



Purchasing Department
140 Stonewall Avenue West, Ste 204
Fayetteville, GA 30214
Phone: 770-305-5420
www.fayettecountyga.gov

November 13, 2019

Subject: Invitation to Bid #1743-B: Sports Lighting

Gentlemen/Ladies:

Fayette County, Georgia is seeking bids from qualified contractors for the design and installation of new field lights at McCurry Park Soccer Fields, in accordance with the information and specifications contained herein.

A pre-bid conference will be held at 10:00am, Wednesday, December 4, 2019, at McCurry Park Soccer Field #21. The address is 130 County Farm Road, Fayetteville, GA 30214. All companies and interested parties are invited and strongly urged to attend. This will be the opportunity to take measurements, pictures, voice all questions, concerns and comments about this Invitation to Bid and have them addressed.

Questions concerning this invitation to bid should be addressed to Ted Crumbley, Buyer & Contract Coordinator in writing via email to tcrumbley@fayettecountyga.gov or fax to (770) 719-5509. Questions will be accepted until 3:00 pm, Tuesday, December 10, 2019.

The Purchasing Department office hours are Monday through Friday 8:00am to 5:00pm excluding holidays. The office telephone number is (770) 305-5420.

Please send or deliver your bid to the following address:

Fayette County Purchasing Department
140 Stonewall Avenue West, Suite 204
Fayetteville, Georgia 30214

Bid Number: 1743-B
Bid Name: Sports Lighting

Your envelope must be sealed, and should show your company's name and address.

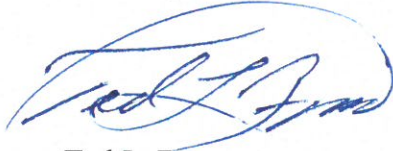
Bids will be received at the above address until 3:00pm, Thursday, December 17, 2019 in the Purchasing Department, Suite 204. Bids will be opened at that time.

Bids must be signed to be considered. Late bids cannot be considered. Faxed or emailed bids cannot be considered.

If you downloaded this Invitation to Bid from the county's website, it will be your responsibility to check the website for any addenda that might be issued for this solicitation. The county cannot not be responsible for a bidder not receiving information provided in any addenda.

Thank you for participating in this solicitation process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ted L. Burgess", enclosed within a blue oval scribble.

Ted L. Burgess
Director of Purchasing

TLB/tc

GENERAL TERMS AND CONDITIONS
ITB #1743-B: SPORTS LIGHTING

1. **Definitions:** The term “contractor” as used herein and elsewhere in these specifications shall be used synonymously with the term “successful bidder.” The term “county” shall mean Fayette County, Georgia.
2. **Bid is Offer to Contract:** Each bid constitutes an offer to become legally bound to a contract with the county, incorporating the invitation to bid and the bidder’s bid. The binding offer includes compliance with all terms, conditions, special conditions, specifications, and requirements stated in the invitation to bid, except to the extent that a bidder takes written exception to such provisions. All such terms, conditions, special conditions, specifications, and requirements will form the basis of the contract. The bidder should take care to answer all questions and provide all requested information, and to note any exceptions in the bid submission. Failure to observe any of the instructions or conditions in this invitation to bid may result in rejection of the bid.
3. **Binding Offer:** Each bid shall constitute a firm offer that is binding for ninety (90) days from the date of the bid opening, unless the bidder takes exception to this provision in writing.
4. **Bidder’s Questions:** The Fayette County Purchasing Department must receive questions about this invitation to bid in writing at least six days before the scheduled bid opening, excluding Saturdays, Sundays, and holidays. The county will post answers to questions and/or other information concerning the invitation to bid in the form of an addendum on the county’s website at http://www.fayettecountyga.gov/purchasing/bids_and_proposals.asp. It is the responsibility of the prospective bidder to check the website for any addenda issued for this invitation to bid.
5. **References:** Include with your bid a list of three (3) jobs that your company has done that are of the same or similar nature to the work described in this invitation to bid, on the form provided. Include all information as requested on the form.
6. **Bid Submission:** Submit your bid, along with any addenda issued by the county, in a sealed opaque envelope with the following information written on the outside of the envelope:
 - a. The bidder’s company name,
 - b. The bid number, which is #1743-B, and
 - c. The “reference” which identifies the bid, which is “**Sports Lighting**”.

Mail or deliver one (1) unbound original bid (paperclip or binder clip acceptable, no staples), signed in ink by a company official authorized to make a legal and binding offer, to:

Fayette County Purchasing Department
140 Stonewall Avenue West, Suite 204
Fayetteville, Georgia 30214

Bid Number: 1743-B
Bid Name: Sports Lighting

You may submit bids in person, by U.S. mail, or by a commercial carrier. Do not submit bids by facsimile, e-mail, or other electronic means. Once submitted, all bids become the property of Fayette County.

