

## Section 1 Overview

### 1.01 Introduction

The following represents the minimum requirements for the outfield scoring/advertising display system to be installed at Veterans Memorial Stadium. Bidders responding to the RFP are asked to submit proposals for the provision and complete installation of the scoring/advertising display system within the existing structure. Only LED technology will be accepted. Vendors submitting a response to this Request for Proposal ensure that they are the manufacturer of all video displays as well as the related controller requirements. The new LED display must interface seamlessly with the existing LED video display and LED display control and scoring system.

### 1.02 Definitions

- 1.02.1            **“Bidder”** shall mean each vendor that has received the RFB and will be bidding on the project
- 1.02.2            **“Contractor”** shall mean the vendor that has been selected to provide products or services.
- 1.02.3            **“Owner”** shall mean the City of Cedar Rapids/Cedar Rapids Kernels.
- 1.02.4            **“Display”** shall mean LED scoring/advertising display.

### 1.03 Bidder Qualifications

The Owner is looking to establish a long-term partnership with an LED display manufacturer. In order to ensure that the company chosen to work with has long-term interests in mind, the following will be required in order to bid. Failure to conform to ALL of these basic requirements will automatically eliminate a vendor from consideration:

- Vendor must provide a minimum of ten (10) similar installations (name of facility, photo of installation, contact name, title, address, and phone number) where similar vendor proposed display product is currently installed. Five (5) of those references must include references where the display technology installed is interfacing seamlessly with the existing LED display manufacturers control and scoring system at Veterans Memorial Stadium without the need for manual inputting of data or a second user station.
- Been in the LED business with a positive track record for more than 10 years
- Letter of Surety from bonding agent, stating ability to provide 100% Payment/Performance bond.
- Vendor must have a service technician/partner located within 85 miles of Cedar Rapids; IA. Service Company must have a minimum of five years' experience servicing bidder's product.
- Vendor must have **24/7/365 phone support** to ensure the Owner the very best in service and maintenance response.
- US Manufacturing Company with a minimum of 80% of the product manufactured in the USA. Assembly of modules into a cabinet does not constitute manufacturing.
- Sole Provider Company: To manufacture and support all products.

#### **1.04 Complete Response**

It shall be the responsibility of the bidder to ensure all specified equipment and scopes-of-work requirements described in the RFB are sufficient to ensure the Owner is supplied with a fully functional system. Equipment or scope-of-work responsibilities not specifically addressed in the specifications but realized by the bidder to be essential for system installation and functionality, must be included in the bidder's quote.

It shall be the bidder's responsibility to research the facility's event schedule to ensure there are no scheduling conflicts regarding installation of the display components. Bidders are advised to discuss their tentative installation schedules with the Owner to determine if work will be required on weekends or if extended shifts will be required.

#### **1.05 General Description**

The Contractor shall provide a complete, workable and operational system including all labor, equipment, tools, material, engineering, supervision, licenses and bonds to design, manufacture and install fully functional LED scoring/advertising display system consisting of the following.

##### **RIBBON BOARD**

- One (1) new LED scoring and advertising display (85'-0")
  - Integration into existing video display control, scoring and stats control system.
  - Protective Net
  - All required data cable
  - Complete Spare Parts Package
  - Complete Removal and Disposal of Existing Equipment and Structure
  - Delivery of product to site.
  - Design, Fabrication and Installation of New Structural Steel Support System Designed to all Local Codes & Standards.
  - Complete Installation and Commissioning of new system
  - On-site Operator Training/Assistance.
  - Replacement board must meet or exceed the existing board's capabilities.
- Non-Illuminated Advertising Signage (55'-0" +/-)
- Alternate: Provide & Install (55'-0" +/-) of New LED Scoring & advertising display in lieu of 55'-0" non-illuminated advertising signage for fully functioning & consolidated Advertising Board (140'-0" +/-)

##### **JUMBOTRON**

- Demo & Remove (12) damaged Daktronics Modules in the "Jumbotron". Provide & Install (12) New Daktronics Modules in the "Jumbotron" for fully functioning system.

#### **1.06 Bid Submittals**

The following items must be submitted in the proposal

- Details/Explanation of Vendors plan to tie into existing LED display control and scoring system.
- Equipment
  - Proposed equipment conceptual.
  - Proposed equipment drawing
  - Product cut sheets for LED display proposed to include at a minimum LED manufacturer, active areas, total resolutions, total weight and total electrical requirements.

