TOWN OF BURLINGTON
Parks & Recreation Department

Simonds Park Lighting Installation
Contract # 19C-631-0090

Burlington Parks & Recreation Dept.
Town Hall
29 Center St.
Burlington MA 01803

June 26, 2019
Table of Contents

INVITATION FOR BID ........................................................................................................ 3
PROJECT DESCRIPTION .................................................................................................. 4
INSTRUCTIONS TO BIDDERS ..................................................................................... 6
FORM OF GENERAL BID ............................................................................................. 11
ADDENDA ...................................................................................................................... 12
TOTAL BID PRICE ........................................................................................................ 13
CONTRACTOR REFERENCES ....................................................................................... 14
CONTRACTOR CERTIFICATION ............................................................................... 15
AGREEMENT ................................................................................................................ 16
SPECIAL CONDITIONS – customize for contract ....................................................... 17
APPENDIX A – .............................................................................................................. 32

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM
INVITATION FOR BID

PUBLIC WORKS CONSTRUCTION

Sealed bids for Simonds Park Lighting Installation will be received by Burlington Parks & Recreation Department, Town Hall 29 Center Street, Burlington, Massachusetts, 01803 until 10:00 AM on July 12, 2019 and will be publicly opened and read aloud at such time.

- Specifications and bid forms are available on the Town of Burlington website site at: http://www.burlington.org, under the Business tab and by clicking on the Bids and Purchasing Documents.

- Specifications and bid forms may be obtained from the Purchasing Analyst, Town Hall, 29 Center Street, Burlington, Massachusetts, 01803 after 10:00 AM on June 26, 2019 between 8:30 AM and 4:00 PM for a fifty ($50.00) dollar reproduction cost.

- A bid bond of five (5) percent is required.

- Successful bidder must provide 100% Payment and Performance bonds.

- This project is bid according to MGL 30-39M.

- Town’s Designated Representative and point of contact for questions is : Brendan Egan, Director of Parks & Recreation, began@burlington.org, 781-270-1695

- Prevailing wage must be paid per MGL 149 SECT. 26-27D
PROJECT DESCRIPTION

The work under this contract will include all equipment, labor, material, supplies, etc. necessary to furnish the work described in this contract.

Time for Completion
  • The project must be completed by Friday, October 4, 2019

This project consists of the installation of a new Musco Sports Lighting system on the tennis courts at Simonds Park. The work includes removal and disposal of the current lighting system and poles, installation of Musco Sports Lighting equipment provided by Town of Burlington which includes the following:

  • (5) Pre-cast concrete bases with integrated lightning grounding
  • (5) Galvanized steel poles
  • Factory wired and tested remote electrical component enclosures
  • Pole length, factory assembled wire harnesses
  • (5) Factory wired poletop luminaire assemblies
  • (20) Factory aimed and assembled luminaries
  • UL Listed as a complete system

The complete description is listed in the documents and drawings that follow this short project description.

  • Work shall conform to the Massachusetts electrical code and Massachusetts building code and requirements of local authorities having jurisdiction.

  • The word "contractor" as used in the "electrical work" shall mean the electrical contractor.

  • Contractor shall pay for all permits, insurance and tests, and shall provide labor and material to complete the installation shown.

  • During construction, the contractor shall keep his portion of the work neat, clean and orderly.

  • Work shall be coordinated with existing conditions to eliminate interferences.

  • Existing conduit locations and method of support shall be determined in the field at the site walk on July 9, 2019.

  • Contractor shall check existing conditions to determine exact extent of work to be performed prior to bidding.
• Provide as-built "CADD" drawings at the completion of the project.
INSTRUCTIONS TO BIDDERS

Receipt and Opening of Bids
The Town of Burlington, Massachusetts, herein called the Owner, acting by and through its Parks & Recreation Department, will receive sealed bids as specified in the invitation for Bids at which time bids will be publicly opened and read.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that this bid will be good and may not be withdrawn for a period of thirty (30) days, Saturdays, Sundays, and legal holidays excluded, after opening the bids.

Location and Work to be Done
The Location of the Work to be done is described in the project description.

The Contractor will furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item will not be limited to the exact extent mentioned or described but will include all incidental work necessary or customarily done for the completion of that item.

Preparation of Bid
Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and endorsed with the name of the project as specified in Receipt and Opening of Bids.

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids.

The following sections need to be filled out and completed as part of the bid package;
- Form of General Bid
- Acknowledgement of Addenda, if any
- Bid Form
- Total Bid Price
- Contractor Reference
- Contractor Certification
Bid Opening Procedure
The following list of requirements will apply to each filed bid. Bids not meeting all the requirements for timeliness and security will be rejected without opening; bids not meeting signature and addenda requirements will be rejected prior to checking of bid amounts.

Bids will be filed at the place and before the time specified in Receipt and Opening of Bids.

Properly executed bid security will be placed in a sealed envelope and will be attached to the outside of the envelope containing the bid.

Bid signatures will be checked.

The total dollar amount of each bid will be read, and the three apparent lowest bids will be selected for further consideration. These three apparent low bids will be read aloud for the benefit of the other bidders and the bid opening procedure will be closed. All those present at the bid opening may arrange a time to examine all bids after the bid opening and after the reading of the three apparent low bids.

Ability and Experience of Bidder
No award will be made to any bidder who cannot satisfy the Owner that he has sufficient ability and experience in this class of work and sufficient capital and resources to enable him to complete the work successfully within the time named. The Owner’s decision or judgment on these matters will be final, conclusive, and binding.

**Bidder must have a minimum of five (5) years’ experience and have completed satisfactorily five (5) jobs within that time of similar size and scope.**

**All Subcontractors must have a minimum of five (5) years’ experience and have completed satisfactorily five (5) jobs within that time of similar size and scope.**

The Contractor must submit with his bid proposal a list of five (5) jobs which he has successfully completed, giving the name and the address of these projects so they can be investigated prior to the award of the contract.

The Owner may make such investigations as he deems necessary, and the bidder must furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

Condition of Work
Each bidder must familiarize himself fully with the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of this Contract. Insofar as possible the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

**Addenda and Interpretations**
No interpretation of the bid documents will be made orally. Every request for such interpretation should be in writing addressed to the Town’s Designated Representative listed in INVITATION TO BID and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Contract Documents. Failure of any bidder to receive any such addendum or interpretation will not relieve such bidder from any obligation under this bid as submitted. All addenda so issued will become part of the Contract Documents.

**Laws and Regulations**
The bidder’s attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulation of all authorities having jurisdiction over construction of the project will apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

**Bid Security**
Each bid must be accompanied by a BID BOND, CASH, or, CERTIFIED CHECK, payable to the Town, in the amount stated in INVITATION FOR BID. Such checks will be returned to all except the three (3) lowest responsible and eligible bidders within five (5) days, Saturday, Sundays, and legal holidays excluded, after the opening of bids, and the remaining checks will be returned promptly after the Owner and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within thirty (30) days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount will be retained from time to time by the Owner from current periodical estimates.

