RUSH

Contract Routing Form

ROUTING: Urgent Rush printed on: 06/19/2017

Contract between: Robert J. Nickles, Incorporated
and Dept. or Division: Engineering Division
Name/Phone Number:

Project: GoodmanPark Ice Rink Improvements

Contract No.: 7949 File No.: 47234
Enactment No.: RES-17-0465 Enactment Date: 06/13/2017
Dollar Amount: 98,636.94

(Please DATE before routing)

Signatures Required	Date Received	Date Signed
City Clerk	6/19/17	6/19/17
Director of Civil Rights	6.19.17	6.20.17 FNJ
Risk Manager	6.21.17	6/21/17 RTN
Finance Director	6.21.17	6.21.17 RW
City Attorney #797	6-21-17	6-21-2017
Mayor	6.22.17	6.27.17

Please return signed Contracts to the City Clerk's Office
Room 103, City-County Building for filing.

Original + 2 Copies

06/19/2017 15:24:47 enjls - Corey Stelljes

Dis Rights: OK / (N/A) / Problem - Hold
Prev Wage: (AA) / Agency / No
Contract Value: 98,636.99
AA Plan: APPROVED
Amendment / Addendum # N/A
Type: POS / Dvlp / Sbdv / Gov't /
Grant / (PW) / Goal / Loan / Agrmt

City of Madison

City of Madison
Madison, WI 53703
www.cityofmadison.com

Legislation Details (With Text)

File #:	47234	**Version:** 1	**Name:**	Awarding Public Works Contract No. 7949, Goodman Park Ice Rink Lighting Improvements.
Type:	Resolution		**Status:**	Passed
File created:	5/9/2017		**In control:**	BOARD OF PUBLIC WORKS
On agenda:	6/6/2017		**Final action:**	6/6/2017
Enactment date:	6/13/2017		**Enactment #:**	RES-17-00465

Title: Awarding Public Works Contract No. 7949, Goodman Park Ice Rink Lighting Improvements.

Sponsors: BOARD OF PUBLIC WORKS

Indexes:

Code sections:

Attachments: 1. Contract 7949.pdf

Date	Ver.	Action By	Action	Result
6/6/2017	1	COMMON COUNCIL	Adopt Under Suspension of Rules 2.04, 2.05, 2.24, and 2.25	Pass
5/17/2017	1	BOARD OF PUBLIC WORKS	RECOMMEND TO COUNCIL TO ADOPT UNDER SUSPENSION OF RULES 2.04, 2.05, 2.24, & 2.25 - REPORT OF OFFICER	Pass
5/9/2017	1	Engineering Division	Refer	

The proposed resolution authorizes the award of Public Works Contract no. 7949, Goodman Park Ice Rink Lighting Improvements. The total estimated cost of the project is $106,530. Funding is available in the Parks Division capital project Lights Goodman Rink (Munis Project #17434).
Awarding Public Works Contract No. 7949, Goodman Park Ice Rink Lighting Improvements.
BE IT RESOLVED, that the following low bids for miscellaneous improvements be accepted and that the Mayor and City Clerk be and are hereby authorized and directed to enter into a contract with the low bidders contained herein, subject to the Contractor's compliance with Section 39.02 of the Madison General Ordinances concerning compliance with the Affirmative Action provisions **and subject to the Contractor's compliance with Section 33.07 of the Madison General Ordinances regarding Best Value Contracting:**

BE IT FURTHER RESOLVED, that the funds be encumbered to cover the cost of the projects contained herein.

See attached document (Contract No. 7949) for itemization of bids.

PROJECT	CONTRACTOR	AMOUNT OF BID

CONTRACT NO. 7949
GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS

	ROBERT J. NICKLES, INCORPORATED	$98,636.94

Acct. No. 17434-51-130: 54250 (98854)	$98,636.94
Contingency 8%±	7,893.06
GRAND TOTAL	$106,530.00

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Details Reports

File #:	47234 Version: 1	Name:	Awarding Public Works Contract No. 7949, Goodman Park Ice Rink Lighting Improvements.
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Sponsors:	BOARD OF PUBLIC WORKS		
Attachments:	1. Contract 7949.pdf		

History (3) Text

3 records Group Export

Date	Ver.	Action By	Action	Result	Action Details	Watch
6/6/2017	1	COMMON COUNCIL	Adopt Under Suspension of Rules 2.04, 2.05, 2.24, and 2.25	Pass	Action details	Not available
5/17/2017	1	BOARD OF PUBLIC WORKS	RECOMMEND TO COUNCIL TO ADOPT UNDER SUSPENSION OF RULES 2.04, 2.05, 2.24, & 2.25 - REPORT OF OFFICER	Pass	Action details	Not available
5/9/2017	1	Engineering Division	Refer		Action details	Not available

Demographics

Company Name: West Bend Mutual Insurance Company
Short Name:
SBS Company Number: 54218767
NAIC CoCode: 15350
FEIN: 39-0698170
Domicile Type: Domestic
State of Domicile: Wisconsin
Country of Domicile: United States
NAIC Group Number:
Organization Type: Mutual
Date of Incorporation: 01/01/1894
Merger Flag: No

Address

Business Address
Not Available
Not Available, UN 99999
United States
Mailing Address
1900 S 18TH AVE
WEST BEND, WI 53095-8796
United States
Statutory Home Office Address
1900 S 18TH AVE
WEST BEND, WI 53095-8796
United States
Main Administrative Office Address
1900 S 18TH AVE
WEST BEND, WI 53095-8796
United States

Phone, E-mail, Website

Phone

Type	Number
Mailing Primary Phone	(262) 365-2512
Mailing Fax Phone	(262) 365-2770
Statutory Home Office Primary Phone	(262) 365-2512
Statutory Home Office Fax Phone	(262) 365-2770
Main Admin Office Primary Phone	(262) 365-2512
Main Admin Office Fax Phone	(262) 365-2770

Email
No results found.
Website
No results found.

Company Type

Company Type: Property and Casualty
Status: Active
Status Reason:
Status Date: 05/01/1894
Effective Date: 10/19/1961
Legacy State ID: 110833
Issue Date: 05/01/1894
Approval Date:
File Date:
Articles of Incorporation Received: No
Article No:
COA Number:

Appointments

eliza

Licensee Name	License Number	NPN	License Type	Line of Authority	Appointment Date	Effective Date	Expiration Date
ELIZABETH DRESSLER	17987090	17987090	Intermediary (Agent) Individual	Casualty	11/04/2016	03/01/2017	02/28/2018
ELIZABETH BERGERON	17216946	17216946	Intermediary (Agent) Individual	Casualty	08/05/2016	03/01/2017	02/28/2018
ELIZABETH DOKKESTUL	8052595	8052595	Intermediary (Agent) Individual	Casualty	07/21/2014	03/01/2017	02/28/2018
ELIZABETH SAMP	6510765	6510765	Intermediary (Agent) Individual	Casualty	07/18/2011	03/01/2017	02/28/2018
ELIZABETH VAN DEN HEUVEL	17221946	17221946	Intermediary (Agent) Individual	Casualty	08/21/2014	03/01/2017	02/28/2018
ELIZABETH MOSCA	12305256	12305256	Intermediary (Agent) Individual	Casualty	08/08/2011	03/01/2017	02/28/2018
ELIZABETH BILLE	7740230	7740230	Intermediary (Agent) Individual	Casualty	07/14/2003	03/01/2017	02/28/2018
ELIZABETH DRESSLER	17987090	17987090	Intermediary (Agent) Individual	Property	11/04/2016	03/01/2017	02/28/2018

First Previous 1 2 Next Last

Line Of Business

Filter

Line of Business	Citation Type	Effective Date
Aircraft	Aircraft	10/19/1961
Automobile	Automobile	10/19/1961
Disability Insurance	Disability Insurance	10/19/1961
Fidelity Insurance	Fidelity Insurance	10/19/1961
Fire, Inland Marine and Other Property Insurance	Fire, Inland Marine and Other Property Insurance	10/19/1961
Liability and Incidental Medical Expense Insurance (other than automobile)	Liability and Incidental Medical Expense Insurance (other than automobile)	10/19/1961
Miscellaneous	Miscellaneous	10/19/1961
Ocean Marine Insurance	Ocean Marine Insurance	10/19/1961
Surety Insurance	Surety Insurance	10/19/1961
Workers Compensation Insurance	Workers Compensation Insurance	10/19/1961

First Previous 1 Next Last

Contact

Filter

First | Previous | 1 | Next | Last

Company Merger

No results found.

Name Change History

Filter

Previous Name	New Name	Effective Date
	West Bend Mutual Insurance Company	

First | Previous | 1 | Next | Last

$98,636.94
FILE

BID OF ROBERT J. NICKLES, INCORPORATED

2017

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS

CONTRACT NO. 7949

MUNIS NO. 17434- 51- 130

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL
MADISON, WISCONSIN ON JUNE 6, 2017

CITY ENGINEERING DIVISION
1600 EMIL STREET
MADISON, WISCONSIN 53713

https://bidexpress.com/login

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS
CONTRACT NO. 7949

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SECTION I: PAYMENT AND PERFORMANCE BOND I-1

This Proposal, and Agreement have
been prepared by:

CITY ENGINEERING DIVISION
CITY OF MADISON
MADISON, DANE COUNTY, WISCONSIN

Eric Knepp, Parks Superintendent

RFP: EK

SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION
CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS
CONTRACT NO.:	7949
BID BOND	5%
PREQUALIFICATION APPLICATION DUE (1:00 P.M)	4/28/17
BID SUBMISSION (1:00 P.M.)	5/5/17
BID OPEN (1:30 P.M.)	5/5/17
PUBLISHED IN WSJ	4/7/17, 4/14/17 & 4/21/17

PREQUALIFICATION APPLICATION: Forms are available at the same location or on our website, www.cityofmadison.com/business/pw/forms.cfm. If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

BIDS TO BE SUBMITTED by hand to 1600 EMIL ST., MADISON, WI 53713 or online at www.bidexpress.com.

THE BID OPENING is at 1600 EMIL ST., MADISON, WI 53713.

STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2017 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, www.cityofmadison.com/Business/PW/specs.cfm.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102, "BIDDING REQUIREMENTS AND CONDITIONS" and Article 103, "AWARD AND EXECUTION OF THE CONTRACT." For the convenience of the bidder, below are highlights of three subsections of the specifications.

SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be pre-qualified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)I. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

SECTION 102.4 PROPOSAL

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express (www.bidexpress.com). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Nothwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an ☒

Building Demolition

101 ☐ Asbestos Removal
120 ☐ House Mover
110 ☐ Building Demolition

Street, Utility and Site Construction

201 ☐ Asphalt Paving
205 ☐ Blasting
210 ☐ Boring/Pipe Jacking
215 ☐ Concrete Paving
220 ☒ Con. Sidewalk/Curb & Gutter/Misc. Flat Work
221 ☐ Concrete Bases and Other Concrete Work
222 ☐ Concrete Removal
225 ☐ Dredging
230 ☐ Fencing
235 ☒ Fiber Optic Cable/Conduit Installation
240 ☐ Grading and Earthwork
241 ☐ Horizontal Saw Cutting of Sidewalk
242 ☐ Infrared Seamless Patching
245 ☐ Landscaping, Maintenance
246 ☐ Ecological Restoration
250 ☐ Landscaping, Site and Street
251 ☐ Parking Ramp Maintenance
252 ☐ Pavement Marking
255 ☐ Pavement Sealcoating and Crack Sealing
260 ☐ Petroleum Above/Below Ground Storage Tank Removal/Installation
262 ☐ Playground Installer
265 ☐ Retaining Walls, Precast Modular Units
270 ☐ Retaining Walls, Reinforced Concrete
275 ☐ Sanitary, Storm Sewer and Water Main Construction
276 ☐ Sawcutting
280 ☐ Sewer Lateral Drain Cleaning/Internal TV Insp.
285 ☐ Sewer Lining
290 ☐ Sewer Pipe Bursting
295 ☐ Soil Borings
300 ☐ Soil Nailing
305 ☐ Storm & Sanitary Sewer Laterals & Water Svc.
310 ☒ Street Construction
315 ☒ Street Lighting
318 ☐ Tennis Court Resurfacing
320 ☒ Traffic Signals
325 ☐ Traffic Signing & Marking
332 ☐ Tree pruning/removal
333 ☐ Tree, pesticide treatment of
335 ☐ Trucking
340 ☒ Utility Transmission Lines including Natural Gas, Electrical & Communications
399 ☐ Other_____

Bridge Construction

501 ☐ Bridge Construction and/or Repair

Building Construction

401 ☐ Floor Covering (including carpet, ceramic tile installation, rubber, VCT
402 ☐ Building Automation Systems
403 ☐ Concrete
404 ☐ Doors and Windows
405 ☐ Electrical - Power, Lighting & Communications
410 ☐ Elevator - Lifts
412 ☐ Fire Suppression
413 ☐ Furnishings - Furniture and Window Treatments
415 ☐ General Building Construction, Equal or Less than $250,000
420 ☐ General Building Construction, $250,000 to $1,500,000
425 ☐ General Building Construction, Over $1,500,000
428 ☐ Glass and/or Glazing
429 ☐ Hazardous Material Removal
430 ☐ Heating, Ventilating and Air Conditioning (HVAC)
433 ☐ Insulation - Thermal
435 ☐ Masonry/Tuck pointing
437 ☐ Metals
440 ☐ Painting and Wallcovering
445 ☐ Plumbing
450 ☐ Pump Repair
455 ☐ Pump Systems
460 ☐ Roofing and Moisture Protection
464 ☐ Tower Crane Operator
461 ☐ Solar Photovoltaic/Hot Water Systems
465 ☐ Soil/Groundwater Remediation
466 ☐ Warning Sirens
470 ☐ Water Supply Elevated Tanks
475 ☐ Water Supply Wells
480 ☐ Wood, Plastics & Composites - Structural & Architectural
499 ☐ Other_____
_____
_____

State of Wisconsin Certifications

1 ☐ Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
2 ☐ Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
3 ☐ Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
4 ☐ Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
5 ☐ Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application: www.dhs.wisconsin.gov/Asbestos/Cert. State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
6 ☐ Certification number as a Certified Arborist or Certified Tree Worker as administered by the International Society of Arboriculture
7 ☐ Pesticide application (Certification for Commercial Applicator For Hire with the certification in the category of turf and landscape (3.0) and possess a current license issued by the DATCP)
8 ☐ State of Wisconsin Master Plumbers License.

SECTION B: PROPOSAL

Please refer to the Bid Express Website at https://bidexpress.com look up contract number and go to Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at www.bidexpress.com

Click on the "Register for Free" button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a 'per bid' basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the 'Digital ID' process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

SECTION C: SMALL BUSINESS ENTERPRISE

Instructions to Bidders
City of Madison
SBE Program Information

SBE NOT APPLICABLE

SECTION D: SPECIAL PROVISIONS

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS
CONTRACT NO. 7949

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

SECTION 102.12: BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than $59,000 for a single trade contract; or equal to or greater than $288,000 for a multi-trade contract pursuant to MGO 33.07(7).

SECTION 104: SCOPE OF WORK

This lighting project consists of the following work in Goodman Park adjacent to the ice rink:

- Coordinate, obtain and pay for all permits, fees and inspections required for this project that have not already been obtained by the City.
- Coordinate and verify the installation of the primary service from MG&E. No additional cost is anticipated for this work. MG&E Contact is Keith Vanden Wymelenberg (608) 252-7132.
- Purchase, coordinate delivery of, and installation of a new lighting system as per these plans and specifications.
- Removal of existing light poles, fixtures, and concrete bases per these plans and specifications
- Design and installation of concrete light pole footings
- All trenching, conduit, wiring, handholes, and electrical connections required to get the new lights into working order as per these plans and specifications and all state and local electrical codes.
- All restoration required to bring damaged lawn surfaces back to pre-construction condition.
- All testing of the system to assure it is working as per manufacturers requirements.

SECTION 105.1: AUTHORITY OF THE ENGINEER

The Engineer shall resolve all questions which arise as to the quality and acceptability of materials furnished, work performed, manner of performance, rate of progress of the work, interpretation of the plans and Specifications, acceptable fulfillment of the contract, compensation, and disputes and mutual rights between Contractors under the Specifications. The Engineer shall determine the amount and quantity of work performed and materials furnished.

SECTION 105.9: SURVEYS, POINTS, AND INSTRUCTION

The Contractor will be responsible for all layout, lines and/or grades required to complete the work for the installation of the light poles. City Parks will stake the pole locations. The Contractor shall mark the trench routes, then call the Parks Division for location/route approval prior to any digging. The City of Madison Parks Division will make available to the surveyor an electronic copy of the project upon request.

Any questions regarding this project should be directed to Corey Stelljes at the Parks Division at cstelljes@cityofmadison.com or (608) 266-6518. Any questions regarding surveying issues should be directed to Dan Rodman of the Parks Division drodman@cityofmadison.com or (608) 266-6674.

SECTION 105.12: COOPERATION BY CONTRACTOR

Several utilities exist on site. The Contractor shall perform a One Call through Digger's Hotline at least three days prior to beginning construction. To ensure that Parks-owned utilities are also marked, include the PARK NAME AT THE BEGINNING OF THE MARKING instructions field on the ticket, and send a copy of the ticket to the City of Madison Parks Surveyor (Dan Rodman / drodman@cityofmadison.com / tel (608)266-6674 / fax (608)267-1162).

The Contractor shall secure materials at the end of each work day to deter any potential vandalism and theft.

This park will be open during construction. The Contractor shall construct and maintain construction fencing during construction operations to the extent possible as specified in this Contract. The Contractor shall ensure that construction fencing is erect and without gaps at the end of each work day.

A pre-construction meeting will be required prior to the start of construction.

The Contractor warrants that its services are performed, within the limits prescribed by the City, with the usual thoroughness and competence of the consulting profession; in accordance with the standard for professional services at the time those services are rendered. The Contractor shall be responsible for the accuracy of the work performed under this Agreement, and shall promptly make necessary revisions or corrections resulting from their negligent acts, errors or omissions without additional compensation. The Contractor shall be responsible for any damages incurred as a result of their errors, omissions, or negligent acts and for any losses or costs to repair or remedy construction.

Matting and seeding quantities are included for all areas disturbed during site access and construction activities. All areas disturbed shall be seeded and matted and Contractor shall ensure proper establishment of seeding.

The Contractor shall be given a large time window to complete the work. The Contractor shall be made aware that the bottom portion of the rink remains wet after rain events and is required to visit the site prior to bidding. The Contractor shall complete the work during dry weather. If the ground is disturbed or rutted beyond the seeding and matting areas shown the Contractor shall be responsible for restoring those areas at no additional cost to the City as well as any additional erosion control measures required to control sediment. Seeding, matting, and erosion control quantities shall only be paid plan quantity without measurement thereof unless mutually agreed to by Contractor and project Engineer.

SECTION 107.13 TREE PROTECTION SPECIFICATIONS

The Contractor is advised to review Article 107.13 of the Standard Specifications for tree protection.

The intent of this design is to avoid the damage to trees on site. Trees that must be protected are designated on the plans. For trees where construction operations, including grading, hauling, pipe lining, filling, etc. occur within 5 feet of the trunk, construction operations near these trees shall be done under the supervision of a City of Madison Forestry Representative.

SECTION 108.2: PERMITS

The following permits have been obtained for this project:

1. City of Madison Erosion Control Permit

The following permits shall be obtained by the Contractor:

1. City of Madison Electrical Permit

The Contractor shall meet the conditions of the permits by properly installing and maintaining the erosion control and electrical measures and items shown on the plans, specified in these Special Provisions, or as directed by the Construction Engineer or his designees. All electrical work shall be performed by a licensed electrician in the state of Wisconsin. This work will be paid for under the appropriate contract bid items. A copy of the permit is available at the City of Madison, Engineering Division office.

Copies of these permits will be provided to Contractor prior to start of construction. The Contractor must keep a copy of each individual permit on site at all times throughout construction.

The City's obtaining of these permits is not intended to be exhaustive of all permits that may be required to be obtained by the Contractor for construction of this project. It shall be the responsibility of the Contractor to identify and obtain any other permits needed for construction.

SECTION 109.2: PROSECUTION OF THE WORK

Work cannot start on this contract until after the "Start to Work" letter has been received. Construction work must begin within seven (7) calendar days after the date appearing on the mailed notice to do so that was sent to the Contractor. Construction work shall be carried at a rate so as to secure full completion within the contract times outlined in Section 109.7, the rate of progress and the time of completion being essential conditions of this Agreement. Definite notice of intention to start work shall be given to the Engineer at least seventy-two (72) hours in advance of beginning work.

The fixed, agreed upon, liquidated damages for failure to complete all work within the contract, unless otherwise specified in this section, shall be calculated in accordance with Article 109 of the Standard Specifications. The Contractor shall limit workdays from Monday through Friday 7:00 am to 7:00 pm, unless approved by the Engineer in writing.

Construction work must begin within seven (7) calendar days after the date appearing on mailed notice to do so. Once started, work shall be carried on at a rate so as to secure full completion within the contract time, the rate of progress and the time of completion being essential conditions of this Agreement.

Work on this project should be scheduled through Corey Stelljes from the Parks Division, at cstelljes@cityofmadison.com or (608) 266-6518. Questions regarding the electrical details should be directed to the Madison Parks Division Electrician, Paul Janes, @ (608) 209-3578.

SECTION 109.7: TIME OF COMPLETION

Work shall start on or after **July 5th, 2017.** All removal and placement of concrete footings, trenching, and site restoration must be completed by **October 13th, 2017.** Installation of the lighting poles and wiring must be completed by **November 17th, 2017.**

SECTION 110.1: MEASUREMENT OF QUANTITIES

All bid items listed in the proposal page will be paid for at the quantity listed in the proposal page, and will not be measured in the field unless otherwise indicated in these special provisions, or there is a significant change approved by the Engineer. A significant change shall be considered more than a 30% change in quantities.

BID ITEM 10911- MOBILIZATION

DESCRIPTION

Work under this item shall include all costs associated with mobilization of the Contractor to the site.

The Contractor may only enter the construction site at the area identified on the plans on page P-1. THE CONTRACTOR MAY NOT DRIVE OR STORE EQUIPMENT ON ANY PORTION OF THE PARK OR RIGHT OF WAY OUTSIDE THE CONSTRUCTION LIMITS UNLESS INDICATED OTHERWISE ON PLANS OR DIRECTED IN THE FIELD.

METHOD OF MEASUREMENT

Mobilization shall be paid as a lump sum.

BASIS OF PAYMENT

Mobilization shall be measured as described above and shall be paid for at the contract price which shall be full compensation for all work, materials, tools, equipment, labor, and incidentals required to complete the work as set forth in the description.

BID ITEM 20217 – CLEAR STONE

DESCRIPTION

The quantity of clear stone included in this contract is sufficient to construct one typical construction entrance and stone berm shown on plans. This item shall include the quantity of clear stone required for the construction entrance per BID ITEM 21011 – CONSTRUCTION ENTRANCE and clear stone berm per BID ITEM 21015 – STREET CONSTRUCTION STONE BERM. If the Contractor choses to use additional clear stone it shall be at no additional cost to the City.

METHOD OF MEASUREMENT

Clear Stone shall be measured by the ton as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Clear Stone shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, labor, tools, equipment, disposal, and incidentals required to complete the work as set forth in the description.

BID ITEM 21011 – CONSTRUCTION ENTRANCE

DESCRIPTION

Work under this item shall include the placement of a stone pad and paid as a construction entrance at the location shown in the plans and in accord with the City of Madison Standard Specifications and with the approval of the Construction Engineer.

Construction entrance shall be constructed at the size and location as approved by the field engineer. The Contractor shall place stone, ramping, and/or plating to avoid damage to concrete or asphalt. If any concrete or asphalt is damaged during construction the Contractor shall remove and replace damaged sections at no additional cost to the city. The field engineer shall determine any damaged sections of curb to be replaced.

