

District Five of Lexington and Richland Counties

Invitation for Bid

Solicitation #	2024-022
Date Issued	March 01, 2024
Procurement Official	Lauren Bové
Phone	(803) 476-8182
E-Mail Address	D5bids@lexrich5.org

DESCRIPTION	Lighting for Athletic Fields		
	The Term "	Offer" Means Your "Bid" or "Pro	oposal"
SUBMIT OFFER BY		March 26, 2024 @ 11:00 am	
QUESTIONS & SUBST BE RECEIVED BY	ITUTION REQUESTS MUST	March 15, 2024 @ 12:00 pm	Electronically to <u>D5bids@lexrich5.org</u>
NUMBER OF COPIES 7	TO BE SUBMITTED	One (1)	

Offers must be submitted in a sealed package. Solicitation number & Opening Date must appear on package exterior.

SUBMIT YOUR SEALED OFFER TO:

District Five of Lexington and Richland Counties
Purchasing Office
1020 Dutch Fork Road
Irmo, SC 29063

CONFERENCE TYPE: Non-Mandatory Pre-Bid Conference	LOCATION: Irmo High School Practice Field
DATE & TIME : March 13, 2024 @ 10:00 AM	(behind Bus Transportation Lot/Offices) 6708 St. Andrews Rd., Columbia, SC 29212
As appropriate, see "Conferences - Pre-Bid/Proposal" & "Site Visit" provisions	

AWARD &	The award, this solicitation, and any amendments will be posted at the following web address:
	https://www.lexrich5.org/departments/office-of-finance/purchasing/solicitations-and-awards

You must submit a signed copy of this form with Your Offer. By submitting a bid or proposal, You agree to be bound by the terms of the			
Solicitation. You agree to hold Your Offer open for a minimum of sixty (60) calendar days after the Opening Date.			
NAME OF OFFEROR (Full legal name of business submitting	the offer)	OFFEROR'S TYPE OF ENTITY: (Check one) ☐ Sole Proprietorship	
AUTHORIZED SIGNATURE		Partnership Corporation (tax-exempt)	
(Person signing must be authorized to submit a binding offer to enter in	to a contract on behalf of	Corporate entity (not tax-exempt)	
Offeror named above.)		Government entity (federal, state,	
TITLE (Business title of person signing a	bove)	or local) Other	
PRINTED NAME (Printed name of person signing above)	DATE SIGNED	(See "Signing Your Offer" provision.)	
Instructions regarding Offeror's name: Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror above. The entity named as the Offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, <i>i.e.</i> , a separate corporation, partnership, sole proprietorship, etc.			
STATE OF INCORPORATION	TAXPAYER IDENTIFICATION	ON NO.	
(If Offeror is a corporation, identify the state of Incorporation.)			

COVER PAGE

PAGE TWO (Return Page Two with Your Offer)

				RESS (Address to we e sent.) (See "Notice		ment and contract related		
				Area Code -	Number - Exte	nsion	Facsimile	
						E-Ma	ail Address	
sent.)	oment" clause	·	ress to which pay	yments will be	ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders" and "Contract Documents" clauses)			
					Order E-Mail Ad	ldress:		
			ome Office Add otice Address	ress (check only one)		ss same as Home Of ss same as Notice A		only one)
	acknowledge		AMENDMENT f amendments by	S: y indicating amendn	nent number and i	ts date of issue. (See	e "Amendments	to Solicitation"
Amend ment No.	Amendmen Date	t Issue	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date
DISCOU PROMPT		10 Cale	endar Days (%)	20 Calendar	Days (%)	30 Calendar	Days (%)	Calendar Days (%)
PAYMENT (See "Discount for Prompt Payment" clause)		_	_	_				
preference in Section . ALL TI MADE HEFEE CERTIF	PREFERENCES - A NOTICE TO VENDORS (SEP. 2009): On June 16, 2009, the South Carolina General Assembly rewrote the law governing preferences available to in-state vendors, vendors using in-state subcontractors, and vendors selling in-state or US end products. This law appears in Section 11-35-1524 of the South Carolina Code of Laws. A summary of the new preferences is available at www.procurement.sc.gov/preferences. ALL THE PREFERENCES MUST BE CLAIMED AND ARE APPLIED BY LINE ITEM, REGARDLESS OF WHETHER AWARD IS MADE BY ITEM OR LOT. VENDORS ARE CAUTIONED TO CAREFULLY REVIEW THE STATUTE BEFORE CLAIMING ANY PREFERENCES. THE REQUIREMENTS TO QUALIFY HAVE CHANGED. IF YOU REQUEST A PREFERENCE, YOU ARE CERTIFYING THAT YOUR OFFER QUALIFIES FOR THE PREFERENCE YOU'VE CLAIMED. IMPROPERLY REQUESTING A PREFERENCE CAN HAVE SERIOUS CONSEQUENCES. [11-35-1524(E)(4)&(6)] PREFERENCES DO NOT APPLY							
in the spa Resident	PREFERENCES - ADDRESS AND PHONE OF IN-STATE OFFICE: Please provide the address and phone number for your in-state office in the space provided below. An in-state office is necessary to claim either the Resident Vendor Preference (11-35-1524(C)(1)(i)&(ii)) or the Resident Contractor Preference (11-35-1524(C)(1)(iii)). Accordingly, you must provide this information to qualify for the preference. An in-state office is not required, but can be beneficial, if you are claiming the Resident Subcontractor Preference (11-35-1524(D)).							
☐ In-State Office Address same as Home Office Address ☐ In-State Office Address same as Notice Address (check only or				e)	PREFE	RENCES DO N	JOT APPLY	

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I. SCOPE OF SOLICITATION

School District Five of Lexington and Richland Counties is seeking offers from qualified sources for the installation of athletic field lights at Irmo High School (6671 St. Andrews Rd., Columbia, SC 29212) and Dutch Fork High School (1400 Old Tamah Rd. Irmo, SC 29063).

A non-mandatory pre-bid conference will be held on March 13, 2024 at 10:00 am @ Irmo High School, located at 6708 St. Andrews Rd., Columbia, SC 29212. If you are unable to attend the pre-bid conference, bidders are encouraged to inspect the site and conditions prior to bidding. Bidders are required to check in at the main office at the school.

ACQUIRE SERVICES & SUPPLIES/EQUIPMENT: The purpose of this solicitation is to acquire services and supplies or equipment complying with the enclosed description and/or specifications and conditions

II. INSTRUCTIONS TO OFFERORS – A. GENERAL INSTRUCTIONS

DEFINITIONS, CAPITALIZATION, AND HEADINGS: CLAUSE HEADINGS USED IN THIS SOLICITATION ARE FOR CONVENIENCE ONLY AND SHALL NOT BE USED TO CONSTRUE MEANING OR INTENT. EVEN IF NOT CAPITALIZED, THE FOLLOWING DEFINITIONS ARE APPLICABLE TO ALL PARTS OF THE SOLICITATION, UNLESS EXPRESSLLY PROVIDED OTHERWISE.

AMENDMENT means a document issued to supplement the original solicitation document.

BOARD means the Board of Trustees of District Five of Lexington and Richland Counties.

BUSINESS means any corporation, partnership, individual, sole proprietorship, joint stock company, joint venture, or any other legal entity.

CHANGE ORDER means any written alteration in specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of any contract accomplished by mutual agreement of the parties to the contract

CONTRACT means all types of District Five of Lexington and Richland Counties' agreements, regardless of what they may be called, for the procurement or disposal of supplies, services, equipment or construction.

CONTRACT MODIFICATION means a written order signed by the Procurement Officer, directing the contractor to make changes which the clause of the contract TITLED "Changes, "if included herein, authorizes the Procurement Coordinator to order without the consent of the contractor.

CONTRACTOR means the Offeror receiving an award as a result of this solicitation.

COVER PAGE means the top page of the original solicitation on which the solicitation is identified by number. Offerors are cautioned that Amendments may modify information provided on the Cover Page.

DISTRICT means District Five of Lexington and Richland Counties.

OFFER means the bid, quote or proposal submitted in response to this solicitation. The terms Bid and Proposal are

used interchangeably with the term Offer.

OFFEROR means the single legal entity submitting the offer. The term Bidder is used interchangeably with the term Offeror. See bidding provisions entitled Signing Your Offer and Bid/Proposal As Offer To Contract.

PAGE TWO means the second page of the original solicitation, which is labeled Page Two.

PROCUREMENT OFFICER means the person, or his successor, identified as such on either the cover page, an amendment, or an award notice.

YOU and YOUR means Offeror.

SOLICITATION means this document, including all its parts, attachments, and any Amendments.

SUBCONTRACTOR means any person you contract with to perform or provide any part of the work.

WORK means all labor, materials, equipment, services, or property of any type, provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract.

AMENDMENTS TO SOLICITATION: (a) The Solicitation may be amended at any time prior to opening. All bidders requesting the bid package will be sent copies of all amendments. (b) Offerors shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date in the space provided for this purpose on Page Two (3) by letter, or (4) by submitting a bid that indicates in some way that the bidder received the amendment. (c) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

AUTHORIZED AGENT: All authority regarding this procurement is vested solely with the responsible Procurement Officer. Unless specifically delegated in writing, the Procurement Officer is the only government official authorized to bind the government with regard to this procurement or the resulting contract.

AWARD NOTIFICATION: Notice regarding any award, cancellation of award, or extension of award will be posted at the location specified on the Cover Page. If the contract resulting from this Solicitation has a total or potential value in excess of one hundred thousand dollars, in addition to the posted notice, notice of intended award will be sent to all Offerors responding to the Solicitation. Any award resulting from this Solicitation will not be effective until the seventh business day after such notice is given. When only one response is received, the notice of intended award and the seven-day delay of award may be waived.

BID/PROPOSAL AS OFFER TO CONTRACT: By submitting Your Bid or Proposal, You are offering to enter into a contract with District Five of Lexington and Richland Counties. Without further action by either party, a binding contract shall result upon final award. Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror on the Cover Page. An Offer may be submitted by only one legal entity; "joint bids" are not allowed.

BID ACCEPTANCE PERIOD: In order to withdraw Your Offer after the minimum period specified on the Cover Page, You must notify the Procurement Officer in writing.

BID IN ENGLISH and DOLLARS: Offers submitted in response to this solicitation shall be in the English language and in US dollars, unless otherwise permitted by the Solicitation.

CERTIFICATE OF INDEPENDENT PRICE DETERMINATION: GIVING FALSE, MISLEADING, OR INCOMPLETE INFORMATION ON THIS CERTIFICATION MAY RENDER YOU SUBJECT TO PROSECUTION UNDER SECTION 16-9-10 OF THE SOUTH CAROLINA CODE OF LAWS AND OTHER APPLICABLE LAWS.

- (a) By submitting an offer, the Offeror certifies that:
 - (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other Offeror or competitor relating to:
 - (i) Those prices;
 - (ii) The intention to submit an offer; or
 - (iii) The methods or factors used to calculate the prices offered.
 - (2) The prices in this offer have not been and will not be knowingly disclosed by the Offeror, directly or indirectly, to any other Offeror or competitor before bid opening (in the case of a sealed bid

- solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
- (3) No attempt has been made or will be made by the Offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- (b) Each signature on the offer is considered to be a certification by the signatory that the signatory:
 - (1) Is the person in the Offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; or
 - (2)(i) Has been authorized, in writing, to act as agent for the Offeror's principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification [As used in this subdivision (b)(2)(i), the term "principals" means the person(s) in the Offeror's organization responsible for determining the prices offered in this bid or proposal].
 - (ii) As an authorized agent, does certify that the principals referenced in subdivision (b)(2)(i) of this certification have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; and
 - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification.
- (c) If the Offeror deletes or modifies paragraph (a)(2) of this certification, the Offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS:

(a)

- (1) By submitting an Offer, Offeror certifies, to the best of its knowledge and belief, that-
 - (i) Offeror and/or any of its Principals
 - (A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
 - (B) Have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and
 - (C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.
 - (ii) Offeror has not, within a three-year period preceding this offer, had one or more contracts terminated for default by any public (Federal, state, or local) entity.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (b) Offeror shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) If Offeror is unable to certify the representations stated in paragraphs (a)(1), Offer must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Offeror's responsibility. Failure of the Offeror to furnish additional information as requested by the Procurement Officer may render the Offeror non-responsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the District, the

Procurement Officer may terminate the contract resulting from this solicitation for default.

Check for federal and state disbarments at www.sam.gov and http://procurement.sc.gov/legal/legal-suspend-debar.

CODE OF LAWS AVAILABLE: The District's Procurement Code is available at: www.lexrich5.org.

DISCLOSURE OF CONFLICTS OF INTEREST OR UNFAIR COMPETITIVE ADVANTAGE: You warrant and represent that your offer identifies and explains any unfair competitive advantage you may have in competing for the proposed contract and any actual or potential conflicts of interest that may arise from your participation in this competition or your receipt of an award. The two underlying principles are (a) preventing the existence of conflicting roles that might bias a contractor's judgment, and (b) preventing an unfair competitive advantage. If you have an unfair competitive advantage or a conflict of interest, the District may withhold award. Before withholding award on these grounds, an Offeror will be notified of the concerns and provided a reasonable opportunity to respond. Efforts to avoid or mitigate such concerns, including restrictions on future activities, may be considered. Without limiting the foregoing, you represent that your offer identifies any services that relate to either this solicitation or the work and that has already been performed by you, a proposed subcontractor, or an affiliated business of either.

DEADLINE FOR SUBMISSION OF OFFER: Any offer received after the Procurement Officer of the District or their designee has declared that the time set for opening has arrived, shall be rejected unless the offer has been delivered to the designated District office or mailroom as instructed on the Cover page prior to the bid opening.

DISTRICT OFFICE CLOSINGS: If an emergency or unanticipated event interrupts normal processes so that offers cannot be received at the District as designated for receipt of bids by the exact time specified in the solicitation, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal district processes resume. In lieu of an automatic extension, an Amendment may be issued to reschedule the bid opening. If district offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an Amendment will be issued to reschedule the conference. Useful information may be available at: http://www.lexrich5.org

DRUG FREE WORK PLACE CERTIFICATION: By submitting an Offer, Contractor certifies that, if awarded a contract, Contractor will comply with all applicable provisions of The Drug-free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.

DUTY TO INQUIRE: Offeror, by submitting an Offer, represents that it has read and understands the Solicitation and that its Offer is made in compliance with the Solicitation. Offerors are expected to examine the Solicitation thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements in the Solicitation. Failure to do so will be at the Offeror's risk. All ambiguities, discrepancies, errors, omissions, or conflicting statements in the Solicitation shall be interpreted to require the better quality or greater quantity of work and/or materials, unless otherwise directed by amendment. Offeror assumes responsibility for any patent ambiguity in the Solicitation that Offeror does not bring to the District's attention. See clause entitled "Questions from Offerors."

ETHICS CERTIFICATE: By submitting an offer, the offeror certifies that the offeror has and will comply with, and has not, and will not, induce a person to violate Title 8, Chapter 13 of the South Carolina Code of Laws, as amended (ethics act). The following statutes require special attention: Section 8-13-700, regarding use of official position for financial gain; Section 8-13-705, regarding gifts to influence action of public official; Section 8-13-720, regarding offering money for advice or assistance of public official; Sections 8-13-755 and 8-13-760, regarding restrictions on employment by former public official; Section 8-13-775, prohibiting public official with economic interests from acting on contracts; Section 8-13-790, regarding recovery of kickbacks; Section 8-13-1150, regarding statements to be filed by consultants; and Section 8-13-1342, regarding restrictions on contributions by contractor to candidate who participated in awarding of contract. The district may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision. If contractor participates, directly or indirectly, in the evaluation or award of public contracts, including without limitation, change orders or task orders regarding a public contract, contractor shall, if required by law to file such a statement, provide the statement required by Section 8-13-150 to the procurement officer at the same time the law requires the statement to be filed.

OMIT TAXES FROM PRICE: Do not include any sales or use taxes in your price that the District may be required to pay.

OPEN TRADE REPRESENTATION: By submitting an Offer, Offeror represents that Offeror is not currently engaged in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code Section 11-35-5300.

PROTESTS: If you are aggrieved in connection with the solicitation or award of the contract, you may be entitled to protest, but only as provided in Section 11-35-4210. To protest a solicitation, you must submit a protest within fifteen days of the date the applicable solicitation document is issued. To protest an award, you must (i) submit notice of your intent to protest within seven business days of the date the award notice is posted, and (ii) submit your actual protest within fifteen days of the date the award notice is posted. Days are calculated as provided in Section 11-35-310(13). Both protests and notices of intent to protest must be in writing and must be received by the appropriate Chief Procurement Officer within the time provided. See clause entitled "Protest- CPO". The grounds of the protest and the relief requested must be set forth with enough particularity to give notice of the issues to be decided. [02-2A085-2]

PROHIBITED COMMUNICATIONS AND DONATIONS: Violation of these restrictions may result in disqualification of your offer, suspension or debarment, and may constitute a violation of law. (a) During the period between publication of the solicitation and final award, you must not communicate, directly or indirectly, with the with District or its employees, agents or officials regarding any aspect of this procurement unless otherwise approved in writing by the Procurement (b) You are advised to familiarize yourself with Regulation 19-445.2165, which restricts donation to a governmental entity with whom you have or seek to have a contract. You represent that your offer discloses any gifts made, directly or through an intermediary, by you or your named subcontractors to or for the benefit of the District during the period beginning eighteen months prior to the Opening Date.

PUBLIC OPENING: Offers will be publicly opened at the date/time and at the location identified on the Cover Page, or last Amendment, whichever is applicable.

QUESTIONS FROM OFFERORS:

(a) Any prospective Offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing. Questions regarding the original solicitation or any amendment must be received by the Procurement Officer no later than five (5) days prior to opening unless an earlier date is stated on the Cover Page. Label any communication regarding your questions with the name of the procurement officer, and the solicitation's title and number. Oral explanations or instructions will not be binding. Any information given a prospective Offeror concerning a solicitation will be furnished promptly to all other prospective Offerors as an Amendment to the solicitation, if that information is necessary for submitting offers or if the lack of it would be prejudicial to other prospective Offerors. We will not identify you in our answer to your question. (b) The District seeks to permit maximum practicable competition. Offerors are urged to advise the Procurement Officer -- as soon as possible -- regarding any aspect of this procurement, including any aspect of the Solicitation, that unnecessarily or inappropriately limits full and open competition.

Email is the preferred method for submitting with "Questions: Solicitation # as the subject of the email." Questions must be submitted in an easily copied format such as Word.

Email: <u>D5bids@lexrich5.org</u>

Questions may also be submitted to the address listed on the Cover Page of this document or faxed to (803) 476-8138.

REJECTION/CANCELLATION: The District may cancel this solicitation in whole or in part. The District may reject any or all proposals in whole or in part.

RESPONSIVENESS/IMPROPER OFFERS: (a) Bid as Specified. Offers for supplies or services other than those specified will not be considered unless authorized by the Solicitation.

(b) Multiple Offers. Offerors may submit more than one Offer, provided that each Offer has significant differences other than price. Each separate Offer must satisfy all Solicitation requirements. If this solicitation is an Invitation for Bids, each separate offer must be submitted as a separate document. If this solicitation is a Request for Proposals,

multiple offers may be submitted as one document, provided that you clearly differentiate between each offer and you submit a separate cost proposal for each offer, if applicable.

- (c) Responsiveness. Any Offer which fails to conform to the material requirements of the Solicitation may be rejected as nonresponsive. Offers which impose conditions that modify material requirements of the Solicitation may be rejected. If a fixed price is required, an Offer will be rejected if the total possible cost to the District cannot be determined. Offerors will not be given an opportunity to correct any material nonconformity. Any deficiency resulting from a minor informality may be cured or waived at the sole discretion of the Procurement Officer.
- (d) Price Reasonableness: Any offer may be rejected if the Procurement Officer determines in writing that it is unreasonable as to price.
- (e) Unbalanced Bidding. The district may reject an Offer as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the District even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

SIGNING YOUR OFFER: Every Offer must be signed by an individual with actual authority to bind the Offer. (a) If the Offeror is an individual, the Offer must be signed by that individual. If the Offeror is an individual doing business as a firm, the Offer must be submitted in the firm name, signed by the individual, and state that the individual is doing business as a firm. (b) If the Offeror is a partnership, the Offer must be submitted in the partnership name, followed by the words by its Partner, and signed by a general partner. (c) If the Offeror is a corporation, the Offer must be submitted in the corporate name, followed by the signature and title of the person authorized to sign. (d) An Offer may be submitted by a joint venturer involving any combination of individuals, partnerships, or corporations. If the Offeror is a joint venture, the Offer must be submitted in the name of the Joint Venture and signed by every participant in the joint venture in the manner prescribed in paragraphs (a) through (c) above for each type of participant. (e) If an Offer is signed by an agent, other than as stated in subparagraphs (a) through (d) above, the Offer must state that is has been signed by an Agent. Upon request, Offeror must provide proof of the agent's authorization to bind the principal.