7. **Bid Preparation Costs:** The bidder shall bear all costs associated with preparing the bid.
8. **Late Bids:** Bids not received by the time and date of the scheduled bid opening will not be considered, unless the delay is a result of action or inaction by the county.
9. **More than One Bid:** Do not submit alternate bids or options, unless requested or authorized by the county in the Invitation to Bid. If a responder submits more than one bid without being requested or authorized to do so, the county may disqualify the bids from that responder, at the county's option.
10. **Bid Corrections or Withdrawals:** The bidder may correct a mistake, or withdraw a bid, before the bid opening by sending written notification to the Director of Purchasing. Bids may be withdrawn after the bid opening only with written authorization from the Director of Purchasing.
11. **Defects or Irregularities in Bids:** The county reserves the right to waive any defect or irregularity in any bid received. In case of an error in extension of prices or totals in the bid, the unit prices shall govern.
12. **Prices Held Firm:** Prices quoted shall be firm for the period of the contract, unless otherwise specified in the bid. All prices for commodities, supplies, equipment, or other products shall be quoted FOB Destination, Fayette County or job site.
13. **Brand Name:** If items in this invitation for bid have been identified, described or referenced by a brand name or trade name description, such identification is intended to be descriptive, but not restrictive and is to indicate the quality and characteristics of products that may be offered. Alternative products may be considered for award if clearly identified in the bid. Items offered must meet required specifications and must be of a quality which will adequately serve the use and purpose for which intended.
14. **Bidder Substitutions:** Bidders offering substitutions or deviations from specifications stated in the invitation to bid, shall list such substitutions or deviations on the "Exceptions to Specifications" sheet provided, or on a separate sheet to be submitted with the bid. The absence of such list shall indicate that the bidder has taken no exception to the specifications. The evaluation of bids and the determination as to equality and acceptability of products or services offered shall be the responsibility of the county.
15. **Samples:** When the county requires samples as part of the bid and vendor selection process, bidders must provide requested samples within the time allotted, and at no cost to the county unless otherwise specified. Any goods provided under contract shall conform to the sample submitted. The county will return samples only at the bidder's request, and at the bidder's expense, if they are not destroyed by testing.
16. **Non-Collusion:** By responding to this invitation to bid, the bidder represents that the bid is not made in connection with any competing bidder, supplier, or service provider submitting a separate response to this invitation to bid, and is in all respects fair and without collusion or fraud.
17. **Bid Evaluation:** Award will be made to the lowest responsive, responsible bidder, taking into consideration payment terms, vendor qualifications and experience, quality, references, any exceptions listed, and/or other factors deemed relevant in making the award. The county may make such investigation as it deems necessary to determine the ability of the bidder to perform, and the bidder shall furnish to the county all information and data for this purpose as the county may request. The county reserves the right to reject any bid item, any bid, or all bids, and to re-advertise for bids.

18. **Partial Award:** The County reserves the right to make award by field, by group of fields, by any combination of fields, or by lump sum award. The award will be made in the best interest of the county. Bidders may restrict their bids to consideration of a lump sum award or other restriction only by so indicating on the pricing sheet or the “Exceptions to Specifications” sheet included in the invitation to bid. Bidders who do not restrict consideration of their bids in this manner shall be expected to accept any portion of the bid awarded. The county reserves the right to award multiple contracts for the products or services sought by this invitation to bid.
19. **Payment Terms and Discounts:** The County’s standard payment terms are Net 30. Any deviation from standard payment terms must be specified in the resulting contract, and both parties must agree on such deviation. Cash discounts offered will be a consideration in awarding the bid, but only if they give the county at least 15 days from receipt of invoice to pay. For taking discounts, time will be computed from the date of invoice acceptance by the County, or the date a correct invoice is received, whichever is the later date. Payment is deemed made, for the purpose of earning the discount, on the date of the check.
20. **Trade Secrets - Confidentiality:** If any person or entity submits a bid or proposal that contains trade secrets, an affidavit shall be included with the bid or proposal. The affidavit shall declare the specific included information which constitutes trade secrets. Any trade secrets must be either (1) placed in a separate envelope, clearly identified and marked as such, or (2) at a minimum, marked in the affidavit or an attached document explaining exactly where such information is, and otherwise marked, highlighted, or made plainly visible. See O.C.G.A. § 50-18-72 (A)(34).
21. **Trade Secrets – Internal Use:** In submitting a bid, the bidder agrees that the county may reveal any trade secret materials contained in the bid to all county staff and officials involved in the selection process, and to any outside consultant or other third parties who may assist in the selection process. The bidder agrees to hold harmless the county and each of its officers, employees, and agents from all costs, damages, and expenses incurred in connection with refusing to disclose any material which the bidder has designated as a trade secret.
22. **Ethics – Disclosure of Relationships:** Before a proposed contract in excess of \$10,000.00 is recommended for award to the Board of Commissioners or the County Administrator, or before the County renews, extends, or otherwise modifies a contract after it has been awarded, the contractor must disclose certain relationships with any County Commissioner or County Official, or their spouse, mother, father, grandparent, brother, sister, son or daughter related by blood, adoption, or marriage (including in-laws). A relationship that must be reported exists if any of these individuals is a director, officer, partner, or employee, or has a substantial financial interest in the business, as described in Fayette County Ordinance Chapter 2, Article IV, Division 3 (Code of Ethics).