- Product cut sheets for any control hardware required.
- Required Project Team Resumes
  - Project Manager
  - Mechanical Engineer
  - Electrical Engineer
- Warranty information.
  - Services provided as part of the required 1 Years parts and labor warranty and Years 2-5 Parts Warranty
  - Spare Parts Lists: List to include spare parts that will be included for each display. Spare parts are to 3% of all LED display components with a minimum of 2.
- Proposed timeline for completing the work (Gant Chart format).

### 1.07 Special Bidding Instructions

Bidders shall review and be familiar with the following special instructions:

- Change orders will not be allowed for bidder error in estimating the cost of the project. Construction documents describe the minimum display system desired by the Owner.
- The Contractor will be responsible for obtaining all permits and licenses required to perform the work.
- The Contractor shall provide an on-site installation coordinator or superintendent to supervise all on-site work. The installation coordinator or superintendent must be a direct employee of the Contractor.

## Section 2 Display/Control Specifications

**Basis of Design Product:** Subject to compliance with requirements, provide Daktronics, Inc LED displays and related controls/ electronic accessories or an approved equal that meets the minimum requirements within section 2.

The Owner requests a product that will be consistent in quality and provide clear images, including bright sunny afternoons/evenings. A product that has a history of successful installations and a guarantee parts availability for a minimum of 10 years.

All LED displays must exhibit at a minimum the following requirements:

- All equipment must be new, with verification of final build dates AFTER the Issue date of this RFB.

### 2.01 LED Display (Ribbon Board)

#### A. General Information

1. One (1) Red, One (1) Green, and One (1) Blue Discreet LED
2. Technology to have a Minimum Active Area of 8.4' tall x 85.2' wide
3. Minimum of 168 lines of resolution
4. Minimum of 1704 columns of resolution
5. Line/Column Spacing: 15.24mm (.6")

#### B. Display Capabilities

1. Video Processing: 22-bit, Distributed
2. Color Processing: 16-bit (281 Trillion Colors)
3. Dimming Capability: 256 Levels
4. Refresh Rate: 3,840 Hz as defined by the number of times per second the display image is repainted in intensity.

C. LED Quality

1. Suppliers: Cree LED's are to be used for this display
2. Quality Control: Sorted by intensity and color wavelength.
3. LED Lifetime: 100,000 hours of operation as defined by time at which display intensity has decreased to 50 percent of the original intensity.

D. Display Construction

1. Service Access: Rear or front.
2. Cabinet Construction: All-aluminum construction for lightweight and corrosion resistance.

E. Viewing Characteristics

1. Module Intensity: 7,000 nits (adjustable).
2. Brightness Control: 32 levels (manual, scheduled or automatic).
3. Contrast Ratio: 1,200:1+
4. Suggested Viewing Angle: 160° horizontally and +25°/-40° vertically

F. Display Interface

1. The full-color video display MUST have the ability to interface and display still graphics, animations, text, avi's, MP4's or real-time data from the existing LED display control system without the need for a duplicate or redundant input.

## **2.02 Advertising Signage (Ribbon Board)**

Bidder must provide as part of the package an 8' tall & 2" deep aluminum tube frame skinned with aluminum sheeting. Front and back to be painted black. Sign to make up a total of 55'+/- feet in length. Signage to meet the following requirements:

1. Bidder must provide all required mounting hardware and deliver to site as well as installation of signage.

## **2.03 Alternate #1 LED Signage to Replace Signage in Section 2.02 (Ribbon Board)**

Bidder to provide a price to increase the LED Display from 85.2' to 140' in length. Product to meet the minimum requirements below as well as the requirements in Section 2.01.

A. General Information

1. One (1) Red, One (1) Green, and One (1) Blue Discreet LED
2. Technology to have a Minimum Active Area of 8.4' tall x 139.2' wide
3. Minimum of 168 lines of resolution
4. Minimum of 2784 columns of resolution
5. Line/Column Spacing: 15.24mm (.6")

## **2.04 LED Modules to Repair Current LED Video Display (Jumbotron)**

Bidder must provide and install twelve (12) new Daktronics LED modules into existing Daktronics video display to repair damaged modules. Twelve (12) Modules to be replaced are Daktronics 15HD modules.