SUBMITTING CONFIDENTIAL INFORMATION: For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Offeror contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged and confidential, as that phrase is used in Section 11-35-410. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Offeror contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "PROTECTED" every page, or portion thereof, that Offeror contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other Mandatory for all solicitations. Table of Clauses (SEP 2017) 12 Clause # Text Guidance on Use text. Do not mark your entire response (bid, proposal, quote, etc.) as confidential, trade secret, or protected. If your response, or any part thereof, is improperly marked as confidential or trade secret or protected, the District may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation or request, Offeror (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, and documents submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, and (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the State will detrimentally rely on Offeror's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, Offeror agrees to defend, indemnify and hold harmless the District, its officers and employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from withholding information by the District, that Offeror marked as "confidential" or "trade secret" or "PROTECTED". (All references to S.C. Code of Laws.)

SUBMITTING A PAPER OFFER OR MODIFICATION: (a) All prices and notations should be printed in ink or typewritten. Errors should be crossed out, corrections entered and initialed by the person signing the bid. Do not modify the solicitation document itself (including bid schedule). (b) (1) All copies of the offer or modification, and any other documents required to be submitted with the offer shall be enclosed in a sealed, opaque envelope or package. (2) Address to the Office of Procurement Services as specified in the Solicitation (3) The envelope or package must show the time and date specified for opening, the solicitation number, and the name and address of the bidder. If the offer or modification is sent by mail or special delivery service (UPS, Federal Express, etc.), the outermost envelope or wrapper must be labeled "OFFER ENCLOSED" on the face thereof. (c) If you are responding to more than one solicitation, submit each offer in a separate envelope or package. (d) Submit the number of copies indicated on the Cover Page. (e) Facsimile or e-mail offers, modifications, or withdrawals, will not be considered unless authorized by the Solicitation.

TAXPAYER IDENTIFICATION NUMBER: (a) If Offeror is owned or controlled by a common parent as defined in paragraph (b) of this provision, Offeror shall submit with its Offer the name and TIN of common parent.

- (b) Definitions: "Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the Offeror is a member. "Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the Offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.
- (c) If Offeror does not have a TIN, Offeror shall indicate if either a TIN has been applied for or a TIN is not required. If a TIN is not required, indicate whether (i) Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States; (ii) Offeror is an agency or instrumentality of a state or local government; (iii) Offeror is an agency or instrumentality of a foreign government; or (iv) Offeror is an agency or instrumentality of the Federal Government.

VENDOR REGISTRATION: Offerors who have not provided products/services to the District in the past or within the past three years should complete a W-9 and submit it with your offer.

WITHDRAWAL OR CORRECTION OF OFFER: Offers may be withdrawn by written notice received at any time before the exact time set for opening. If the Solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for opening. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid. The withdrawal and correction of Offers is governed by S.C. Code Section 11-35-1520 and Regulation 19-445.2085.

II. INSTRUCTIONS TO OFFERORS – B. SPECIAL INSTRUCTIONS

BID BOND: Your offer must include either a bid bond issued by a surety or sureties licensed in South Carolina or a certified check. The amount of surety shall be five per cent (5%) of the total bid amount. This bid bond penalty may be expressed in terms of a percentage of the bid price or may be expressed in dollars and cents. If a certified check is submitted in lieu of a bid bond, it must be made payable to the Using Governmental Unit.

BID SUBMITTAL: All bidding documents must be submitted in a sealed envelope. Do not include more than one bid per envelope. The face of the envelope shall contain the bid title, the bid number, and the date and time of bid opening. Bids not submitted on the bid form will be subject to rejection. The district assumes no responsibility for unmarked or improperly marked envelopes.

BACKGROUND CHECKS: The vendor and all representatives of the vendor must have an acceptable background check to enter school property. At a minimum, the Bidder shall obtain a complete South Carolina statewide criminal background investigation for all individuals and employees performing work or services for Bidder or any other entities such as subcontractors, sub-sub-contractors, and consultants who will perform work or a service on this project. In the event that the individual being investigated is from out of state, the criminal background investigation shall be broadened to include their home state, as well as the state of South Carolina as outlined above. The company providing such information must be recognized by local law enforcement agency as qualified to do so. In addition,

the Bidder shall check employees against the National Database of Registered Sex Offenders. Any individual that is registered as a sex offender will not be permitted on school property. All costs associated with these criminal background checks are the responsibility of the bidder. The District reserves the right to request a copy of SLED checks on any representatives of the Vendor who will be on District property. The District reserves the right to deny access to any employee, contractor of person caused to be present on District property by the vendor/contractor. Removal of employees on this basis shall not disrupt the project schedule or cost.

CLARIFICATION: Pursuant to Section 11-35-1520(8), the Procurement Officer may elect to communicate with you after opening for the purpose of clarifying either your offer or the requirements of the solicitation. Such communications may be conducted only with Offerors who have submitted an offer which obviously conforms in all material aspects to the solicitation. Clarification of an offer must be documented in writing and included with the offer. Clarifications may not be used to revise an offer or the solicitation.

CONFERENCE – PRE- BID/PROPOSAL:

Non-Mandatory Pre-Bid/Proposal Conference Date and Time: January 30, 2024 @ 10 AM Location of Pre-Bid/Proposal Conference: Irmo High School, 6671 St. Andrews Rd., Cola, SC 29212.

Due to the importance of all offerors having a clear understanding of the specifications and requirements of this solicitation, a conference of potential offerors will be held on the date specified on the cover page. Bring a copy of the solicitation with you. Any changes resulting from this conference will be noted in a written amendment to the solicitation. Your failure to attend will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the District. The District assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available at the conference. Nor does the District assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

DESCRIPTIVE LITERATURE – LABELLING: Include offeror's name on the cover of any specifications or descriptive literature submitted with your offer.

PREFERENCES - A NOTICE TO VENDORS: On June 16, 2009, the South Carolina General Assembly rewrote the law governing preferences available to in-state vendors, vendors using in-state subcontractors, and vendors selling in-state or US end products. This law appears in Section 11-35-1524 of the South Carolina Code of Laws. A summary of the new preferences is available at www.procurement.sc.gov/preferences. ALL THE PREFERENCES MUST BE CLAIMED AND ARE APPLIED BY LINE ITEM, REGARDLESS OF WHETHER AWARD IS MADE BY ITEM OR LOT. VENDORS ARE CAUTIONED TO CAREFULLY REVIEW THE STATUTE BEFORE CLAIMING ANY PREFERENCES. THE REQUIREMENTS TO QUALIFY HAVE CHANGED. IF YOU REQUEST A PREFERENCE, YOU ARE CERTIFYING THAT YOUR OFFER QUALIFIES FOR THE PREFERENCE YOU'VE CLAIMED. IMPROPERLY REQUESTING A PREFERENCE CAN HAVE SERIOUS CONSEQUENCES.

PREFERENCES - SC/US END-PRODUCT: Section 11-35-1524 provides a preference to vendors offering South Carolina end-products or US end-products, if Table of Clauses (SEP 2017) 20 Clause # Text Guidance on Use those products are made, manufactured, or grown in SC or the US, respectively. An end-product is the tangible project identified for acquisition in this solicitation, including all component parts in final form and ready for the use intended. The terms "made," "manufactured," and "grown" are defined by Section 11-35-1524(A). By signing your offer and checking the appropriate space(s) provided and identified on the bid schedule, you certify that the end-product(s) is either made, manufactured or grown in South Carolina, or other states of the United States, as applicable. Preference will be applied as required by law. Post award substitutions are prohibited. See "Substitutions Prohibited - End Product Preferences (Sep 2009)" provision.

PREFERENCES - RESIDENT CONTRACTOR PREFERENCE: To qualify for the RCP, you must maintain an office in this state. An office is a nonmobile place for the regular transaction of business or performance of a particular service which has been operated as such by the bidder for at least one year before the bid opening and during that year the place has been staffed for at least fifty weeks by at least two employees for at least thirty-five hours a week each. In addition, you must, at the time you submit your bid, directly employ, or have a documented commitment with,

individuals domiciled in South Carolina that will perform services expressly required by the solicitation and your total direct labor cost for those individuals to provide those services must exceed fifty percent of your total bid price. [11-35-1524(C)(1)(iii)] Upon request by the procurement officer, you must identify the persons domiciled in South Carolina that will perform the services involved in the procurement upon which you rely in qualifying for the preference, the services those individuals are to perform, and documentation of your labor cost for each person identified. If requested, your failure to provide this information promptly will be grounds to deny the preference (and, potentially, for other enforcement action).

PREFERENCES - RESIDENT SUBCONTRACTOR PREFERENCE: To qualify for this preference, You must meet the following requirements. (1) You must -- at the time you submit your bid -- have a documented commitment from a single proposed first tier subcontractor to perform some portion of the services expressly required by the solicitation. (2) The subcontractor -- at the time you submit your bid -- must directly employ, or have a documented commitment with, individuals domiciled in South Carolina that will perform services expressly required by the solicitation and the total direct labor cost to the subcontractor for those individuals to provide those services exceeds, as applicable, either twenty percent for a 2% preference or forty percent of bidder's total bid price for a 4% preference. (3) You must identify the subcontractor that will perform the work, the work the subcontractor is to perform, and your factual basis for concluding that the subcontractor's work constitutes the required percentage of the work to be performed in the procurement. [11-35-1524(D)] You can stack this preference, i.e., earn another 2% or 4% preference for each additional qualifying subcontractor, but the preference is capped. [11-35-1524(D)(4), (E)(7)] Upon request by the procurement officer, you must identify the persons domiciled in South Carolina that are to perform the services involved in the procurement upon which you rely in qualifying for the preference, the services those individuals are to perform, the employer of those persons, your relationship with the employer, and documentation of the subcontractor's labor cost for each person identified. If requested, your failure to provide this information promptly will be grounds to deny the preference (and, potentially, for other enforcement action). YOU WILL NOT RECEIVE THE PREFERENCE UNLESS YOU SPECIFY WHETHER YOUR ARE CLAIMING THE 2% OR 4% PREFERENCE AND YOU PROVIDE THE INFORMATION REQUIRED BY ITEM (3) ABOVE.

PREFERENCES - RESIDENT VENDOR PREFERENCE: To qualify for the RVP, you must maintain an office in this state. An office is a nonmobile place for the regular transaction of business or performance of a particular service which has been operated as such by the bidder for at least one year before the bid opening and during that year the place has been staffed for at least fifty weeks by at least two employees for at least thirty-five hours a week each. In addition, you must either: (1) maintain at a location in South Carolina at the time of the bid an inventory of expendable items which are representative of the general type of commodities for which the award will be made and which have a minimum total value, based on the bid price, equal to the lesser of fifty thousand dollars [\$50,000] or the annual amount of the contract; or (2) be a manufacturer headquartered and having an annual payroll of at least one million dollars in South Carolina and the end product being sold is either made or processed from raw materials into a finished end product by that manufacturer or its affiliate (as defined in Section 1563 of the Internal Revenue Code)

PROTESTS: (This only applies to contracts exceeding \$50,000.00.) Bidders desiring to exercise protest rights under Section 4210 of the District Procurement Code should direct all correspondence to:

Lynda Robinson, Coordinator of Procurement School District Five of Lexington and Richland Counties 1020 Dutch Fork Road Irmo, SC 29063 Fax: 803-476-8140

E-Mail: ljrobins@lexrich5.org

SITE VISIT – <u>Bidders are strongly encouraged to visit each site prior to bidding to inspect the sites</u>. All visitors are required to check in at the front office of the school.

EVERY RESULTING CONTRACT IS SUBJECT TO ALL TERMS OF THE DISTRICT PROCUREMENT CODE INCLUDING LIMITATIONS AS TO DURATION, RIGHTS OF THE DISTRICT TO TERMINATE AND MEANS OF DISPUTE RESOLUTION. NO RESULTING CONTRACT IS RENEWABLE EXCEPT TO THE EXTENT PROVIDED IN THE SOLICITATION. NO VENDOR TERMS TAKE PRECEDENCE OVER THE SOLICITATION AND DISTRICT PROCUREMENT CODE.

III. SCOPE OF WORK / SPECIFICATIONS

SCOPE OF WORK:

School District Five of Lexington and Richland Counties is seeking offers from qualified sources for the installation of athletic field lights at Irmo High School (6671 St. Andrews Rd., Columbia, SC 29212) and Dutch Fork High School (1400 Old Tamah Rd. Irmo, SC 29063).

BRAND NAME OR EQUAL: Any manufacturer's names, trade names, brand names or catalogue numbers used in the specifications are for the purpose of describing and establishing general performance and quality levels. Such references are not intended to be restrictive. Offers are invited to use these and equivalent brands or products provided the quality of the proposed products meet or exceed the quality of the specifications listed for any item. If submitting an equal, the vendor must submit detailed descriptive literature with their offer. The District will determine if the equal meets all required specifications. **The bid packet must include a list of all the proposed equipment.**

Substitution Requests must be received electronically to D5bids@lexrich5.org by March 15, 2024 @ 12:00pm. Please provide the manufacturer's published description, catalog, or other descriptive document, explaining in detail, exactly what is being proposed. The District shall reserve the exclusive right to determine products and/or services which are approved as equal to those specified in the solicitation.

SPECIFICATIONS - LIGHTING SYSTEM WITH LED LIGHT SOURCE

The specifications and drawings, prepared by ETI Engineering, LLC., are posted to the District's website along with this solicitation. The project manager is Troy Lowder, who can be reached at 803-233-9396 or tlowder@etiservices.net.

PART 1 – GENERAL

1.1 SUMMARY

- A. Work covered by this section of the specifications shall conform to the contract documents, engineering plans as well as state and local codes.
- B. The purpose of these specifications is to define the lighting system performance and design standards for Dutch Fork and Irmo High School using an LED Lighting source. The contractor shall supply lighting equipment to meet or exceed the standards set forth in these specifications.
- C. The sports lighting will be for the following venues:
 - 1. Irmo Practice Field
 - 2. Dutch Fork Practice Field
- D. The primary goals of this sports lighting project are:
 - 1. Guaranteed Light Levels: Selection of appropriate light levels impact the safety of the players and the enjoyment of spectators. Therefore, light levels shall be guaranteed to not drop below specified target values for a period of 25 years.
 - 2. Environmental Light Control: It is the primary goal of this project to minimize spill light to adjoining properties and glare to the players, spectators, and neighbors.
 - 3. Cost of Ownership: In order to reduce the operating budget, the preferred lighting system shall be energy efficient and cost effective to operate. All maintenance costs shall be eliminated for the duration of the warranty.
 - 4. Control and Monitoring: To allow for optimized use of labor resources and avoid unneeded operation of the facility, a remote on/off control system for the lighting system is required.

Fields should be proactively monitored to detect luminaire outages over a 25-year life cycle. All network, communication, and monitoring costs for 25-year period shall be included in the bid/cost.

a. Control and monitoring system shall provide contactor control of all existing circuits. Key switches shall be provided to provide field-level control of existing circuit groups.

1.2 LIGHTING PERFORMANCE

A. Illumination Levels and Design Factors: Playing surfaces shall be lit to an average target illumination level and uniformity as specified in the chart below. Lighting manufacturers will provide a guarantee that light levels will be sustained over the life of the warranty period. Lighting calculations shall be developed and field measurements taken on the grid spacing with the minimum number of grid points specified below.

Lumen maintenance data of the LED luminaires used per TM-21-11 will be provided and will incorporate the lumen maintenance projections into the lighting designs to ensure target light levels are achieved throughout the guaranteed period of the system. Per IES guidelines, lumen maintenance hours should be reported based on the 6x multiplier of testing hours.

Area of Lighting	Average Target Illumination Levels	Maximum to Minimum Uniformity Ratio	Grid Points	Grid Spacing
Irmo Practice	30 footcandles	2.5:1.0	96	30' x 30'
Dutch Fork Practice	30 footcandles	25:1.0	77	30' x 30'

^{**(2)} Southernmost located poles at Dutch Fork need to be accommodated for future backside fixtures (for future athletic field). Contractor will need to account for same # of fixtures/ loading to be able to be added to the backside of the pole at a later date. Electrical drawings/ panel will accommodate for this as well.

- B. Color Temperature: The lighting system shall have a minimum color temperature of 5700K and a CRI of 75.
- C. Playability: Lighting design and luminaire selection should be optimized for playability by reducing glare onfield and providing sufficient uplight.
 - 1. Aiming Angles: To reduce glare, luminaire aiming should ensure the top of the luminaire field angle (based on sample photometric reports) is a minimum of 10 degrees below horizontal.
 - 2. Glare Control Technology Luminaires selected should have glare control technology including, but not limited to: external visors, internal shields and louvres. No symmetrical beam patterns are acceptable.
 - 3. Mounting Heights: To ensure proper aiming angles, minimum mountings heights shall be as described below. Higher mounting heights may be necessary for luminaire with lesser glare control to meet field angle requirements of section 1.2.C.1.

# of Poles	Pole Designation	Pole Height
4	F1-F4	80'
4	S1-S4	70'

1.3 ENVIRONMENTAL LIGHT CONTROL

A. Light Control Luminaires: All luminaires shall utilize spill light and glare control devices including, but not limited to, internal shields, louvers and external shields. No symmetrical beam patterns are accepted.

B. Spill Light and Glare Control: To minimize impact on adjacent properties, spill light and candela values must not exceed the following levels taken at 3 feet above grade.

	Maximum
150' Specified Spill Line Horizontal Footcandles	0.1 fc
150' Specified Spill Line Max Vertical Footcandles	0.3 fc

150' Specified Spill Line Max Candela (taken at 5 ft above grade)	7500 cd
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- C. Spill Scans: Spill scans must be submitted indicating the amount of horizontal and vertical footcandles along the specified lines. Light levels shall be provided in 30-foot intervals along the boundary line at 3 ft above grade.
- D. Sample Photometry: The first page of a 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 testing laboratory with a minimum of five years' experience or by a manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products. A summary of the horizontal and vertical aiming angles for each luminaire shall be included with the photometric report.
- E. Field Verification: Contractor shall supply field verification of environmental light control using a meter calibrated within the last 12 months:
 - 1. Spill verification: Illumination levels shall be taken in accordance with IESNA RP-6-22. The light sensing surface of the light meter should be held 36 inches above the playing surface with the sensing surface horizontal (for horizontal readings) or vertically pointed at the brightest light bank (for max vertical readings)

1.4 Cost of Ownership

A. Contractor shall submit a 25-year Cost of Ownership summary that includes energy consumption, anticipated maintenance costs, and control costs. All costs associated with faulty luminaire replacement - equipment rentals, removal and installation labor, and shipping - are to be included in the maintenance costs.

PART 2 – PRODUCT

2.1 Sports Lighting System Construction

- A. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaires, wire harnesses, drivers and other enclosures shall be factory assembled, aimed, wired and tested.
- B. 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, 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 components enclosure.

C. System Description:

- 1. Lighting system shall consist of galvanized steel poles and cross-arm assembly.
- 2. Lighting system shall not consist of:
 - a. Square static cast concrete poles.

- b. Direct bury steel poles which utilize the extended portion of the steel shaft for their foundation due to potential for internal and external corrosive reaction to the soils and long-term performance concerns.
- 3. Lighting systems shall use concrete foundations. See Section 2.4 for details.
 - a. The foundation shall use a pre-stressed concrete base embedded in concrete backfill. The concrete shall be air-entrained and have a minimum compressive design strength at 28 days of 3,000 PSI. 3,000 PSI concrete specified for early pole erection; actual required minimum allowable concrete strength is 1,000 PSI. All piers and concrete backfill must bear on and against firm undisturbed soil.
- 4. All drivers and supporting electrical equipment will be supplied.
 - a. 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 located in the enclosure. Integral drivers are not allowed.
 - b. Surge protection shall be provided at the pole equal to or greater than 40 kA for each line to ground (Common Mode) as recommended by IEEE C62.41.2 2002.
- 5. The wire harness shall include an abrasion protection sleeve, strain relief, and plug-in connections for fast, trouble-free installation.
- 6. All luminaires, visors, and cross-arm assemblies shall withstand 150 miles/hour winds and maintain luminaire aiming alignment. Technical datasheets confirming this requirement are required to be included with bid submittal.
- 7. Contactor cabinet to provide on-off control.
- 8. Lightning grounding shall be provided as defined by NFPA 780 and be UL Listed per UL 96 and UL 96A. Grounding shall be achieved using one of the two following processes:
 - a. Integrated grounding via concrete encased electrode grounding system.

or

- b. If grounding is not integrated into the structure, the contractor shall supply grounding electrodes, copper down conductors, and exothermic weld kits. Electrodes and conductors shall be sized as required by NFPA 780. The grounding electrode shall be minimum size of 5/8 inch diameter and 8 feet long, with a minimum of 10 feet embedment. Grounding electrode shall be connected to the structure by a grounding electrode conductor with a minimum size of 2 AWG for poles with 75 feet mounting height or less, and 2/0 AWG for poles with more than 75 feet mounting height.
- D. Safety: All system components shall be UL listed for the appropriate application.