If such relationship exists between your company and any individual mentioned above, relevant information must be presented in the form of a written letter to the Director of Purchasing. You must include the letter with any bid, proposal, or price quote you submit to the Purchasing Department.

In the event that a contractor fails to comply with this requirement, the County will take action as appropriate to the situation, which may include actions up to and including rejection of the bid or offer, cancellation of the contract in question, or debarment or suspension from award of a County contract for a period of up to three years.

23. **Contract Execution & Notice to Proceed:** After the Board of Commissioners makes an award, all required documents are received by the county, and the contract is fully executed with signature of both parties, the county will issue a written Notice to Proceed. The county shall not be liable for payment of any work done or any costs incurred by any bidder prior to the county issuing the Notice to Proceed.
24. **Unavailability of Funds:** This contract will terminate immediately and absolutely at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the county under the contract.
25. **Insurance:** The successful bidder shall procure and maintain the following insurance, to be in effect throughout the term of the contract, in at least the amounts and limits as follows:
- a. **General Liability Insurance:** \$1,000,000 combined single limit per occurrence, including bodily and personal injury, destruction of property, and contractual liability.
 - b. **Automobile Liability Insurance:** \$1,000,000 combined single limit each occurrence, including bodily injury and property damage liability.
 - c. **Worker's Compensation & Employer's Liability Insurance:** Workers Compensation as required by Georgia statute.

Before a contract with the successful bidder is executed, the successful bidder shall provide Certificates of Insurance for all required coverage. The successful offeror can provide the Certificate of Insurance after award of the contract, but must be provided prior to execution of the contract document by both parties. The certificate shall list an additional insured as follows:

Fayette County, Georgia
140 Stonewall Avenue West
Fayetteville, GA 30214

26. **Bid Bond:** You must include a bid bond with your bid, equal to five percent (5%) of the total amount bid. Bid bonds shall be provided by a surety which appears on Georgia's list of approved sureties administered by the State Insurance Commissioner, or the U.S. Treasury's list of approved bond sureties (Circular 570).
27. **Performance and Payment Bonds:** Prior to execution of a contract, the successful bidder shall submit performance and payment bonds each equal to 100 percent of the contract value, provided by a surety which appears on Georgia's list of approved sureties administered by the State Insurance Commissioner, or the U.S. Treasury's list of approved bond sureties (Circular 570).
28. **Liquidated Damages:** Contractor and the county recognize that time is of the essence in performance of the work under this contract, and that the county will suffer financial and other losses if all work is not completed by the agreed-upon date. In lieu of requiring proof of specific losses, the Contractor agrees that liquidated damages of \$ 100.00 per day will be assessed for each day beyond the agreed-upon date.

29. **Unauthorized Performance:** The County will not compensate the contractor for work performed unless the work is authorized under the contract, as initially executed or as amended.
30. **Assignment of Contract:** Assignment of any contract resulting from this invitation to bid will not be authorized, except with express written authorization from the County.
31. **Indemnification:** The contractor shall defend and indemnify the county and all its officers, agents and employees against any suits, actions, or other claims brought on account of any injuries or damages to any person, persons, or property resulting from any negligent act or fault of the contractor, or of any agent, employee, subcontractor or supplier in the performance of any contract which may be awarded. The contractor shall pay any judgment with cost which may be obtained against the county growing out of such injury or damages.
32. **Building Permits:** Work performed for the county requiring building permits by licensed contractors will not have permit fees assessed, although any re-inspection fees for disapproved inspections will be the responsibility of the contractor prior to final inspections and the Certificate of Occupancy or Certificate of Completion being issued.
33. **Severability:** The invalidity of one or more of the phrases, sentences, clauses or sections contained in the contract shall not affect the validity of the remaining portion of the contract. If any provision of the contract is held to be unenforceable, then both parties shall be relieved of all obligations arising under such provision to the extent that the provision is unenforceable. In such case, the contract shall be deemed amended to the extent necessary to make it enforceable while preserving its intent.
34. **Delivery Failures:** If the contractor fails to deliver contracted goods or services within the time specified in the contract, or fails to replace rejected items in a timely manner, the county shall have authority to make open-market purchases of comparable goods or services. The county shall have the right to invoice the contractor for any excess expenses incurred, or deduct such amount from monies owed the contractor. Such purchases shall be deducted from contracted quantities.
35. **Substitution of Contracted Items:** The contractor shall be obligated to deliver products awarded in this contract in accordance with terms and conditions specified herein. If a contractor is unable to deliver the products under the contract, it shall be the contractor's responsibility to obtain prior approval of the ordering agency to deliver an acceptable substitute at the same price quoted in the contractor's original bid. In the event any contractor consistently needs to substitute or refuses to substitute products, the County reserves the right to terminate the contract or invoke the "Delivery Failures" clause stated herein.
36. **Inspection and Acceptance of Deliveries:** The county reserves the right to inspect all goods and products delivered. The county will decide whether to accept or reject items delivered. The inspection shall be conclusive except with respect to latent defects, fraud, or such gross mistakes as shall amount to fraud. Final inspection resulting in acceptance or rejection of the products will be made as soon as practicable, but failure to inspect shall not be construed as a waiver by the county to claim reimbursement or damages for such products which are later found to be in non-conformance with specifications. Should public necessity demand it, the county reserves the right to use or consume articles delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.