## **2.05 Display Control System Interface Requirements**

- Veterans Memorial Stadium currently has an LED display and scoring system in place. The vendor must provide a display/display system that can integrate seamlessly with the existing scoring and display control system without the need for redundant and manual entry. Display must be able to be operated from the existing user interface so multiple operators are not needed. Vendor must provide a minimum of a one-page document explaining how they can and will integrate into the existing display and scoring system. Any additional hardware (primary/back-up) required must be rack mountable. If equipment does not fit into existing rack space a new control rack must be included. All racks and related equipment to be installed in the existing control room.

New display must be able to display the following content/data from the existing user interface/display control system and scoring/statistics system.

- Game in progress information: Home/guest team name, scores (total or inning/inning), runs, hits, errors, or any other data from existing game in progress scoring/timing controller.
- Game or season team/player stats from the existing statistics system and interface that is currently in place.
- Content playout including Graphics, animations, AVI's, MP4's, text, data content that is coming from the existing display control system. System must have the ability to display content on both the video display and new outfield display at the same time with a click of a button. New system must not need a second user station or the need for manual input.

## **2.06 Protective Netting (Ribbon Board)**

Vendor to provide and install protective netting that covers the entire front of the LED display to prevent baseballs from damaging the modules/LEDs. Include netting to cover the base size of 8.4' tall x 85.2' wide as well as pricing in the Alternate #1 for the size of 8.4' tall x 139.2' wide.

## **2.07 Structural Steel Support (Ribbon Board)**

Contractor to provide custom designed steel support structure & foundations to support new Ribbon Board (LED Display & Advertising Signage). Steel to be primed w/ high performance paint system to protect against rusting. Foundations to be designed w/reinforcing steel & anchor plate connections w/ min. 4500 PSI concrete.

# **Section 3- Installation Services**

## **3.01 General Description**

The following section describes the installation, maintenance and delivery responsibilities and shall establish project guidelines for quality control, warranties and service. All work described in this section shall be assigned to the Contractor as part of the project Scope-of-Work, unless specifically noted otherwise.

## **3.02 Demolition**

Contractor shall demolish, remove, & dispose complete existing structure, and footing (24") below grade. Contractor to remove & salvage to owner 85' of LED if in working condition. Contractor to demo, remove, & dispose existing Tri-Visions Any unused power and data cables

associated with the displays, which will not be utilized by the new display components will also be removed and disposed of by the Contractor.

### **3.03 Structure**

Structural and footing design including base plate and display attachment, Contractor/Vendor to provide all new.

The Contractor must submit drawings and calculations, sealed by a professional engineer, registered in the State of Iowa, detailing all structure and display supports and attachments.

### **3.04 System Delivery**

The Contractor shall deliver to the site all system components and related materials at its own expense. The Contractor shall completely unload, uncrate, assemble, transport each component to its desired location for installation and install the system on-site in accordance with the Owners scheduling and on-site regulations. The Contractor will be responsible for the removal and disposal of all packaging materials, scrap, debris and construction waste generated by all portions of its work. Any temporary on-site storage of equipment or tools will be their responsibility of the Contractor and must be coordinated with and approved by the Owner.

### **3.05 Electrical Certification/Compliance**

All electrical equipment provided in response to this RFB must be listed with a testing agency and be comprised of Underwriters Laboratories listed components. Any equipment not certified as such shall require on site certification by a listed testing agency, performance of which shall be the responsibility of the Contractor. Proof of certification or equivalent will be required prior to any work being performed on site.

### **3.06 Power**

The electrical design and engineering of all branch circuits by the Contractor must comply with all federal, state and local governing codes. As part of the response to this RFB, the Bidder shall provide electrical Riser diagrams, designed by an electrical engineer, of the entire system.

Contractor will be responsible for providing a new transformer/panel to feed the new display including trenching of power/conduit to the display location. Contractor will also provide secondary power into the display. The Contractor will be responsible for power distribution within the display enclosure to each necessary display cabinet. The Contractor will be responsible for the provision and installation of all load centers, breaker panels, circuit breakers, cable, conduit and wire required to distribute power to the display module. The Contractor shall be responsible for termination and final connect of power to all modules.