2.2 ELECTRICAL

- A. Electric Power Requirements for the Sports Lighting Equipment:
 - 1. Electric power shall be determined at existing sites.
 - 2. Maximum total voltage drop: Voltage drop to the disconnect switch located on the poles shall not exceed three (3) percent of the rated voltage.
- B. Irmo High School Practice Energy Consumption: The kW consumption for the field lighting system shall be 30kW or less.
- C. Dutch Fork High School Practice Energy Consumption: The kW consumption for the field lighting system shall be 25kW or less (for single field). Electrical considerations for future field will be input on electrical drawings

2.3 CONTROL

- A. Instant On/Off Capabilities: System shall provide for instant on/off of luminaires.
- B. Lighting contactor cabinet(s) shall be constructed of NEMA Type 4 aluminum, designed for easy installation with contactors, and labeled to match field diagrams and electrical design. Manual off-on-auto selector switches shall be provided.
- C. Contactor control of lights: To minimize wear on drivers and other electrical components and prevent lights from turning on due to communication loss, circuits must be controlled via contactor switching, not dimming driver output to zero.
- D. Remote Lighting Control System: System shall allow owner and users with a security code to schedule on/off system operation via a web site, phone, fax or email up to ten years in advance. Contractor shall provide and maintain a two-way TCP/IP communication link. Trained staff shall be available 24/7 to provide scheduling support and assist with reporting needs.

The owner may assign various security levels to schedulers by function and/or fields. This function must be flexible to allow a range of privileges such as full scheduling capabilities for all fields to only having permission to execute "early off" commands by phone. Scheduling tool shall be capable of setting curfew limits.

Controller shall accept and store 7-day schedules, be protected against memory loss during power outages, and shall reboot once power is regained and execute any commands that would have occurred during outage.

- E. Remote Monitoring System: System shall monitor lighting performance and notify the contractor if individual luminaire outage is detected so that appropriate maintenance can be scheduled. The controller shall determine switch position (manual or auto) and contactor status (open or closed).
- F. Management Tools: Contractor shall provide a web-based database and dashboard tool of actual field usage and provide reports by facility and user group. Dashboard shall also show current status of luminaire outages, control operation and service. Mobile application shall be provided suitable for IOS, Android and Blackberry devices

Hours of Usage: Contractor shall provide a means of tracking actual hours of usage for the field lighting system that is readily accessible to the owner. Tracking shall include:

- 1. Cumulative hours to show the total hours used by the facility
- 2. Report hours saved by using early off and push buttons by users.
- G. Communication Costs: Contractor shall include communication costs for operating the control and monitoring system for a period of 25 years.
- H. Communication with luminaire drivers: Control system shall interface with drivers in electrical components enclosures by means of powerline communication.

2.4 STRUCTURAL PARAMETERS

- A. Wind Loads: Wind loads shall be based on the 2018 International Building Code. Wind loads shall be calculated using ASCE 7-16, an ultimate design wind speed of 115 and exposure category C.
- B. Pole Structural Design: The stress analysis and safety factor of the poles shall conform to 2013 AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-6).
- C. Foundation Design: The foundation design shall be based on soils that meet or exceed those of a Class 5 material as defined by 2018 IBC Table 1806.2.

D. As noted in Section 1.2, structural considerations for additional fixtures being added to the (2) Southernmost located poles at Dutch Fork must also be provided.

PART 3 – EXECUTION

3.1 SOIL QUALITY CONTROL

- A. It shall be the Contractor's responsibility to notify the Owner if soil conditions exist other than those on which the foundation design is based, or if the soil cannot be readily excavated. Contractor may issue a change order request / estimate for the Owner's approval / payment for additional costs associated with:
 - 1. Providing engineered foundation embedment design by a registered engineer in the State of South Carolina for soils other than specified soil conditions;
 - 2. Additional materials required to achieve alternate foundation;
 - 3. Excavation and removal of materials other than normal soils, such as rock, caliche, etc.

3.2 <u>DELIVERY TIMING</u>

A. Delivery Timing Equipment On-Site: The equipment must be on-site 8 - 12 weeks from receipt of purchase order.

3.3 FIELD QUALITY CONTROL

- A. Illumination Measurements: Upon substantial completion of the project, and in the presence of the Contractor, Project Engineer, Owner's Representative, and Manufacturer's Representative, illumination measurements shall be taken and verified. The illumination measurements shall be conducted in accordance with IESNA RP-6-22.
- B. Field Light Level Accountability
 - 1. Light levels are guaranteed not to fall below the target maintained light levels for the entire warranty period of 25 years. These levels will be specifically stated as "guaranteed" on the illumination summary provided by the manufacturer.
 - 2. The contractor shall be responsible for conducting initial light level testing and an additional inspection of the system, in the presence of the owner, one year from the date of commissioning of the lighting.
 - The contractor will be held responsible for any and all changes needed to bring these fields back to compliance for light levels and uniformities. Contractor will be held responsible for any damage to the fields during these repairs.
- C. Correcting Non-Conformance: If, in the opinion of the Owner or his appointed Representative, the actual performance levels (including footcandles, uniformity ratios, uplight for aerial visibility, and offsite candela readings) are not in conformance with the requirements of the performance specifications and submitted information, the Contractor shall be required to make adjustments to meet specifications and satisfy Owner.

3.4 WARRANTY AND GUARANTEE

- A. 25-Year Warranty: Contractor shall supply a signed warranty covering the entire system for 25 years from the date of shipment. Warranty shall guarantee specified light levels. Contractor shall maintain specifically funded financial reserves to assure fulfillment of the warranty for the full term. Warranty does not cover weather conditions events such as lightning or hail damage, improper installation, vandalism or abuse, unauthorized repairs or alterations, or product made by other manufacturers.
- B. Maintenance: Contractor shall monitor the performance of the lighting system, including on/off status,

hours of usage and luminaire outage for 25 years from the date of equipment shipment. Parts and labor shall be covered such that individual luminaire outages will be repaired when the usage of any field is materially impacted. Contractor is responsible for removal and replacement of failed luminaires, including all parts, labor, shipping, and equipment rental associated with maintenance. Owner agrees to check fuses in the event of a luminaire outage.

PART 4 – SUBSTITUTION REQUESTS

- A. Approved Product: Musco's Light-Structure SystemTM with TLC for LED[®] is the approved product. All substitution requests must be submitted for approval as outlined in Submittal Information at the end of this section. All substitution requests must be received electronically to <u>D5bids@lexrich5.org</u> by March 15, 2024 @ 12:00pm. Special manufacturing to meet the standards of this specification may be required. An addendum may be issued prior to bid listing any other approved lighting manufacturers and designs.
- B. Bidders are required to bid only products that have been approved by this specification or addendum by the owner or owner's representative. Bids received that do not utilize an approved system/design, will be rejected.

REQUIRED SUBMITTAL INFORMATION FOR ALL SUBSTITUTION REQUESTS

All items listed below are mandatory, shall comply with the specifications provided herein and be submitted according to substitution request requirements. Complete the Yes/No column to indicate compliance (Y) or noncompliance (N) for each item.

Submit checklist below with substitution requests.

Yes/ No	Tab	Item	Description
	A	Letter/ Checklist	Listing of all information being submitted must be included on the table of contents. List the name of the manufacturer's local representative and his/her phone number. Signed submittal checklist to be included.
	В	Equipment Layout	Drawing(s) showing field layouts with pole locations
	C	On Field Lighting Design	 Lighting design drawing(s) showing: a. Field Name, date, file number, prepared by b. Outline of field(s) being lighted, as well as pole locations referenced to the center of the field (x & y), Illuminance levels at grid spacing specified c. Pole height, number of fixtures per pole, horizontal and vertical aiming angles, as well as luminaire information including wattage, lumens and optics d. Height of light test meter above field surface. e. Summary table showing the number and spacing of grid points; average, minimum and maximum illuminance levels in foot candles (fc); uniformity including maximum to minimum ratio, coefficient of variance (CV), coefficient of utilization (CU) uniformity gradient; number of luminaries, total kilowatts, average tilt factor; light loss factor.
	D	Off Field Lighting Design	Lighting design drawing showing initial spill light levels along the boundary line (defined on bid drawings) in footcandles. Lighting design showing glare along the boundary line in candela. 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.
	E	Photometric Report	Provide first page of photometric report for all luminaire types being proposed showing candela tabulations as defined by IESNA Publication LM-35-02. Photometric data shall be certified by laboratory with current National Voluntary Laboratory Accreditation Program or an independent testing facility with over 5 years' experience.
	F	Performance Guarantee	Provide performance guarantee including a written commitment to undertake all corrections required to meet the performance requirements noted in these specifications at no expense to the owner. Light levels must be guaranteed to not fall below target levels for warranty period.
	G	Structural Calculations	Pole structural calculations and foundation design showing foundation shape, depth backfill requirements, rebar and anchor bolts (if required). Pole base reaction forces shall be shown on the foundation drawing along with soil bearing pressures. Design must be stamped by a structural engineer in the state of South Carolina, if required by owner.
	Н	Control & Monitoring System	Written definition and schematics for automated control system shall be provided. Contractor shall provide ten (10) references of customers currently using proposed system in the state of South Carolina.

		Contractor bidding an alternate product must include a revised electrical distribution plan including changes to service entrance,
I	Electrical Distribution Plans	panels and wire sizing, signed by a licensed Electrical Engineer in the state of South Carolina.
J	Warranty	Provide written warranty information, including all terms and conditions. Provide ten (10) references of customers currently under specified warranty in the state of South Carolina.
K	Project References	Provide a list of 10 projects where the technology and specific fixture proposed for this project has been installed in the state of South Carolina. Reference list will include project name, project city, installation date, and if requested, contact name and contact phone number.
L	Product Information	Complete bill of material and current brochures/cut sheets for all products being provided.
M	Delivery	Contractor shall supply an expected delivery timeframe from receipt of approved submittals and complete order information.
N	Non-Compliance	Contractor shall list all items that do not comply with the specifications. If in full compliance, tab may be omitted.
0	Cost of Ownership	Document cost of ownership as defined in the specification. Identify energy costs for operating the luminaires. Maintenance cost for the system must be included. All costs should be based on 25 Years
P	Environmental Light Control Design	Environmental glare impact scans must be submitted showing the maximum candela from the field edge on a map of the surrounding area until 500 candela or less is achieved.

The information supplied herein shall be used for the purpose of complying with the specifications for Dutch Fork and Irmo High School Practice Fields. By signing below, I agree that all requirements of the specifications have been met and that the contractor will be responsible for any future costs incurred to bring their equipment into compliance for all items not meeting specifications and not listed in the Non-Compliance section.

Manufacturer:	Signature:
Contact Name:	
Contractor:	Signature:

DELIVERY/ PERFORMANCE LOCATION – PURCHASE ORDER: After award, all deliveries must be made and all services provided to the location specified by the District in its purchase order.

QUALITY- NEW- All materials furnished shall be new and unused.

IV. INFORMATION FOR OFFERORS TO SUBMIT

INFORMATION FOR OFFERORS TO SUBMIT – GENERAL: Offeror shall submit a signed Cover Page, Page Two, and Amendments (if applicable). Offeror should submit all other information and documents requested in this part and in parts II.B. Special Instructions; III. Scope of Work; V. Qualifications; and any appropriate attachments addressed in section IX. Attachments to Solicitations. You should submit a summary of all insurance policies you have or plan to acquire to comply with the insurance requirements stated herein, if any, including policy types; coverage types; limits, sub-limits, and deductibles for each policy and coverage type; the carrier's A.M. Best rating; and whether the policy is written on an occurrence or claims-made basis.

MINORITY PARTICIPATION:

Is the bidder a South Carolina Certified Minority Business? [] Yes [] No
Is the bidder a Minority Business certified by another governmental entity? [] Yes [] No
If so, please list the certifying governmental entity:
Will any of the work under this contract be performed by a SC certified Minority Business as a subcontractor? [] Yes
[] No
If so, what percentage of the total value of the contract will be performed by a SC certified Minority Business as a
subcontractor?
Will any of the work under this contract be performed by a minority business certified by another governmental entity
as a subcontractor? [] Yes [] No
If so, what percentage of the total value of the contract will be performed by a minority business certified by another
governmental entity as a subcontractor?
If a certified Minority Business is participating in this contract, please indicate all categories for which the Business
is certified:
[] Traditional minority
[] Traditional minority, but female [] Women (Caucasian females)
[] Hispanic minorities
[] DOT referral (Traditional minority)
[] DOT referral (Caucasian female)
[] Temporary certification
[] SBA 8 (a) certification referral
[] Other minorities (Native American, Asian, etc.)
(If more than one minority contractor will be utilized in the performance of this contract, please provide the
information above for each minority business.)
The Department of Administration, Division of Small and Minority Business Contracting and Certification, publishes

REFERENCES Provide a minimum of three (3) references from employers with similar contracts. References to include the name, contact person, telephone number, email address, and type of services performed.

a list of certified minority firms. The Minority Business Directory is available at the following URL:

http://osmba.sc.gov/directory.htmlfollowing URL: http://osmba.sc.gov/directory.html

SUBMITTING REDACTED OFFERS: You are required to mark the original copy of your offer to identify any information that is exempt from public disclosure. You must do so in accordance with the clause entitled "Submitting Confidential Information." In addition, you must also submit one complete copy of your offer from which you have removed any information that you marked as exempt, i.e., a redacted copy. The information redacted should mirror in every detail the information marked as exempt from public disclosure. The redacted copy should (i) reflect the same pagination as the original, (ii) show the empty space from which information was redacted, and (iii) be submitted on magnetic media. (See clause entitled "Magnetic Media Required Format.") Except for the redacted information, the CD must be identical to the original hard copy. Portable Document Format (.pdf) is preferred.

V. QUALIFICATIONS

QUALIFICATION OF OFFEROR: (1) To be eligible for award, you must have the capability in all respects to perform fully the contract requirements and the integrity and reliability which will assure good faith performance. We may also consider a documented commitment from a satisfactory source that will provide you with a capability. We may consider information from any source at any time prior to award. We may elect to consider (i) key personnel, any predecessor business, and any key personnel of any predecessor business, including any facts arising prior to the date a business was established, and/or (ii) any subcontractor you identify. (2) You must promptly furnish satisfactory evidence of responsibility upon request. Unreasonable failure to supply requested information is grounds for rejection. (3) Corporate subsidiaries are cautioned that the financial capability of an affiliated or parent company will not be considered in determining financial capability; however, we may elect to consider any security, e.g., letter of credit, performance bond, parent-company corporate guaranty, that you offer to provide. Instructions and forms to help assure acceptability are posted on procurement.sc.gov, link to "Standard Clauses & Provisions."

SUBCONTRACTOR – IDENTIFICATION: If you intend to subcontract, at any tier level, with another business for any portion of the work and that portion either (1) exceeds 10% of your cost, (2) involves access to any "government information," as defined in the clause entitled "Information Security - Definitions," if included, or (3) otherwise involves services critical to your performance of the work (err on the side of inclusion), your offer must identify that business and the work which they are to perform. Identify potential subcontractors by providing the business name, address, phone, taxpayer identification number, and point of contact. In determining your responsibility, the District may contact and evaluate your proposed subcontractors.

VI. AWARD CRITERIA

AWARD CRITERIA - BIDS: Award will be made to the lowest responsive and responsible bidder(s).

AWARD TO ONE OFFEROR: Award will be made to one Offeror.

CONTRACT LIMITATIONS: No sales may be made pursuant to this contract for any item or service that is not expressly listed. No sales may be made pursuant to this contract after expiration of this contract. Violation of this provision may result in termination of this contract and may subject contractor to suspension or debarment.

VII. TERMS AND CONDITIONS - A. GENERAL

ASSIGNMENT, NOVATION, AND CHANGE OF NAME, IDENTITY, OR STRUCTURE:

(a) Contractor shall not assign this contract, or its rights, obligations, or any other interest arising from this contract, or delegate any of its performance obligations, without the express written consent of the responsible procurement officer. The foregoing restriction does not apply to a transfer that occurs by operation of law (e.g., bankruptcy; corporate reorganizations and consolidations, but not including partial asset sales). Notwithstanding the foregoing, contractor may assign monies receivable under the contract provided that the District shall have no obligation to make payment to an assignee until thirty days after contractor (not the assignee) has provided the responsible procurement officer with (i) proof of the assignment, (ii) the identity (by contract number) of the specific District contract to which the assignment applies, and (iii) the name of the assignee and the exact address or account information to which assigned payments should be made. (b) If contractor amends, modifies, or otherwise changes its name, its identity (including its trade name), or its corporate, partnership or other structure, or its FEIN, contractor shall provide the procurement officer prompt written notice of such change. (c) Any name change, transfer, assignment, or novation is subject to the conditions and approval required by Regulation 19-445.2180, which does not restrict transfers by operation of law.

AFFIRMATIVE ACTION: The successful bidder will take affirmative action in complying with all federal and state requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, without regard or discrimination by reason of race, color, religion, sex, national origin or physical handicap. The following are incorporated herein by reference: 41 C.F.R. 60-1.4, 60-250.4 and 60-741.4.

BANKRUPTCY: (a) Notice. In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish written notification of the bankruptcy to the District. This

notification shall be furnished within two (2) days of the initiation of the proceedings relating to the bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of all District contracts against which final payment has not been made. This obligation remains in effect until final payment under this Contract. (b) Termination. This contract is cancellable and subject to immediate termination by the District upon the contractor's insolvency, including the filing of proceedings in bankruptcy.

CHOICE-OF-LAW: The Agreement, any dispute, claim, or controversy relating to the Agreement, and all the rights and obligations of the parties shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of South Carolina, except its choice of law rules. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation.

CONTRACT DOCUMENTS & ORDER OF PRECEDENCE: (a) Any contract resulting from this solicitation shall consist of the following documents: (1) a Record of Negotiations, if any, executed by you and the Procurement Officer, (2) documentation regarding the clarification of an offer, if applicable, (3) the solicitation, as amended, (4) modifications, if any, to your offer, if accepted by the Procurement Officer, (5) your offer, (6) any statement reflecting the District's final acceptance (a/k/a "award"), and (7) purchase orders. These documents shall be read to be consistent and complimentary. Any conflict among these documents shall be resolved by giving priority to these documents in the order listed above. (b) The terms and conditions of documents (1) through (6) above shall apply notwithstanding any additional or different terms and conditions in either (i) a purchase order or other instrument submitted by the District or (ii) any invoice or other document submitted by Contractor. Except as otherwise allowed herein, the terms and conditions of all such documents shall be void and of no effect. (c) No contract, license, or other agreement containing contractual terms and conditions will be signed by the District. Any document signed or otherwise agreed to by persons other than the Procurement Officer or designee shall be void and of no effect.

DISCOUNT FOR PROMPT PAYMENT: (a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the Offeror. As an alternative to offering a discount for prompt payment in conjunction with the offer, Offerors awarded contracts may include discounts for prompt payment on individual invoices. (b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the District annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or a legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

DISPUTES: (1) Choice-of-Forum. All disputes, claims, or controversies relating to the Agreement shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws, or in the absence of jurisdiction, only in the Court of Common Pleas for, or a federal court located in, Richland County, State of South Carolina. Contractor agrees that any act by the Government regarding the Agreement is not a waiver of either the Government's sovereign immunity or the Government's immunity under the Eleventh Amendment of the United States Constitution. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation. (2) Service of Process. Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any disputes, claims, or controversies relating to the Agreement; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided as the Notice Address on Page Two or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States mail.

EQUAL OPPORTUNITY: Contractor is referred to and shall comply with all applicable provisions, if any, of Title 41, Part 60 of the Code of Federal Regulations, including but not limited to Sections 60-1.4, 60-4.2, 60-4.3, 60-250.5(a), and 60-741.5(a), which are hereby incorporated by reference.

FALSE CLAIMS: According to the S.C. Code of Laws § 16-13-240, "a person who by false pretense or representation obtains the signature of a person to a written instrument or obtains from another person any chattel, money, valuable security, or other property, real or personal, with intent to cheat and defraud a person of that property is guilty" of a crime.

FIXED PRICING REQUIRED: Any pricing provided by contractor shall include all costs for performing the work associated with that price. Contractor's price shall be fixed for the duration of this contract, including option terms, except as otherwise provided in this solicitation. This clause does not prohibit contractor from offering lower pricing after award.

NO INDEMNITY OR DEFENSE: Any term or condition is void to the extent it requires the District to indemnify, defend, or pay attorney's fees to anyone for any reason.

NOTICE: (A) After award, any notices shall be in writing and shall be deemed duly given (1) upon actual delivery, if delivery is by hand, (2) upon receipt by the transmitting party of automated confirmation or answer back from the recipient's device if delivery is by telex, telegram, facsimile, or electronic mail, or (3) upon deposit into the United States mail, if postage is prepaid, a return receipt is requested, and either registered or certified mail is used. (B) Notice to contractor shall be to the address identified on Cover Page. Notice to the District shall be to the Procurement Officer's address on the Cover Page. Either party may designate a different address for notice by giving notice in accordance with this paragraph.

OPEN TRADE REPRESENTATION: During the contract term, including any renewals or extensions, Contractor will not engage in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined SC Code Section 11-35-5300.