METHOD OF MEASUREMENT

Construction Entrance shall be measured as each pad placed in the field as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Construction Entrance shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, labor, tools, equipment, disposal, and incidentals required to complete the work as set forth in the description.

BID ITEM 90000 – REMOVE EXISTING LIGHT POLE AND BASE

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary for the Contractor to remove the six existing light poles, fixtures, wiring, and concrete bases. All materials shall be removed from site and disposed of at a location determined by the Contractor at the Contractors expense.

There exists concrete bases for each light pole. These are of unkown depth and composition. Light bases shall either be totally removed from site or removed to a depth of four feet below grade and the remaining portion abandoned in place. Site shall be restored with select fill, topsoil, seed, and matting as part of this bid item. Topsoil or fill required to replace void left by concrete bases shall be concidered incidental to this item. Salvaged soil from excavation for new bases shall be allowed if approved by project engineer. No portion of the existing lighting system or bases shall be left above grade. All electrical connections shall be removed a distance of 6 feet back from all removed light bases. If concrete bases are left in place below grade conduit shall be trimmed flush with concrete base a minimum of 12 inches below grade and plugged with concrete slurry a minimum of 6" thick.

Payment under this item shall include concrete base removal and removal of electrical lines back 6 feet from base. The existing electrical system shall be abadoned per Bid Item 90001, all other work required to abandon the electrical system outside of 6' back from pole bases shall be paid under 90001.

METHOD OF MEASUREMENT

Remove Existing Light Pole and Base shall be measured as each pole and base removed in the field as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Remove Existing Light Pole and Base shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, labor, tools, equipment, disposal, and incidentals required to complete the work as set forth in the description.

BID ITEM 90001 – ABANDON EXISTING ELECTRICAL SYSTEM

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary for the Contractor to abandon the existing electrical system. Lights, poles, and concrete light bases shall be removed per Bid Item 90000.

All electrical conduit shall be removed a distance of 6 feet back from all removed light bases per bid item 90000. All copper wiring shall be removed from conduit in ground. No metal wiring shall be allowed to remain in the conduit to be abandoned.

METHOD OF MEASUREMENT

Abandon Existing Electrical System shall be measured as lump sum for all existing electrical facilities to be abandoned as called for on the plans.

BASIS OF PAYMENT

Abandon Existing Electrical System shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, labor, tools, equipment, disposal, and incidentals required to complete the work as set forth in the description.

BID ITEM 90002 - CONSTRUCTION FENCE (PLASTIC)

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary for the Contractor to provide, install, maintain and remove construction fence from the project site as shown on the plans.

Construction fencing shall be installed to discourage access to the construction area by the general public during the course of the project. Fencing will be maintained throughout and adjusted or removed at the request of the Engineer.

This construction fence shall be highly visible (orange), constructed of a plastic web, and able to withstand the expected amount of use it will receive on a construction site. Minor relocation of fencing may be required as the work progresses. No extra payment shall be made for temporarily opening and re-closing the fence, or minor relocation of the fencing as needed to perform the work.

Construction fencing shall be orange color, high-density polyethylene mesh conforming to the following:
- Mesh opening: 1 inch minimum to 3 inch maximum
- Height: 4 feet
- Ultimate tensile strength: Avg 3000lb per 4' width (ASTM D638)

Construction fencing posts shall be installed a minimum of 10' O.C.

METHOD OF MEASUREMENT

Construction Fence (plastic) shall be measured by the Linear Foot as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Construction Fence (plastic) shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

BID ITEM 90003 – LIGHTING SYSTEM AND BASES

DESCRIPTION

Work under this item shall include all materials, labor and incidentals necessary to purchase and install a lighting system for the ice rink as per the enclosed plans, and the following specifications:

Summary of Electrical Service Materials and Work to be Included in Bid:
- Install supplied lighting controller in enclosure next to load center
- Design and install new concrete light bases
- Purchase and install new lighting system, poles, fixtures, and electrical components as outlined in this item description

PERFORMANCE SPECIFICATIONS:

Lighting System with LED Light Source

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 Goodman Ice Rink using an LED Lighting source. The manufacturer / 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. Ice Rink

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 are 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. The LED design should provide better control than a good HID design.
3. Life-cycle Cost: 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, the City requires a remote on/off control system for the lighting system. Fields should be proactively monitored to detect luminaire outages over a 25-year life cycle. All communication and monitoring costs for 25-year period shall be included in the bid.

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 calculations shall be developed and field measurements taken on the grid spacing with the minimum number of grid points specified below. Appropriate light loss factors shall be applied and submitted for the basis of design. Average illumination level shall be measured in accordance with the IESNA LM-5-04 (IESNA Guide for Photometric Measurements of Area and Sports Lighting Installations). Illumination levels shall not to drop below desired target values in accordance to IES RP-6-15, Page 2, Maintained Average Illuminance and shall be guaranteed for the full warranty period.

Area of Lighting	Average Target Illumination Levels	Maximum to Minimum Uniformity Ratio	Grid Points	Grid Spacing
Ice Rink	13	7:1	176	10' x 10'

B. Hours of usage: Designs shall be based on the following hours of usage

Area of Lighting	Annual Usage Hours	25 year Usage Hours
Ice Rink	300	7,500

C. Color: The lighting system shall have a minimum color temperature of 5700K and a CRI of 65.

D. Mounting Heights: To ensure proper aiming angles for reduced glare and to provide better playability, minimum mounting heights shall be as described below. Higher mounting heights may be required based on photometric report and ability to ensure the top of the field angle is a minimum of 10 degrees below horizontal.

# of Poles	Pole Designation	Pole Height
2	P1-P2	40'

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 Scans: Spill scans must be submitted indicating the amount of horizontal and vertical footcandles along the specified lines. Light levels shall be taken at 30-foot intervals along the boundary line. Readings shall be taken with the meter orientation at both horizontal and aimed towards the most intense bank of lights. Illumination level shall be measured in accordance with the IESNA LM-5-04 after 1 hour warm up.

C. The first page of 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 independent 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.

1.4 LIFE-CYCLE COSTS

A. Manufacturer shall submit a 25-year life cycle cost calculation as outlined in the required submittal information.

B. Preventative and Spot Maintenance: Manufacturer shall provide all preventative and spot maintenance, including parts and labor for 25 years from the date of equipment shipment. Individual outages shall be repaired when the usage of any field is materially impacted. Owner agrees to check fuses in the event of a luminaire outage.

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 of 18-8 grade or better, passivated

and coated with aluminum-based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking. Structural fasteners may be carbon steel and galvanized meeting ASTM A153 and ISO/EN 1461 (for hot dipped galvanizing), or ASTM B695 (for mechanical galvanizing). All wiring shall be enclosed within the cross-arms, pole, or electrical components enclosure.

C. System Description: Lighting system shall consist of the following:

1. Galvanized steel poles and cross-arm assembly.

2. Non-approved pole technology:

   a. Square static cast concrete poles will not be accepted.

   b. Direct bury steel poles which utilize the extended portion of the steel shaft for their foundation will not be accepted due to potential for internal and external corrosive reaction to the soils and long term performance concerns.

3. Pre-stressed concrete base embedded in concrete backfill allowed to cure for 12-24 hours before pole stress is applied. Alternate may be an anchor bolt foundation designed such that the steel pole and any exposed steel portion of the foundation is located a minimum of 18 inches above final grade. The concrete for anchor bolt foundations shall be allowed to cure for a minimum of 28 days before the pole stress is applied unless shorter cure time approved by structural engineer of record.

4. Manufacturer will remote all drivers and supporting electrical equipment in aluminum enclosures mounted approximately 10 feet above grade. 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 driver fixtures will not be accepted.

5. Wire harness complete with 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 mph winds and maintain luminaire aiming alignment.

7. Push-button control unit shall be provided to allow players to turn the lighting system on or off during times allowed by the owner. Once a player pushes the "on" button, the lights will come on for a preset time of 1 minute to 160 minutes. At the end of the specified period, a strobe will start flashing for approximately 3 minutes. During this time, players will be able to push the "on" button again to continue play, or the lights will go off.

8. Control cabinet to provide remote on-off control and monitoring of the lighting system. Cabinet shall be constructed of aluminum and be rated NEMA Type 4. Communication method shall be provided by manufacturer. Cabinet shall contain custom configured contactor modules for 30, 60, and 100 amps, labeled to match field diagrams and electrical design. Manual off-on-auto selector switches shall be provided.

9. Lightning Protection: Manufacturer shall provide integrated lightning grounding via concrete encased electrode grounding system as defined by NFPA 780 and be UL Listed per UL 96 and UL 96A. If grounding is not integrated into the structure, the manufacturer 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: **(240 SINGLE PHASE)**
   2. Maximum total voltage drop: Voltage drop to the disconnect switch located on the poles shall not exceed five (5) percent of the rated voltage.

B. Energy Consumption: The kW consumption for the field lighting system shall be 3.2 kW.

2.3 STRUCTURAL PARAMETERS

A. Wind Loads: Wind loads shall be based on the 2009 International Building Code. Wind loads to be calculated using ASCE 7-05, a design wind speed of 90, exposure category C and wind importance factor of 1.

B. Pole Structural Design: The stress analysis and safety factor of the poles shall conform to 2009 AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-5).

C. Foundation Design: The foundation design shall be based on soil parameters as outlined in the geotechnical report included in these special provisions.

D. Foundation Drawings: Project specific foundation drawings stamped by a registered engineer in the state of Wisconsin. The foundation drawings must list the moment, shear (horizontal) force, and axial (vertical) force at ground level for each pole. These drawings must be submitted at time of bid to allow for accurate pricing.

2.4 CONTROL

A. Instant On/Off Capabilities: System shall provide for instant on/off of luminaires.

B. 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. Manufacturer 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.

C. Remote Monitoring System: System shall monitor lighting performance and notify manufacturer 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).

D. Management Tools: Manufacturer 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 will be provided suitable for IOS, Android and Blackberry devices.

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

1. Cumulative hours: shall be tracked to show the total hours used by the facility
2. Report hours saved by using early off and push buttons by users.

E. Communication Costs: Manufacturer shall include communication costs for operating the controls and monitoring system for a period of 25 years.

PART 3 – EXECUTION

3.1 SOIL QUALITY CONTROL

A. It shall be the Contractor's responsibility to notify the City if soil conditions exist other than those on which the foundation design is based, or if the soil cannot be readily excavated.

3.2 FIELD QUALITY CONTROL

A. Illumination Measurements: Upon substantial completion of the project and in the presence of the Contractor, Project Engineer, and Manufacturer's Representative, illumination measurements shall be taken and verified. The illumination measurements shall be conducted in accordance with IESNA LM-5-04.

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.

2. The Contractor/manufacturer shall be responsible for an additional inspection one year from the date of commissioning of the lighting system and will utilize the owner's light meter in the presence of the owner.

3. The Contractor/manufacturer will be held responsible for any and all changes needed to bring these fields back to compliance for light levels and uniformities. Contractor/Manufacturer will be held responsible for any damage to the fields during these repairs.

C. Correcting Non-Conformance: If, in the opinion of the City, the actual performance levels including footcandles and uniformity ratios are not in conformance with the requirements of the performance specifications and submitted information, the Manufacturer shall be required to make adjustments to meet specifications and satisfy the City.

3.4 WARRANTY AND GUARANTEE

A. 25-Year Warranty: Each manufacturer shall supply a signed warranty covering the entire system for 25 years from the date of shipment. Warranty shall guarantee specified light levels. Manufacturer shall maintain specifically-funded financial reserves to assure fulfillment of the warranty for the full term.

B. Maintenance: Manufacturer 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. Owner agrees to check fuses in the event of a luminaire outage.