37. **Termination for Cause:** The County may terminate the contract for cause by sending written notice to the contractor of the contractor's default in the performance of any term of this agreement. Termination shall be without prejudice to any of the county's rights or remedies by law.
38. **Termination for Convenience:** The County may terminate the contract for its convenience at any time with 10 days' written notice to the contractor. In the event of termination for convenience, the county will pay the contractor for services performed. The county will compensate partially completed performance based upon a signed statement of completion submitted by the contractor, which shall itemize each element of performance completed.
39. **Force Majeure:** Neither party shall be deemed to be in breach of the contract to the extent that performance of its obligations is delayed, restricted, or prevented by reason of any act of God, natural disaster, act of government, or any other act or condition beyond the reasonable control of the party in question.
40. **Governing Law:** This agreement shall be governed in accordance with the laws of the State of Georgia. The parties agree to submit to the jurisdiction in Georgia, and further agree that any cause of action arising under this agreement shall be required to be brought in the appropriate venue in Fayette County, Georgia.

**Fayette County, Georgia
Checklist of Required Documents**

*(Be Sure to Return This Checklist and
the Required Documents in the order listed below)*

ITB #1743-B: SPORTS LIGHTING

Company information – on the form provided _____

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1) _____

Bid Bond _____

Pricing sheet _____

References – on form provided _____

Warranty Information _____

Documentation & Other Submittals (as listed in “I”) _____

List of exceptions, if any – on the form provided _____

Signed Addenda, if any _____

COMPANY NAME: _____

ITB #1743-B: SPORTS LIGHTING

COMPANY INFORMATION

COMPANY

Company Name: _____

Physical Address: _____

Mailing Address (if different): _____

AUTHORIZED REPRESENTATIVE

Signature: _____

Printed or Typed Name: _____

Title: _____

Email Address: _____

Phone Number: _____ Fax Number: _____

PROJECT CONTACT PERSON

Name: _____

Title: _____

Office Number: _____ Cellular Number: _____

Email Address: _____

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of Fayette County, Georgia has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

ITB #1743-B: SPORTS LIGHTING

Name of Project

FAYETTE COUNTY GEORGIA

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 2019 in (city) _____, (state) _____

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 2019.

NOTARY PUBLIC

My Commission Expires:

**PRICING SHEET
ITB #1743-B: SPORTS LIGHTING**

DESCRIPTION	PRICE
McCURRY PARK SOCCER FIELD #21	\$
McCURRY PARK SOCCER FIELD #24	\$
McCURRY PARK SOCCER FIELD #25	\$
TOTAL PRICE BEFORE DISCOUNTS :	\$

STATE DISCOUNT(S) IF AWARDED ALL FIELDS,	\$
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TOTAL PRICE AFTER DISCOUNT:	\$
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NOTES:

1. All applicable charges shall be included in your prices, including but not limited to materials, equipment, installation, labor, and any other amounts. No additional charges will be allowed after the bid opening.
2. All warranty, maintenance, and light-verification testing shall be included in your total bid amount.
3. Fayette County may make award by individual field, by a group of fields or to the overall lowest bidder for all fields, unless the bidder qualifies his quote by specific limitations. Depending on the availability of funds, all fields may not be awarded.

- STATE PAYMENT TERMS, IF DIFFERENT THAN NET 30 DAYS
_____.(As per General Terms and Conditions #19)

- STATE TIME NEEDED TO START PROJECT AFTER NOTICE TO
PROCEED IS RECEIVED _____ DAYS.

- STATE LENGTH OF TIME TO COMPLETE PROJECT _____ DAYS.

COMPANY NAME: _____

**ITB #1743-B: SPORTS LIGHTING
REFERENCES**

Please list three (3) references of current or very recent customers who can verify the quality of service your company provides. Projects of similar size and scope are required.

REFERENCE ONE

Government/Company Name _____

City _____

Contact Person and Title _____

Phone _____ Contract Period _____

Scope of Work _____

REFERENCE TWO

Government/Company Name _____

City _____

Contact Person and Title _____

Phone _____ Contract Period _____

Scope of Work _____

REFERENCE THREE

Government/Company Name _____

City _____

Contact Person and Title _____

Phone _____ Contract Period _____

Scope of Work _____

COMPANY NAME _____

INVITATION TO BID #1743-B: SPORTS LIGHTING

OBJECTIVE

Fayette County Board of Commissioners seeks bids for design and installation of new field lights at the following location, to be completed between January 2, 2020 and August 1, 2020. The county will work with the awarded company concerning the dates of construction.