PAYMENT & INTEREST: (a) The District shall pay the Contractor, after the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified herein, including the purchase order, payment shall not be made on partial deliveries accepted by the District. (b) Unless otherwise provided herein, including the purchase order, payment will be made by check mailed to the payment address on "page Two." (c) Notwithstanding any other provision, payment shall be made in accordance with S.C. Code Section 11-35-45, or Chapter 6 of Title 29 (real property improvements) when applicable, which provides the Contractor's exclusive means of recovering any type of interest from the Owner. Contractor waives imposition of an interest penalty unless the invoice submitted specifies that the late penalty is applicable. Except as set forth in this paragraph, the District shall not be liable for the payment of interest on any debt or claim arising out of or related to this contract for any reason. (d) Amounts due to the District shall bear interest at the rate of interest established by the South Carolina Comptroller General pursuant to Section 11-35-45 ("an amount not to exceed fifteen percent each year"), as amended, unless otherwise required by Section 29-6-30. (e) Any other basis for interest, including but not limited to general (pre- and post-judgment) or specific interest statutes, including S.C. Code Ann. Section 34-31-20, are expressly waived by both parties. If a court, despite this agreement and waiver, requires that interest be paid on any debt by either party other than as provided by items (c) and (d) above, the parties further agree that the applicable interest rate for any given calendar year shall be the lowest prime rate as listed in the first edition of the Wall Street Journal published for each year, applied as simple interest without compounding. (f) The District shall have all of its common law, equitable and statutory rights of setoff.

PROHIBITION AGAINST CONFLICTS OF INTERESTS, GRATUITIES AND KICKBACKS: "Any employee or any official of the school district, elective or appointive, who shall take, receive or offer to take or receive either directly or indirectly, any rebate, percentage of contract, money or other things of value, as an inducement or intended inducement, in the procurement of business, or the giving of business, for, or to, or from, any person, partnership, firm of corporation, offering, bidding for, or in open market seeking to make sales to the school district shall be deemed guilty of a felony and upon conviction such person or persons shall be subject to punishment or a fine in accord with State and/or Federal laws."

PUBLICITY: Contractor shall not publish any comments or quotes from District employees, or include the District in either news releases or a published list of customers, without the prior written approval of the Procurement Officer.

PURCHASE ORDERS: Contractor shall not perform any work prior to the receipt of a purchase order from the District. The District shall order any supplies or services to be furnished under this contract by issuing a purchase order. Purchase orders may be used to elect any options available under this contract, e.g., quantity, item, delivery date, payment method, but are subject to all terms and conditions of this contract. Purchase orders may be electronic. No particular form is required. An order placed pursuant to the purchasing card provision qualifies as a purchase order. Purchase order number must be clearly stated on each carton or package, shipping ticket, invoice and any/all other information related to the order.

SURVIVAL OF OBLIGATIONS: The Parties' rights and obligations which, by their nature, would continue beyond the termination, cancellation, rejection, or expiration of this contract shall survive such termination, cancellation, rejection, or expiration, including, but not limited to, the rights and obligations created by the following clauses: Indemnification - Third Party Claims, Intellectual Property Indemnification, and any provisions regarding warranty or audit.

SWMBE PARTICIPATION: District Five of Lexington and Richland Counties encourages SWMBE businesses to participate in the Solicitation process. All business conducted with SWMBE businesses certified by the South Carolina Governor's Office of Small and Minority Business Assistance is recorded in an annual report submitted to the Board of Trustees. In order to be included in this report, you must submit a copy of your certificate with your bid.

TAXES: Any tax the contractor may be required to collect or pay upon the sale, use or delivery of the products shall be paid by the District, and such sums shall be due and payable to the contractor upon acceptance. Any personal property taxes levied after delivery shall be paid by the District. It shall be solely the District's obligation, after payment to contractor, to challenge the applicability of any tax by negotiation with, or action against, the taxing authority. Contractor agrees to refund any tax collected, which is subsequently determined not to be proper and for which a refund has been paid to contractor by the taxing authority. In the event that the contractor fails to pay, or delays in paying, to any taxing authorities, sums paid by the District to contractor, contractor shall be liable to the District for any loss (such as the assessment of additional interest) caused by virtue of this failure or delay. Taxes based on Contractor's net income or assets shall be the sole responsibility of the contractor.

TERMINATION: Subject to the conditions below, the District, providing a (30) thirty-day advance written notice is given to the vendor, may terminate the contract for any reason.

NON-APPROPRIATIONS: Any contract entered into by the District resulting from this bid invitation shall be subject to cancellation without damages or further obligation when funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period or appropriated year.

FOR CONVENIENCE: In the event that this contract is terminated or canceled upon request and for the convenience of the District without the required thirty (30) days advance written notice, then the District may negotiate reasonable termination costs, if applicable.

FOR CAUSE: Termination by the District for cause, default or negligence on the part of the vendor shall be excluded from the foregoing conditions; termination costs, if any, shall not apply. The thirty (30) days advance notice requirement is waived and the default clause in this bid shall apply.

DEFAULT: In case of default by the vendor, the District reserves the right to purchase any or all items in default in the open market, charging the vendor with any additional costs. The defaulting vendor shall not be considered a responsible bidder until the assessed charge has been satisfied.

TERMINATION DUE TO UNAVAILABILITY OF FUNDS: Payment and performance obligations for succeeding fiscal periods shall be subject to the availability and appropriation of funds therefore. When funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period, the contract shall be canceled. In the event of a cancellation pursuant to this paragraph, contractor will be reimbursed the resulting unamortized, reasonably incurred, nonrecurring costs. Contractor will not be reimbursed any costs amortized beyond the initial contract term.

THIRD PARTY BENEFICIARY: This Contract is made solely and specifically among and for the benefit of the parties hereto, and their respective successors and assigns, and no other person will have any rights, interest, or claims hereunder or be entitled to any benefits under or on account of this Contract as a third-party beneficiary or otherwise.

WAIVER: The District does not waive any prior or subsequent breach of the terms of the Contract by making payments on the Contract, by failing to terminate the Contract for lack of performance, or by failing to strictly or promptly insist upon any term of the Contract. Only the Procurement Officer has actual authority to waive any of District's rights under this Contract. Any waiver must be in writing.

VII. TERMS AND CONDITIONS - B. SPECIAL

- 1. The contractor shall furnish all labor, equipment, transportation, materials and supplies necessary to install new footings, poles, electrical service and sports lighting.
- 2. The contractor shall have all underground utilities located prior to beginning any work.
- 3. The contractor shall exercise precautions at all times for the protection and safety of their employees, school staff, students, and the general public. Barricades will be provided at the contractor's expense when work is performed in areas traversed by persons or vehicles or when deemed necessary by the District.
- 4. All work associated with the solicitation shall not impede with school functions and operation of District campuses. The successful contractor shall coordinate all work through the district representative.
- 5. The contractor shall be responsible for the repair/replacement of any areas damaged through the course of installation back to their original state. This includes damage to grounds, water lines, electrical lines, sanitary sewer lines, etc. The owner will make repairs to irrigation lines that may be damaged during the installation.
- 6. The District will make repairs to the Bermuda Turf grass and irrigation system on the practice field if damage is considered minor. The contractor shall use all precautions and care not to damage the irrigation system.
- 7. Installation of electrical conduit and wires: The contractor shall bore electrical conduit and electrical wires.
- 8. The contractor shall maintain workplace safety standards at all times.
- 9. All excess material shall be removed from site and legally/properly disposed of.
- 10. The contractor is responsible for purchasing and securing all permits and/or licenses that may be required by the State South Carolina or local municipalities for this project.
- 11. SC law requires that contractors who are awarded contracts in excess of \$5,000 be licensed by the SC Contractors Licensing Board if required for the project. The contractor's SC General Contractor's license number must be clearly indicated on the face of the envelope of bids exceeding this amount. Contractors must include a copy of their license(s) with their bid.
- 12. All bids over \$50,000.00 must be accompanied by a 5% Bid Bond with Power of Attorney.
- 13. For construction projects over \$50,000.00, the successful bidder will be required to submit a Performance and Payment Bond in the amount of 100% of the contract amount.
- 14. Insurance: Contractor shall provide and maintain during the entire performance period minimum insurance limits of **Low Risk** as shown in the Minimum Insurance Limits Guideline. **Include a copy of your insurance certificate (COI) with your bid.**

Minimum Insurance Limits Guidelines				
<u>FORM</u>	BASIS	<u>HIGH</u>	<u>MEDIUM</u>	LOW
		<u>RISK</u>	<u>RISK</u>	<u>RISK</u>
Commercial General	Occurrence	\$5 Million	\$2 Million	\$1 Million
Liability (CGL)				
	Aggregate	\$10	\$5 Million	\$2 Million
		Million		
	Products-Completed Operation	\$10	\$5 Million	\$2 Million
	Aggregate	Million		
	Personal/Advertising Injury	\$5 Million	\$2 Million	\$1 Million
Employer's Liability	BI - Occurrence	\$1 Million	\$500,000	\$250,000
	Disease - Occurrence	\$1 Million	\$500,000	\$250,000
	Disease - Aggregate	\$2 Million	\$1 Million	\$500,000
Business Automobile	Occurrence	\$2 Million	\$2 Million	\$1 Million
Liability				
Workers Comp		Statutory	Statutory	Statutory

CHANGES:

- (1) Contract Modification. By a written order, at any time, and without notice to any surety, the Procurement Officer may, subject to all appropriate adjustments, make changes within the general scope of this contract in any one or more of the following:
 - (a) Drawings, designs, or specifications, if the supplies to be furnished are to be specially manufactured for the District in accordance therewith;
 - (b) Method of shipment or packing;
 - (c) Place of delivery;
 - (d) Description of services to be performed;
 - (e) Time of performance (i.e., hours of the day, days of the week, etc.); or,
 - (f) Place of performance of the services.
 - Subparagraphs (a) to (c) apply only if supplies are furnished under this contract. Subparagraphs (d) to (f) apply only if services are performed under this contract.
- (2) Adjustments of Price or Time for Performance. If any such change increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, an adjustment shall be made in the contract price, the delivery schedule, or both, and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the Price Adjustment Clause of this contract. Failure of the parties to agree to an adjustment shall not excuse the contractor from proceeding with the contract as changed, provided that the District promptly and duly make such provisional adjustments in payment or time for performance as may be reasonable. By proceeding with the work, the contractor shall not be deemed to have prejudiced any claim for additional compensation, or an extension of time for completion. (3) Time Period for Claim. Within 30 days after receipt of a written contract modification under Paragraph (1) of this clause, unless such period is extended by the Procurement Officer in writing, the contractor shall file notice of intent
- clause, unless such period is extended by the Procurement Officer in writing, the contractor shall file notice of intent to assert a claim for an adjustment. Later notification shall not bar the contractor's claim unless the District is prejudiced by the delay in notification.
- (4) Claim Barred After Final Payment. No claim by the contractor for an adjustment hereunder shall be allowed if notice is not given prior to final payment under this contract.

CISG: The parties expressly agree that the UN Convention on the International Sale of Goods shall not apply to this agreement.

COMPLIANCE WITH LAWS: During the term of the contract, contractor shall comply with all applicable provisions of laws, codes, ordinances, rules, regulations, and tariffs.

CONTRACTS: Every resulting contract is subject to all terms of the District procurement code including limitations as to duration, rights of the district to terminate and means of dispute resolution. No resulting contract is renewable except to the extent provided in the solicitation. No vendor terms take precedence over the solicitation and the District's

procurement code.

CONTRACTOR PERSONNEL: The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

CONTRACTOR'S OBLIGATION – **GENERAL:** The contractor shall provide and pay for all materials, tools, equipment, labor and professional and non-professional services, and shall perform all other acts and supply all other things necessary, to fully and properly perform and complete the work. The contractor must act as the prime contractor and assume full responsibility for any subcontractor's performance. The contractor will be considered the sole point of contact with regard to all situations, including payment of all charges and the meeting of all other requirements.

CONTRACTOR'S USE OF DISTRICT PROPERTY: Upon termination of the contract for any reason, the District shall have the right, upon demand, to obtain access to, and possession of, all District properties, including, but not limited to, current copies of all District application programs and necessary documentation, all data, files, intermediate materials and supplies held by the contractor. Contractor shall not use, reproduce, distribute, display, or sell any data, material, or documentation owned exclusively by the District without the District's written consent, except to the extent necessary to carry out the work.

DEFAULT:

- (a) (1) The District may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to:
- (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;
- (ii) Make progress, so as to endanger performance of this contract (but see paragraph (a)(2) of this clause); or
- (iii) Perform any of the other material provisions of this contract (but see paragraph (a)(2) of this clause).
- (2) The District's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Procurement Officer) after receipt of the notice from the Procurement Officer specifying the failure.
- (b) If the District terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Procurement Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to the District for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.
- (c) Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (1) acts of God or of the public enemy, (2) acts of the District in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the Contractor.
- (d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule.
- (e) If this contract is terminated for default, the District may require the Contractor to transfer title and deliver to the District, as directed by the Procurement Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Procurement Officer, the Contractor shall also protect and preserve property in its possession in which the District has an interest.
- (f) The District shall pay contract price for completed supplies delivered and accepted. The Contractor and Procurement Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property; if the parties fail to agree, the Procurement Officer shall set an amount subject to the Contractor's rights under the Disputes clause. Failure to agree will be a dispute under the Disputes clause. The District may withhold from these amounts any sum the Procurement Officer determines to be necessary to protect the District against loss because of outstanding liens or claims of former lien holders.
- (g) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience

of the District, be the same as if the termination had been issued for the convenience of the District. If, in the foregoing circumstances, this contract does not contain a clause providing for termination for convenience of the District, the contract shall be adjusted to compensate for such termination and the contract modified accordingly subject to the contractor's rights under the Disputes clause.

(h) The rights and remedies of the District in this clause are in addition to any other rights and remedies provided by law or under this contract.

REBATES BONUSES, AND OTHER FINANCIAL BENEFITS: All rebates, bonuses, discounts or other financial benefits derived from the procurement process must accrue to the District's nonprofit school food service account as defined in 7CFR 210.21(f). Allowable costs will be paid from the nonprofit school food service account to the contractor net of all discounts, rebates, and applicable credits accruing to or received by the contractor or any assignee under the contract, to the extent those credits are allowable to the allowable portion of the costs billed to the District.

ILLEGAL IMMIGRATION: (An overview is available at www.procurement.sc.gov) By signing your offer, you certify that you will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agree to provide to the District upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable to you and your subcontractors or sub-subcontractors; or (b) that you and your subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony, and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both." You agree to include in any contracts with your subcontractor's language requiring your subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractor's language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14.

INDEMNIFICATION - THIRD PARTY CLAIMS - GENERAL: Notwithstanding any limitation in this agreement, and to the fullest extent permitted by law, Contractor shall defend and hold harmless indemnitees for and against any and all suits or claims of any character (and all related damages, settlement payments, attorneys' fees, costs, expenses, losses or liabilities) by a third party which are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property arising out of or in connection with the goods or services acquired hereunder or caused in whole or in part by any act or omission of contractor, its subcontractors, their employees, workmen, servants, agents, or anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by an Indemnitee, and whether or not such claims are made by a third party or an Indemnitee; however, if an Indemnitee's negligent act or omission is subsequently determined to be the sole proximate cause of a suit or claim, the Indemnitee shall not be entitled to indemnification hereunder. Contractor shall be given timely written notice of any suit or claim. Contractor's obligations hereunder are in no way limited by any protection afforded under workers' compensation acts, disability benefits acts, or other employee benefit acts. This clause shall not negate, abridge, or reduce any other rights or obligations of indemnity which would otherwise exist. The obligations of this paragraph shall survive termination, cancelation, or expiration of the parties' agreement. This provision shall be construed fairly and reasonably, neither strongly for nor against either party, and without regard to any clause regarding insurance. As used in this clause, "Indemnitees" means District Five of Lexington and Richland Counties, its instrumentalities, agencies, departments, boards, and all their respective officers, agents and employees.

LICENSES AND PERMITS: During the term of the contract, the Contractor shall be responsible for obtaining, and maintaining in good standing, all licenses (including professional licenses, if any), permits, inspections and related fees for each or any such licenses, permits and /or inspections required by the State, county, city or other government entity or unit to accomplish the work specified in this solicitation and the contract.

MATERIAL AND WORKMANSHIP: Unless otherwise specifically provided in this contract, all equipment, material, and articles incorporated in the work covered by this contract are to be new and of the most suitable grade for the purpose intended.

PRICE ADJUSTMENTS: (1) Method of Adjustment. Any adjustment in the contract price made pursuant to a clause in this contract shall be consistent with this Contract and shall be arrived at through whichever one of the following ways is the most valid approximation of the actual cost to the Contractor (including profit, if otherwise allowed):

- (a) By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
- (b) By unit prices specified in the Contract or subsequently agreed upon;
- (c) by the costs attributable to the event or situation covered by the relevant clause, including profit if otherwise allowed, all as specified in the Contract; or subsequently agreed upon;
- (d) in such other manner as the parties may mutually agree; or,
- (e) in the absence of agreement by the parties, through a unilateral initial written determination by the Procurement Officer of the costs attributable to the event or situation covered by the clause, including profit if otherwise allowed, all as computed by the Procurement Officer in accordance with generally accepted accounting principles, subject to the provisions of Title 11, Chapter 35, Article 17 of the S.C. Code of Laws.
- (2) Submission of Price or Cost Data. Upon request of the Procurement Officer, the contractor shall provide reasonably available factual information to substantiate that the price or cost offered, for any price adjustments is reasonable, consistent with the provisions of Section 11-35-1830.

RELATIONSHIP OF THE PARTIES: Neither party is an employee, agent, partner, or joint venturer of the other. Neither party has the right or ability to bind the other to any agreement with a third party or to incur any obligation or liability on behalf of the other party.

SUBSTITUTIONS PROHIBITED - END PRODUCT PREFERENCES: If you receive the award as a result of the South Carolina end product or United States end product preference, you may not substitute a nonqualifying end product for a qualified end product. If you violate this provision, the District may terminate your contract for cause and you may be debarred. In addition, you shall pay to the District an amount equal to twice the difference between the price paid by the District and your evaluated price for the item for which you delivered a substitute.

SUBCONTRACTOR SUBSTITUTION PROHIBITED - RESIDENT SUBCONTRACTOR PREFERENCE:

If you receive an award as a result of the subcontractor preference, you may not substitute any business for the subcontractor upon which you relied to qualify for the preference, unless first approved in writing by the procurement officer. If you violate this provision, the District may terminate your contract for cause and you may be debarred. In addition, the procurement officer may require you to pay the District an amount equal to twice the difference between the price paid by the District and the price offered by the next lowest bidder, unless the substituted subcontractor qualifies for the preference.

TERMINATION FOR CONVENIENCE: (1) Termination. The Procurement Officer may terminate this contract in whole or in part, for the convenience of the District. The Procurement Officer shall give written notice of the termination to the contractor specifying the part of the contract terminated and when termination becomes effective. (2) Contractor's Obligations. The contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the contractor will stop work to the extent specified. The contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. The Procurement Officer may direct the contractor to assign the contractor's right, title, and interest under terminated orders or subcontracts to the District. The contractor must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

- (3) Right to Supplies. The Procurement Officer may require the contractor to transfer title and deliver to the District in the manner and to the extent directed by the Procurement Officer: (a) any completed supplies; and (b) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the contractor has specifically produced or specially acquired for the performance of the terminated part of this contract. The contractor shall, upon direction of the Procurement Officer, protect and preserve property in the possession of the contractor in which the District has an interest. If the Procurement Officer does not exercise this right, the contractor shall use best efforts to sell such supplies and manufacturing materials in a accordance with the standards of Uniform Commercial Code Section 2-706. Utilization of this Section in no way implies that the District has breached the contract by exercise of the Termination for Convenience Clause.
- (4) Compensation. (a) The contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data required by Section 11-35-1830 bearing on such claim.

If the contractor fails to file a termination claim within one year from the effective date of termination, the Procurement Officer may pay the contractor, if at all, an amount set in accordance with Subparagraph (c) of this Paragraph.

- (b) The Procurement Officer and the contractor may agree to a settlement and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the District, the proceeds of any sales of supplies and manufacturing materials under Paragraph (3) of this clause, and the contract price of the work not terminated;
- (c) Absent complete agreement under Subparagraph (b) of this Paragraph, the Procurement Officer shall pay the contractor the following amounts, provided payments agreed to under Subparagraph (b) shall not duplicate payments under this Subparagraph:
- (i) contract prices for supplies or services accepted under the contract;
- (ii) costs reasonably incurred in performing the terminated portion of the work less amounts paid or to be paid for accepted supplies or services;
- (iii) reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Paragraph (2) of this clause. These costs must not include costs paid in accordance with Subparagraph (c)(ii) of this paragraph;
- (iv) any other reasonable costs that have resulted from the termination. The total sum to be paid the contractor under this Subparagraph shall not exceed the total contract price plus the reasonable settlement costs of the contractor reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under Subparagraph (b) of this Paragraph, and the contract price of work not terminated.
- (d) Contractor must demonstrate any costs claimed, agreed to, or established under Subparagraphs (b) and (c) of this Paragraph using its standard record keeping system, provided such system is consistent with any applicable Generally Accepted Accounting Principles.
- (5) Contractor's failure to include an appropriate termination for convenience clause in any subcontract shall not (i) affect the District's right to require the termination of a subcontract, or (ii) increase the obligation of the District beyond what it would have been if the subcontract had contained an appropriate clause.

