruction of the Owner.

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>Unit</u>	<u>Item Description</u>	<u>Unit Price</u>	<u>Item Total</u>
1	1	LS	Clearing and Grubbing		
_____ Dollars				\$ _____	\$ _____
(Dollars per unit written)					
2	5	CY	PC Concrete Pavement		
_____ Dollars				\$ _____	\$ _____
(Dollars per unit written)					
3	60	LF	Concrete Curb (8" Barrier – Integral)		
_____ Dollars				\$ _____	\$ _____
(Dollars per unit written)					
4	18	SY	Removal of Concrete Pavement		
_____ Dollars				\$ _____	\$ _____
(Dollars per unit written)					
5	1	LS	Mobilization		
_____ Dollars				\$ _____	\$ _____
(Dollars per unit written)					
6	1	LS	Construction Staking Level II		
_____ Dollars				\$ _____	\$ _____
(Dollars per unit written)					

<b>Item No.</b>	<b>Estimated Quantity</b>	<b>Unit</b>	<b>Item Description</b>	<b>Unit Price</b>	<b>Item Total</b>
7	400	LF	2" Galv. Steel Electrical Conduit Exposed		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
8	13,200	LF	2" PVC SCH. 40 Plastic Conduit Bored		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
9	32,800	LF	2" PVC SCH. 40 Plastic Conduit Trenched		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
10	8	EA	Junction Box (8"x8"x6")		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
11	91	EA	Pull Box (Size I)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
12	73	CY	Structural Concrete		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
13	4,175	LB	Reinforcing Steel		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
14	65	EA	Removal of Light Pole		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>Unit</u>	<u>Item Description</u>	<u>Unit Price</u>	<u>Item Total</u>
15	20	EA	Decorative Pole and Mast Arm (30' M.H. Teardrop)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
16	66	EA	Decorative Pole and Twin Mast Arm (30' M.H. Cobrahead)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
17	39	EA	Decorative Pole and Twin Mast Arm (30' M.H. Teardrop)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
18	132	EA	Roadway Luminaire (Cobrahead)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
19	98	EA	Roadway Luminaire (Teardrop)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
20	6	EA	Service Pole		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
21	23,000	LF	1/C No. 4 Electrical Conductor (Stranded Aluminum)		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____
22	1	LS	Construction Traffic Control		
				_____ Dollars	\$ _____
				(Dollars per unit written)	\$ _____

**TOTAL BASE BID:** \_\_\_\_\_ **and 00/100 Dollars**

**(\$ \_\_\_\_\_)**