**Right to Reject Bid**
The Owner reserves the right to waive any informality or reject any and all bids and alternate bids, should the Owner deem it to be in the public interest to do so.

The Owner also reserves the right to reject the bid of any bidder that the Owner considers to be unqualified based on the criteria set forth herein.

**Time for Completion**
The bidder must agree to commence work and to fully complete the project within the time limit stated in SPECIAL CONDITIONS.

**Comparison of Bids**
In the event that there is a discrepancy in FORM OF GENERAL BID between the lump sum or unit prices written in words and figures, the prices written in words will govern.

**Rule for Award of Contract**
The Contract will be awarded to “the lowest responsible and eligible bidder” for the Total Price Bid pursuant to General Laws Chapter 30, Section 39M, as amended. Such a bidder will possess the skill ability and integrity necessary for the faithful performance of the work, will be able to furnish labor that can work in harmony with all other elements of labor employed, or to be employed, in the work, and will otherwise comply with all applicable provisions of law. Bidder will execute formal agreement within ten (10) days of the Notice of Award.

**Statutes Regulating Competitive Bidding**
Any bid that does not comply with the provisions of Massachusetts General Laws Chapter 30, Section 39M as amended, need not be accepted and the Owner may reject every such bid.

**Wage Rates**
Prevailing Wage Rates as determined by the Commissioner of Department of Labor and Industries under the provision of the Massachusetts General Laws, Chapter 149, Section 26 to 27G, as amended, apply to this project. It is the responsibility of the contractor, before bid opening to request if necessary, any additional information on Prevailing Wage Rates for those trades people who may be employed for the proposed work under this contract.

State schedules of Prevailing Wage Rates are included in the contract documents.

**Bid Items Not Guaranteed**
The successful bidder is not guaranteed all items or the total bid price under this contract. Bidders must understand that like items may be bid under other contracts specifically packaged as one complete project. The successful bidder has no right to similar items bid under other projects. The Owner will specify where and when this contract will be applied to undertake a particular improvement.
Tie Bids
In the event of tied bids, wherein two or more responsive and responsible vendors provide the same bid price a coin toss will be used to break the tie.

Unforeseen Office Closure
If, at the time of the scheduled bid opening, Town Offices are closed due to uncontrolled events, the bid opening will be postponed until the next normal business day at the original time specified in the documents. Bids will be accepted until that date and time.
FORM OF GENERAL BID

Bid of _____________________________ (hereinafter called “Bidder”)*

(____) a corporation, organized and existing under the laws of the state of ___________.

(____) a partnership

(____) a joint venture

(____) an individual doing business as _____________________________

To the Town of Burlington, Massachusetts (hereinafter called “Owner”).

Gentlemen:

The bidder, in compliance with your invitation for bid, examined the Contract Documents and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby propose to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents within the time set forth in the agreement, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, or which this proposal is a part.

*Insert corporation, partnership or individual as applicable.
ADDENDA

Bidder acknowledges receipt of the following addenda:

No.______________________ Dated:_______________________

No.______________________ Dated:_______________________

No.______________________ Dated:_______________________

No.______________________ Dated:_______________________

No.______________________ Dated:_______________________
TOTAL BID PRICE

Total Price Bid: $ ________________________________

Bid Price in Words: ________________________________

Name: ________________________________

Signature: ________________________________

Title: ________________________________

Company: ________________________________

Address: ________________________________

Phone: ________________________________

This is an unofficial Bid Spec. If this document is used to submit a bid then you must email your contact information to Kmoskos@burlington.org in order to be added to the bidders list.
CONTRACTOR REFERENCES

The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications.

1. Have been in business under present name for ____ years.

2. The names and addresses of all persons interested in the bid (if made by a partnership or corporation) as Principals are as follows:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

(Attach supplementary list if necessary)

3. The bidder is requested to state below what work of a similar character to that included in the proposed contract he has done, and give references that will enable the Owner to judge his experience, skill and business standing (add supplementary page if necessary).

<table>
<thead>
<tr>
<th>#</th>
<th>Completion Date</th>
<th>Project Name</th>
<th>Contract Amount</th>
<th>Reference Name</th>
<th>Telephone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Bank reference ____________________________
   (Name)
   ____________________________
   (Bank)
   ____________________________
   (Address)                  (Telephone No.)

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM
CONTRACTOR CERTIFICATION

NON-COLLUSION

I certify under penalties of perjury that this bid or proposal has been made and submitted under good faith and without collusion or fraud with any other person. As used in this certification, the word “person” means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

TAX COMPLIANCE

Pursuant to Massachusetts General Law Chapter 62C, Section 49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

LABOR HARMONY / OSHA 10-HOUR

I will furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work, and All employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health administration that is at least 10 hours in duration.

Signature: __________________________________________________________

(Person Signing Bid)

______________________________

(Name of Business)
AGREEMENT

THIS AGREEMENT, by and between the party of the first part, the Town of Burlington, hereinafter called “OWNER”, acting herein through its Town Administrator, and the party of the second part hereinafter called “CONTRACTOR”.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described by these bid documents hereinafter called the project, for the sum of the contract price and all extra work in connection therewith, under the terms as stated in the Contract Documents; and at his (its and their) own proper cost and expense to furnish all the materials, supplies, machinery equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in FORM OF GENERAL BID, GENERAL CONDITIONS, Contract Documents as prepared by the Owner.

IN WITNESS WHEREOF, the parties to these presents have executed this contract.

$ 

Contract Price

AGREED:
Town of Burlington

Owner Date

Contractor

Contractor Date

Company Name: 

Address: 

In accordance with M.G.L. C. 44, Section 31C, this is to certify than an appropriation in the amount of this contract is available therefore and that the Town Administrator has been authorized to execute the contract and approve all requisitions and change orders.

Account #  Town Accountant Date

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM
SPECIAL CONDITIONS - Lighting Installation

1. Musco Sports Lighting equipment will be provided by the Town of Burlington Parks & Recreation Department

2. Contractor responsible for the removal and disposal of the existing lighting equipment and poles.

3. The security lights noted on the light plan have been removed from the project and will NOT be installed.

4. There will be a site walk on **Tuesday, July 9, 2019, 10:00 AM at the Simonds Park tennis courts located at 10 Bedford St., Burlington, MA 01803** for all interested bidders.

5. Insurance requirements noted in the **Lighting Specifications for Simonds Park, by Musco Sports Lighting, LLC** are superseded by Town of Burlington requirements where required.

6. Unless otherwise specified, the cost of the Police Detail Officer(s) will be the responsibility of the contractor.

7. Attention is directed to the following parts of the contract:
   - Manufacturer’s Instructions: Written instructions for the installation of the sports lighting equipment shall be provided by the manufacturer after an approved submittal is returned to the manufacturer. The contractor shall review the instructions prior to beginning installation and review any areas of concern with the manufacturer.