WARRANTY- STANDARD: Contractor must provide the manufacturer's standard written warranty upon delivery of product. Contractor warrants that manufacturer will honor the standard written warranty provided.

VIII. BIDDING SCHEDULE

endor Name:	_	
Description	Total Cos	
Lighting System for Irmo High School Practice Fields	\$	
Lighting System for Dutch Fork High School Practice Fields	\$	
GRAND TOTAL (Basis of Award):	\$	
gnature of Authorized Official:		

Print name and Title:

ATTACHMENTS TO SOLICITATION

LIST OF ATTACHMENTS

The following documents are attached to this solicitation:

- A. References
- B. Minority Participation AffidavitC. Offeror's Checklist
- D. Electrical Permits & Designs

ATTACHMENT A

REFERENCES

Instructions: Provide three references of customers that you have provided similar services as is described in this solicitation. The list of References shall be completed in its entirety and submitted with the bid response.

Company/School Name:	
Address:	
Contact Person:	
Phone Number:	
Email:	
Type of Service:	
Company/School Name:	
Address:	
Contact Person:	
Phone Number:	
Email:	
Type of Service:	
Company/School Name:	
Address:	
Contact Person:	
Phone Number:	
Email:	
Type of Service:	

ATTACHMENT B

MINORITY PARTICIPATION AFFIDAVIT

Is the bidder a South Carolina Certified Minority Business? [] Yes [] No
Is the bidder a Minority Business certified by another governmental entity? [] Yes [] No
If so, please list the certifying governmental entity:
Will any of the work under this contract be performed by a SC certified Minority Business as a subcontractor? [] Yes [] No
If so, what percentage of the total value of the contract will be performed by a SC certified Minority Business as a subcontractor?
Will any of the work under this contract be performed by a minority business certified by another governmental entity as a subcontractor? [] Yes [] No
If so, what percentage of the total value of the contract will be performed by a minority business certified by another governmental entity as a subcontractor?
If a certified Minority Business is participating in this contract, please indicate all categories for which the Business is certified:
[] Traditional minority [] Traditional minority, but female [] Women (Caucasian females) [] Hispanic minorities [] DOT referral (Traditional minority) [] DOT referral (Caucasian female) [] Temporary certification [] SBA 8 (a) certification referral [] Other minorities (Native American, Asian, etc.)
(If more than one minority contractor will be utilized in the performance of this contract, please provide the information above for each minority business.)
The Department of Administration, Division of Small and Minority Business Contracting and Certification, publishes a list of certified minority firms. The Minority Business Directory is available at the following URL: http://osmba.sc.gov/directory.html

ATTACHMENT C Offeror's Checklist

OFFEROR'S CHECKLIST

AVOID COMMON BID/PROPOSAL MISTAKES

Review this checklist prior to submitting your bid/proposal. If you fail to follow this checklist, you risk having your bid/proposal rejected.

- ✓ COMPLETED & SIGNED <u>ALL</u> REQUIRED DOCUMENTS.
- ✓ DO NOT INCLUDE ANY OF YOUR STANDARD CONTRACT FORMS!
- ✓ UNLESS EXPRESSLY REQUIRED, DO <u>NOT</u> INCLUDE ANY ADDITIONAL BOILERPLATE CONTRACT CLAUSES!
- ✓ REREAD YOUR ENTIRE BID/PROPOSAL TO MAKE SURE YOUR BID/PROPOSAL DOES NOT TAKE EXCEPTION TO ANY OF THE DISTRICT'S MANDATORY REQUIREMENTS!
- ✓ MAKE SURE YOU HAVE PROPERLY MARKED ALL PROTECTED, CONFIDENTIAL OR TRADE SECRET INFORMATION IN ACCORDANCE WITH THE INSTRUCTIONS: "SUBMITTING CONFIDENTIAL INFORMATION." <u>DO NOT</u> MARK YOUR ENTIRE RESPONSE AS CONFIDENTIAL, TRADE SECRET OR PROTECTED! <u>DO NOT</u> INCLUDE A LEGEND ON THE COVER STATING THAT YOUR ENTIRE RESPONSE IS NOT TO BE RELEASED!
- ✓ HAVE YOU PROPERLY ACKNOWLEDGED ALL AMENDMENTS? INSTRUCTIONS REGARDING HOW TO ACKKNOWLEDGE AN AMENDMENT SHOULD APPEAR IN ALL AMENDMENTS ISSUED.
- ✓ MAKE SURE THAT YOUR BID/PROPOSAL INCLUDES A COPY OF THE SOLICITATION COVER PAGE. MAKE SURE THE COVER PAGE IS SIGNED BY A PERSON THAT IS <u>AUTHORIZED</u> TO CONTRACTUALLY BIND YOUR BUSINESS.
- ✓ MAKE SURE YOUR BID/PROPOSAL INCLUDES THE NUMBER OF COPIES REQUESTED.
- ✓ CHECK TO ENSURE YOUR OFFER INCLUDES EVERYTHING REQUESTED!
- ✓ IF YOU HAVE CONCERNS ABOUT THE SOLICITATION, DO NOT RAISE THOSE CONCERNS IN YOUR RESPONSE! **AFTER OPENING, IT IS TOO LATE! IF THIS SOLICITATION INCLUDES A QUESTION & ANSWER PERIOD OR A PRE-SOLICITATION CONFERENCE, RAISE YOUR QUESTIONS AS PART OF THAT PROCESS!** PLEASE SEE INSTRUCTIONS UNDER THE HEADING "SUBMISSION OF QUESTIONS' AND ANY PROVISIONS REGARDING PRE-BID/PROPOSAL CONFERENCES.

This checklist is included only as a reminder to help offerors avoid common mistakes. Responsiveness will be evaluated against the solicitation, not against this checklist. You do <u>not</u> need to return this checklist with your offer.

SUBMIT WITH OFFER:

- 1. Cover Page
- 2. Page 2
- 3. Bid Schedule
- 4. Reference Sheet
- 5. Minority Participation Affidavit
- 6. Completed W-9
- 7. Copy of License(s), if applicable
- 8. Certificate of Insurance (COI)

ATTACHMENT D- Electrical Permits & Designs

ELECTRICAL SPECIFICATIONS

- 1. GENERAL PROVISIONS
- A. Work included in these specifications and included on the drawings shall include furnishing all labor, materials, supplies, and equipment to perform all work required including cutting, channeling, chasing, excavating and backfilling, to install a complete and working electrical system(s) in accordance with these sections of the specifications and the accompanying drawings. This shall include all required preparation work, raceways, coordination, etc. required to install the electrical system.
- B. The electrical work shall include, but in no way be limited to the following: Raceways (To include raceways for conductors and cables, but also empty for designated signal systems and future uses.)
- Electrical Distribution System. Exterior and Interior Lighting Systems.
- Exterior and Interior Power Systems. Wiring Devices.

Connection and installation of Equipment Furnished Under Other Divisions of the Specification.

C. The contractor is responsible for including any and all work related to the electrical that is noted in any part of the specifications or any part of the drawings, including Divisions 1, 15 and any other sections. The contractor will supply power to equipment at the voltage indicated on the drawings. The contractor will be held responsible for coordinating the equipment voltages, control equipment, wiring, and locations and type of terminations/connections and/or disconnects required to comply with the National Electrical Code, International Building Code, International Energy Conservation Code, all local codes, and the equipment manufacturer's requirements.

D. Electrical Drawings are diagrammatic in nature except where specific dimensions, or specific details are shown on the electrical, mechanical, or architectural drawings. The contractor shall refer to other drawings for exact locations of equipment, building dimensions, architectural details and conditions affecting the electrical work; however, field measurements take precedence over dimensioned drawings. The Electrical Contractor shall provide all labor and materials and all incidental elements; junction and pull boxes, filters, pull wires, connectors, support materials, fuses, disconnect switches, lamps, and labels, to install, connect, start-up and result in a complete and working system in accordance with the drawings and specifications. The contractor is responsible for coordinating the installation of all electrical work with the work of other contractors and/or trades. The electrical drawings are such that the electrical service to equipment furnished and installed under other sections of the contract documents (examples, include but are not limited to: HVAC equipment, water heaters, fans, pumps, motors, etc) is coordinated for the specified equipment only. If the equipment installed under other divisions of the contract documents is not the specified equipment it is the responsibility of the contractor to coordinate the electrical service/interface requirements with the electrical contractor.

E. Provide all wiring, connectors, fittings, connections, and all accessories for the complete installation of, and final connections to, equipment furnished under other divisions of the specifications and where indicated on the drawings or otherwise specified.

F. All safety disconnect switches shall be provided under Division 16 unless specifically noted on drawings. The electrical contractor shall furnish and install fuses that are sized in accordance to the equipment nameplate of the equipment served.

G. The contractor is responsible for obtaining all required permits and complying with all National (NEC, IBC, NFPA), State, County, and Municipal codes and regulations. This shall include, but not be limited to, the followina: 1. Federal Occupational Safety and Health Act (OSHA)

2. NFPA 70 (National Electrical Code) 3. NFPA 101 (Life Safety Code) 4. Americans with Disabilities Act (ADA).

5. International Building Code (IBC). 6. International Energy Conservation Code (IECC).

H. The contractor shall keep a set of construction drawings during the length of the project on which he shall note any and all changes from the original drawings. This record set of drawings shall be updated daily.

I. Electrical Subcontractor shall submit for review by the Engineer detailed shop drawings of all material listed below. All submittal data shall be submitted at one time. No material or equipment for which Engineer's review is required shall be delivered to the job site or installed until the Electrical Contractor has in his possession the reviewed and approved shop drawings for the particular material and/or equipment. The Electrical Contractor shall assemble, organize, prepare and review for correctness shop drawings on all materials, equipment, fixtures and devices to be used. If material submitted is the result of "value engineering" or "prior approval" changes, the submittal must contain supporting documentation of the approved changes, otherwise it will be reviewed against the specified products on these plans. The Electrical contractor shall furnish one (1) PDF copy of shop drawings. Shop drawings that are incorrectly submitted, contain errors or omissions, or not in the form and sequence specified shall be rejected as unapproved.

Shop drawings shall contain as cover page a letter by the supplying Vendor stating that the Vendor has received full contract documents and that to the best of his or her knowledge the submittal is in compliance with the contract documents and design intent including all ancillary parts and pieces required for a complete job.

Review of shop drawings in no way relieves the Contractor of his responsibility of quantity, dimensions, weights, means and methods, safety, or coordination with others.

Failure of the Contractor to submit shop drawings to the Engineer with reasonable time for review shall not entitle the Contractor to an extension of contract time. Reasonable review time is fifteen working days unless otherwise specified.

At minimum shop drawings shall be submitted for

7. Panelboards

9. Basic materials; wire, conduit, fittings, wiring devices

J. Requests for Substitution

Submit requests for substitution to Engineer through Architect in PDF format no fewer than ten (10) working days prior to bid time. Requests shall contain cutsheets, catalog numbers, etc. Any approval will be in writing by the Engineer. Prior approval submittals for lighting shall include adequate photometric and energy use documentation for comparison to specified. Substituted items will not result in an increase in cost to the Owner.

K. Catalog numbers and names that appear in the specifications or on the plans may be incomplete or obsolete and are for descriptive purposes only. As such they may not indicate all of the parts, pieces and systems required for a complete and operating installation. It is the responsibility of the Electrical Contractor, the Vendor and the Supplier to review the plans, specifications and applications to determine the correct item(s) required to include all installation and support materials and systems for a complete and working installation.

2. RACEWAYS/CONDUITS AND ASSOCIATED EQUIPMENT

A. The work shall include all raceways, conduits, fittings, and all other equipment required to install a raceway system. This shall include, but not limited to the following: 1. Rigid metal conduit and fittings

2. Electrical metallic tubing and fittings 3. Flexible metal conduit and fittings. 4. Liquid tight flexible metal conduit and fittings. Non-metallic conduit and fittings.

B. Except where otherwise permitted on drawings route all conductors in conduit.

C. All signal systems shall have their wiring installed in conduit/raceways to above accessible ceiling. All cabling exposed above ceiling

Conduit routing and device wiring for signal system components is not shown on the drawings. The contractor shall coordinate with the signal system manufacturer to determine the conduit (size and routing) and wiring requirements to circuit the equipment shown on the

D. Specified products and their areas of use shall be as described on drawings.

E. Fittings shall be steel compression type, concrete tight for all EMT raceways. For PVC raceways, use slip fittings with glue joints. For

rigid galvanized steel and IMC, fittings shall be threaded galvanized iron, heavy steel, concrete tight. F. Size conduit for conductor type installed; 1/2 inch minimum size.

G. For all empty raceways, furnish and install a nylon pull cord. The nylon pull cord shall be rated for a 200 pound force pull strength.

3. WIRE AND CABLE - 600 VOLTS AND LESS

A. Work shall include the furnishing and installing of all required wire and cable to complete the wiring and electrical system. This shall include, but not be limited to the following:

Building wire.

2. Wiring connections and terminations. B. All service entrance power cable shall be type XHHW OR THWN-2, 90 degree C, copper conductor U.N.O. Feeders and Branch Circuits Larger Than 6 AWG: Copper, stranded conductor, 600 volt insulation, THHN. Feeders and Branch Circuits 6 AWG and Smaller: Copper

conductor, 600 volt insulation, THHN. 6 and 8 AWG, stranded conductor; smaller than 8 AWG, solid conductor. MINIMUM SIZE SHALL BE

#12 FOR ALL WIRING ABOVE 48 VOLTS. All conductors in damp or wet locations (including below grade) shall be listed for

ABBREVIATIONS INTERMEDIATE METALLIC CONDUIT ABOVE FINISHED FLOOR JUNCTION BOX ABOVE FINISHED GRADE KVA KILOVOLT
KW KILOWATT KILOVOLT AMPERES ARC FAULT CIRCUIT INTERRUPTER BREAKER MAXIMUM MECHANICAL CONTRACTOR CONDUIT CABLE TELEVISION MINIMUM ELECTRICAL CONTRACTOR MANUFACTURER NONMETALLIC-SHEATHED CABLE EXHAUST FAN ELECTRICAL METALLIC TUBING 2020 NATIONAL ELECTRICAL CODE, (NFPA 70) FAN COIL UNIT SWBD SWITCHBOARD GENERAL CONTRACTOR GROUND FAULT CIRCUIT INTERRUPTER UNO UNLESS NOTED OTHERWISE GALVANIZED RIGID STEEL CONDUIT WC WATER COOLER XFMR TRANSFORMER HIGH INTENSITY DISCHARGE DEVICE SHALL HAVE ISOLATED GROUND

C. All cables shall be color coded. Color coding shall be as follows:

120/208 Volt Orange White Neutral Gray Ground

D. Each wire or cable in a feeder at its terminal points, and in each pull-box, junction box, and panel gutter through which it passes shall be identified to show the circuit number of the breaker that it connects to. Each common wire, common circuit to common loop of a system, sound system, or any signal system conductor, shall be identified.

E. All installation shall be in accordance with the NEC. All splices shall be in junction boxes and shall be electrically and mechanically secure. Where a circuit home run is shown on the plans without any conductor or raceway identification, it shall be a minimum of 2 # 12, 1 # 12 Ground, 1/2" Conduit. Place an equal number of conductors for each phase of a circuit in same raceway or cable. Splice only in junction or outlet boxes. Neatly train and lace wiring inside boxes, equipment, and panelboards. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.

4. PANELBOARDS

A. This section includes furnishing and installing panelboards and related equipment to form a complete and functioning electrical system. This shall include, but not be limited to the following: 1. Service and distribution panelboards. 2. Lighting and appliance branch circuit panelboards.

B. Panelboards shall be as manufactured by Square D or approved equivalent by GE, Cutler Hammer or Siemens.

C. Provide cabinet front with concealed trim clamps, and hinged door with flush lock. Finish in manufacturer's standard gray enamel. Provide panelboards with bus ratings as scheduled. Provide ground bus in all panelboards. Minimum Integrated Short Circuit Rating: See drawings. Molded Case Circuit Breakers: NEMA AB 1; provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole. Provide circuit breakers UL listed as Type HACR for air conditioning equipment branch circuits. All breakers shall be bolt on

D. Furnish and install all required materials to install and mount the panelboards to the wall shown on the drawings. Install panelboards plumb and flush with wall finishes, in conformance with NEMA PB 1.1. Provide filler plates for unused spaces in panelboards. E. Provide typed circuit directory for each circuit breaker in each panelboard. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses. Provide name plates for each panel and switch as described in the General Notes on the drawings.

5. SECONDARY GROUNDING

A. Work included shall include power system grounding, communication system grounding, and electrical equipment and raceway grounding and bonding. Ground electrical work in accordance with NEC Article 250, local codes as specified herein, and as shown on the drawings. B. Ground the electrical service system neutral at service entrance equipment to metallic water service and to supplementary grounding electrode(s). Provide communications system grounding conductor at point of service entrance. Bond together system neutrals, service equipment enclosures, exposed non-current carrying metal parts of electrical equipment, metal raceway systems, grounding conductor in raceways and cables, receptacle ground connectors, and plumbing systems.

C. Provide a grounding system that includes all connections and testing of: ground rods, ground cables, ground buses, conduits, fittings, anchors, supports, CADWELD(R) materials and equipment, and other materials as required for a complete installation. Provide ground cables composed of soft drawn, stranded bare copper of 98 percent conductivity encased in nonmetallic conduit above grade. Cable to be buried not less than 24 inches below grade. Install as required to provide sufficient mechanical protection. All copper to copper and copper to steel connections of #6 AWG and larger shall be made with the CADWELD(R).

D. Ground Rods: Copper-encased steel, 3/4 inch diameter, minimum length 10 feet. Number as required to achieve 10 ohms E. Provide a separate, insulated equipment grounding conductor in feeder and branch circuits. Terminate each end on a grounding lug, bus, or bushing. Connect grounding electrode conductors to metal water pipe using a suitable ground clamp. Make connections to flanged piping at street side of flange. Provide bonding jumper around water meter. Supplementary Grounding Electrode: Use driven ground rods on exterior of buildina.

F. Install ground cables continuous between connections. Splices will not be allowed except where indicated on the drawings. Connections made by the CADWELD(R) Process are not considered splices. Where ground cables pass through floor slabs, building walls, etc., and are not in metallic enclosures, provide the sleeves of approved nonmetallic material.

G. Install equipment grounding conductors in raceway with feeder and branch circuit conductors. Flexible metal conduit shall have a ground wire installed with the power conductors. Where connections are made to motors or equipment with flexible metal conduit. grounding conductor shall be stranded copper conductor within the conduit, bonded to the equipment and to the rigid metal raceway

6. TESTING

name, date and time of tests, weather and humidity

The complete system shall be free of faults, short circuits, grounds and open circuits. Balance loads across phases to obtain minimum neutral current in feeders and branch circuits. 2. The Electrical Contractor shall perform inspections and test as herein specified. The Electrical Contractor shall provide all material, equipment, labor and supervision to perform such tests and inspections. It is the intent of these tests to assure that all tested electrical equipment and systems are operational and within industry and the manufacturer's tolerances and is installed in accordance with the design Specifications. The test and inspections shall determine suitability Written documentation of the tests and inspections shall be provided and shall include the company name performing the work, project

B. Systems and equipment are to be tested and operated to verify compliance with the requirements of the contract documents and applicable codes.

Equipment, systems, conductors and devices to be tested are as follows: Power Distribution Equipment shown on the one-line (Power Riser) diagram

Proper operation of equipment ground fault protective devices.

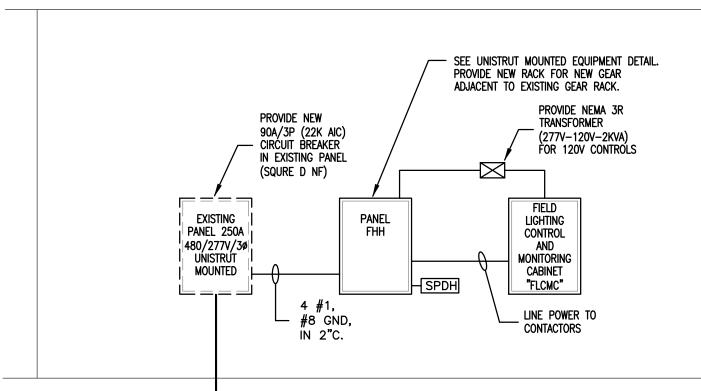
Conductors - Conductors rated 100 amperes and above.