McCurry Park Soccer Field #21 at 130 County Farm Road in Fayetteville, Georgia
McCurry Park Soccer Field #24 at 130 County Farm Road in Fayetteville, Georgia
McCurry Park Soccer Field #25 at 130 County Farm Road in Fayetteville, Georgia
McCurry Park Soccer Field #21 being approximately 125' x 85'
McCurry Park Soccer Field #24 being approximately 125' x 85'
McCurry Park Soccer Field #25 being approximately 120' x 80'

SCOPE OF SERVICES

The primary goals of this sports lighting project are:

1. **Life Cycle Cost:** The preferred lighting system shall be energy efficient and cost effective to operate. All maintenance cost shall be included in the offered warranty, as described elsewhere in this document. The field(s) shall be proactively monitored to detect fixture outages over a 25 year life cycle. Lights will be controllable via remote on/off controls.
2. **Environmental Light Control:** Lighting should not negatively impact the community, players or spectators with excessive spill light or glare. The LED design should provide better control than a good HID design.
3. **Guaranteed Constant Light Levels:** The lighting system is to be designed so that constant light levels are guaranteed for a period of 25 years, for the safety of players and enjoyment of spectators.

A. WORK & PRODUCT REQUIREMENTS:

- The successful contractor shall supply and install the Musco LED Sports Lighting System Equipment *on existing poles*
- The contractor shall provide and install equipment necessary to provide a complete operational Musco LED Lighting System that is energy efficient and cost effective to operate, does not negatively impact the community with excessive spill light or glare and provides guaranteed specified light levels for 25 years. Warranty shall guarantee specified light levels; include all individual outages; system energy consumption; and maintenance. Warranty shall cover all parts and labor expenses including lift rental if needed. Warranty shall maintain financial reserves to assure fulfillment of the warranty for the full term. Warranty may exclude fuses, vandalism, abuse, unauthorized repairs or alterations, and acts of God/nature (including but not limited to: earthquake, flood, typhoons, hurricanes, or lightning).
- Items to be provided and installed by the contractor include, but shall not be strictly limited to the following:

1. Musco TLC for LED Lighting System Equipment with a Musco Guaranteed 25-year warranty and maintenance program on existing poles.
 2. Electrical wire shall be THWN or other conductors approved for the application in wet locations.
 3. All conduit above grade shall be rigid galvanized steel
 4. New electrical distribution panel board.
 5. All labor and materials necessary to install NEW contactors and controls.
 6. All NEW wiring from above ground to top of poles.
 7. All labor and materials necessary to aim lighting.
 8. All labor and materials necessary to install lamps and reflectors on pole top assembly.
- Light Level Requirements: Musco Sports Lighting/Contractor shall provide computer models guaranteeing light levels on the field over 25 years. Lighting calculations shall be developed and field measurements taken on the grid spacing with the minimum number of grid points specified below.

Area of Lighting	Average Maintained Light Levels	Maximum to Minimum Uniformity Ratio	Grid Points	Grid Spacing
McCurry Park Soccer Field #21	30 footcandles	2.5:1.0	117	30' x 30'
McCurry Park Soccer Field #24	30 footcandles	2.5:1.0	117	30' x 30'
McCurry Park Soccer Field #25	30 footcandles	2.5:1.0	108	30' x 30'

- Due to glare control concerns, a minimum mounting height shall be used to ensure sufficient vertical aiming angles which reduce glare and help ensure the illumination on the playing field is balanced, providing adequate modeling of the ball for optimal playability. Due to the type and level of play expected on the field mounting heights shall be mounted to the top of the existing poles.

B. LIGHTING PERFORMANCE

- Illumination Levels and Design Factors: The illumination levels specified shall be based on guaranteeing light levels for 25 years. Light levels shall not drop below specified targeted lighting levels during the 25 years' operating hours. Appropriate light loss factors shall be applied and submitted for the basis of design.
- Horizontal illumination levels shall be based at any point on a parallel plane 36 inches above the playing surface, unless otherwise indicated and shall not exceed 0.5 foot-candles at any point. Lighting calculations shall be placed on a grid as shown in the specifications.

C. ENVIRONMENTAL LIGHT CONTROL

- a. Spill Light and Glare Control: To minimize impact on adjacent properties, spill light and candela values must not exceed the following at 150' from the field.

	Average	Maximum
Maximum Vertical Footcandles	0.002 fc	0.016 fc
Horizontal Footcandles	0.0004 fc	0.004 fc
Max Candela (per fixture)	145 Cd	609 Cd

- b. Spill Scans: Spill scans must be submitted indicating the amount of horizontal and vertical footcandles along the specified lines. Light levels shall be taken at 30-foot intervals along the boundary line. Readings shall be taken with the meter orientation at both horizontal and aimed towards the most intense bank of lights. Illumination level shall be measured in accordance with the IESNA LM-5-04 after 1 hour warm up.
- c. The first page of the photometric report for all luminaire types proposed showing horizontal and vertical axial candle power shall be provided to demonstrate the capability of achieving the specified performance. Reports shall be certified by a qualified independent testing laboratory with a minimum of five years' experience or by a manufacture's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products. A summer of the horizontal and vertical aiming angles for each luminaire shall be included with the photometric report.