8. Summary Table of Important Contract Dates

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid Opening</td>
<td>July 12, 2019</td>
</tr>
<tr>
<td>Commencement of Work No Later Than</td>
<td>September 3, 2019</td>
</tr>
<tr>
<td>Completion of Work No Later Than</td>
<td>October 4, 2019</td>
</tr>
<tr>
<td>Liquidated Damages Starting</td>
<td>October 7, 2019</td>
</tr>
</tbody>
</table>
GENERAL CONDITIONS

ARTICLE 1

CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS
The Contract Documents consist of the Owner-Contractor Agreement, the Conditions of the Contract (General, and other Conditions), the Drawings, the Specifications, all Addenda issued prior to and all Change Orders issued after execution of the Contract, and all applicable laws, ordinances and regulations. The Contract Documents include Bidding Documents such as the Advertisement or Invitation for Bid, the Instructions to Bidders, sample forms, the Contractor’s Bid or portions of Addenda relating to any of these, or any other documents, specifically enumerated in the Owner-Contractor Agreement.

1.1.2 THE CONTRACT
The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Change Order.

1.1.3 THE WORK
The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated in such construction.

1.1.4 THE PROJECT
The project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

1.1.5 OR EQUAL
The use of the words “Or Equal” following the name of any manufacturer, vendor or proprietary product will be understood to mean that articles or materials may be substituted which, in the opinion of the Owner, are equal in quality, durability, appearance, strength, design and performance to the articles or materials named or described and will perform adequately in providing a first-class facility.

When submitting shop drawing information on articles or materials which are being proposed as substitutes for specified items, the Contractor must clearly identify them as such. If the articles or materials are accepted as equal to those on which dimensions on the drawings are based, any dimensional variance from those shown and/or specified must be shown on the shop drawings prepared by the Contractor, illustrating the manner in which conformity to dimensions and design is to be obtained. All such drawings will
be subject to the approval of the Owner and the installation of the article will not proceed without first obtaining said approval.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1
By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.2
The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one will be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable there from as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance which such recognized meanings.

1.2.3
The Notice to Proceed will come in the form of a written letter to the Contractor. Once the written Notice to Proceed has been received by the Contractor, that date will be the legal start date for work under the Contract.

In the event of a failure to issue a Notice to Proceed written document specifying the commencement date, the pre-construction meeting date will serve as the Notice to Proceed date.

1.3 OWNERSHIP AND USE OF DOCUMENTS

1.3.1
All Drawings, Specifications and copies thereof furnished by the Owner are and will remain the Owner’s property. They are to be used only with respect to this Project and are not to be used on any other project without prior written consent of the Owner. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Owner at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of any reserved rights.
ARTICLE 2

ADMINISTRATION

2.1 ADMINISTRATION OF THE CONTRACT

2.1.1 The Owner or its Designated Representative will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. However, the Owner’s Designated Representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

2.1.2 The Owner will at all times have access to the Work whenever it is in preparation and progress. The Contractor must provide facilities for such access so the Owner may perform its functions under the Contract Documents.

2.1.3 The Owner will make payments for completed work, as approved by the Owner, in accordance with M.G.L. Ch. 30, Sec. 39G. A five percent retainage will be deducted from periodic payments to the Contractor.

2.1.4 The Owner will render information necessary for the proper execution or progress of the Work within twenty (20) days of any request by the contractor or in accordance with any time limit agreed upon.

2.1.5 The Owner will have authority to reject Work which does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work whether or not such Work is then fabricated, installed or completed. Any such rejection of work will not relieve the Contractor of the responsibility for maintaining protection of the Work and the Owner’s property.

2.1.6 The Owner or its Designated Representative will review and approve or take other appropriate action upon Contractor’s submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action will be taken with reasonable promptness so as to cause no delay. The Owner’s approval of a specific item will not indicate approval of an assembly of which the item is a component.
2.1.7
The Owner will conduct inspections to determine the date of Substantial Completion and Final Completion, will review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment.

ARTICLE 3

OWNER

3.1 DEFINITION

3.1.1
The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Town of Burlington or its designated representative.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

3.2.1
The Owner will, at the time of execution of the Agreement and any subsequent Change Orders, certify for the Contractor that financial arrangements have been made to fulfill the Owner’s obligations under the Contract.

3.2.2
The Owner will furnish all documents describing the work.

3.2.3
Except as provided in Subparagraph 4.7.1. Owner will secure and pay for necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.4
Information or services under the Owner’s control will be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

3.2.5
The Owner will furnish the Contractor with three (3) copies of all Drawings and Specifications and revisions issued during the progress of the Work; all additional copies will be furnished upon request at the cost of reproduction.

3.2.6

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM
The Owner, through its Designated Represented, will forward all instructions directly to the Contractor.

3.3 OWNER’S RIGHT TO STOP THE WORK

3.3.1 If the Contractor fails to correct defective Work as required by the Owner or fails to carry out the Work in accordance with the Contract Documents or if the Owner will for any other reason so require, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated or until further written notice from the Owner; however, this right of the Owner to stop the Work will not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. The Contractor must resume the Work after such stoppage promptly upon written notice to do so from the Owner. If such stoppage is required through no fault of the Contractor, the Contract Time (and the dates for achieving Substantial Completion and Final Completion) will be extended by a period equal to the period of the stoppage, and the Contractor will be compensated for its reasonable and justifiable cost incurred as a result of such stoppage.

3.4 OWNER’S RIGHT TO CARRY OUT THE WORK

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy he may have, perform such work or cause such work to be performed and/or make good such deficiencies. In such case an appropriate Change Order will be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover the amount, the Contractor must pay the difference to the Owner.

3.5 OWNER’S RIGHT TO TERMINATE CONTRACT

3.5.1 The Town reserves the right to terminate this Contract at their discretion with thirty (30) days written notice to the contractor. In the event of Contract termination, all finished or unfinished work, or un-used material, already paid for under Contract prices, will become the property of the Town of Burlington.
ARTICLE 4

CONTRACTOR

4.1 DEFINITION

4.1.1
The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1
The Contractor must carefully study and compare the Contract Documents and must at once report to the Owner any error, inconsistency or omission he may discover. The Contractor will not be liable to the Owner for any damage resulting from errors, inconsistencies or omissions in the Contract Documents which he discovers but will be liable for damage to the extent he reasonably should have but failed to discover such errors, inconsistencies or omissions. The Contractor will perform no portion of the Work at any time without Contract Documents or, where required, approved Shop Drawings, Product Data or Samples for such portion of the Work.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1
The Contractor must supervise and direct the Work, using his best skill and attention which will not be less than such state of skill and attention generally rendered by the contracting profession for projects similar to the Project in scope, difficulty and location. The Contractor must maintain adequate supervisory personnel at the Site during the performance of the Work. He will be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

4.3.2
The Contractor will be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor. This obligation will also extend to the presence on the Site of suppliers of materials or equipment, their employees, contractors, and agents engaged in the work.

4.3.3
The Contractor will not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Owner in its administration of the Contract.