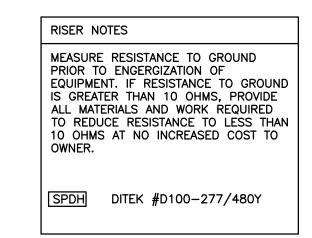
Insulation resistance test (Megger) at 1000 volts DC for 1 Minute or per cable manufacturer specifications. Minimum insulation resistance values shall not be less than fifty (50) megohms.

Test ground resistance using the attached rod technique (ART) or the fall of potential method according to IEEE 81 at the service

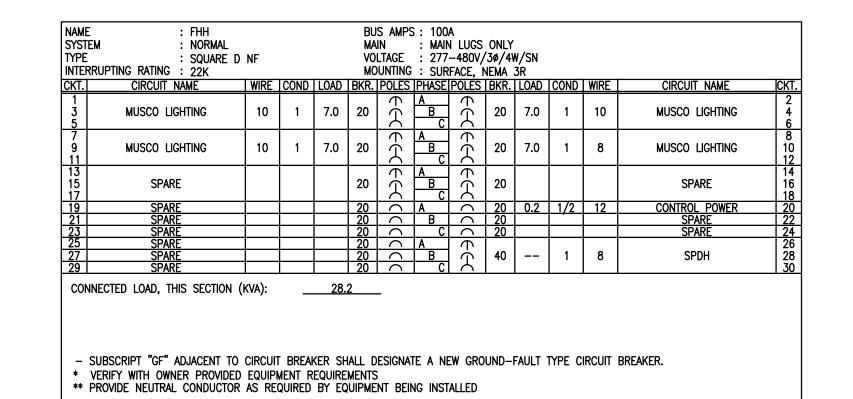
Verify proper type and size of grounding conductors and proper ground connections. 3. If ground resistance exceeds 10 ohms or values otherwise specified in the Specifications, equipment requirements or General or Special Conditions notify the Engineer immediately. The Electrical Contractor shall be responsible for providing alternate and/or additional means of grounding to reduce the ground resistance to 10 ohms or below at no additional cost.

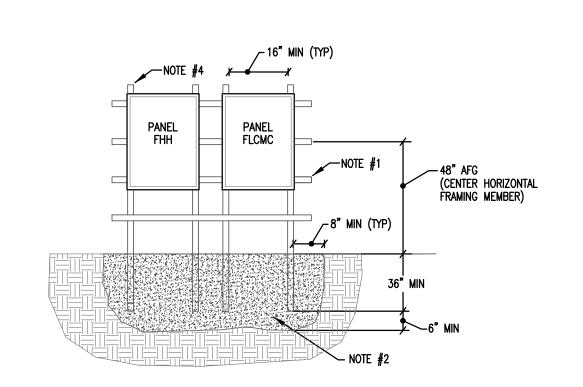
D. All devices which must be adjusted or set to operate on a schedule (time clocks, program mechanisms, etc.) shall be set prior to substantial completion to operate on schedules directed by the Owner. Instruct the owner on the proper operation of these devices.





TEST AND VERIFY EXISTING ---POWER RISER DIAGRAM SERVICE GROUND PER SECTION 6: TESTING.

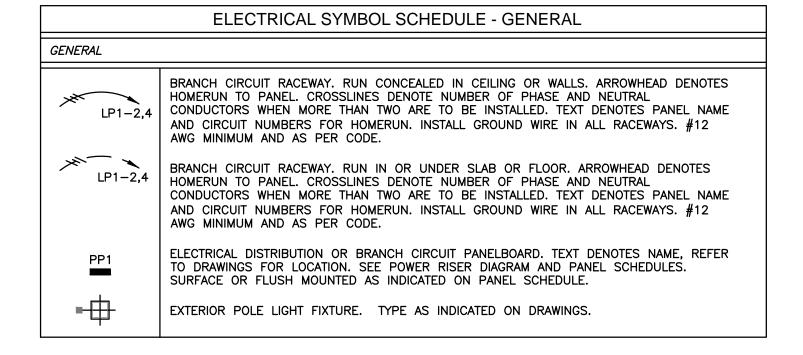


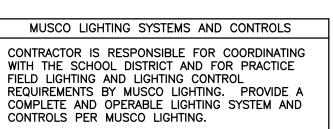


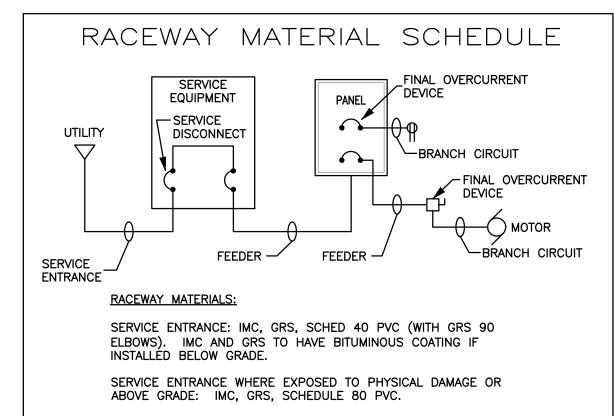
PROVIDE MINIMUM 1 5/8" GALVANIZED CHANNEL STRUT FOR ALL HORIZONTAL RACK FRAMING AND SUPPORTS. USE GALVANIZED FASTENERS, STRAPS, FITTINGS, ETC ONLY. COAT ALL FIELD CUTS OF STRUT OR HARDWARE WITH COLD GALVANIZING SPRAY. 3000 PSI CONCRETE, MINIMUM 8" AROUND EACH RACK VERTICAL SUPPORT. THIS DETAIL IS NOT SPECIFIC FOR EQUIPMENT BEING FURNISHED, BUT RATHER A GUIDE TO UNISTRUT MOUNTED EQUIPMENT. DIMENSIONS WILL VARY FOR

EQUIPMENT BEING FURNISHED PROVIDE MINIMUM 3" GALVANIZED CONDUIT FILLED WITH CONCRETE AND CAPPED FOR ALL VERTICAL RACK SUPPORTS. USE GALVANIZED FASTENERS, STRAPS, FITTINGS, ETC ONLY. COAT ALL FIELD CUTS OF SUPPORTS OR HARDWARE WITH COLD GALVANIZING SPRAY.

UNISTRUT MOUNTED EQUIPMENT DETAIL







FEEDERS: IMC, GRS, EMT (INTERIOR) BRANCH CIRCUITS CONCEALED ABOVE CEILING/IN WALLS: EMT,

BRANCH CIRCUITS EXPOSED (INTERIOR): EMT OUTDOORS BELOW GRADE: SAME AS SERVICE ENTRANCE. OUTDOORS EXPOSED: IMC, GRS (WITH THE EXCEPTION OF CONNECTIONS TO MECHANICAL EQUIPMENT WHICH MAY BE FLEXIBLE WATERTIGHT CONDUIT).

GENERAL NOTES ALL DRAWINGS:

- DO NOT SCALE DRAWINGS. LOCATE OUTLETS, EQUIPMENT AND OTHER ELECTRICAL DEVICES AS INDICATED AND COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE EXACT LIGHTING FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- MINIMUM SIZE CONDUCTOR FOR POWER SHALL BE #12 AWG. PROVIDE DEDICATED NEUTRAL FOR EACH MULTI-WIRE BRANCH CIRCUIT IN COMPLIANCE WITH NEC.
- BRANCH CIRCUIT SIZES ARE #12 AWG, 1/2"C. UNLESS OTHERWISE NOTED IN PANELBOARD
- SCHEDULES OR ON DRAWINGS. 4. ALL BRANCH CIRCUIT LOADS SHALL BE BALANCED ACROSS PANELBOARD BUSSES TO OBTAIN
- MINIMUM NEUTRAL CURRENT. 5. ALL FLEXIBLE CONDUIT SHALL CONTAIN A GREEN WIRE BONDED TO RIGID RACEWAY, BOX OR
- FIXTURE AT EACH END OF FLEX. SIZE GROUND PER NEC TABLE 250-122. 6. PROVIDE PULL STRING IN ALL EMPTY RACEWAYS.
- COORDINATE WITH OTHER TRADES TO CONCEAL ELECTRICAL WORK AND PROVIDE OUTLETS IN CORRECT LOCATIONS.
- 8. WHERE NOT INDICATED OTHERWISE, EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED PER NEC TABLE 250-122.
- 9. ALL METAL CONDUITS 1" AND LARGER SHALL HAVE A GROUNDING BUSHING BONDING CONDUIT TO
- RUN EXPOSED COORDINATE ROUTING WITH ARCHITECT AND PAINT AS REQUIRED BY ARCHITECT. 11. ELECTRICAL WORK SHALL COMPLY WITH ALL NATIONAL, STATE AND LOCAL CODES, REQUIREMENTS

10. CONCEAL ALL CONDUIT AND RACEWAY. IF CONDITIONS REQUIRE CONDUIT OR RACEWAY TO BE

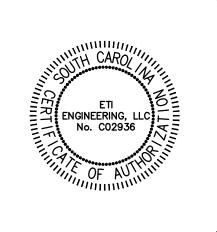
- AND ORDINANCES. 12. ALL BACKBOXES SHALL BE MINIMUM 4" SQUARE.
- 13. ALL EMT FITTINGS SHALL BE STEEL COMPRESSION TYPE WITH INSULATED THROAT.
- 14. PROVIDE PLASTIC ENGRAVED NAMETAGS FOR ALL ELECTRICAL GEAR. INDICATE EQUIPMENT NAME, EQUIPMENT SERVED (WHERE APPLICABLE), FEEDER SOURCE AND CIRCUIT, VOLTAGE. LETTERING SHALL BE 3/8" IN HEIGHT, WHITE ON BLACK BACKGROUND.

ENGINEERING, LLO

5725 Bush River Road Columbia, SC 29212 803.233.9396 (Phone) 803.233.4371 (Fax)

> Project Manager Troy Lowder PE, x105

> > ETi #2201-4051





DRAWN BY: TRL CHECKED BY: BD7 REVISIONS:

R

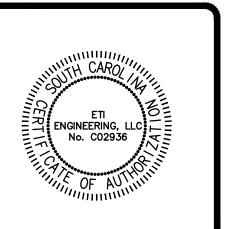


ENGINEERING, LLC

5725 Bush River Road Columbia, SC 29212 803.233.9396 (Phone) 803.233.4371 (Fax)

Project Manager: Troy Lowder PE, x105

ETi #2201-40511





DRAWN BY: TRL CHECKED BY: BDT **REVISIONS**:



PROJECT NAME (EDIT) PROJECT LOCATION (EDIT)

Lighting System

Pole / Fixture Summary											
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit					
S1-S4	80'	80'	1	TLC-LED-1200	1.17 kW	Α					
		80'	4	TLC-LED-1500	5.64 kW	Α					
4			20		27.24 kW						

Circuit Summ	ary		
Circuit	Description	Load	Fixture Qty
Α	Soccer	27.24 kW	20

Fixture Type Summary										
Туре	Source	Wattage	Lumens	L90	L80	L70	Quantity			
TLC-LED-1500	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	>120,000	16			
TLC-LED-1200	LED 5700K - 75 CR	1170W	150,000	>120,000	>120,000	>120,000	4			

Single Luminaire Amperage Draw Chart										
Driver (.90 min power factor)	Max Line Amperage Per Luminaire									
Single Phase Voltage	208 (0)	220 (0)	240 (0)	277 (0)	347 (0)	380 (0)	480 (0)			
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6			
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0			

Light Level Summary

Calculation Grid Summar	ry							
Grid Name	Calculation Metric			Illumination			Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		.,
150' Spill	Horizontal Illuminance	0.02	0	0.07	17.45		Α	20
150' Spill	Max Candela (by Fixture)	1937	622	4619	7.43	3.11	Α	20
150' Spill	Max Vertical Illuminance Metric	0.06	0.01	0.13	10.11	5.75	Α	20
Soccer	Horizontal Illuminance	30.2	22	34	1.53	1.37	Α	20

From Hometown to Professional







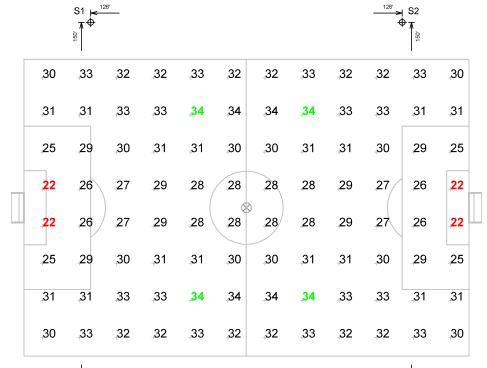




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PROJECT SUMMARY

EQI	EQUIPMENT LIST FOR AREAS SHOWN											
	Р	ole		Luminaires								
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS				
4	S1-S4	80'	-	80'	TLC-LED-1200	1	1	0				
				80'	TLC-LED-1500	4	4	0				
4	TOTALS							0				



126

150'

S4

ENGINEERED DESIGN By: File #SO3-3624-1215-4P_D · 12-Jan-23

SCALE IN FEET 1:60



Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

PROJECT NAME (EDIT) PROJECT LOCATION (EDIT)

RID SUMMARY	
Name:	Soccer
Size:	360' x 240'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ricigire.	5.0 above 6.aac								
ILLUMINATION S	ILLUMINATION SUMMARY								
MAINTAINED HORIZONTAL FOOTCANDLES									
	Entire Grid								
Guaranteed Average:	30								
Scan Average:	30.18								
Maximum:	34								
Minimum:	22								
Avg / Min:	1.35								
Guaranteed Max / Min:	2.5								
Max / Min:	1.53								
UG (adjacent pts):	1.24								
CU:	0.73								
No. of Points:	96								
LUMINAIRE INFORMATIO	N								
Applied Circuits:	A								
No. of Luminaires:									
Total Load:	27.24 kW								

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

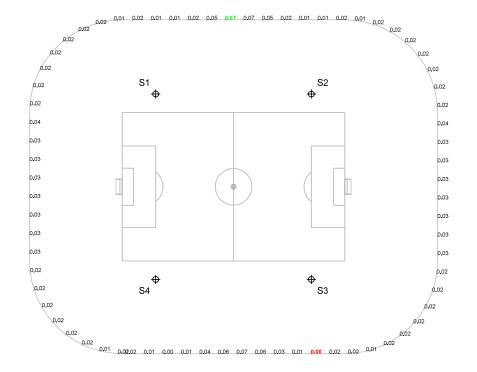
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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EQI	EQUIPMENT LIST FOR AREAS SHOWN											
	Р	ole		Luminaires								
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS				
4	S1-S4	80'	-	80'	TLC-LED-1200	1	1	0				
				80'	TLC-LED-1500	4	4	0				
4	4 TOTALS							0				



SCALE IN FEET 1 : 120
0' 120' 240

ENGINEERED DESIGN By: File #SO3-3624-1215-4P_D · 12-Jan-23

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

PROJECT NAME (EDIT) PROJECT LOCATION (EDIT)

GRID SUMMARY

Name: 150' Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY HORIZONTAL FOOTCANDLES

Scan Average: 0.0238
Maximum: 0.07
Minimum: 0.00
No. of Points: 72
LUMINAIRE INFORMATION

Applied Circuits: A
No. of Luminaires: 20
Total Load: 27.24 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

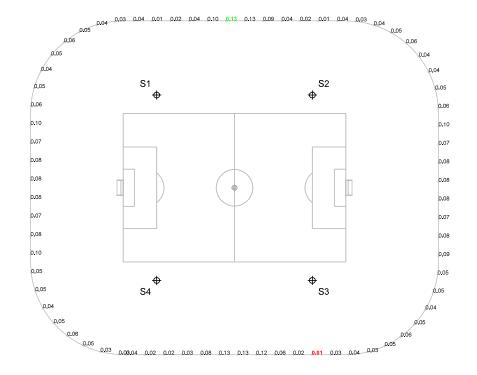
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.



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EQI	EQUIPMENT LIST FOR AREAS SHOWN										
Pole Luminaires											
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS			
4	S1-S4	80'	-	80'	TLC-LED-1200	1	1	0			
				80'	TLC-LED-1500	4	4	0			
4			20	20	0						



SCALE IN FEET 1 : 120
0' 120' 240

ENGINEERED DESIGN By: File #SO3-3624-1215-4P_D · 12-Jan-23

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

PROJECT NAME (EDIT) PROJECT LOCATION (EDIT)

GRID SUMMARY

Name: 150' Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY MAX VERTICAL FOOTCANDLES Entire Grid Scan Average: 0.0575 Maximum: 0.13 Minimum: 0.01 No. of Points: 72 LUMINAIRE INFORMATION Applied Circuits: A No. of Luminaires: 20 Total Load: 27.24 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

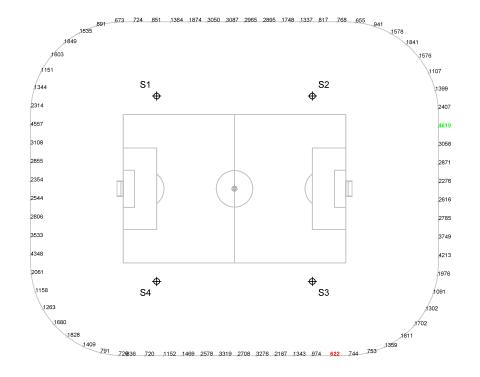
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.



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EQI	EQUIPMENT LIST FOR AREAS SHOWN										
	Pole Luminaires										
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS			
4	S1-S4	80'	-	80'	TLC-LED-1200	1	1	0			
				80'	TLC-LED-1500	4	4	0			
4	4 TOTALS							0			





Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

PROJECT NAME (EDIT) PROJECT LOCATION (EDIT)

GRID SUMMARY

Name: 150' Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY CANDELA (PER FIXTURE)

| Entire Grid | Scan Average: 1936.8722 | Maximum: 4619.33 | Minimum: 622.07 | No. of Points: 72

Applied Circuits: A
No. of Luminaires: 20
Total Load: 27.24 kW

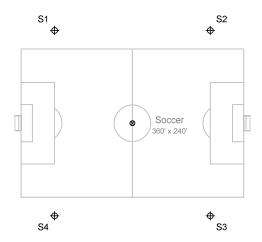
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.



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PROJECT NAME (EDIT) PROJECT LOCATION (EDIT)

EQUIPMENT LAYOUT

INCLUDES:

Soccer

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN										
Pole Luminaires										
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE				
4	S1-S4	80'	-	80'	TLC-LED-1200	1				
				80'	TLC-LED-1500	4				
4 TOTALS										

SINGLE LUMINAIRE AMPERAGE DRAW CHART										
Driver (.90 min power factor)		Line A	mper:	age Pe		inaire	2			
Single Phase Voltage	208	220	240	277 (0)	347 (0)	380	480 (0)			
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6			
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0			



Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes



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EQUIPMENT LAYOUT

- 1. GENERAL PROVISIONS
- A. Work included in these specifications and included on the drawings shall include furnishing all labor, materials, supplies, and equipment to perform all work required including cutting, channeling, chasing, excavating and backfilling, to install a complete and working electrical system(s) in accordance with these sections of the specifications and the accompanying drawings. This shall include all required preparation work, raceways, coordination, etc. required to install the electrical system.
- B. The electrical work shall include, but in no way be limited to the following:
 1. Raceways (To include raceways for conductors and cables, but also empty for designated signal systems and future uses.)
- Raceways (10 include raceways for conductors ar
 Electrical Distribution System.
 Exterior and Interior Lighting Systems.

Exterior and Interior Power Systems.

Utility Service Entrances — Electrical

- Wiring Devices.
 Connection and installation of Equipment Furnished Under Other Divisions of the Specification.
- C. The contractor is responsible for including any and all work related to the electrical that is noted in any part of the specifications or any part of the drawings, including Divisions 1, 15 and any other sections. The contractor will supply power to equipment at the voltage indicated on the drawings. The contractor will be held responsible for coordinating the equipment voltages, control equipment, wiring, and locations and type of terminations/connections and/or disconnects required to comply with the National Electrical Code, International Building Code, International Energy Conservation Code, all local codes, and the equipment manufacturer's requirements.

D. Electrical Drawings are diagrammatic in nature except where specific dimensions, or specific details are shown on the electrical, mechanical, or architectural drawings. The contractor shall refer to other drawings for exact locations of equipment, building dimensions, architectural details and conditions affecting the electrical work; however, field measurements take precedence over dimensioned drawings. The Electrical Contractor shall provide all labor and materials and all incidental elements; junction and pull boxes, filters, pull wires, connectors, support materials, fuses, disconnect switches, lamps, and labels, to install, connect, start—up and result in a complete and working system in accordance with the drawings and specifications. The contractor is responsible for coordinating the installation of all electrical work with the work of other contractors and/or trades. The electrical drawings are such that the electrical service to equipment furnished and installed under other sections of the contract documents (examples, include but are not limited to: HVAC equipment, water heaters, fans, pumps, motors, etc) is coordinated for the specified equipment only. If the equipment installed under other divisions of the contract documents is not the specified equipment it is the responsibility of the contractor to coordinate the electrical service/interface requirements with the electrical contractor.

E. Provide all wiring, connectors, fittings, connections, and all accessories for the complete installation of, and final connections to, equipment furnished under other divisions of the specifications and where indicated on the drawings or otherwise specified.