PART 1 - DESIGN APPROVAL

1.1 PRE-BID SUBMITTAL REQUIREMENTS

A. Approved Product: Musco's Green Generation Lighting® sports lighting system with an LED light source is the approved product. All substitutions must provide a complete submittal package for approval as outlined in Submittal Information at the end of this section **by 2:00 PM on Monday, March 20th, 2017**. Special manufacturing to meet the standards of this specification may be required. An addendum will be issued prior to bid **(on Wednesday, March 22nd, 2017 by 12:00 noon)**, listing any other approved lighting manufacturers and designs. Submittal shall be made to Corey Stelljes at cstelljes@cityofmadison.com.

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 (Non-Musco)
Design Submittal Data Checklist and Certification for Alternate System Bids
All items listed below are mandatory, shall comply with the specification and be submitted

according to pre-bid submittal requirements

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.
	B	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. 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	Environmental Light Control Design	Environmental glare impact scans must be submitted showing the maximum candela from the rink edge on a map of the surrounding area.
	F	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.
	G	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.
	H	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 Wisconsin, if required by owner. (May be supplied upon award).
	I	Control & Monitoring System	Manufacturer of the control and monitoring system shall provide written definition and schematics for automated control system to include monitoring. They will also provide references of customers currently using proposed system in the state of Wisconsin.
	J	Electrical Distribution Plans	Manufacturer bidding an alternate product must include a revised electrical distribution plan including changes to service entrance, panels and wire sizing, signed by a licensed Electrical Engineer in the state of Wisconsin.
	K	Warranty	Provide written warranty information including all terms and conditions. Provide ten (10) references of customers currently under specified warranty in the state of Wisconsin.
	L	Project References	Manufacturer to provide a list of projects where the technology and specific fixture proposed for this project has been installed in the state of. Reference list will include project name, project city, installation date, and if requested, contact name and contact phone number.
	M	Product Information	Complete bill of material and current brochures/cut sheets for all product being provided.
	N	Delivery	Manufacturer shall supply an expected delivery timeframe from receipt of approved submittals and complete order information.
	O	Non-Compliance	Manufacturer shall list all items that do not comply with the specifications. If in full compliance, tab may be omitted.
	P	Life-cycle Cost Calculation	Document life-cycle cost calculations as defined in the specification. Identify energy costs for operating the luminaires. Maintenance cost for the system must be included in the warranty. All costs should be based on 25 Years. (complete table below)

25-Year Life Cycle Operating Cost			
a.	**Luminaire energy consumption** _____# of luminaires x _____ kW demand per luminaire x $0.10 kWh rate x 300 annual usage hours x 25 years		
b.	**Extra energy used without base bid automated control system** Energy consumption in item a. x 10% if control system not included with the bid.	+	
c.	**Cost for maintenance, not covered, for 25 years** Assume 5 repairs at 750 each if not included with the bid	+	
	TOTAL 25 -Year Life-cycle Operating Cost	=	

The information supplied herein shall be used for the purpose of complying with the specifications for Goodman Park Ice Rink. By signing below I agree that all requirements of the specifications have been

met and that the manufacturer 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: _____ **Date:** _____/_____/_____

Contractor: _____

Signature: _____

METHOD OF MEASUREMENT

LIGHTING SYSTEM AND BASES shall be measured as LUMP Sum installed in the field.

BASIS OF PAYMENT

LIGHTING SYSTEM AND BASES shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

Goodman-Franklin Park Ice Rink

Madison,WI

Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Group
P1-P2	40'	40'	4	TLC-LED-400	1.60 kW	A
2			***8***		***3.20 kW***	

Group Summary

Group	Description	Load	Fixture Qty
A	Ice Rink	3.2 kW	8

Fixture Type Summary

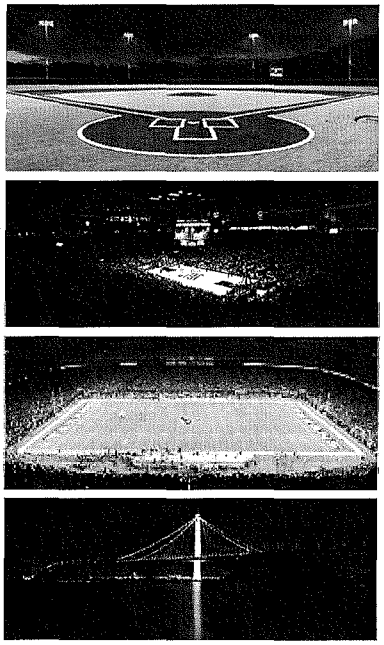
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-400	LED 5700K - 75 CRI	400W	38,600	61,000	>72,000	>72,000	8

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination				Groups	Fixture Qty
		Ave	Min	Max	Max/Min		
ICE RINK	Horizontal Illuminance	0	0	0	0.00	A	8
Spill Grid	Horizontal	5.14	0	37	0.00	A	8

From Hometown to Professional



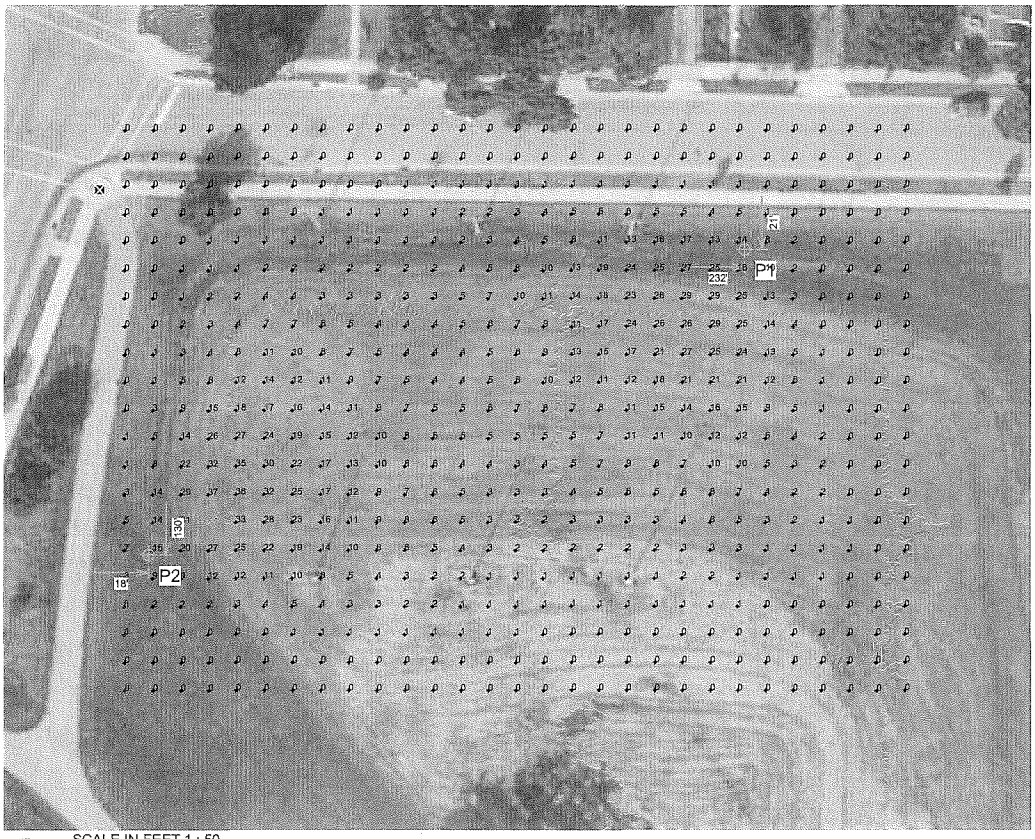
ENGINEERED DESIGN By: Greg Beatty • File #175085E • 03-Mar-17

We Make It Happen.

PROJECT SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	P1-P2	40'	-	40'	TLC-LED-400	4	4	0
2	TOTALS					8	8	0



SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Greg Beatty • File #175085E • 03-Mar-17

Goodman-Franklin Park Ice Rink

Madison,WI

GRID SUMMARY

Name:	**Spill Grid**
Size:	2' x 2'
Spacing:	10.0' x 10.0'
Height:	4.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

Entire Grid

Scan Average:	**5.14**
Maximum:	37
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	3841.42
CU:	1.00
No. of Points:	609

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	38,600 lumens
No. of Luminaires:	**8**
Total Load:	3.2 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-400	61,000	>72,000	>72,000

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.

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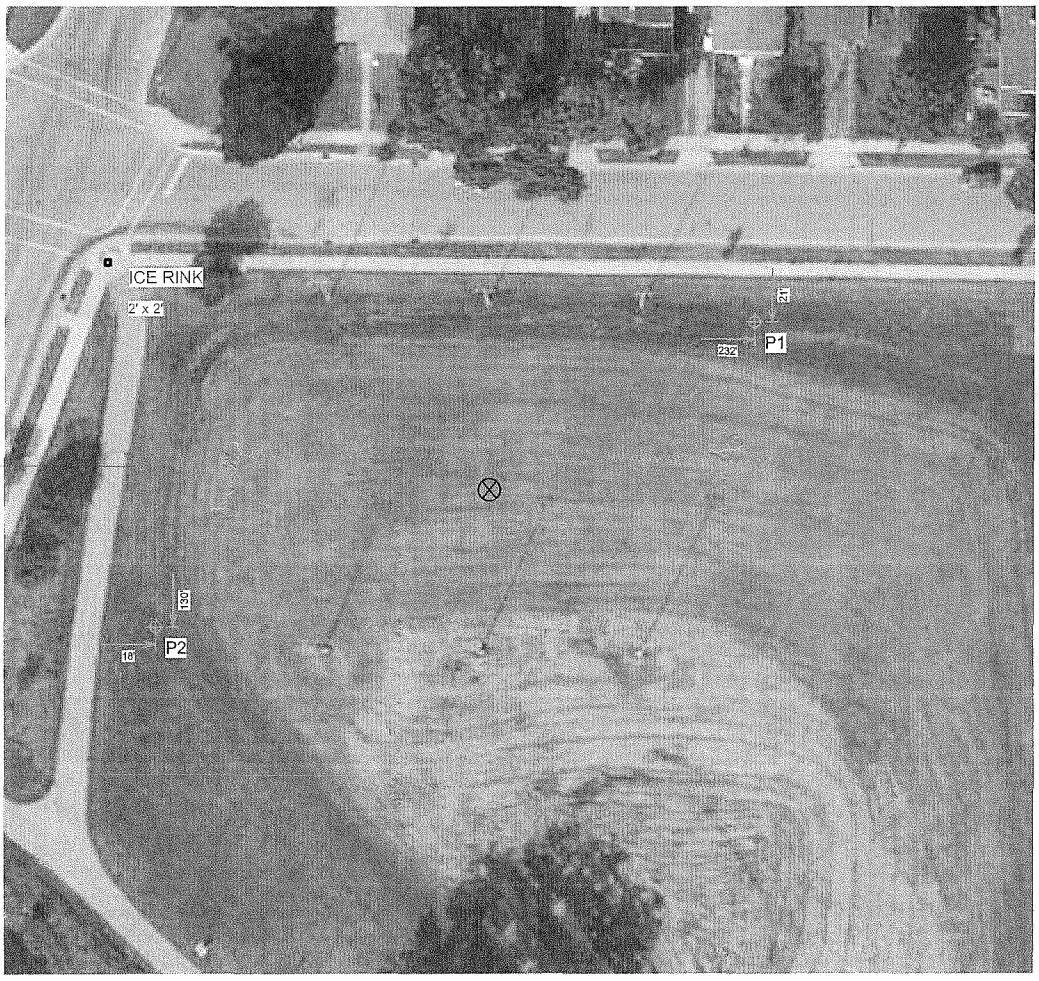
ILLUMINATION SUMMARY



Goodman-Franklin Park Ice Rink

Madison,WI

EQUIPMENT LAYOUT

INCLUDES:

- ICE RINK

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
2	P1-P2	40'	-	40'	TLC-LED-400	4
2	TOTALS					8

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-400	2.5	2.3	2.1	1.9	1.5	1.4	1.1

SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Greg Beatty • File #175085E • 03-Mar-17

We Make It Happen.

EQUIPMENT LAYOUT

Goodman-Franklin Park Ice Rink

Madison,WI

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.