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM

23
4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise provided in the Contract Documents, the Contractor will provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and service necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

4.4.2 The Contractor will at all times enforce strict discipline and good order among his employees and will not employ on the Work any unfit person or anyone not skilled in the task assigned to him including all persons on the Site controlled directly or indirectly by the Contractor.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new and of recent manufacture unless otherwise permitted in writing by the Owner and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective and, promptly after written notification of non-conformance, will be repaired or replaced by the Contractor with Work conforming to such requirements. If required by the Owner, the Contractor will furnish satisfactory evidence as to the kind and quality of materials and equipment.

4.6 TAXES

4.6.1 The Contractor will pay all applicable sales, consumer, use and other similar taxes for the Work or portion thereof provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective.

4.7 PERMITS, FEES AND NOTICES

4.7.1 Unless otherwise expressly provided in the SPECIAL CONDITIONS, the Contractor will secure and pay for all permits and fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required at the time the bids are received, and the same will at all times be the property of the Owner and will be delivered to the Owner upon completion of the Project.
4.7.2
The Contractor must give all notices and comply with all federal, state and local laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work. The Contractor must provide the Owner with reproductions of all permits, licenses and receipts for any fees paid. The Owner represents that it has disclosed to the Contractor all orders and requirements known to the Owner of any public authority particular to this Contract.

4.7.3
If the Contractor observes that any of the Contract Documents are at variance with applicable laws, statutes, codes and regulations in any respect, he must promptly notify the Owner in writing, and any necessary changes must be accomplished by appropriate Modification.

4.7.4
If the Contractor performs any Work which he knows or should know is contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he will assume full responsibility therefore and will bear all costs attributable thereto.

4.8 SUPERINTENDENT

4.8.1
The Contractor must employ a competent superintendent and necessary assistants who will be in attendance at the Project site at all times during the progress of the Work. The superintendent will represent the Contractor and all communications given to the superintendent will be as binding as if given to the Contractor. Important communications will be confirmed in writing. Other communications will be so confirmed on written request in each case.

4.9 PROGRESS SCHEDULE

4.9.1
The Contractor, immediately after being awarded the Contract, must prepare and submit for the Owner’s information an estimated progress schedule for the Work. The progress schedule must be related to the entire Project to the extent required by the Contract Documents, and will provide for expeditious and practicable execution of the Work. No work will start without the Project schedule. The Contractor must submit the project schedule five days prior to start the work.

4.10 DOCUMENTS AND SAMPLES AT THE SITE

4.10.1
The Contractor must maintain at the site for the Owner one record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, and “As-Built”
4.11 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

4.11.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

4.11.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.

4.11.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

4.11.4 The Contractor must review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.

4.11.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all material, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

4.11.6 The Contractor will not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Owner’s approval of Shop Drawings, Product Data or Samples or the Owners’ approval of the same unless the Contractor has specifically informed the Designated Representative in writing of such deviation at the time of submission and the Designated Representative has given written approval to the specific deviation. The Contractor will not be relieved from responsibility from errors or omissions in the Shop Drawings, Product Data or Samples by the Owner’s approval thereof.

Simonds Park Lighting Installation contract # 19C-631-0090

Bid Opening: July 12 @ 10:00 AM
4.11.7
The Contractor must direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Owner or its Designated Representative on previous submittals.

Designated Representative

4.11.8
No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample will be commenced until the submittal has been approved by the Owner or Designated Representative. All such portions of the Work will be in accordance with approved submittals.

4.12 USE OF SITE

4.12.1
The Contractor will confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and must not unreasonably encumber the site with any materials or equipment.

4.13 CUTTING AND PATCHING OF WORK

4.13.1
The Contractor will be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

4.13.2
The Contractor must not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work or by excavation. The Contractor must not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and of such separate contractor. The Contractor must not unreasonably withhold from the Owner or any separate contractor his consent to cutting or otherwise altering the Work.

4.14 CLEANING UP

4.14.1
The Contractor at all times will keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he will remove all his waste materials and rubbish from and about the Project in full compliance with all applicable laws and regulations as well as all his tools, construction equipment, machinery and surplus materials and the Project must be thoroughly cleaned and ready for immediate occupancy by the Owner.

4.14.2
If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof will be charged to the Contractor.
4.15 COMMUNICATIONS

4.15.1 The Contractor must forward all communications to the Owner’s designated representative.

4.16 ROYALTIES AND PATENTS

4.16.1 The Contractor must pay all royalties and license fees. He must defend all suits or claims for infringement of any patent rights and will save the Owner harmless from loss on account thereof, except that the Owner will be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor believes or has reason to believe that the design, process or product specified is an infringement of a patent, he will be responsible for such loss unless he promptly gives such information to the Owner, and thereafter the Owner insists on the use of the design, process or products specified.

4.17 INDEMNIFICATION

4.17.1 To the fullest extent permitted by law, the Contractor will indemnify and hold harmless the Owner, the Designated Representative, and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorney’s fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury or destruction of tangible property (other than the Work itself) including the loss of use resulting there from, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified there under. Such obligation will not be construed to negate, abridge, or otherwise reduce any other right or of indemnity which would otherwise exist as to any party or person described in this Paragraph 4.17.

4.17.2 In any and all claims against the Owner the Designated Representative or any of their agents or employees by any employee of the Contractor, any Subcontractor anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.17 will not be limited in any way by any limitation on the amount or type of damages, compensation or benefits.

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM
payable by or for the Contractor or any Subcontractor under workers’ or workmen’s compensation acts, disability benefit acts or other employee benefit acts.

4.17.3
The obligations of the Contractor under this paragraph 4.17 will not extend to the liability of the Owner, the Designated Representative, their agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) written directions or instructions given by the Owner, the Designated Representative, their agents or employees, provided they are the sole cause of the injury or damage.
ARTICLE 5
INSURANCE

Contractor must provide insurance as specified below:

General Liability

Includes:
- Comprehensive form
- Premises/Operations
- Underground Explosion & Collapse Hazard
- Products / Completed Operations
- Independent Contractors
- Broad From Property Damage
- Personal Injury

<table>
<thead>
<tr>
<th>Each Occurrence</th>
<th>$1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>

Automobile Liability

Includes:
- All Owned Vehicles
- Hired Vehicles
- Non-owned Vehicles

| Bodily Injury & Property Damage Combined | $1,000,000 |

Workers Compensation & Employers Liability

- As Required by State of Massachusetts

<table>
<thead>
<tr>
<th>Each Accident</th>
<th>$100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodily Injury by Disease (Policy Limit)</td>
<td>$500,000</td>
</tr>
<tr>
<td>Bodily Injury by Disease (Each Employee)</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

Additional Insurance / Requirements

- The Town of Burlington Will be named as Additional Insured

Simonds Park Lighting Installation contract # 19C-631-0090
Bid Opening: July 12 @ 10:00 AM
ARTICLE 6
LIQUIDATED DAMAGES

6.1 LIQUIDATED DAMAGES

If the Contractor neglects, fails or refuses to complete the work as herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to Owner the amount of $1,000 per day, not as a penalty but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day that the Contract will be in default after the date stipulated in the Contract for completing the work.
APPENDIX A –

Plans, prevailing wage, details, etc.
LIGHTING SPECIFICATION
PREPARED FOR

Simonds Park

Tennis and Skate Park Lighting Project
Burlington, Massachusetts
June 3, 2019

SUBMITTED BY:

Musco Sports Lighting, LLC

2107 Stewart Road
PO Box 260
Muscatine, Iowa 52761
Local Phone: 563/263-2281
Toll Free: 800/756-1205
Fax: 800/374-6402
PART 1 – EXECUTION

1. CONTRACTOR’S DUTIES

All work performed under this contract shall be performed in accordance with all provisions of these specifications and drawings. Any deviations from the specifications or plans must be approved in writing by the owner or his representative.