D. LIFE CYCLE COSTS

- Energy Consumption:
 - a. Soccer Field #21 – The max kWh consumption for the soccer field's lighting system shall be 20.7 kWh or less.
 - b. Soccer Field #24 – The max kWh consumption for the soccer field's lighting system shall be 20.7 kWh or less
 - c. Soccer Field #25 – The max kWh consumption for the soccer field's lighting system shall be 20.7 kWh or less

E. PRODUCT

- System Description: Lighting system shall consist of the following:
 - a. LED Lamp Technology Sports Lighting Fixtures. Minimum of 10,000-hour lamp life, instant on/off capabilities.
 - b. Fixtures must have internal optic control to minimize glare for the community, players, and spectators.
 - c. Manufacturer will supply all drivers and supporting electrical equipment. Remote drivers and supporting electrical equipment shall be mounted approximately 10 feet above grade in aluminum enclosures. The enclosures shall be touch-safe and include drivers and fusing with indicator lights on fuses

- to notify when a fuse is to be replaced for each luminaire. Disconnect per circuit for each pole structure will be in the enclosure.
- d. Manufacturer shall provide surge protection at the pole equal to or greater than 40KS for each line to ground (Common Mode) as recommended by IEEE C62.41.2_2002.
 - e. Wire harness complete with an abrasion protection sleeve, strain relief and plug-in connections for fast, trouble-free installation.
 - f. Fixtures must include thermal management and come with a 25-year full coverage warranty including parts and labor.
 - g. Minimum of 5,700K Color Temp and 65+ CRI
 - h. Maximum Fixture Wattage of 1150W to ensure adequate glare control.
 - i. Fixture Operating Temperature Range of -30 Degrees C to 55 Degrees C. Maximum Junction Temperature for the diodes of 80 Degrees C.
 - j. Electronic Driver with an efficiency of 95% or greater. Maximum Starting inrush of 7 amps at 25 degrees C.
 - k. Secondary Wiring: Manufacturer shall supply all necessary wiring to connect the fixture to the driver enclosure. Wiring shall be protected with either a jacketed cord or conduit.
 - l. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaries, wire harnesses, drivers, and other enclosures shall be factory assembled, aimed, wired, and tested.
 - m. Durability: All exposed components shall be constructed of corrosion resistant material and/or coated to help prevent corrosion. All exposed carbon steel shall be hot dip galvanized per ASTM A123. All exposed aluminum shall be powder coated with high performance polyester or anodized. All exterior reflective inserts shall be anodized, coated, and protected from direct environmental exposure to prevent reflective degradation or corrosion. All exposed hardware and fasteners shall be stainless steel of 18-8 grade or better, passivated and coated with aluminum-based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking. Structural fasteners may be carbon steel and galvanized meeting ASTM A153 and ISO/EN 1461 (for hot dipped galvanizing), or ASTM B695 (for mechanical galvanizing). All wiring shall be enclosed within the cross-arms, pole, or electrical enclosure.
 - n. Safety: All system components shall be UL Listed for the appropriate application.
 - o. All luminaires, cross-arm assemblies, etc. shall withstand the wind load capacity as specified by Fayette County and maintain luminaire aiming alignment.
- Electric Power Requirements for the Sports Lighting Equipment:
 - a. Electric Power: 277/480V, 3 Phase
 - b. Maximum total voltage drop: Voltage drop to the remote enclosure shall not exceed three (3) percent of the rated voltage.

F. CONTROL:

- Instant On/Off Capabilities: System shall provide for instant on/off luminaires.
- Lighting Contactor Monitoring Cabinet shall be constructed of NEMA Type 4 aluminum, designed for easy installation with contactors, labeled to match field diagrams and electrical design. Manual off-on-auto selector switches shall be provided.

- The contractor will coordinate remote on/off switch location with the County. The successful contractor shall provide written specs on remote on/off control switches and timers to be installed.
- Remote Monitoring System: System shall monitor lighting performance and notify manufacturer/contractor if individual luminary's outage is detected so that appropriate maintenance can be scheduled. Musco Sports Lighting /contractor shall notify Fayette County of outages within 24 hours, or the next business day. The controller shall determine switch position (manual or auto) and contactor status (open or closed).
- Remote Lighting Control System: System shall include lighting contactors. System shall allow Fayette County and users with a security code to schedule on/off system operation via computer or telephone and up to ten years in advance. Fayette County shall be able to assign various security levels to schedulers by function and/or fields. This function shall allow a range of privileges such as full scheduling capabilities to only having permission to turn lights on by telephone. Musco Sports Lighting /contractor shall provide and maintain a two-way communication link. The system should have trained staff available 24/7 to provide scheduling support and assist with reporting needs. A separate lighting contactor cabinet and control and monitoring system shall be provided for each electrical service.
- On site equipment shall include manual off-on-auto switches to allow for maintenance and shall accept and store schedules. The controller shall accept and store schedules, be protected against power outages/memory loss and shall reboot once power is regained and execute any commands that would have occurred during outage.
- The contractor shall provide a computer based database of actual field usage and provide reports by facility and user group.
- All lighting equipment shall be UL listed as individual components.
- All poles, fixtures and distribution panels shall be grounded according to National Electrical Code Recommendations.
- All structures shall be equipped with lightning protection meeting standards established by NFPA 780. Each structure shall have a ground rod of not less than 5/8" in diameter and not less than 10' in length. An 8' ground rod is permissible, provided that the ground rod extends vertically into the ground a minimum of 10'. The ground rods shall be connected to the structure by a copper main down conductor with a minimum size of #2 for poles with less than 75' mounting height and 2/0 for poles with more than 75' mounting height.
- The lighting circuits shall be designed to provide within +/- 3% of the nominal voltage to the line side of the disconnect switch or breaker in the remote electrical enclosure.
- Each pole shall have an individual circuit run to it from the main service entrance panel. Common poles shall have individual circuits to each group of lights designated to different playing areas.
- All system components shall be UL Listed for appropriate application.