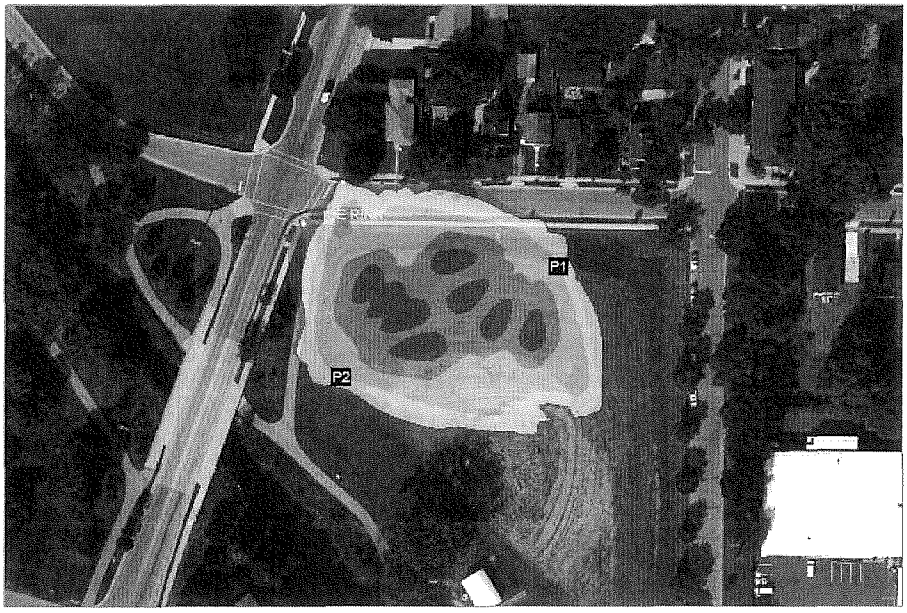
GLARE

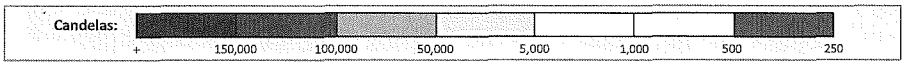
Candela Levels

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.



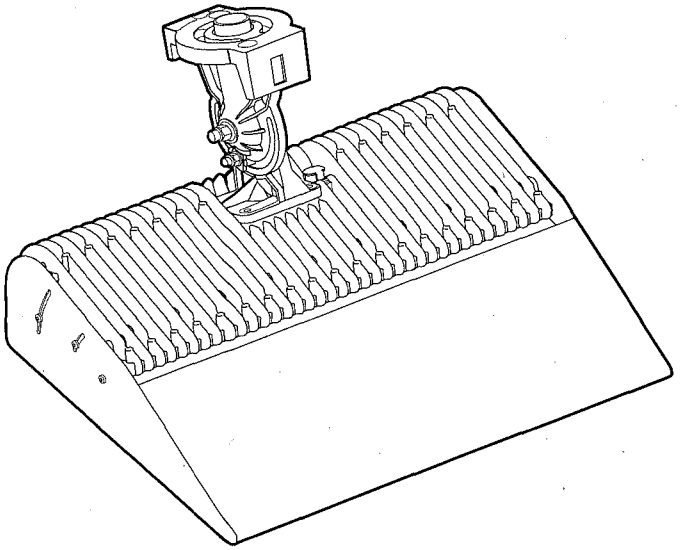


ENGINEERED DESIGN By: Greg Beatty • File #175085E • 03-Mar-17

We Make It Happen.

ENVIRONMENTAL GLARE IMPACT

Datasheet: **96 LED Luminaire and Driver**



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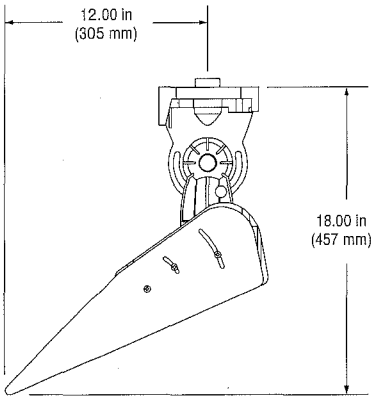

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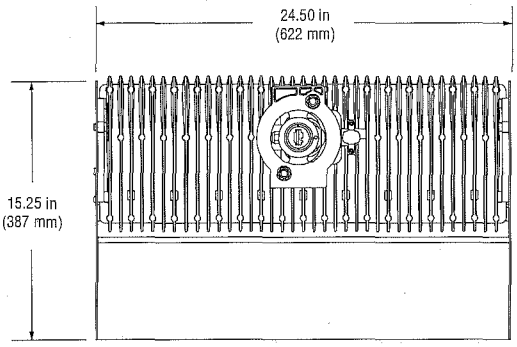


Luminaire Data

Weight (luminaire) ..... 35 lb (16 kg)

UL listing number E338094

UL Listed for USA / Canada UL1598
CSA-C22.2 No. 250.0

Material and finish ..... Die-cast aluminum, anodized, CASTGUARD™ coated, and powder-coat painted

Wind speed rating (aiming only) ..... 150 mi/h (67 m/s)

Photometric Characteristics

Projected lumen maintenance per IES TM-21-11

L90 (12k) ..... =61,000 h

L80 (12k) ..... >72,000 h

L70 (12k) ..... >72,000 h

CIE correlated color temperature ..... 5700 K

Color Rendering Index (CRI), typical 75

Color Rendering Index (CRI), minimum 70

Lumens[1] 38,600

Footnotes:

1) Incorporates appropriate dirt depreciation factor for life of luminaire.

Driver Data

Electrical Data

Rated Wattage[1]

- Per driver ..... 800 W
- Per luminaire ..... 400 W

Number of luminaires per driver 2

Starting (inrush) current ..... <40 A, 256 µs

Fuse Rating ..... 15 A

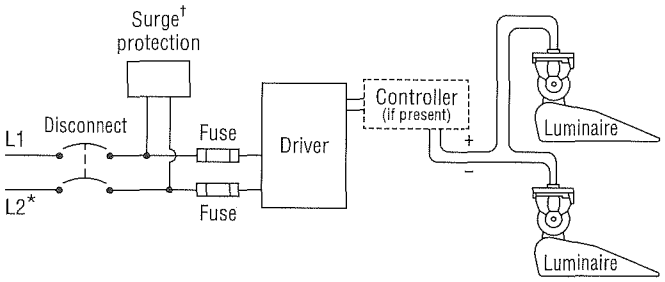
UL ambient temperature rating ..... 50°C (122°F)

Efficiency 95%

Dimming mode ..... optional

- Range, energy consumption 15–100%
- Range, light output 20–100%

Typical Wiring



* If L2 (com) is neutral then not switched or fused.
† Not present if indoor installation.

	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	380 Vac 50/60 Hz	400 Vac 50 Hz	415 Vac 50 Hz	480 Vac 60 Hz
Max operating current[2]	5.12 A	4.92 A	4.66 A	4.44 A	4.26 A	3.70 A	2.96 A	2.70 A	2.56 A	2.48 A	2.14 A

Footnotes:

1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25° C ambient temperature environment.

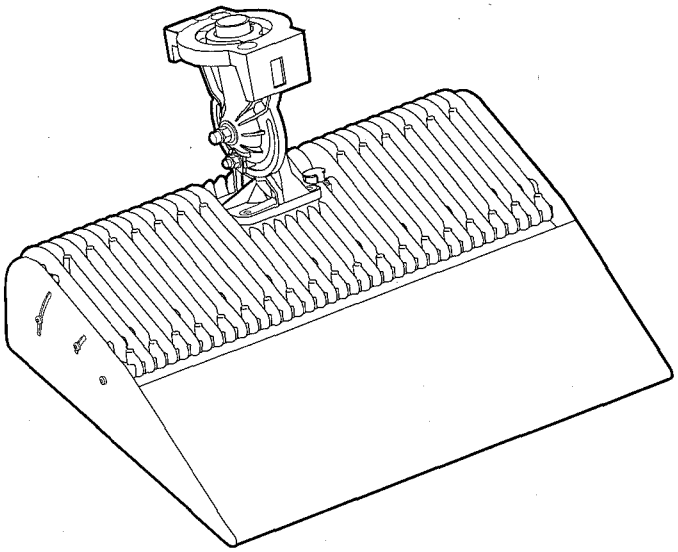
2) Operating current includes allowance for 0.90 minimum power factor, operating temperature, and LED light source manufacturing tolerances.

Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See Musco *Control System Summary* for circuit information.

Model 96 LED
(347–480V only)

Datasheet: **96 LED Luminaire and Driver**



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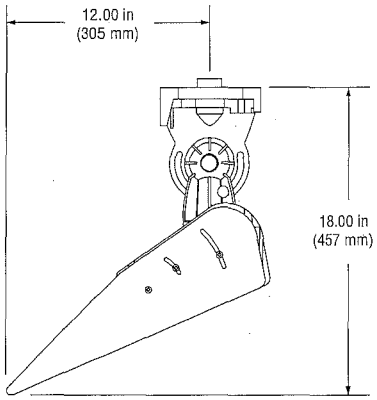
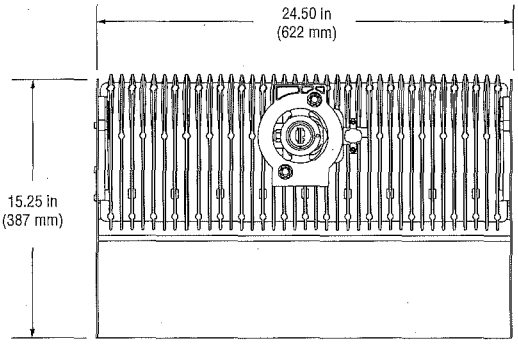


Top



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Color Rendering Index (CRI), typical 75

Color Rendering Index (CRI), minimum 70

Lumens[1] 38,600

Footnotes:

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Driver Data

Electrical Data

Rated Wattage[1]

- Per driver ..... 800 W
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Number of luminaires per driver 2

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Fuse Rating ..... 15 A

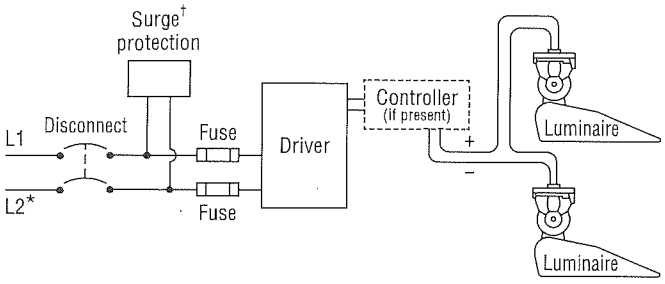
UL ambient temperature rating ..... 50°C (122°F)

Efficiency 95%

Dimming mode ..... optional

- Range, energy consumption 15–100%
- Range, light output 20–100%

Typical Wiring



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1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25° C ambient temperature environment.

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Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See Musco *Control System Summary* for circuit information.

Model 96 LED
(347–480V only)

CGC, Inc.

Construction • Geotechnical
Consulting Engineering/Testing

February 8, 2017
C17051-2

Mr. Corey Stelljes
City of Madison – Parks Division
City-County Building Room 104
210 Martin Luther King Jr. Blvd.
Madison, WI 35703

Re: Geotechnical Exploration Report
Goodman Park Ice Rink Lighting System
Madison, Wisconsin

Dear Mr. Stelljes:

Construction • Geotechnical Consultants, Inc. (CGC) has completed the subsurface exploration program for the proposed new lighting system at Goodman Park Ice Rink in Madison, Wisconsin. The purpose of the exploration program was to evaluate the site's subsurface conditions from a geotechnical engineering viewpoint and to provide soil parameters for the drilled shafts proposed for the tower foundations. An electronic copy of this report is being submitted for your use.

PROJECT DESCRIPTION

We understand that there will be a new lighting system installed at Goodman Park Ice Rink. We envision that new towers will replace existing towers. There were a total of two borings performed at locations selected by the City. The illumination towers will have a relatively small axial load, and the foundation design will be predominately governed by lateral loading parameters. It is anticipated that drilled shafts with prefabricated reinforcement cages will be used for the foundations.