A. Initial site inspection: The contractor shall be presumed to have made a reasonable inspection of the premises prior to the time of bidding and shall be held responsible for all information available through such inspection. The contractor shall immediately upon discovery, bring to the attention of the owner any conflicts that may occur among the various provisions of the specifications and plans. The owner shall resolve such conflicts and shall be responsible for any costs reasonably incurred by the contractor due to such conflict. Failure of the contractor to bring conflicts or exceptions to the attention of the owner shall allow the owner to require any change deemed necessary before acceptance by the owner.

B. Insurance Requirements:

1. Contractor’s and Subcontractor’s Insurance: The contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the owner, nor shall the contractor allow any subcontractor to commence work on his sub-contract until the insurance required of the subcontract has been so obtained and approved.

2. Workman’s Compensation Insurance: The contractor shall procure and shall maintain during the life of the contract, Workman’s Compensation Insurance and Death Liability Insurance for all of the employees engaged in work on the project under the contract, and in case any such work is sublet, the contractor shall require the subcontractor similarly to provide Workman’s Compensation Insurance and Death Liability Insurance for all of the latter’s employees engaged in such work unless such employees engaged in hazardous work on the project under his contract are not protected under Workman’s Compensation Statute, the contractor shall provide and shall cause each subcontractor to provide adequate employer’s general liability insurance for the protection of such of his employees not otherwise protected.

3. Contractor’s Public Liability and Property Damage Insurance: The contractor shall procure and shall maintain during the life of this contract, Contractor’s Public Liability Insurance in an amount not less than $500,000 for injuries, including accidental death to any one person and subject to the same limit for each person in an amount not less than $500,000 on account of one accident, the Contractor’s Property Damage Insurance in an amount not less than $100,000 each occurrence and aggregate.

4. Subcontractor’s Public Liability and Property Damage Insurance: The contractor shall require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor’s Public Liability and Property Damage Insurance of the type specified in subparagraph 3 hereof in the amount specified.

5. Automobile Public and Property Damage Insurance: The contractor shall require each of his subcontractors to procure and to maintain during the life of his subcontract, Automobile Public Liability Insurance in an amount not less than $500,000 single limit for injuries, including accidental death and property damage. Insurance for automobiles shall include: the contractor’s owned automobiles and trucks, hired automobiles and trucks, and automobiles and trucks not owned by the contractor.
C. Bonding: The successful contractor shall furnish a performance bond in an amount equal to one hundred percent (100%) of the contract as security for the faithful performance of this contract, and a labor and material payment bond in an amount of one hundred percent (100%), or in the penal sum not greater than that prescribed by state, territory, or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The bonds shall be written by a surety licensed to do business in the locale in which the work is being performed and shall be satisfactory to the owner. The successful contractor shall, upon completion of the project, protect the owner against defective materials or faulty workmanship for a period of two (2) years. The contractor, at the owner’s request, shall furnish a maintenance bond for the above outlined maintenance term. This bond shall be in an amount not to exceed one hundred percent (100%) of the contract price.

D. Codes, Permits and Licenses: All work shall comply with the applicable rules of the National Electrical Code, the National Electrical Safety Code, the National Fire Codes, (published by the National Fire Protection Association), state and local codes and ordinances, and the terms and conditions of the services of the electrical utility, as well as any other authorities that may have lawful jurisdiction pertaining to the work specified. None of the terms or provisions of this specification shall be construed as waiving any of the rules, regulations or requirements of these authorities. The contractor shall procure all necessary permits or licenses to carry out his work, and shall pay the lawful fee therefore, as well as for any inspection fee or the cost of a certificate of approval.

In any instance where these specifications call for materials for construction of a better quality or larger size than required by the codes, the provisions of these specifications shall take precedence. The codes shall govern in the case of direct conflict between the codes and the plans and the specifications.

2.2 MATERIALS

A. Approved Materials: All materials supplied by the contractor under the provisions of these specifications and plans shall be new materials of the kind and character called for by the specifications. Defective equipment or material damaged in the course of installation or tests shall be replaced or repaired in a manner satisfactory to the owner. All materials and equipment to be furnished under these specifications shall be the standard product of a manufacturer regularly engaged in the production of such material and shall be the manufacturer’s current standard design.

B. Alternate Materials: The materials specified have been determined to have characteristics appropriate for the purposes of this project. Alternate materials will only be considered as a substitute bid on a separate substitution sheet. No bid will be approved which proposes to use a non-approved substitute. Substitutions will not be considered in determining the lowest responsive bid. The owner reserves the right to reject any or all bids.

2.3 SITE ACCESS

A. Contractor Access: For the performance of the contract, the contractor will be permitted to occupy such portions of the site as shown on the plans, or as permitted by the owner or his representative. A reasonable amount of tools, materials or equipment for construction purposes may be stored in such place, but not more than is necessary to avoid delays in construction. Excavated and waste materials shall be piled or stocked in such a way as to not interfere with spaces that may be designated to be left free and unobstructed, not to inconvenience other contractors or the owners.

B. Owner’s Access: The owner’s representative shall at all times have access to the work site. The contractor shall keep the owner advised of the progress of the project and shall provide opportunity for the owner or his representative to inspect each phase of the project. The contractor shall provide proper and safe facilities for such access and for inspection.
2.4 REPLACEMENT OF DAMAGED PROPERTY

The contractor shall replace all property damaged by him including fences, trees, plants, grass, walks, drives, building surfaces, etc.

2.5 INSTALLATION

A. Manufacturer’s Instructions: Written instructions for the installation of the sports lighting equipment shall be provided by the manufacturer after an approved submittal is returned to the manufacturer. The contractor shall review the instructions prior to beginning installation and review any areas of concern with the manufacturer.

B. Installation of Equipment: Contractor shall install lighting equipment per manufacturer’s stated requirements to ensure lighting performance is achieved.

C. Manufacturer Representative: A qualified representative from the sports lighting manufacturer shall be available to provide installation guidance if required by the contractor. Note that coordination of this must be made prior in order to ensure a representative is available for onsite coordination.

D. Handling of Equipment: The lighting equipment shall be handled in an appropriate manner to ensure safe installation and prevent damage to the equipment. Repair or replacement of damaged component shall be the responsibility of the installing contractor.

E. Rigging: Use the appropriate rated web fabric slings to lift components into position. Chains or cables shall not be allowed due to potential failure and damage to components.