- F. All safety disconnect switches shall be provided under Division 16 unless specifically noted on drawings. The electrical contractor shall furnish and install fuses that are sized in accordance to the equipment nameplate of the equipment served.
- G. The contractor is responsible for obtaining all required permits and complying with all National (NEC, IBC, NFPA), State, County, and Municipal codes and regulations. This shall include, but not be limited to, the following:
- Federal Occupational Safety and Health Act (OSHA)
 NFPA 70 (National Electrical Code)
 NFPA 101 (Life Safety Code)
- 4. Americans with Disabilities Act (ADA).
- 5. International Building Code (IBC).6. International Energy Conservation Code (IECC).
- H. The contractor shall keep a set of construction drawings during the length of the project on which he shall note any and all changes from the original drawings. This record set of drawings shall be updated daily.

I. Electrical Subcontractor shall submit for review by the Engineer detailed shop drawings of all material listed below. All submittal data shall be submitted at one time. No material or equipment for which Engineer's review is required shall be delivered to the job site or installed until the Electrical Contractor has in his possession the reviewed and approved shop drawings for the particular material and/or equipment. The Electrical Contractor shall assemble, organize, prepare and review for correctness shop drawings on all materials, equipment, fixtures and devices to be used. If material submitted is the result of "value engineering" or "prior approval" changes, the submittal must contain supporting documentation of the approved changes, otherwise it will be reviewed against the specified products on these plans. The Electrical contractor shall furnish one (1) PDF copy of shop drawings. Shop drawings that are incorrectly submitted, contain errors or omissions, or not in the form and sequence specified shall be rejected as unapproved.

Shop drawings shall contain as cover page a letter by the supplying Vendor stating that the Vendor has received full contract documents and that to the best of his or her knowledge the submittal is in compliance with the contract documents and design intent including all ancillary parts and pieces required for a complete job.

Review of shop drawings in no way relieves the Contractor of his responsibility of quantity, dimensions, weights, means and methods, safety, or coordination with others.

Failure of the Contractor to submit shop drawings to the Engineer with reasonable time for review shall not entitle the Contractor to an extension of contract time. Reasonable review time is fifteen working days unless otherwise specified.

At minimum shop drawings shall be submitted for

- 1. Panelboards
- SPD'S
 Basic materials; wire, conduit, fittings, wiring devices
- J. Requests for Substitution

Submit requests for substitution to Engineer through Architect in PDF format no fewer than ten (10) working days prior to bid time. Requests shall contain cutsheets, catalog numbers, etc. Any approval will be in writing by the Engineer. Prior approval submittals for lighting shall include adequate photometric and energy use documentation for comparison to specified.

Substituted items will not result in an increase in cost to the Owner.

K. Catalog numbers and names that appear in the specifications or on the plans may be incomplete or obsolete and are for descriptive purposes only. As such they may not indicate all of the parts, pieces and systems required for a complete and operating installation. It is the responsibility of the Electrical Contractor, the Vendor and the Supplier to review the plans, specifications and applications to determine the correct item(s) required to include all installation and support materials and systems for a complete and working installation.

- 2. RACEWAYS/CONDUITS AND ASSOCIATED EQUIPMENT
- A. The work shall include all raceways, conduits, fittings, and all other equipment required to install a raceway system. This shall include, but not limited to the following:

 1. Rigid metal conduit and fittings.
- Electrical metallic tubing and fittings.
 Flexible metal conduit and fittings.
 Liquid tight flexible metal conduit and fittings.
- 5. Non-metallic conduit and fittings.
- B. Except where otherwise permitted on drawings route all conductors in conduit.
- C. All signal systems shall have their wiring installed in conduit/raceways to above accessible ceiling. All cabling exposed above ceiling shall be plenum rated.

Conduit routing and device wiring for signal system components is not shown on the drawings. The contractor shall coordinate with the signal system manufacturer to determine the conduit (size and routing) and wiring requirements to circuit the equipment shown on the

- D. Specified products and their areas of use shall be as described on drawings.
- E. Fittings shall be steel compression type, concrete tight for all EMT raceways. For PVC raceways, use slip fittings with glue joints. For rigid galvanized steel and IMC, fittings shall be threaded galvanized iron, heavy steel, concrete tight.
- F. Size conduit for conductor type installed; 1/2 inch minimum size.
- G. For all empty raceways, furnish and install a nylon pull cord. The nylon pull cord shall be rated for a 200 pound force pull strength.
- 3. WIRE AND CABLE 600 VOLTS AND LESS
- A. Work shall include the furnishing and installing of all required wire and cable to complete the wiring and electrical system. This shall include, but not be limited to the following:
 1. Building wire.
 2. Wiring connections and terminations.
- B. All service entrance power cable shall be type XHHW OR THWN-2, 90 degree C, copper conductor U.N.O. Feeders and Branch Circuits Larger Than 6 AWG: Copper, stranded conductor, 600 volt insulation, THHN. Feeders and Branch Circuits 6 AWG and Smaller: Copper conductor, 600 volt insulation, THHN. 6 and 8 AWG, stranded conductor; smaller than 8 AWG, solid conductor. MINIMUM SIZE SHALL BE #12 FOR ALL WIRING ABOVE 48 VOLTS. All conductors in damp or wet locations (including below grade) shall be listed for that use, THWN-2 or equivalent.

ABBREVIATIONS INTERMEDIATE METALLIC CONDUIT ABOVE FINISHED FLOOR JUNCTION BOX KVA | KILOVOLT AMPERES
KW | KILOWATT ABOVE FINISHED GRADE ARC FAULT CIRCUIT INTERRUPTER BREAKER MAXIMUM MECHANICAL CONTRACTOR CONDUIT CABLE TELEVISION MDP | MAIN DISTRIBUTION PANEL MINIMUM ELECTRICAL CONTRACTOR MANUFACTURER NONMETALLIC-SHEATHED CABLE EXHAUST FAN ELECTRICAL METALLIC TUBING 2020 NATIONAL ELECTRICAL CODE, (NFPA 70) FAN COIL UNIT SWBD SWITCHBOARD GENERAL CONTRACTOR GROUND FAULT CIRCUIT INTERRUPTER UNO UNLESS NOTED OTHERWISE GALVANIZED RIGID STEEL CONDUIT WC WATER COOLER XFMR TRANSFORMER HIGH INTENSITY DISCHARGE DEVICE SHALL HAVE ISOLATED GROUND

C. All cables shall be color coded. Color coding shall be as follows:

120/208 Volt Phase 277/480 Volt
Black A Brown
Red B Orange
Blue C Yellow
White Neutral Gray
Green Ground Green

D. Each wire or cable in a feeder at its terminal points, and in each pull—box, junction box, and panel gutter through which it passes shall be identified to show the circuit number of the breaker that it connects to. Each common wire, common circuit to common loop of a system, sound system, or any signal system conductor, shall be identified.

E. All installation shall be in accordance with the NEC. All splices shall be in junction boxes and shall be electrically and mechanically secure. Where a circuit home run is shown on the plans without any conductor or raceway identification, it shall be a minimum of 2 # 12, 1 # 12 Ground, 1/2" Conduit. Place an equal number of conductors for each phase of a circuit in same raceway or cable. Splice only in junction or outlet boxes. Neatly train and lace wiring inside boxes, equipment, and panelboards. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.

4. WIRING DEVICES

A. The shall include the furnishing and installing of any and all wiring devices required to make a complete and functioning wiring system. See the drawings for symbols and descriptions of devices. Devices specified are to establish a level of quality. All devices shall be best specification grade. Equivalent devices by Pass and Seymore or Leviton are acceptable.

B. Light switches other than sweep switches and low voltage button stations shall be 20 ampere, 120-277 volt. Unit shall be HBL #1221 for SPST, HBL #1223 for three-way, and HBL #1224 for Four-Way.

- C. Installation shall be per NEC. Install wall switches OFF position down.
- D. Wiring Device Plates:
 1. Provide over—sized Thermoset type cover plates for all flush mounted devices. Color shall match existing or provide at minimum selection of white, ivory, brown or gray.
- Plates for surface mounted devices in unfinished areas shall be steel, galvanized types with beveled edges.
 Screws securing the plate shall have flush mounted heads (when installed) with finish to match that of the plate.
 Weather—proof plates shall be constructed with cast aluminum base plates and covers. Hinge pins, springs and screws shall be constructed of stainless steel. Covers shall comply with appropriate UL and NEC requirements for use in wet locations.

5. PANELBOARDS

A. This section includes furnishing and installing panelboards and related equipment to form a complete and functioning electrical system.
This shall include, but not be limited to the following:
Service and distribution panelboards.
Lighting and appliance branch circuit panelboards.

B. Panelboards shall be as manufactured by Square D or approved equivalent by GE, Cutler Hammer or Siemens.

C. Provide cabinet front with concealed trim clamps, and hinged door with flush lock. Finish in manufacturer's standard gray enamel. Provide panelboards with bus ratings as scheduled. Provide ground bus in all panelboards. Minimum Integrated Short Circuit Rating: See drawings. Molded Case Circuit Breakers: NEMA AB 1; provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole. Provide circuit breakers UL listed as Type HACR for air conditioning equipment branch circuits. All breakers shall be bolt on

D. Furnish and install all required materials to install and mount the panelboards to the wall shown on the drawings. Install panelboards plumb and flush with wall finishes, in conformance with NEMA PB 1.1. Provide filler plates for unused spaces in panelboards.

E. Provide typed circuit directory for each circuit breaker in each panelboard. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses. Provide name plates for each panel and switch as described in the General Notes on the drawings.

6. SECONDARY GROUNDING

A. Work included shall include power system grounding, communication system grounding, and electrical equipment and raceway grounding and bonding. Ground electrical work in accordance with NEC Article 250, local codes as specified herein, and as shown on the drawings.

B. Ground the electrical service system neutral at service entrance equipment to metallic water service and to supplementary grounding electrode(s). Provide communications system grounding conductor at point of service entrance. Bond together system neutrals, service equipment enclosures, exposed non—current carrying metal parts of electrical equipment, metal raceway systems, grounding conductor in raceways and cables, receptacle ground connectors, and plumbing systems.

C. Provide a grounding system that includes all connections and testing of: ground rods, ground cables, ground buses, conduits, fittings, anchors, supports, CADWELD(R) materials and equipment, and other materials as required for a complete installation. Provide ground cables composed of soft drawn, stranded bare copper of 98 percent conductivity encased in nonmetallic conduit above grade. Cable to be buried not less than 24 inches below grade. Install as required to provide sufficient mechanical protection. All copper to copper and copper to steel connections of #6 AWG and larger shall be made with the CADWELD(R).

D. Ground Rods: Copper—encased steel, 3/4 inch diameter, minimum length 10 feet. Number as required to achieve 10 ohms

E. Provide a separate, insulated equipment grounding conductor in feeder and branch circuits. Terminate each end on a grounding lug, bus, or bushing. Connect grounding electrode conductors to metal water pipe using a suitable ground clamp. Make connections to flanged piping at street side of flange. Provide bonding jumper around water meter. Supplementary Grounding Electrode: Use driven ground rods on exterior of building.

F. Install ground cables continuous between connections. Splices will not be allowed except where indicated on the drawings. Connections made by the CADWELD(R) Process are not considered splices. Where ground cables pass through floor slabs, building walls, etc., and are not in metallic enclosures, provide the sleeves of approved nonmetallic material.

G. Install equipment grounding conductors in raceway with feeder and branch circuit conductors. Flexible metal conduit shall have a ground wire installed with the power conductors. Where connections are made to motors or equipment with flexible metal conduit, grounding conductor shall be stranded copper conductor within the conduit, bonded to the equipment and to the rigid metal raceway system.

6. TESTING

GENERAL

A. GUARANTEE OF WORK, EQUIPMENT AND MATERIALS

1. The complete system shall be free of faults, short circuits, grounds and open circuits. Balance loads across phases to obtain minimum neutral current in feeders and branch circuits.

2. The Electrical Contractor shall perform inspections and test as berein specified. The Electrical Contractor shall provide all materials are all materials.

- 2. The Electrical Contractor shall perform inspections and test as herein specified. The Electrical Contractor shall provide all material, equipment, labor and supervision to perform such tests and inspections.

 3. It is the intent of these tests to assure that all tested electrical equipment and systems are operational and within industry and the manufacturer's tolerances and is installed in accordance with the design Specifications. The test and inspections shall determine suitability for energization.

 Written documentation of the tests and inspections shall be provided and shall include the company name performing the work, project
- B. Systems and equipment are to be tested and operated to verify compliance with the requirements of the contract documents and applicable codes.

 Equipment, systems, conductors and devices to be tested are as follows:
- quipment, systems, conductors and devices to be tested are as follows:

 Power Distribution Equipment shown on the one—line (Power Riser) diagram.

 Proper targue yalves on luga and connectors
- Proper torque values on lugs and connectors.Proper operation of equipment ground fault protective devices.

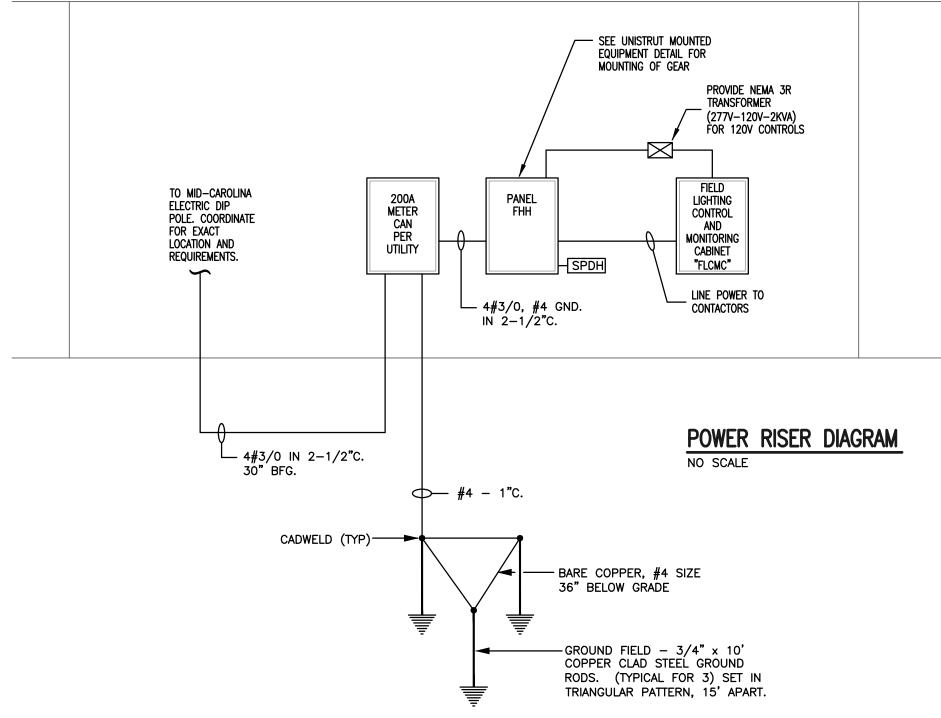
name, date and time of tests, weather and humidity

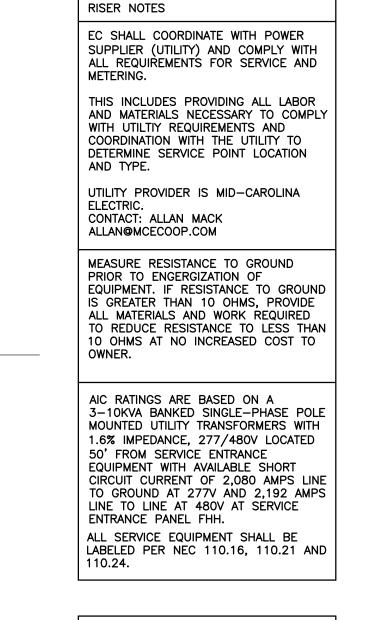
- Conductors Conductors rated 100 amperes and above.
 Proper conductor and insulation type
 Insulation resistance test (Megger) at 1000 volts DC for 1 Minute or per cable manufacturer specifications.
- c. Minimum insulation resistance values shall not be less than fifty (50) megohms. C. Grounding

ELECTRICAL SYMBOL SCHEDULE - GENERAL

- Test ground resistance using the attached rod technique (ART) or the fall of potential method according to IEEE 81 at the service entrance.
 Verify proper type and size of grounding conductors and proper ground connections.
- 3. If ground resistance exceeds 10 ohms or values otherwise specified in the Specifications, equipment requirements or General or Special Conditions notify the Engineer immediately. The Electrical Contractor shall be responsible for providing alternate and/or additional means of grounding to reduce the ground resistance to 10 ohms or below at no additional cost.

D. All devices which must be adjusted or set to operate on a schedule (time clocks, program mechanisms, etc.) shall be set prior to substantial completion to operate on schedules directed by the Owner. Instruct the owner on the proper operation of these devices.

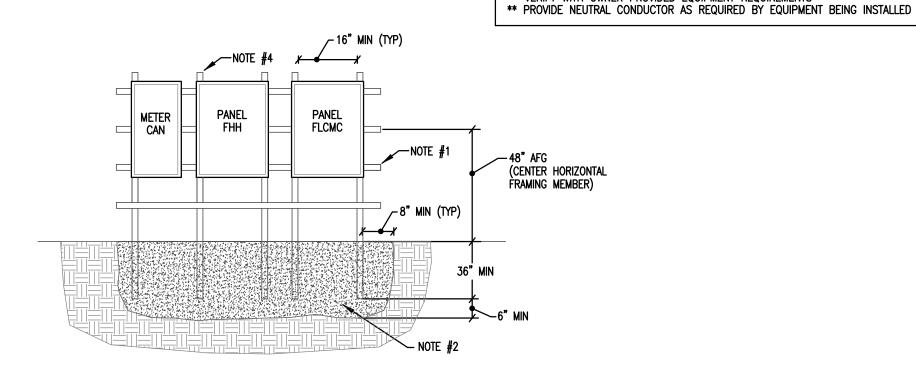




SURGE PROTECTION DEVICE SCHEDULE

SPDH DITEK #D100-277/480Y

OIDOLUT NAME	LWIDE	LOONE	MOUNTING : SURFACE, NEMA 3R D LOAD BKR. POLES PHASE POLES BKR. LOAD COND WIRE						OIDOUIT MANE	-love			
CIRCUIT NAME	WIRE	COND	LUAD	RKK.				RKK.	LOAD	COND	WIRE	CIRCUIT NAME	CKT.
MUSCO LIGHTING	10	1	5.7	20		A B C	<u> </u>	20	5.7	1	8	MUSCO LIGHTING	2 4 6
MUSCO LIGHTING	10	1	5.7	20)-)-)	A B C	\mathcal{H}	20	5.7	1	8	MUSCO LIGHTING	8 10 12
MUSCO LIGHTING SPARE	8	1	(5.7)	20)	A B C	+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	20	(5.7)	1	8	MUSCO LIGHTING SPARE	14 16 18
SPARE				20		Α	$\overline{}$	20	0.2	1/2	12	CONTROL POWER	20
SPARE				20)	В	$\overline{}$	20		·		SPARE	22
SPARE							$\overline{}$	20				SPARE	24
SPARE	 			20		В	Υ	40		1	8	SPDH	26 28 30
	MUSCO LIGHTING MUSCO LIGHTING SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	MUSCO LIGHTING 10 MUSCO LIGHTING SPARE 8 SPARE	MUSCO LIGHTING 10 1 MUSCO LIGHTING SPARE 8 1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	MUSCO LIGHTING 10 1 5.7 MUSCO LIGHTING SPARE 8 1 (5.7) SPARE	MUSCO LIGHTING 10 1 5.7 20 MUSCO LIGHTING SPARE 8 1 (5.7) 20 SPARE 20	MUSCO LIGHTING 10 1 5.7 20	MUSCO LIGHTING1015.720 \bigcirc BMUSCO LIGHTING1015.720 \bigcirc \bigcirc AMUSCO LIGHTING SPARE81(5.7)20 \bigcirc ASPARE20 \bigcirc ASPARE20 \bigcirc BSPARE20 \bigcirc CSPARE20 \bigcirc ASPARE20 \bigcirc ASPARE20 \bigcirc ASPARE20 \bigcirc B	MUSCO LIGHTING1015.720 \bigcirc B \bigcirc MUSCO LIGHTING1015.720 \bigcirc \bigcirc A \bigcirc MUSCO LIGHTING SPARE81(5.7)20 \bigcirc \bigcirc \bigcirc \bigcirc SPARE20 \bigcirc A \bigcirc SPARE20 \bigcirc B \bigcirc SPARE20 \bigcirc A \bigcirc SPARE20 \bigcirc A \bigcirc SPARE20 \bigcirc A \bigcirc SPARE20 \bigcirc B \bigcirc SPARE20 \bigcirc B \bigcirc	MUSCO LIGHTING1015.720 $\frac{B}{C}$ $\frac{A}{C}$ 20MUSCO LIGHTING1015.720 $\frac{A}{C}$ $\frac{A}{C}$ $\frac{A}{C}$ 20MUSCO LIGHTING SPARE81 (5.7) 20 $\frac{A}{C}$ $\frac{B}{C}$ 20SPARE20 $\frac{A}{C}$ $\frac{B}{C}$ 20SPARE20 $\frac{A}{C}$ $\frac{B}{C}$ 20SPARE20 $\frac{A}{C}$ $\frac{A}{C}$ $\frac{A}{C}$ SPARE20 $\frac{A}{C}$ $\frac{A}{C}$ $\frac{A}{C}$	MUSCO LIGHTING 10 1 5.7 20 B C 20 5.7 MUSCO LIGHTING 10 1 5.7 20 \bigcirc <td< td=""><td>MUSCO LIGHTING 10 1 5.7 20 \bigcirc \bigcirc</td><td>MUSCO LIGHTING 10 1 5.7 20 B C C C C C C C C C C C C C C C C C C C</td><td>MUSCO LIGHTING 10 1 5.7 20 ☐ B ☐ 20 5.7 1 8 MUSCO LIGHTING MUSCO LIGHTING 10 1 5.7 20 ☐ A ☐ 20 5.7 1 8 MUSCO LIGHTING MUSCO LIGHTING SPARE 8 1 (5.7) 20 ☐ A ☐ 20 (5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ A ☐ 20 [5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ A ☐ 20 [5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ A ☐ 20 [5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ B ☐ 20 ☐ Image: Control of the cont</td></td<>	MUSCO LIGHTING 10 1 5.7 20 \bigcirc	MUSCO LIGHTING 10 1 5.7 20 B C C C C C C C C C C C C C C C C C C C	MUSCO LIGHTING 10 1 5.7 20 ☐ B ☐ 20 5.7 1 8 MUSCO LIGHTING MUSCO LIGHTING 10 1 5.7 20 ☐ A ☐ 20 5.7 1 8 MUSCO LIGHTING MUSCO LIGHTING SPARE 8 1 (5.7) 20 ☐ A ☐ 20 (5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ A ☐ 20 [5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ A ☐ 20 [5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ A ☐ 20 [5.7) 1 8 MUSCO LIGHTING SPARE 20 ☐ B ☐ 20 ☐ Image: Control of the cont



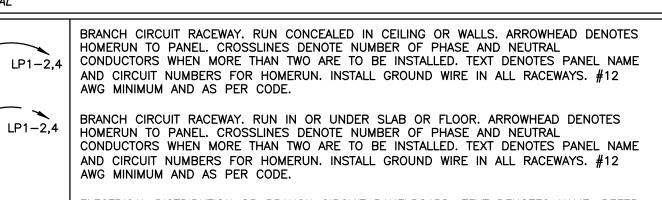
OTE 1. PROVIDE MINIMUM 1 5/8" GALVANIZED CHANNEL STRUT FOR ALL HORIZONTAL RACK FRAMING AND SUPPORTS. USE GALVANIZED FASTENERS, STRAPS, FITTINGS, ETC ONLY. COAT ALL FIELD CUTS OF STRUT OR HARDWARE WITH COLD GALVANIZING SPRAY.