SITE CONDITIONS

We envision that the new illumination towers will be installed near the existing towers that are being replaced. The area where the borings were drilled is landscaped and adjacent to the rink. An all-terrain (ATV) drill-rig was used to access the borings because of the soft soil conditions below the existing snow (such that potential rutting was minimized).

SUBSURFACE CONDITIONS

The geotechnical exploration program consisted of drilling two Standard Penetration Test (SPT) soil borings to 20 ft below the existing ground surface on February 2, 2017. The borings were extended to the 20 ft depth at locations stipulated by the City. More information regarding the drilling program is included in Appendix A of this report, with the boring locations presented on the Soil Boring Location Map found in Appendix B.

2921 Perry Street, Madison WI 53713
Telephone: 608/288-4100
FAX: 608/288-7887

The subsurface conditions encountered at each boring are as follows:

- 8 in. of ***topsoil*** ; over
- ***Fill*** involving 2 ft to about 5 ft of clays and sands that vary in consistency (i.e., soft to stiff clays and loose to medium dense sands); followed by
- Very soft to medium stiff ***clay*** that is 2.5 ft to about 10 ft thick; over
- Loose to very dense ***sand*** to the maximum depth explored. Note that a loose layer of sand was sandwiched between clay layers near 10 ft in B-2

As an exception, a 1-ft thick layer of peat was observed near 6 ft between the fill and clay at B-2.

Groundwater encountered at depths during drilling or shortly after that ranged from 9.5 to 12.5 ft (i.e., corresponding to about EL 838 to EL 839.5). Groundwater levels can be anticipated to fluctuate based on seasonal variations in lake level, precipitation, infiltration, and other factors. More detailed information regarding soil and groundwater conditions at the sites is presented in the Boring Logs found in Appendix B.

DISCUSSION AND RECOMMENDATIONS

Based on the results of the geotechnical exploration, it is our opinion that the soils are suitable for the proposed drilled shaft foundations *provided that the base of the shafts terminate in the sand soils.* We conservatively estimate that the allowable end bearing will be a minimum of 4,000 psf for the shafts that will bear in the sands at 10 ft or deeper in B-1 or 20 ft in B-2. Recommendations and pertinent geotechnical design parameters for the lateral loading of shafts are presented on Table 1. Appropriate safety factors need to be applied. Additional information regarding this report is discussed in Appendix C.

Due to the presence of granular soils below the groundwater level in the borings, temporary casing will be required during drilled shaft construction to both control groundwater and prevent collapse of the shaft through the sand/clay strata. If groundwater collects to a depth of more than 2 inches in the base of the shaft, it should be removed before concrete placement. If the use of casing does not effectively control ground water seepage, drilling under slurry conditions (or use of positive head of water inside the casing) and placement of concrete by tremie methods may be required to reduce the risk of compromising the integrity of the soils.

Concrete used to construct the drilled shafts should have a minimum slump of 5 to 6 inches. Higher slumps may be used, if desired, but should be achieved in a manner that does not reduce

concrete strength. A positive head of concrete should be kept in the casing, if used, to prevent the development of voids in the shafts.

RECOMMENDED CONSTRUCTION MONITORING

To check that earthwork and foundation construction proceeds in accordance with our recommendations, the following operations should be monitored by CGC:

- Drilling during shaft construction to document that the subsurface conditions are consistent with those anticipated from the borings;
- Placement of concrete and use of casing/slurry, if needed; and
- Concrete evaluation (including test cylinders).

* * * * *

It has been a pleasure to serve you on this project. We look forward to continuing our project involvement by providing testing services during the construction phase of the project. If you have any questions or need additional consultation, please contact us.

Sincerely,

CGC, Inc.

Michael N. Schultz, P.E.
Principal/Consulting Professional

David A. Staab, P.E., LEED AP
Consulting Professional

Encl: Table 1 - Recommended Soil Parameters for Drilled Shaft Foundations
Appendix A - Field Investigation
Appendix B - Soil Boring Location Map
Logs of Test Borings (2)
Log of Test Boring-General Notes
Unified Soil Classification System
Appendix C - Document Qualifications

Table 1
Recommended Soil Parameters for Drilled Shaft Foundations
Goodman Park Illumination Towers

Soil Layer	Soil Type A (2) FILL: B-1 to 3 ft B-2 to 5.5 ft	Soil Type B Loose SAND	Soil Type C Very Soft to Medium Stiff CLAY	Soil Type D PEAT	Soil Type E Medium Dense to Very Dense SAND
Estimated Soil Parameters					
Short-term Loading Conditions					
Angle of internal friction, ϕ	0 degrees	28 degrees	0 degrees	0 degrees	33 degrees
Cohesion	250 lb/sq ft	0 lb/sq ft	500 lb/sq ft	75 lb/sq ft	0 lb/sq ft
Long-term Loading Conditions					
Angle of internal friction, ϕ	26 degrees	28 degrees	22 degrees	15 degrees	33 degrees
Cohesion	0 lb/sq ft	0 lb/sq ft	0 lb/sq ft	0 lb/sq ft	0 lb/sq ft
Moist unit weight	120 lb/cu ft	115 lb/cu ft	120 lb/cu ft	90 lb/cu ft	125 lb/cu ft
Submerged unit weight	58 lb/cu ft	53 lb/cu ft	58 lb/cu ft	28 lb/cu ft	63 lb/cu ft
Earth pressure coefficients(1)					
Active, Ka	1.0	0.36	1.0	1.0	0.30
Passive, Kp	1.0	2.77	1.0	1.0	3.39

Notes:
(1) Does not include a factor of safety (i.e., FS = 1)
(2) Refer to soil boring logs for additional soil type designations.

APPENDIX A

FIELD INVESTIGATION

APPENDIX A

FIELD INVESTIGATION

Two soil borings were drilled to depths of 20 ft below the ground surface at locations selected by the City. The borings were drilled by Badger State Drilling (under subcontract to CGC) on February 2, 2017. A track-mounted ATV drill rig was used. Ground surface elevations were estimated based on DCI topographic contour information. Boring locations were field staked by CGC staff at locations selected by the City.

Soil samples were obtained at 2.5-ft intervals for a depth of 10 ft and at 5-ft intervals thereafter. The soil samples were obtained in general accordance with specifications for standard penetration testing, ASTM D1586. The specific procedures used for drilling and sampling are described below.

1. Drilling Procedures Between Samples

   The boring were extended downward between samples using a roller bit and circulating drilling mud. Hollow stem augers were also used in the upper portions of Boring 1 and Borings 2 and 3.

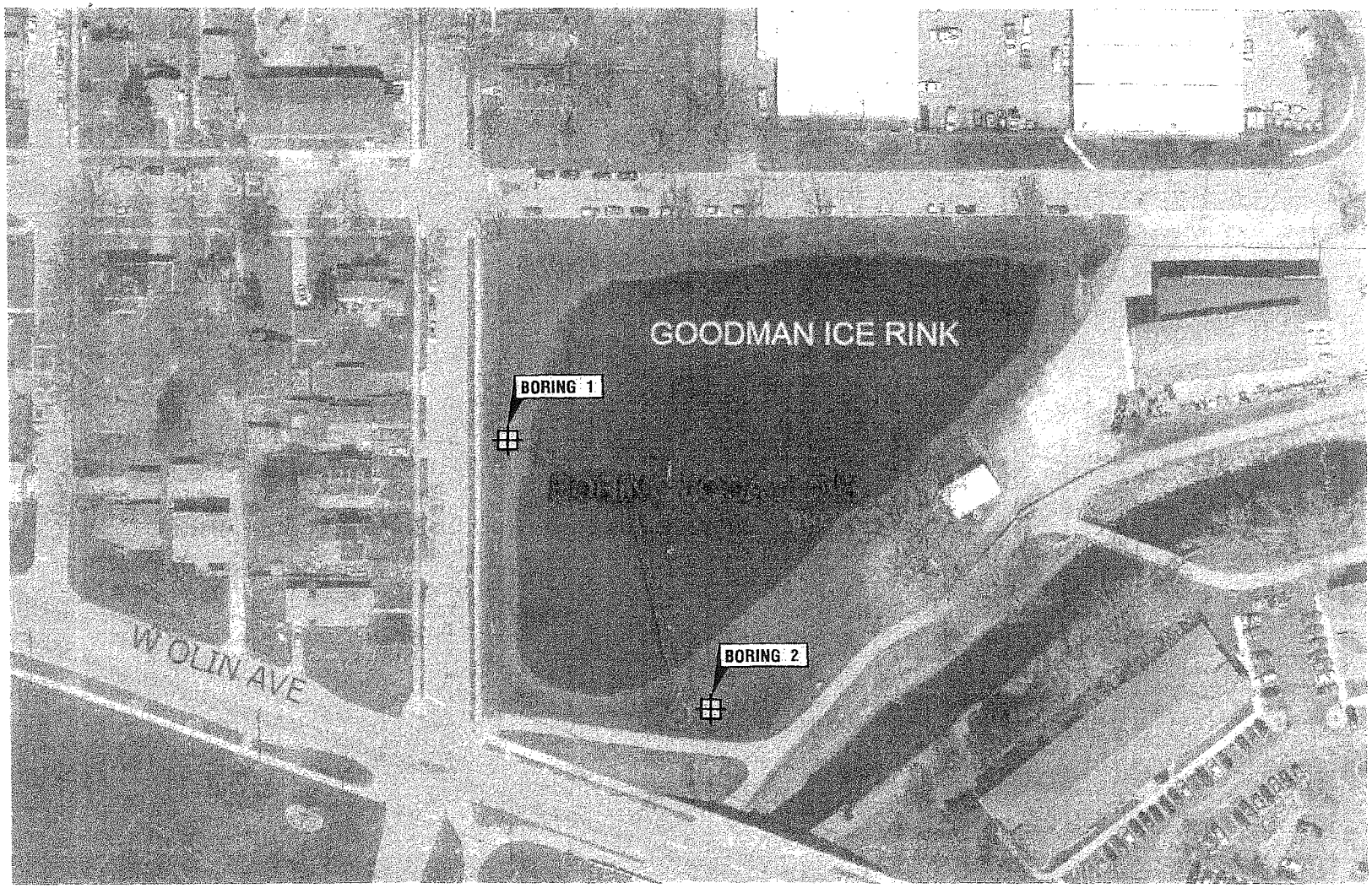
2. Standard Penetration Test and Split-Barrel Sampling of Soils (ASTM Designation: D1586)

   This method consists of driving a 2-inch outside diameter split barrel sampler using a 140-pound weight falling freely through a distance of 30 inches. The sampler is first seated 6 inches into the material to be sampled and them driven 12 inches. The number of blows required to drive the sampler the final 12 inches is recorded on the log of borings and is known as the Standard Penetration Resistance.

During the field exploration, the driller visually classified the soil and prepared a field log. Field screening of the samples for possible environmental contaminants was not conducted by Badger State as environmental site assessment activities were not part of CGC's work scope. Water level observations were made in the hollow stem auger boring during and after drilling and are shown at the bottom of each boring log. Upon completion of drilling, the open boreholes were backfilled with bentonite in accordance with WDNR guidelines. The soils were then delivered to our laboratory for visual classification and laboratory testing. The soils were visually classified by a geotechnical engineer using the Unified Soil Classification System. The final logs prepared by the engineer and a description of the Unified Soil Classification System are presented in Appendix B.

APPENDIX B

SOIL BORING LOCATION MAP
LOGS OF TEST BORINGS (2)
LOG OF TEST BORING-GENERAL NOTES
UNIFIED SOIL CLASSIFICATION



Legend

Denotes Boring Location (approximate)

N

Notes

1. Soil borings performed by Badger State Drilling in February 2017

DWN: -	APP'D: MNS	Date: 2/17	C17051-2	CGC, Inc.	**SOIL BORING LOCATION PLAN** **Goodman Ice Rink Light Towers** **Madison, Wisconsin**

CGC Inc.