F. Completion Time: All construction, after Notice to Proceed, is to be completed **October 4, 2019**. If construction is not completed within the specified period, and the delay is due to the fault of the contractor, the owner may charge the contractor liquidated damages in the amount of $1,000 per day. The contractor will be required to commence work within ten (10) calendar days after the owner issues a Notice to Proceed and shall be present at the job site during normal working hours and shall proceed to completion with due diligence.

G. Clean-up: Upon completion of the work and before acceptance and final payment is made, the contractor shall clean and remove from the site of the work, surplus and discarded materials, temporary structures and debris of every kind. The contractor shall leave the site of work in a neat and orderly condition equal to that which originally existed. Surplus and waste materials removed from the site of the work shall be disposed of at locations satisfactory to the owner.

2.6 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-6-01, Appendix B.

B. Correcting Non-Conformance: If, in the opinion of the Owner or his appointed Representative, the actual performance levels are not in conformance with the requirements of the lighting equipment performance specifications and submitted information, the Contractor shall be liable to any or all of the following if installation of the lighting equipment does not conform to manufacturer's stated requirements:

1. The owner shall provide to the contractor a written explanation of the items not meeting specification. The contractor shall then communicate said error to the manufacturer. The manufacturer will assist in providing materials needed to make corrections but reserves the right to request a change order from the contractor.
## Lighting System

### Pole / Fixture Summary

<table>
<thead>
<tr>
<th>Pole ID</th>
<th>Pole Height</th>
<th>Mtg Height</th>
<th>Fixture Qty</th>
<th>Luminaire Type</th>
<th>Load</th>
<th>Circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1, P4</td>
<td>50'</td>
<td>50'</td>
<td>3</td>
<td>TLC LED-600</td>
<td>1.74 kW</td>
<td>A</td>
</tr>
<tr>
<td>P2, P3</td>
<td>50'</td>
<td>30'</td>
<td>1</td>
<td>CREE OSQ</td>
<td>0.13 kW</td>
<td>C</td>
</tr>
<tr>
<td>FS</td>
<td>50'</td>
<td>30'</td>
<td>4</td>
<td>TLC LED-600</td>
<td>1.32 kW</td>
<td>A</td>
</tr>
<tr>
<td>S</td>
<td>22</td>
<td></td>
<td>22</td>
<td>TLC LED-600</td>
<td>11.86 kW</td>
<td>C</td>
</tr>
</tbody>
</table>

### Circuit Summary

<table>
<thead>
<tr>
<th>Circuit</th>
<th>Description</th>
<th>Load</th>
<th>Fixture Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>TN / Pickleball</td>
<td>5.8 kW</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>Roller Hockey / Skatepark</td>
<td>5.8 kW</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>Security</td>
<td>0.26 kW</td>
<td>2</td>
</tr>
</tbody>
</table>

### Fixture Type Summary

<table>
<thead>
<tr>
<th>Type</th>
<th>Source</th>
<th>Wattage</th>
<th>CRI</th>
<th>L90</th>
<th>L80</th>
<th>L70</th>
<th>L60</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC LED-600</td>
<td>LED 5700K - 75 CRI</td>
<td>580W</td>
<td>75</td>
<td>&gt;81,000</td>
<td>&gt;81,000</td>
<td>&gt;81,000</td>
<td>&gt;81,000</td>
<td>20</td>
</tr>
<tr>
<td>CREE OSQ</td>
<td>LED 5700K - 70 CRI</td>
<td>130W</td>
<td>70</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2</td>
</tr>
</tbody>
</table>

### Light Level Summary

#### Calculation Grid Summary

<table>
<thead>
<tr>
<th>Grid Name</th>
<th>Calculation Metric</th>
<th>Avg</th>
<th>Min</th>
<th>Max</th>
<th>Max/Min</th>
<th>Ave/Min</th>
<th>Circuits</th>
<th>Fixture Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blanket Grid</td>
<td>Horizontal</td>
<td>0.24</td>
<td>0</td>
<td>0.00</td>
<td>A</td>
<td>20</td>
<td>A</td>
<td>20</td>
</tr>
<tr>
<td>Blanket Grid</td>
<td>Max Candela (by Fixture)</td>
<td>0.25</td>
<td>0</td>
<td>0.00</td>
<td>A</td>
<td>20</td>
<td>A</td>
<td>20</td>
</tr>
<tr>
<td>Pickleball</td>
<td>Horizontal Birenance</td>
<td>27.8</td>
<td>20.8</td>
<td>35.2</td>
<td>1.70</td>
<td>1.34</td>
<td>A</td>
<td>10</td>
</tr>
<tr>
<td>Roller Hockey</td>
<td>Horizontal Birenance</td>
<td>27.7</td>
<td>20.8</td>
<td>35.2</td>
<td>1.70</td>
<td>1.35</td>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td>Security</td>
<td>Horizontal Birenance</td>
<td>0.84</td>
<td>0.07</td>
<td>2.65</td>
<td>30.52</td>
<td>12.00</td>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>Skatepark</td>
<td>Horizontal Birenance</td>
<td>27.8</td>
<td>20.8</td>
<td>35.2</td>
<td>1.70</td>
<td>1.35</td>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td>Tennis</td>
<td>Horizontal Birenance</td>
<td>27.7</td>
<td>20.8</td>
<td>35.2</td>
<td>1.50</td>
<td>1.35</td>
<td>A</td>
<td>10</td>
</tr>
</tbody>
</table>
Simonds Park Tennis & Skate Park
Burlington, MA

GRID SUMMARY
Name: Tennis
Size: 62' x 120'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY
Guaranteed Average: 27.7
Scan Average: 35.23
Minimum: 20.80
Avg / Min: 1.33
Guaranteed Max / Min: 1.69
UG (adjacent pts): 1.33
CL: 0.29
No. of Points: 72

SUMMARY INFORMATION
Color / CRI: 5700K - 75 CRI / 5700K - 70 CRI
Luminaire Output: 65,600 / 16,599 lumens
No. of Luminaires: 10
Total Load: 5.8 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.
**Simonds Park Tennis & Skate Park**
Burlington, MA

**GRID SUMMARY**

- **Name:** Pickleball
- **Size:** 60’ x 120’
- **Spacing:** 10.0’ x 10.0’
- **Height:** 3.0’ above grade

**ILLUMINATION SUMMARY**

- **Guaranteed Average:** 27.77
- **Scan Average:** 27.77
- **Maximum:** 35.25
- **Minimum:** 20.79
- **Avg / Min:** 1.34
- **Guaranteed Max / Min:** 1.70
- **UG (adjacent pts):** 1.33
- **CU:** 0.29
- **No. of Points:** 72

**LUMINAIRE INFORMATION**

- **Color / CRI:** 5700K - 75 CRI / 5700K - 70 CRI
- **Luminaire Output:** 65,600 / 16,599 lumens
- **No. of Luminaires:** 10
- **Total Load:** 5.8 kW

**Lumen Maintenance**

- **TLC-LED-600:** >81,000
- **CREE OSQ:** --

Reported per TM-21-11. See luminaire datasheet for details.