G. ELECTRICAL DESIGN:

- All electrical work shall conform to the current edition of the National Electric Code.
- Equipment and material furnished under this section shall be new, unused, and shall be manufactured to the following standards:
 - I.E.E.E. – Institute of Electrical & Electronic Engineers
 - A.N.S.I. – American National Standards Institute
 - U.L. – Underwriters Laboratories, Inc.
 - I.C.E.A. – Insulated Conductor Engineers Association
- The electrical service shall be rated at least 12% of calculated KA load. Panel boards shall be rated for service entrance, NEMA 3R and each shall include a main breaker. All branch breakers shall be bolt types.
- Electrical service shall include heavy-duty lighting contactors, switches and timers.
- The pole and the luminaries shall be designed, such that all wiring remains underground before entering the base of the pole and that no wiring shall be exposed to sun or weather as it transitions through the pole and to the ballast and on to each lamp.
- Each pole location shall have a dedicated circuit and contactor.
- All equipment being installed **shall be new**.
- All conduits above grade shall be rigid galvanized steel. Electrical metallic tubing shall not be used at any location. Conduits shall be U.L. listed.
- Electrical switch gear shall be housed on a frame constructed from 3” galvanized angle iron with hardware that is either stainless steel or hot dipped galvanized.
- The electrical contractor shall coordinate the transformer and switch gear locations with the local Power Company and the County before any equipment is installed.
- The electrical contractor shall be a licensed contractor and shall be responsible for providing electrical calculations and fault current calculations including maximum available fault current to be listed on service, feeder, and branch equipment.
- The electrical contractor shall provide a detailed panel schedule and list calculated loads.
- The electrical contractor shall be responsible for labeling all equipment to code and provide manufacturers installation instructions for all equipment.
- Building Permits: Work performed for the county requiring building permits by licensed contractors will not have permit fees assessed, although any re-inspection fees for disapproved inspections will be the responsibility of the contractor prior to final inspections and the Certificate of Occupancy or Certificate of Completion being issued.

H. WARRANTY AND ACCOUNTABILITY:

- Safety: A UL listing for all electrical components from its connection to the feeder conductors, to its completion at the lamp socket including all connections. This listing shall be based upon UL testing and evaluation of the compatibility of the enclosures and the components for use in combination in this application in addition to the individual components being UL Listed or recognized.
- Sports Lighting Structure shall meet National Electrical Code.
- Performance Warranty: Musco Sports Lighting/Contractor shall guarantee in writing that all light performance criteria shall conform to the submitted photometric data as required by these specifications. Any field deviation corrections shall be the responsibility of the successful contractor including additional field aiming costs, installation of additional luminaries, and/or other corrective measures.
- Musco Sports Lighting warranty, maintenance and monitoring program shall be provided with your bid. The warranty shall also include all preventative and spot maintenance, including parts and labor for 25 years, from the date the system is powered up and turned over to Fayette County. Warranty shall guarantee specified light levels; include all individual outages; system energy consumption; and maintenance. Warranty shall cover all parts and labor expenses including lift rental if needed. Warranty shall maintain financial reserves to assure fulfillment of the warranty for the full term. Musco Sports Lighting/Contractor shall provide group lamp replacement warranty information with your proposal. Musco Sports Lighting/Contractor shall provide lighting performance monitoring warranty information with your bid.
- Inspection and verification: The contractors will grid the field in accordance with the project approved computer model submittals. A Fayette County representative will be in attendance when the contractor field measures and documents the on-field illumination levels and calibrate uniformity ratios in accordance with this specification. Off-site spill and glare light levels will be measured in accordance with Musco Sports Lighting approved extended computer models submittals. All light level measurements shall meet the approved initial light level computer model submittals. If in the opinion of Fayette County the actual performance levels including foot-candles, uniformity ratios and maximum kilowatt consumptions are not in conformance with the requirements of the performance specifications and submitted information, the contractor shall be liable to any or all of the following:
 1. The contractor shall at his expense provide and install any necessary additional fixtures to meet the minimum lighting standards. The contractor shall also either replace the existing poles to meet any new wind load (EPA) requirements caused by the additional light fixtures being installed or verify by certification by a licensed structural engineer that the existing poles will withstand the additional wind load.
 2. The contractor shall minimize Fayette County's additional long-term fixture maintenance and energy consumption costs created by the additional fixtures by reimbursing Fayette County an agreed upon amount for each additional fixture required.
 3. The contractor shall remove the entire unacceptable lighting system and install a new lighting system to meet the specifications.
- All testing will be done with the entire facility illuminated. The lighting sensing surface of the light meter is to be held 36 inches above the playing surface with the sensing surface horizontal

to the ground so that it detects light coming downward to the sensing surface from all directions around the ball field.