LOG OF TEST BORING

Project: Goodman Park Ice Rink Lighting System
Location: Madison, WI

Boring No. B1
Surface Elevation (ft) 849±
Job No. C17051-2
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LI
						8± in. TOPSOIL FILL with Peat (OL)					
1		18	M	5		FILL: Soft/Loose, Brown-Gray Clay and Sand with Gravel (A)	(0.3)				
2		15	M	7	5	Soft to Medium Stiff, Gray Lean CLAY, Some Sand, Trace to Little Gravel (CL) (C)	(0.5)	16.9			
3		14	M	5		Loose to Very Dense, Gray Fine to Medium SAND, Some Silt and Gravel, Trace Clay, Scattered Cobbles/Boulders (SM) (B)					
4		17	M/W	18	10	(E)					
5		18	W	25	15						
6		18	W	71	20						
					25	End Boring at 20 ft Borehole backfilled with bentonite chips					

WATER LEVEL OBSERVATIONS

While Drilling ▽ 11.0' Upon Completion of Drilling 9.5'
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 2/2/17 End 2/2/17
Driller BSD Chief DB Rig D-50
Logger FD/MC Editor ESF ATV
Drill Method 2.25" HSA; Automatic Hammer

CGC Inc.

LOG OF TEST BORING

Project: Goodman Park Ice Rink Lighting System
Location: Madison, WI

Boring No. B2
Surface Elevation (ft) 851±
Job No. C17051-2
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						8 in. TOPSOIL					
1		18	M	10		FILL: Stiff, Brown Clay with Sand to 3 ft (A)	(1.25)				
2		15	M	10		Loose to Medium Dense, Brown Sand to 5.5 ft					
					5	Loose to Very Loose, Black Sedimentary PEAT (D)					
3		14	M	5		Soft to Medium Stiff, Gray Lean CLAY, Trace Sand and Plant Fibers (CL) (C)	(0.5)	30.4			
4		17	M	7			(0.8)	22.4			
					10	Loose, Gray Fine to Medium SAND, Trace to Little Silt (SP/SP-SM) (B)					
					▽	Very Soft to Medium Stiff, Gray Lean CLAY, Occasional Sand Partings (CL)					
5		18	W	7		(C)	(0.25-0.75)	20.5			
					15						
6		18	W	50/5"		Very Dense, Brown to Gray Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM) (E)					
					20	End Boring at 19 ft Due to Spoon Refusal on Presumed Cobble/Boulder					
						Borehole backfilled with bentonite chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ 12.5' Upon Completion of Drilling ____
Time After Drilling ____
Depth to Water ____ ▼
Depth to Cave in 6'

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 2/2/17 End 2/2/17
Driller BSD Chief DB Rig D-50
Logger FD/MC Editor ESF ATV
Drill Method 2.25" HSA; Automatic
Hammer

CGC, Inc.

LOG OF TEST BORING
General Notes

DESCRIPTIVE SOIL CLASSIFICATION

Grain Size Terminology

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders	Larger than 12"	Larger than 12"
Cobbles	3" to 12"	3" to 12"
Gravel: Coarse	¾" to 3"	¾" to 3"
Fine	4.76 mm to ¾"	#4 to ¾"
Sand: Coarse	2.00 mm to 4.76 mm	#10 to #4
Medium	0.42 to mm to 2.00 mm	#40 to #10
Fine	0.074 mm to 0.42 mm	#200 to #40
Silt	0.005 mm to 0.074 mm	Smaller than #200
Clay	Smaller than 0.005 mm	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

General Terminology

Physical Characteristics
Color, moisture, grain shape, fineness, etc.
Major Constituents
Clay, silt, sand, gravel
Structure
Laminated, varved, fibrous, stratified, cemented, fissured, etc.
Geologic Origin
Glacial, alluvial, eolian, residual, etc.

Relative Density

Term	"N" Value
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Over 50

Relative Proportions Of Cohesionless Soils

Proportional Term	Defining Range by Percentage of Weight
Trace	0% - 5%
Little	5% - 12%
Some	12% - 35%
And	35% - 50%

Consistency

Term	q_u-tons/sq. ft
Very Soft	0.0 to 0.25
Soft	0.25 to 0.50
Medium	0.50 to 1.0
Stiff	1.0 to 2.0
Very Stiff	2.0 to 4.0
Hard	Over 4.0

Organic Content by Combustion Method

Soil Description	Loss on Ignition
Non Organic	Less than 4%
Organic Silt/Clay	4 – 12%
Sedimentary Peat	12% - 50%
Fibrous and Woody Peat	More than 50%

Plasticity

Term	Plastic Index
None to Slight	0 - 4
Slight	5 - 7
Medium	8 - 22
High to Very High	Over 22

The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

SYMBOLS

Drilling and Sampling

CS – Continuous Sampling
RC – Rock Coring: Size AW, BW, NW, 2"W
RQD – Rock Quality Designation
RB – Rock Bit/Roller Bit
FT – Fish Tail
DC – Drove Casing
C – Casing: Size 2 ½", NW, 4", HW
CW – Clear Water
DM – Drilling Mud
HSA – Hollow Stem Auger
FA – Flight Auger
HA – Hand Auger
COA – Clean-Out Auger
SS - 2" Dia. Split-Barrel Sample
2ST – 2" Dia. Thin-Walled Tube Sample
3ST – 3" Dia. Thin-Walled Tube Sample
PT – 3" Dia. Piston Tube Sample
AS – Auger Sample
WS – Wash Sample
PTS – Peat Sample
PS – Pitcher Sample
NR – No Recovery
S – Sounding
PMT – Borehole Pressuremeter Test
VS – Vane Shear Test
WPT – Water Pressure Test

Laboratory Tests

q_a – Penetrometer Reading, tons/sq ft
q_a – Unconfined Strength, tons/sq ft
W – Moisture Content, %
LL – Liquid Limit, %
PL – Plastic Limit, %
SL – Shrinkage Limit, %
LI – Loss on Ignition
D – Dry Unit Weight, lbs/cu ft
pH – Measure of Soil Alkalinity or Acidity
FS – Free Swell, %

Water Level Measurement

▽ - Water Level at Time Shown
NW – No Water Encountered
WD – While Drilling
BCR – Before Casing Removal
ACR – After Casing Removal
CW – Cave and Wet
CM – Caved and Moist

Note: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.

CGC, Inc.

Madison - Milwaukee

Unified Soil Classification System

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS (more than 50% of material is larger than No. 200 sieve size)			
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	Clean Gravels (Less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)	GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	Clean Sands (Less than 5% fines)	SW	Well-graded sands, gravelly sands, little or no fines
		SP	Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)	SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (50% or more of material is smaller than No. 200 sieve size.)			
SILTS AND CLAYS Liquid limit less than 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils

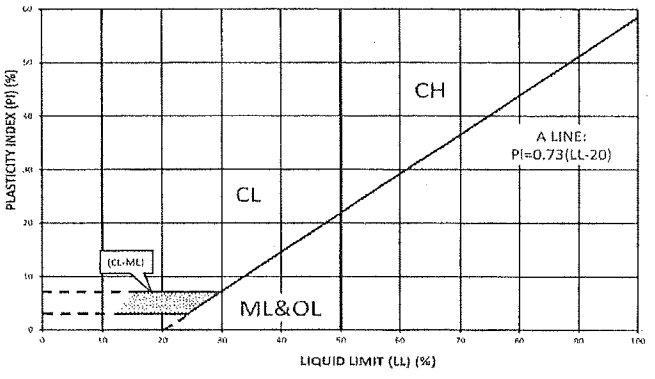
LABORATORY CLASSIFICATION CRITERIA

GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_C = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
GP	Not meeting all gradation requirements for GW	
GM	Atterberg limts below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
GC	Atterberg limts above "A" line or P.I. greater than 7	
SW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_C = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
SP	Not meeting all gradation requirements for GW	
SM	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
SC	Atterberg limits above "A" line with P.I. greater than 7	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent ..... GW, GP, SW, SP
More than 12 percent ..... GM, GC, SM, SC
5 to 12 percent ..... Borderline cases requiring dual symbols

PLASTICITY CHART



APPENDIX C

DOCUMENT QUALIFICATIONS

APPENDIX C
DOCUMENT QUALIFICATIONS

I. GENERAL RECOMMENDATIONS/LIMITATIONS

CGC, Inc. should be provided the opportunity for a general review of the final design and specifications to confirm that earthwork and foundation requirements have been properly interpreted in the design and specifications. CGC should be retained to provide soil engineering services during excavation and subgrade preparation. This will allow us to observe that construction proceeds in compliance with the design concepts, specifications and recommendations, and also will allow design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction. CGC does not assume responsibility for compliance with the recommendations in this report unless we are retained to provide construction testing and observation services.

This report has been prepared in accordance with generally accepted soil and foundation engineering practices and no other warranties are expressed or implied. The opinions and recommendations submitted in this report are based on interpretation of the subsurface information revealed by the test borings indicated on the location plan. The report does not reflect potential variations in subsurface conditions between or beyond these borings. Therefore, variations in soil conditions can be expected between the boring locations and fluctuations of groundwater levels may occur with time. The nature and extent of the variations may not become evident until construction.

II. IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes. While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one - not even you* - should apply the report for any purpose or project except the one originally contemplated.

READ THE FULL REPORT

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A GEOTECHNICAL ENGINEERING REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes - even minor ones - and request an assessment of their impact. *CGC cannot accept responsibility or liability for problems that occur because our reports do not consider developments of which we were not informed.*

SUBSURFACE CONDITIONS CAN CHANGE

A geotechnical engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

MOST GEOTECHNICAL FINDINGS ARE PROFESSIONAL OPINION

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgement to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ - sometimes significantly - from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most

effective method of managing the risks associated with unanticipated conditions.

A REPORT'S RECOMMENDATIONS ARE NOT FINAL

Do not over-rely on the confirmation-dependent recommendations included in your report. *Those confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgement and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *CGC cannot assume responsibility or liability for the report's confirmation-dependent recommendations if we do not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A GEOTECHNICAL ENGINEERING REPORT IS SUBJECT TO MISINTERPRETATION

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical engineering report. Confront that risk by having CGC participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

DO NOT REDRAW THE ENGINEER'S LOGS

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

GIVE CONSTRUCTORS A COMPLETE REPORT AND GUIDANCE

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

READ RESPONSIBILITY PROVISIONS CLOSELY

Some clients, design professionals, and constructors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineer's responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

ENVIRONMENTAL CONCERNS ARE NOT COVERED

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

OBTAIN PROFESSIONAL ASSISTANCE TO DEAL WITH MOLD

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

RELY ON YOUR GEOTECHNICAL ENGINEER FOR ADDITIONAL ASSISTANCE

Membership in the Geotechnical Business Council (GBC) of Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with CGC, a member of GBC, for more information.

Modified and reprinted with permission from:

Geotechnical Business Council
of the Geoprofessional Business Association
8811 Colesville Road, Suite G 106
Silver Spring, MD 20910

SECTION E: BIDDERS ACKNOWLEDGEMENT

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS

CONTRACT NO. 7949

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2017 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda to the Contract Nos. _____ through _____ issued thereto, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not acknowledge here)
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. *(IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).*
5. I hereby certify that all statements herein are made on behalf of Robert J. Nickles, Inc. (name of corporation, partnership, or person submitting bid) a corporation organized and existing under the laws of the State of WI a partnership consisting of _____; an individual trading as _____; of the City of Madison State of WI; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

Michael R Pollman
SIGNATURE

President
TITLE, IF ANY

JEFFREY A. KNUDTSON NOTARY PUBLIC STATE OF WISCONSIN

Sworn and subscribed to before me this 4th day of May, 2020.

(Notary Public or other officer authorized to administer oaths)
My Commission Expires 12-11-2020

Bidders shall not add any conditions or qualifying statements to this Proposal.

SECTION F: BEST VALUE CONTRACTING

CONTRACT NO. 7949

Best Value Contracting

1. The Contractor shall Indicate the non-apprenticeable trades used on this contract.

None

2. Madison General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the active apprentice requirement. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin. Please check applicable box if you are seeking an exemption.