**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.
Simonds Park Tennis & Skate Park
Burlington, MA

GRID SUMMARY

Name: Roller Hockey
Size: 62' x 120'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

<table>
<thead>
<tr>
<th>Grid Area</th>
<th>Guaranteed Average</th>
<th>Scan Average</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Avg / Min</th>
<th>Guaranteed Max / Min</th>
<th>UG (adjacent pts)</th>
<th>CU</th>
<th>No. of Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire Grid</td>
<td>20</td>
<td>27.71</td>
<td>34.94</td>
<td>20.56</td>
<td>1.35</td>
<td>1.70</td>
<td>1.33</td>
<td>0.29</td>
<td>72</td>
</tr>
</tbody>
</table>

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.

LUMINAIRE INFORMATION

- Color / CRI: 5700K - 75 CRI
- Luminaire Output: 65,600 lumens
- No. of Luminaires: 10
- Total Load: 5.8 kW

Lumen Maintenance

<table>
<thead>
<tr>
<th>Luminaire Type</th>
<th>L90 hrs</th>
<th>L80 hrs</th>
<th>L70 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC-LED-600</td>
<td>&gt;81,000</td>
<td>&gt;81,000</td>
<td>&gt;81,000</td>
</tr>
</tbody>
</table>

Reported per TM-21-11. See luminaire datasheet for details.
Simonds Park Tennis & Skate Park
Burlington, MA

GRID SUMMARY

Name: Skatepark
Size: 62' x 120'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

Guaranteed Average: 27.80
Scan Average: 27.80
Maximum: 34.97
Minimum: 20.59
Avg / Min: 1.35

Guaranteed Max / Min: 3
Max / Min: 1.70
UG (adjacent pts): 1.33
CU: 0.29
No. of Points: 72

LUMINAIRE INFORMATION

- Color / CRI: 5700K - 75 CRI
- Luminaire Output: 65,600 lumens
- No. of Luminaires: 10
- Total Load: 5.8 kW

Lumen Maintenance

Luminaire Type L90 hrs L80 hrs L70 hrs
TLC-LED-600 >81,000 >81,000 >81,000


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.
**EQUIPMENT LIST FOR AREAS SHOWN**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Location</th>
<th>Size</th>
<th>Elevation</th>
<th>Mounting</th>
<th>Height</th>
<th>Pole Type</th>
<th>QTY / POLE</th>
<th>This Grid</th>
<th>Other Grids</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2</td>
<td>P2-P3</td>
<td>50'</td>
<td>4'</td>
<td>34'</td>
<td>54'</td>
<td>0.15</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CREE OSQ</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

**GRID SUMMARY**

- **Name:** Security
- **Size:** 10' x 240'
- **Spacing:** 10.0' x 10.0'
- **Height:** 3.0' above grade

**ILLUMINATION SUMMARY**

- **Scan Average:** 0.84
- **Maximum:** 2.65
- **Minimum:** 0.07
- **Avg / Min:** 12.56
- **Max / Min:** 39.52
- **UG (adjacent pts):** 1.72
- **CRI:** 0.12
- **No. of Points:** 48

**LUMINAIRE INFORMATION**

- **Color / CRI:** 5700K - 70 CRI
- **Luminaire Output:** 16,599 lumens
- **No. of Luminaires:** 2
- **Total Load:** 0.26 kW

**Lumen Maintenance**

- **CREE OSQ:** --

Reported per TM-21-11. See luminaire datasheet for details.

**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% normal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.
**GRID SUMMARY**

Name: Blanket Grid  
Spacing: 11'6" x 10'7"  
Height: 3.0' above grade

**ILLUMINATION SUMMARY**

- **Scan Average:** 0.74  
- **Minimum:** 0.00  
- **Maximum:** 9.97  
- **UG (adjacent point):** 8.76  
- **Max. Use:** 9.97  
- **No. of Points:** 7558  
- **Color/ CRI:** 5700K - 75-CRI / 5700K - 70-CRI  
- **Luminous Output:** 65,600 / 16,990 lumens  
- **No. of Luminaire:** 20  
- **Total Load:** 11.6 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 ESMA RP-6-15.

Electrical System Requirements: Refer to Amparging

Draw Chart and the "Musco Control System Summary" for electrical sizing.

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

---

**EQUIPMENT LIST FOR AREAS SHOWN**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Luminaire Type</th>
<th>Luminaire Number</th>
<th>Mounting Method</th>
<th>Swing Arm</th>
<th>Poles</th>
<th>Spacing</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T1 LED 450</td>
<td>1</td>
<td>Ground Mount</td>
<td>0</td>
<td>3</td>
<td>11'6&quot;</td>
<td>3'0&quot;</td>
</tr>
<tr>
<td>1</td>
<td>T1 LED 450</td>
<td>2</td>
<td>Ground Mount</td>
<td>0</td>
<td>3</td>
<td>10'7&quot;</td>
<td>3'0&quot;</td>
</tr>
<tr>
<td>1</td>
<td>T1 LED 450</td>
<td>3</td>
<td>Ground Mount</td>
<td>0</td>
<td>3</td>
<td>11'6&quot;</td>
<td>3'0&quot;</td>
</tr>
</tbody>
</table>

*The structure utilizes a back-in-back mounting configuration.*
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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

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

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 ESHA RP-6-16.

Electrical System Requirements: Refer to Amprange Draw Chart and/or the “Musco Control System Summary” for electrical sizing.

Installation Requirements: Results assume a 3% nominal voltage at line-side of the driver and structures located within 3 feet (1m) of design locations.
Simonds Park Tennis & Skate Park
Burlington, MA

INCLUDES:
- Pickleball
- Roller Hockey
- Security
- Skatepark
- Tennis

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

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LUMINAIRE</th>
<th>QTY / POLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>P1, P4</td>
<td>50'</td>
<td>-</td>
<td>50'</td>
<td>TLC-LED-600</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>P2-P3</td>
<td>50'</td>
<td>4'</td>
<td>34'</td>
<td>54'</td>
<td>CREE OSQ</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>P5</td>
<td>50'</td>
<td>4'</td>
<td>54'</td>
<td>TLC-LED-600</td>
<td>1/1</td>
<td>1/1</td>
</tr>
</tbody>
</table>

TOTALS 22

* This structure utilizes a back-to-back mounting configuration.

SINGLE LUMINAIRE AMPERAGE DRAW CHART

<table>
<thead>
<tr>
<th>Single Phase Voltage</th>
<th>208V (60)</th>
<th>220V (60)</th>
<th>240V (60)</th>
<th>277V (60)</th>
<th>347V (60)</th>
<th>380V (60)</th>
<th>480V (60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC-LED-600</td>
<td>3.4</td>
<td>3.2</td>
<td>3.0</td>
<td>2.6</td>
<td>2.0</td>
<td>1.9</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Ballast Specification: (.90 min power factor)

Line Amperage Per Luminaire (max draw):

- 208V: 3.4
- 220V: 3.2
- 240V: 3.0
- 277V: 2.6
- 347V: 2.0
- 380V: 1.9
- 480V: 1.5

Note: Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2018 Musco Sports Lighting, LLC.
Simonds Park Tennis & Skate Park

GLARE IMPACT

Summary:
Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

GLARE

Candela levels:
High Glare: 150,000 or more candela
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

Significant Glare: 25,000 to 75,000 candela
Equivalent to high beam headlights of a car.