- **A Fayette County representative shall be present during testing.**
- The light meter utilized for the verification of the lighting performance shall be provided by the Fayette County representative and/or Musco Sports Lighting. The meter used for verification shall be of high accuracy and certified within the previous 12 months. Acceptable light meters are those manufactured by Cooke, Gossen and Minolta or approved equal.
- For final approval of the project, the contractor shall provide a final report from the test results that shall provide the following items:
 - (1) Identification of numbers and location of the test stations that shall agree with the description provided in specifications.
 - (2) Actual horizontal foot-candle readings taken at each test station.
 - (3) Actual maximum foot-candle readings taken at each spill/glare test station.
 - (4) Number of hours of operation and number of system starts.
- Final testing shall be done in the first 100 hours of operation. Although there may be differences from expected results to actual results on the field, there will not be an allowance of +/- 10% of predicted mean in accordance with IESNA RP-6-01. Actual field reading must meet or exceed the initial values given in the specification.
- Testing shall also be done a maximum of every 5 years after installation or at the request of the Parks and Recreation Director to verify light levels are being maintained.

I. DOCUMENTATION & OTHER SUBMITTAL REQUIREMENTS:

- Computer generated scans showing the initial and guaranteed light levels.
- Light level, uniformity, and fixture alignment guarantee from Musco Sports Lighting, including the manufacturer's remedy to deficiencies. Guarantees provided by a Musco Sports Lighting's representative will not be accepted in lieu of the manufacturer's guarantee.
- Written spill and glare control from Musco Sports Lighting for the lighting system.
- Aiming diagram or report showing vertical aiming angles of each fixture for the field layout.
- Written specifications on remote control switches and timers to be installed.
- Drawings that indicate dimensioned pole locations and the number of luminaries per pole.
- A certified engineer, independent of manufacturer, shall verify and stamp wind load test of luminaries' assembly to meet or exceed structural strength. Please note, EPA test does not constitute misalignment verification.
- Written warranty from Musco Sports Lighting covering entire structure.
- Written warranty from contractor for contractor's work.
- Written maintenance and monitoring program.
- Written energy consumption from Musco Sports Lighting for the lighting system.

- Written 25-Year Life Cycle Cost from the Musco Sports Lighting for the lighting system. Calculations shall be equal to # of fixtures x .07 kWh rate x 350 annual hours x 25 years. Calculations should include such things as costs for energy consumption, re-lamping, maintenance, and energy controls.
- Written remote on/off control operation information for the lighting system.
- **Upon completion of the project**, the successful contractor shall provide a final report from the test results that shall provide the following items:
 - Identification of numbers and location of the test stations that shall agree with the description provided in specs.
 - Actual horizontal foot-candle readings taken at each test station.
 - Actual maximum foot-candle readings taken at each spill/glare test station.
 - Number of hours of operation and number of system starts.

J. OTHER REQUIREMENTS:

- Electrical service to the soccer fields will be 277/480V, 3 Phase. If old transformers power adjacent fields or buildings, it should remain.
- All existing underground wire will remain underground.
- The successful contractor shall repair **all** damage to walking trails, landscaping, fields, irrigation, scoreboard wires, phone lines, power lines or any park features during the installation process. All existing asphalt torn up by the successful contractor shall be repaired with asphalt or concrete. **All cuts shall be direct and smooth cuts.** All grass disturbed areas on the outside of the playing field shall be smoothed to existing ground surface and must be seeded with Winter Blend and then straw placed over seed. Seed and straw must meet county requirements. Inside playing field shall be smoothed to existing ground surface and installed with Tiftway 419 Sod. It is highly suggested contractor take photos of all preexisting conditions around or within the vicinity of their work and staging areas. All photos should be submitted to the County prior to mobilizing to the project site.
- The successful contractor shall coordinate the location of remote control lighting switches with Fayette County prior to installation.
- The successful contractor shall be responsible for keeping job site clean and orderly. All excess material shall be removed from site and disposed of by the successful contractor upon completion each work day. Barricades and signage shall be used in an effort to keep the general public from entering the work area.
- Fayette County is a smoke-free, tobacco free, and vape free County. Therefore, these items are prohibited on any county owned property.
- The successful contractor shall locate all utilities.
- The successful contractor shall obtain all necessary permits to perform the work and arrange for inspection by authorities having jurisdiction. The successful contractor shall pay all necessary fees.

- The successful contractor shall coordinate all work with county before any installation begins.
- Work hours shall be between 8:00 a.m. and 5:00 p.m. Monday – Friday. Any modifications to those hours must be in writing by the successful contractor and accepted by Fayette County.
- Work shall be coordinated with and inspected by Fayette County. Each stage of the installation process must be inspected by Fayette County prior to proceeding to the next stage of installation. The contractor shall provide a list of the various installation stages to Fayette County prior to any installation.
- It shall be the responsibility of the contractor to measure fields to confirm actual sizes. All designs submitted must include pole coordinates.