- ☐ Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.
- ☐ No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.
- ☐ Contractor is not using an apprentice due to having a journey worker on layoff status, provided the journey worker was employed by the contractor in the past six months.
- ☐ First-time Contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.
- ☐ Contractor has been in business less than one year.
- ☐ Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.
- ☐ An exemption is granted in accordance with a time period of a "Documented Depression" as defined by the State of Wisconsin.

3. The Contractor shall indicate on the following section which apprenticeable trades are to be used on this contract. Compliance with active apprenticeship, to the extent required by M.G.O. 33.07(7), shall be satisfied by documentation from an applicable trade training body; an apprenticeship contract with the Wisconsin Department of Workforce Development or a similar agency in another state; or the U.S Department of Labor. This documentation is required prior to the Contractor beginning work on the project site.

- ☐ The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.

LIST APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)

- ☐ BRICKLAYER
- ☐ CARPENTER
- ☐ CEMENT MASON / CONCRETE FINISHER
- ☐ CEMENT MASON (HEAVY HIGHWAY)
- ☐ CONSTRUCTION CRAFT LABORER
- ☐ DATA COMMUNICATION INSTALLER
- ☒ ELECTRICIAN
- ☐ ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE
- ☐ GLAZIER
- ☐ HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER
- ☐ INSULATION WORKER (HEAT & FROST)
- ☐ IRON WORKER
- ☐ IRON WORKER (ASSEMBLER, METAL BLDGS)
- ☐ PAINTER & DECORATOR
- ☐ PLASTERER
- ☐ PLUMBER
- ☐ RESIDENTIAL ELECTRICIAN
- ☐ ROOFER & WATER PROOFER
- ☐ SHEET METAL WORKER
- ☐ SPRINKLER FITTER
- ☐ STEAMFITTER
- ☐ STEAMFITTER (REFRIGERATION)
- ☐ STEAMFITTER (SERVICE)
- ☐ TAPER & FINISHER
- ☐ TELECOMMUNICATIONS (VOICE, DATA & VIDEO) INSTALLER-TECHNICIAN
- ☐ TILE SETTER

ROBERT J. NICKLES, INC.
5/05/2017

Revision	1						
List ID	7949						
Title	Section B: Proposal Page						
Item ID	Item Code	Description	Quantity	Units	Unit Price	Extended	
183202	10911	MOBILIZATION	1	LS	$ 1,360.00	$	1,360.00
183203	20217	CLEAR STONE	135	TON	$ 19.06	$	2,573.10
183204	20221	TOPSOIL	322	SY	$ 4.35	$	1,400.70
183205	20701	TERRACE SEEDING	322	SY	$ 1.12	$	360.64
183206	21011	CONSTRUCTION ENTRANCE	1	EACH	$ 8,616.00	$	8,616.00
183207	21015	STREET CONSTRUCTION STONE BERM	1	EACH	$ 6,303.00	$	6,303.00
183208	21073	EROSION MATTING, CLASS II, TYPE C - ORGANIC	322	SY	$ 2.75	$	885.50
183209	90000	REMOVE EXISTING LIGHT POLE AND BASE	6	EACH	$ 1,179.00	$	7,074.00
183210	90001	ABANDON EXISTING ELECTRICAL SYSTEM	1	LS	$ 1,384.00	$	1,384.00
183211	90002	CONSTRUCTION FENCE (PLASTIC)	800	LF	$ 2.91	$	2,328.00
183212	90003	LIGHTING SYSTEM AND BASES	1	LS	$ 66,352.00	$	66,352.00
						$	98,636.94

Department of Public Works
City Engineering Division

Larry D. Nelson, P.E.
City Engineer

City-County Building, Room 115
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703
608 264 9275 FAX
1 866 704 2315 Textnet

608 266 4751

Deputy City Engineer
Robert F. Phillips, P.E.

Principal Engineers
Michael R. Dailey, P.E.
Christina M. Bachmann, P.E.
John S. Fahrney, P.E.
Gregory T. Fries, P.E.

Facilities & Sustainability
Jeanne E. Hoffman, Manager
James C. Whitney, A.I.A.

Operations Supervisor
Kathleen M. Cryan

Hydrogeologist
Joseph L. DeMorett, P.G.

GIS Manager
David A. Davis, R.L.S.

Financial Officer
Steven B. Danner-Rivers

BIENNIAL BID BOND

Robert J. Nickles, Incorporated
(a corporation of the State of Wisconsin)
(individual), (partnership), (hereinafter referred to as the "Principal") and
Fidelity & Deposit Company of Maryland,
a corporation of the State of Maryland (hereinafter referred to as the "Surety") and licensed to do business in the State of Wisconsin, are held and firmly bound unto the City of Madison, Wisconsin (hereinafter referred to as the "City"), in the sum equal to the individual proposal guaranty amounts of the total bid or bids of the Principal herein accepted by the City, for the payment of which the Principal and the Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is that the Principal has submitted to the City certain bids for projects from the time period of July 14, 2015 through July 14, 2017.

If the Principal is awarded the contract(s) by the City and, within the time and manner required by law after the prescribed forms are presented for its signature, the Principal enters into (a) written contract(s) in accordance with the bid(s), and files with the City its bond(s) guaranteeing faithful performance and payment for all labor and materials, as required by law, or if the City rejects all bids for the work described, then this obligation shall be null and void; otherwise , it shall remain in full force and effect.

In the event the Principal shall fail to execute and deliver the contract(s) or the performance and payment bond(s), all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to pay to the City within ten (10) calendar days of written demand a total equal to the sum of the individual proposal guaranty amounts of the total bid(s) as liquidated damages.

The Surety, for value received, hereby agrees that the obligations of it and its bond shall be in no way impaired or affected by any extension of time within which the City may accept a bid, and the Surety does hereby waive notice of any such extension.

This bond may be terminated by the Surety upon giving thirty (30) days written notice to the City of its intent to terminate this bond and to be released and discharged therefrom, but such termination shall not operate to relieve or discharge the Surety from any liability already accrued or which shall accrue before the expiration of such thirty (30) day period.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

PRINCIPAL

Robert J. Nickles, Incorporated — 7/14/15
COMPANY NAME — AFFIX SEAL — DATE

By: Daniel H. Murphy - Treasurer
SIGNATURE AND TITLE

SURETY

Fidelity & Deposit Company of Maryland — 7/14/15
COMPANY NAME — AFFIX SEAL — DATE

By: Brooke L. Parker
Brooke L. Parker, Attorney-in-Fact

This certifies that I have been duly licensed as an agent for the Surety in Wisconsin under License No. 2512433 for the year 2015, and appointed as attorney in fact with authority to execute this bid bond, which power of attorney has not been revoked.

7/14/15
DATE

Brooke Parker
AGENT Brooke Parker, Hausmann-Johnson Insurance

700 Regent St.
ADDRESS

Madison, WI 53715
CITY, STATE AND ZIP CODE

(608)257-3795
TELEPHONE NUMBER

Note to Surety and Principal: Any bid submitted which this bond guarantees may be rejected if the Power of Attorney form showing that the Agent of Surety is currently authorized to execute bonds on behalf of Surety is not attached to this bond.

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Judith A. WALKER, Timothy HAUSMANN, Patrick A. MCKENNA, Brooke L. PARKER and Elizabeth MOSCA, all of Madison, Wisconsin, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 24th day of August, A.D. 2015.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____
Secretary
Michael McKibben

_____
Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 24th day of August, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and MICHAEL MCKIBBEN, Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____
Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2019

POA-F 184-0007

SECTION H: AGREEMENT

THIS AGREEMENT made this 7th day of June in the year Two Thousand and Seventeen between ROBERT J. NICKLES, INCORPORATED hereinafter called the Contractor, and the City of Madison, Wisconsin, hereinafter called the City.

WHEREAS, the Common Council of the said City of Madison under the provisions of a resolution adopted JUNE 6, 2017, and by virtue of authority vested in the said Council, has awarded to the Contractor the work of performing certain construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. **Scope of Work.** The Contractor shall, perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and contract; perform all items of work covered or stipulated in the proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS
CONTRACT NO. 7949

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.

3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of NINETY-EIGHT THOUSAND SIX HUNDRED THIRTY-SIX AND 94/100 ($98,636.94) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.

4. **Affirmative Action.** In the performance of the services under this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

   The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

   If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

   The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications and application procedures

and deadlines. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement
Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national original and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Affirmative Action Division Manager.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.

2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.

3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or five thousand dollars ($5,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract. (In federally funded contracts the terms "DBE, MBE and WBE" shall be substituted for the term "small business" in this Article.)

5. Substance Abuse Prevention Program Required. Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.

6. **Contractor Hiring Practices.**

Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(l), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

a. **Definitions.** For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

b. **Requirements.** For the duration of this Contract, the Contractor shall:

1. Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.

2. Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.

3. Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.

4. Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.

5. Comply with all other provisions of Sec. 39.08, MGO.

c. **Exemptions:** This section shall not apply when:

1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or

2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS

CONTRACT NO. 7949

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused these presents to be sealed with its corporate seal and to be subscribed by its Mayor and City Clerk the day and year first above written.

Countersigned:

6-15-2017
Witness Date

6-15-2017
Witness Date

ROBERT J. NICKLES, INCORPORATED
Company Name

6/15/17
President Date

6/15/17
Secretary Date

CITY OF MADISON, WISCONSIN

Provisions have been made to pay the liability that will accrue under this contract.

Finance Director

Approved as to form:

City Attorney

Signed this 27th day of June, 2017

Witness

Witness

27 June 2017
Mayor Date

Thomas Lund for 6/19/17
City Clerk Date

Bond No. 2352458

SECTION I: PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we **ROBERT J. NICKLES, INCORPORATED** as principal, and West Bend Mutual Insurance Company Company of Middleton, WI as surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum of **NINETY-EIGHT THOUSAND SIX HUNDRED THIRTY-SIX AND 94/100** ($**98,636.94**) Dollars, lawful money of the United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully perform all of the terms of the Contract entered into between him/herself and the City of Madison for the construction of:

GOODMAN PARK ICE RINK LIGHTING IMPROVEMENTS
CONTRACT NO. 7949

in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the prosecution of said work, and save the City harmless from all claims for damages because of negligence in the prosecution of said work, and shall save harmless the said City from all claims for compensation (under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is to be void, otherwise of full force, virtue and effect.

Signed and sealed this 7 day of June, 2017

Countersigned:

Witness

Secretary

ROBERT J. NICKLES, INCORPORATED
Company Name (Principal)

President Seal

Approved as to form:

City Attorney

West Bend Mutual Insurance Company
Surety Seal

[X] Salary Employee [ ] Commission

By
Attorney-in-Fact , Elizabeth Mosca

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Producer Number 12305256 for the year 2017, and appointed as attorney-in-fact with authority to execute this payment and performance bond which power of attorney has not been revoked.

June 7, 2017
Date

Agent Signature

WEST BEND
A MUTUAL INSURANCE COMPANY

2352458

Power of Attorney

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Elizabeth Mosca

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: **Seven Million Five Hundred Thousand Dollars ($7,500,000)**

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-in-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of March, 2009.

Attest James J. Pauly

James J. Pauly
Secretary

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS.

Kevin A. Steiner

Kevin A. Steiner
Chief Executive Officer / President

State of Wisconsin
County of Washington

On the 1st day of March, 2009 before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that is was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.

JOHN F. DUWELL NOTARY PUBLIC STATE OF WISCONSIN

John F. Duwell

John F. Duwell
Executive Vice President - Chief Legal Officer
Notary Public, Washington Co. WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 7 day of June, 2017

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS.

Dale J. Kent

Dale J. Kent
Executive Vice President -
Chief Financial Officer

NOTICE: Any questions concerning this Power of Attorney may be directed to the Bond Manager at NSI, a division of West Bend Mutual Insurance Company

8401 Greenway Blvd. Suite 1100 | P.O. Box 620976 | Middleton, WI 53562 | ph (608) 410-3410 | www.thesilverlining.com