2. 3000 PSI CONCRETE, MINIMUM 8" AROUND EACH RACK VERTICAL SUPPORT.

THIS DETAIL IS NOT SPECIFIC FOR EQUIPMENT BEING FURNISHED, BUT RATHER A GUIDE TO UNISTRUT MOUNTED EQUIPMENT. DIMENSIONS WILL VARY FOR EQUIPMENT BEING FURNISHED.

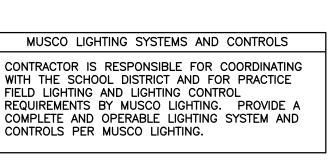
TE 4. PROVIDE MINIMUM 3" GALVANIZED CONDUIT FILLED WITH CONCRETE AND CAPPED FOR ALL VERTICAL RACK SUPPORTS. USE GALVANIZED FASTENERS, STRAPS, FITTINGS, ETC ONLY. COAT ALL FIELD CUTS OF SUPPORTS OR HARDWARE WITH COLD GALVANIZING SPRAY.

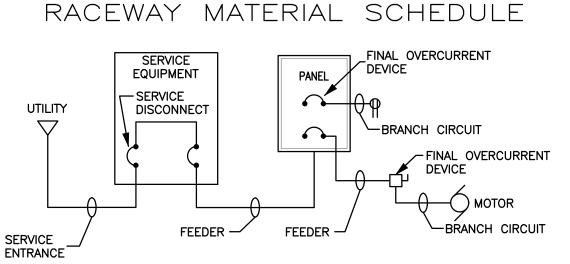
UNISTRUT MOUNTED EQUIPMENT DETAIL



ELECTRICAL DISTRIBUTION OR BRANCH CIRCUIT PANELBOARD. TEXT DENOTES NAME, REFER TO DRAWINGS FOR LOCATION. SEE POWER RISER DIAGRAM AND PANEL SCHEDULES. SURFACE OR FLUSH MOUNTED AS INDICATED ON PANEL SCHEDULE.

EXTERIOR POLE LIGHT FIXTURE. TYPE AS INDICATED ON DRAWINGS.





RACEWAY MATERIALS:

SERVICE ENTRANCE: IMC, GRS, SCHED 40 PVC (WITH GRS 90 ELBOWS). IMC AND GRS TO HAVE BITUMINOUS COATING IF INSTALLED BELOW GRADE.

SERVICE ENTRANCE WHERE EXPOSED TO PHYSICAL DAMAGE OR ABOVE GRADE: IMC, GRS, SCHEDULE 80 PVC.

FEEDERS: IMC, GRS, EMT (INTERIOR)

BRANCH CIRCUITS CONCEALED ABOVE CEILING/IN WALLS: EMT, IMC, GRS

BRANCH CIRCUITS EXPOSED (INTERIOR): EMT

OUTDOORS BELOW GRADE: SAME AS SERVICE ENTRANCE.

OUTDOORS EXPOSED: IMC, GRS (WITH THE EXCEPTION OF CONNECTIONS TO MECHANICAL EQUIPMENT WHICH MAY BE FLEXIBLE WATERTIGHT CONDUIT).

GENERAL NOTES ALL DRAWINGS:

ENCLOSURE.

- DO NOT SCALE DRAWINGS. LOCATE OUTLETS, EQUIPMENT AND OTHER ELECTRICAL DEVICES AS INDICATED AND COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE EXACT LIGHTING FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- 2. MINIMUM SIZE CONDUCTOR FOR POWER SHALL BE #12 AWG. PROVIDE DEDICATED NEUTRAL FOR EACH MULTI-WIRE BRANCH CIRCUIT IN COMPLIANCE WITH NEC.
- 3. BRANCH CIRCUIT SIZES ARE #12 AWG, 1/2"C. UNLESS OTHERWISE NOTED IN PANELBOARD SCHEDULES OR ON DRAWINGS.
- 4. ALL BRANCH CIRCUIT LOADS SHALL BE BALANCED ACROSS PANELBOARD BUSSES TO OBTAIN MINIMUM NEUTRAL CURRENT.
- 5. ALL FLEXIBLE CONDUIT SHALL CONTAIN A GREEN WIRE BONDED TO RIGID RACEWAY, BOX OR FIXTURE AT EACH END OF FLEX. SIZE GROUND PER NEC TABLE 250-122.
- 7. COORDINATE WITH OTHER TRADES TO CONCEAL ELECTRICAL WORK AND PROVIDE OUTLETS IN CORRECT LOCATIONS.
- NEC TABLE 250-122.

 9. ALL METAL CONDUITS 1" AND LARGER SHALL HAVE A GROUNDING BUSHING BONDING CONDUIT TO

8. WHERE NOT INDICATED OTHERWISE, EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED PER

- 10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK WITH POWER UTILITY.
 ELECTRICAL CONTRACTOR TO PROVIDE ALL MATERIALS AND WORK FOR AS REQUIRED BY EACH
 UTILITY FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE RACEWAY(S) TO UTILITY CONNECTION
- 11. CONCEAL ALL CONDUIT AND RACEWAY. IF CONDITIONS REQUIRE CONDUIT OR RACEWAY TO BE RUN EXPOSED COORDINATE ROUTING WITH ARCHITECT AND PAINT AS REQUIRED BY ARCHITECT.
- 12. ELECTRICAL WORK SHALL COMPLY WITH ALL NATIONAL, STATE AND LOCAL CODES, REQUIREMENTS AND ORDINANCES.
- 13. ALL BACKBOXES SHALL BE MINIMUM 4" SQUARE.

6. PROVIDE PULL STRING IN ALL EMPTY RACEWAYS.

- 14. ALL EMT FITTINGS SHALL BE STEEL COMPRESSION TYPE WITH INSULATED THROAT.
- 15. PROVIDE PLASTIC ENGRAVED NAMETAGS FOR ALL ELECTRICAL GEAR. INDICATE EQUIPMENT NAME, EQUIPMENT SERVED (WHERE APPLICABLE), FEEDER SOURCE AND CIRCUIT, VOLTAGE. LETTERING SHALL BE 3/8" IN HEIGHT, WHITE ON BLACK BACKGROUND.



ENGINEERING, LLO

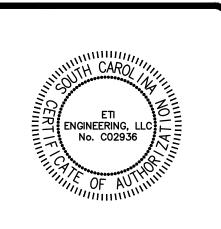
Columbia, SC 29212 803.233.9396 (Phone) 803.233.4371 (Fax)

5725 Bush River Road

Troy Lowder PE, x105

ETi #2201-40512

Project Manager





AH RD., IRMO, SC 29063
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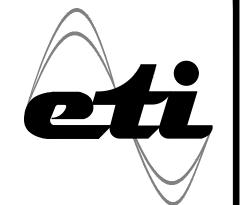
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DRAWN BY: TRL
CHECKED BY: BDT
REVISIONS:

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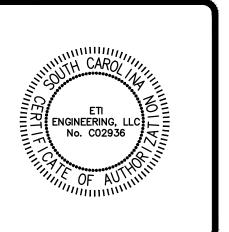
ENGINEERING, LLO

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803.233.4371 (Fax)

Project Manager Troy Lowder PE, x105

ETi #2201-40512





CE 33

TCH FORK HIGH SCHOOL SACTICE FIELD ELECTRICAL SERVICE 400 OLD TAMAH RD., IRMO, SC 29063

DRAWN BY: TRL
CHECKED BY: BDT
REVISIONS:

E-2

Lighting System

Pole / Fixture Summary											
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit					
S1-S4	70'	70'	4	TLC-LED-1500	5.64 kW	Α					
4			16		22.56 kW						

Circuit Summ	ary		
Circuit	Description	Load	Fixture Qty
Α	Soccer	22.56 kW	16

Fixture Type Summary										
Туре	Source	Wattage	Lumens	L90	L80	L70	Quantity			
TLC-LED-1500	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	>120,000	16			

Single Luminaire Amperage Draw Chart									
Driver (.90 min power factor)	Max Line Amperage Per Luminaire								
Single Phase Voltage	208 (0)	220 (0)	240 (0)	277 (0)	347 (0)	380 (0)	480 (0)		
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6		

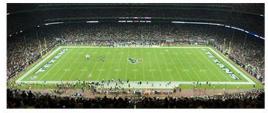
Light Level Summary

Calculation Grid Summar								
Grid Name	Calculation Metric				Circuits	Fixture Qty		
0.10.110.110	- Caroundarion mouro	Ave	Min	Max	Max/Min	Ave/Min	-1100	
150' Spill (Cd)	Max Candela (by Fixture)	1205	0.45	2180	4867.39	2678.24	Α	16
150' Spill	Horizontal Illuminance	0.02	0	0.05	0.00		Α	16
150' Spill	Max Vertical Illuminance Metric	0.04	0	0.11	735.55		Α	16
Soccer	Horizontal Illuminance	34	24	41	1.70	1.42	Α	16

From Hometown to Professional





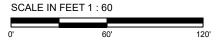






EQI	EQUIPMENT LIST FOR AREAS SHOWN												
	P	ole		Luminaires									
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS					
4	S1-S4	70'	-	70'	TLC-LED-1500	4	4	0					
4		16	16	0									

		S1 + 115	<u> </u>						115'	> S2 ⊕ ★	
	.35	39	.38	.38	32	29	32	.38	.38	39	35
	36	41	₋ 36	₄ 37	₄ 36	33	, 36	₋ 37	₋ 36	41	36
	29	.34	.35	.32	₋ 31	30	<u>.</u> 31	₋ 32	₋ 35	.34	29
	.24	.30	.32	.30	28	27	28	.30	.32	.30	24
	29	.34	.35	.32	31	30	.31	32	35	.34	29
,	.36	₋ 41	.36	.,37	₄ 36	33	₋ 36	. ₃ 7	₋ 36	₋ 41	.36
	₄ 35	₋ 39	.38	.,38	₋ 32	29	₄ 32	₋ 38	₋ 38	₄ 39	₋ 35
		§2 ¥ ⊕ S4 € 115							115'	→ ¥ > S3	



Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

GRID SUMMARY	
Name:	Soccer
Size:	330' x 195'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY MAINTAINED HORIZONTAL FOOTCANDLES Entire Grid Guaranteed Average: 30	
Entire Grid	
Guaranteed Average: 30	
Scan Average: 33.96	
Maximum: 41	
Minimum: 24	
Avg / Min: 1.41	
Guaranteed Max / Min: 2.5	
Max / Min: 1.70	
UG (adjacent pts): 1.26	
CU: 0.77	
No. of Points: 77	
LUMINAIRE INFORMATION	
Applied Circuits: A	
No. of Luminaires: 16	
Total Load: 22.56 kW	

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

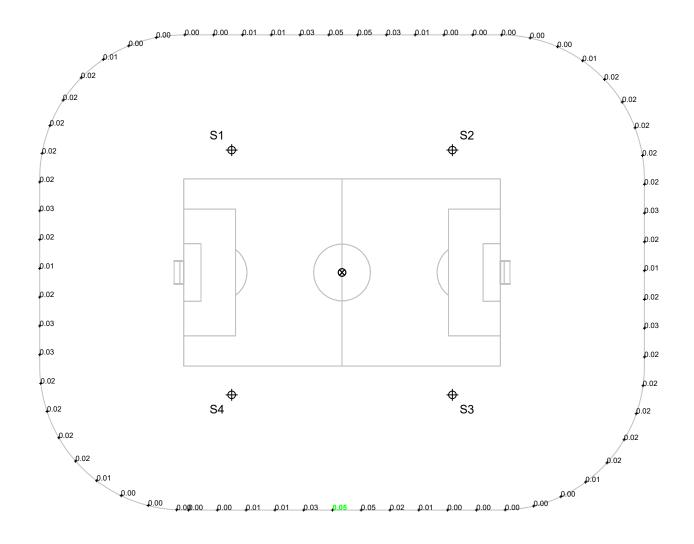
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



EQI	EQUIPMENT LIST FOR AREAS SHOWN												
	P	ole		Luminaires									
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS					
4	S1-S4	70'	-	70'	TLC-LED-1500	4	4	0					
4		16	16	0									



SCALE IN FEET 1 : 100
0' 100' 200'

ENGINEERED DESIGN By: · File #SO3-3319-15-4P E · 31-Mar-23

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

Rame: 150' Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY						
HORIZONTAL FOOTCAND	HORIZONTAL FOOTCANDLES					
Scan Average:	Entire Grid 0.0157					
Maximum: Minimum: No. of Points:	0.05 0.00 67					
LUMINAIRE INFORMATION						
Applied Circuits: No. of Luminaires: Total Load:	A 16 22.56 kW					

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

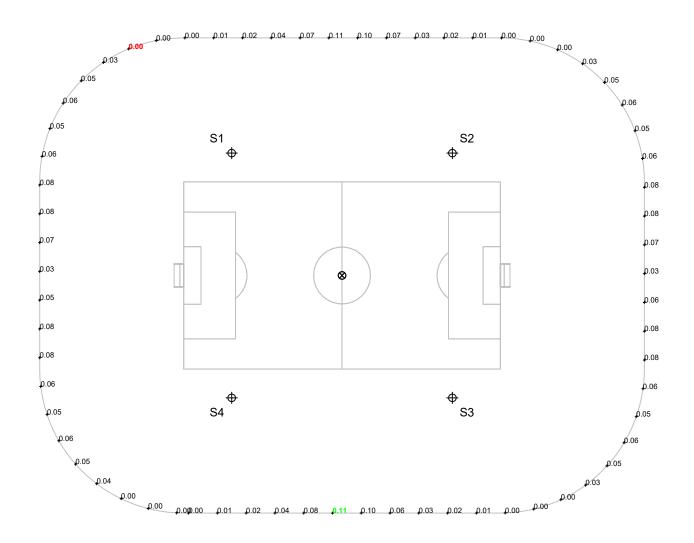
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



EQUIPMENT LIST FOR AREAS SHOWN									
Pole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS	
4	S1-S4	70'	-	70'	TLC-LED-1500	4	4	0	
4	4 TOTALS					16	16	0	



SCALE IN FEET 1 : 100
0' 100' 200'

ENGINEERED DESIGN By: · File #SO3-3319-15-4P_E · 31-Mar-23

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

GRID SUMMARY

Name: 150' Spill Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Scan Average: 0.0437
Maximum: 0.11
Minimum: 0.00
No. of Points: 67

LUMINAIRE INFORMATION

Applied Circuits: A
No. of Luminaires: 16

Total Load: 22.56 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty

document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken

in accordance with IESNA RP-6-15. **Electrical System Requirements:** Refer to Amperage

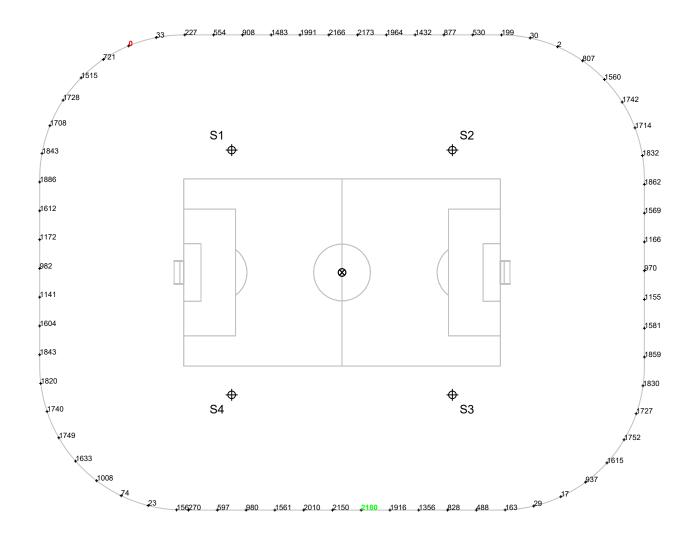
Draw Chart and/or the "Musco Control System Summary"

for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



EQUIPMENT LIST FOR AREAS SHOWN									
Pole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS	
4	S1-S4	70'	-	70'	TLC-LED-1500	4	4	0	
4	4 TOTALS					16	16	0	



SCALE IN FEET 1 : 100
0' 100' 200'

ENGINEERED DESIGN By: · File #SO3-3319-15-4P_E · 31-Mar-23

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

GRID SUMMARY

Name: 150' Spill (Cd)

Spacing: 30.0'

Height: 5.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

Scan Average: 1205.2094
Maximum: 2180.48

Maximum: 2180.4 Minimum: 0.45 No. of Points: 67

LUMINAIRE INFORMATION

Applied Circuits: A
No. of Luminaires: 16

Total Load: 22.56 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty

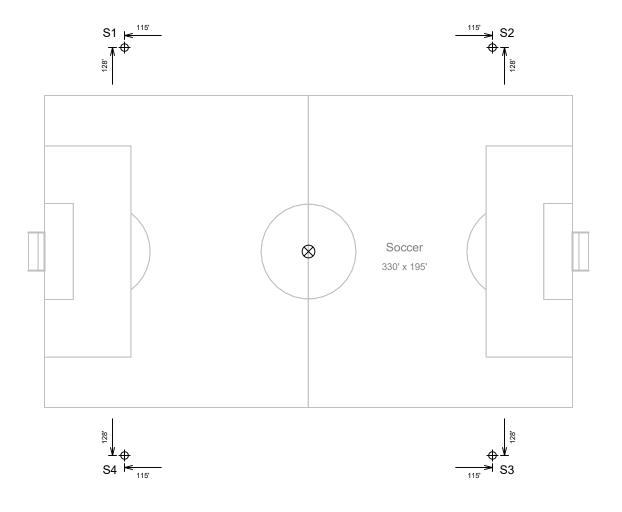
document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





EQUIPMENT LAYOUT

INCLUDES:

 $\cdot \, \mathsf{Soccer}$

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN							
	Pole Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	QTY / POLE		
4	S1-S4	70'	-	70'	TLC-LED-1500	4	
4	TOTALS						

SINGLE LUMINAIRE AMPERAGE DRAW CHART								
Driver (.90 min power factor)	Line Amperage Per Luminaire (max draw)							
Single Phase Voltage	208	220 (0)	240	277 (0)	347 (0)	380	480 (0)	
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6	



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