Minimal to No Glare: 500 or less candela
Equivalent to 100W incandescent light bulb.

Candelas: + 150,000 100,000 50,000 5,000 1,000 500 250

Simonds Park Tennis & Skate Park
Burlington, MA
Project Specific Notes:

Controls include Hi/Med/Low dimming capabilities.

20A breaker required for powerline controller communication.

Materials Checklist

Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location.
- If the control voltage is NOT available, a control transformer is required.
- Electrical distribution panel to provide overcurrent protection for circuits
  - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring:
  - See chart on page 2 for wiring requirements
  - Equipment grounding conductor and splices must be insulated. (per circuit)
  - Lightning ground protection (per pole), if not Musco supplied.
- Electrical conduit wireway system
  - Entrance hubs rated NEMA 4: must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation. Note: Activation may take up to 1 1/2 hours

Equipment Listing

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>APPROXIMATE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Control and Monitoring Cabinet</td>
<td>24 X 72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>QTY</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Contactors</td>
<td>8</td>
<td>30 AMP</td>
</tr>
<tr>
<td>Total Off/On/Auto Switches</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Important Notes

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.

2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco’s single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.

3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are UL 100% rated for the published continuous load. All contactors are 3 pole.

4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.

5. A single control circuit must be supplied per control system.

6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart. Minimum power factor is 0.9.

Note: Refer to Installation Instructions for more details on equipment information and the installation requirements.
### Control Link®

#### Control and Monitoring System

**Digital cellular antenna**

- **Off-on-auto keyed switches**
- **Transformer (provided by customer for control voltage supply if not available)**
- **Electrical distribution panel (provided by customer for overcurrent protection)**

---

**Conduit ID**

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th># of Wires</th>
<th>Wire (AWG)</th>
<th>Conduit (in)</th>
<th>Max. Wire Length (ft)</th>
<th>MUSCO Supplied</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Line power to contactors, and equipment grounding conductor</td>
<td>*A, *B, *C</td>
<td>N/A</td>
<td>No</td>
<td>A-E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Power-line Communication Connection (dedicated, 20A)</td>
<td>*A, 12</td>
<td>*C</td>
<td>N/A</td>
<td>No</td>
<td>A-E</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Load power to lighting circuits, and equipment grounding conductor</td>
<td>*A, *B, *C</td>
<td>N/A</td>
<td>No</td>
<td>A-E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Control power (dedicated, 20A)</td>
<td>3, 12</td>
<td>*C</td>
<td>N/A</td>
<td>No</td>
<td>C,E</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.

**IMPORTANT:** Control wires (3) must be in separate conduit from line and load power wires (1, 2).
### CONTROL POWER CONSUMPTION

**120V Single Phase**

| VA loading of Musco Supplied Equipment | INRUSH: 2533.0 | SEALED: 283.8 |

### SWITCHING SCHEDULE

<table>
<thead>
<tr>
<th>Field/Zone Description</th>
<th>Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pickleball</td>
<td>1</td>
</tr>
<tr>
<td>Skatepark</td>
<td>2</td>
</tr>
<tr>
<td>Security</td>
<td>3</td>
</tr>
</tbody>
</table>

### CIRCUIT SUMMARY BY ZONE

<table>
<thead>
<tr>
<th>POLE</th>
<th>CIRCUIT DESCRIPTION</th>
<th># OF FIXTURES</th>
<th># OF DRIVERS</th>
<th>*FULL LOAD AMPS</th>
<th>CONTACTOR SIZE (AMPS)</th>
<th>CONTACTOR ID</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Pickleball</td>
<td>3</td>
<td>2</td>
<td>8.9</td>
<td>30</td>
<td>C1</td>
<td>1</td>
</tr>
<tr>
<td>P4</td>
<td>Pickleball</td>
<td>3</td>
<td>2</td>
<td>8.9</td>
<td>30</td>
<td>C2</td>
<td>1</td>
</tr>
<tr>
<td>P5</td>
<td>Pickleball</td>
<td>4</td>
<td>2</td>
<td>11.8</td>
<td>30</td>
<td>C3</td>
<td>1</td>
</tr>
<tr>
<td>P2</td>
<td>Roller Hockey</td>
<td>3</td>
<td>2</td>
<td>8.9</td>
<td>30</td>
<td>C4</td>
<td>2</td>
</tr>
<tr>
<td>P3</td>
<td>Roller Hockey</td>
<td>3</td>
<td>2</td>
<td>8.9</td>
<td>30</td>
<td>C5</td>
<td>2</td>
</tr>
<tr>
<td>P5</td>
<td>Roller Hockey</td>
<td>4</td>
<td>2</td>
<td>11.8</td>
<td>30</td>
<td>C6</td>
<td>2</td>
</tr>
<tr>
<td>P2</td>
<td>Security</td>
<td>1</td>
<td>1</td>
<td>0.6</td>
<td>30</td>
<td>C7</td>
<td>3</td>
</tr>
<tr>
<td>P3</td>
<td>Security</td>
<td>1</td>
<td>1</td>
<td>0.6</td>
<td>30</td>
<td>C8</td>
<td>3</td>
</tr>
</tbody>
</table>

*Full Load Amps based on amps per driver.*
### PANEL SUMMARY

<table>
<thead>
<tr>
<th>CABINET #</th>
<th>CONTROL MODULE LOCATION</th>
<th>CONTACTOR ID</th>
<th>CIRCUIT DESCRIPTION</th>
<th>FULL LOAD AMPS</th>
<th>DISTRIBUTION PANEL ID (BY OTHERS)</th>
<th>CIRCUIT BREAKER POSITION (BY OTHERS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>C1</td>
<td>Pole P1</td>
<td>8.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C2</td>
<td>Pole P4</td>
<td>8.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C3</td>
<td>Pole P5</td>
<td>11.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C4</td>
<td>Pole P2</td>
<td>8.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C5</td>
<td>Pole P3</td>
<td>8.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C6</td>
<td>Pole P5</td>
<td>11.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C7</td>
<td>Pole P2</td>
<td>0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>C8</td>
<td>Pole P3</td>
<td>0.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ZONE SCHEDULE

<table>
<thead>
<tr>
<th>ZONE</th>
<th>SELECTOR SWITCH</th>
<th>ZONE DESCRIPTION</th>
<th>CIRCUIT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>1</td>
<td>Pickleball</td>
<td>P1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P5</td>
</tr>
<tr>
<td>Zone 2</td>
<td>2</td>
<td>Roller Hockey</td>
<td>P2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P5</td>
</tr>
<tr>
<td>Zone 3</td>
<td>3</td>
<td>Security</td>
<td>P2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C8</td>
</tr>
</tbody>
</table>