### **3.07 Signal/Data Distribution**

Contractor shall provide, route and install all necessary data/control cables through Owner provided primary conduits and raceways to the existing video display location. It is the contractor's responsibility to install conduit and cable from the existing video display to the new LED display. Contractor will be responsible to terminate and perform final connection of said cables. Contractor will be responsible for providing all final secondary conduit and raceway extensions into the display. **All signal cable is required to be installed with a MINIMUM of 50% spares.**

### **3.08 Manufacturing /Installation Standards**

The Contractor shall be responsible for the provision and installation of all proposed equipment in the proposal. Contractor shall be responsible for assembly and attachment of all display components onto the new structure.

Proper industry standards and approved connectors and terminators shall be used at all times. Wire routing will be through approved wire ways when required or be harnessed to provide a neat, safe and secure installation, which prevents physical damage to equipment or operators.

### **3.09 Commissioning**

Contractor will be required to demonstrate the full capabilities of the scoring and video displays and verify conformance to contractual specifications. The Contractor will be required to provide all necessary test equipment for acceptance testing. Confirmation will be required of, but not limited to the following functions: operation of each major system component, control functionality including integration into existing LED display control and scoring system, diagnostic capabilities, screen brightness, color temperature, gamma correction, viewing angles and uniformity of brightness and color across the display as specified by the Bidder product specification documents.

### **3.10 Field Verification**

This specification along with any attached blue-line drawings and/or other construction documents are for reference only. Prior to bid submission or installation of any equipment, it is the Bidders/Contractor's responsibility to field-verify all measurements and conditions pertinent to the supplied equipment.

### **3.11 Warranty and Service**

All proposals shall include a parts and labor warranty on all proposed equipment for one (1) year from the date of acceptance of the system and a parts agreement for years 2-5. Proposals shall demonstrate that there is service provided within 85 miles driving distance to the facility. This service provider must have a minimum of five (5) years' experience servicing the manufactures product. The local service entity shall be one that will offer emergency response availability. Local service entity shall have the ability to service all components. Phone support shall also be available 24/7/365.

### **3.12 Spare Parts**

Contractor will be required to provide an on-site supply of spare parts, which will ensure the timely repair of component failures. Bidders shall submit a list of spare parts that will be provided with each display component. Additional spare parts, either under system warranty or ordered by the facility, must be delivered to the facility within twenty-four hours of order if so requested.

Absolute minimum Spare Parts to located on-site:

- 3% of LED Video & Matrix Modules (Daktronics 15HD modules basis of design)
- 3% of LED Video & Matrix Drivers (Daktronics 15HD drivers basis of design)

### **3.13 Operator and Maintenance Training and Event Support**

The Contractor will provide training as follows.

- On-site operator training for a minimum of two (2) consecutive days following complete system installation, to train/assist designated operators in the general operation of all system components supplied by the Contractor
- Bidder must provide support for a minimum of 1 (1) event. Event support must be onsite a minimum of three hours before start of game and as long as needed after the event. Specific event to be specified by owner.

### 3.14 Maintenance

Service accessibility for all components shall be from both the front and the rear for all displays. All displays are to be mounted in completely self-contained cabinets with no modules exposed on the backside. Proposal shall include detailed information regarding service accessibility of all display components.

## Section 4 Pricing Summary

### 4.1 General Description

Pricing for the provision and installation of the display equipment is detailed in these specifications. Pricing for the provision and installation of all scoring, and large screen video displays and all necessary controllers as described in these specifications. Pricing to include provision, assembly and mounting of proposed display onto owner provided structure (vendor to be responsible for all attachment methods) to as well as all required electrical, control equipment and data cable connections.

### 4.2 Ribbon Board LED Display Specifications

## VETERANS MEMORIAL STADIUM Ribbon Board

OUTFIELD LED DISPLAY-BASE BID	SPECIFICATION	BIDDER
Line/Column Spacing	15.24	
Quantity	1	
Resolution Height	168	
Resolution Length	1704	
System Height (F)	8.4'	
System Length (F)	85.2'	
Power Draw Total Outfield LED Display- Max Amps based on 120/208V, 3phase		
LED Supplier	CREE	
LED Display Manufacturer	DAKTRONICS	



Brightness (nits)	7,000	
Viewing Angle - Horizontal	160	
Viewing Angle - Vertical	+25/-40	
Display Service	Front and Rear	
Refresh Rate	3840 Hz	
Video Processing	22 Bit	
Color Processing	16-Bit (281 Trillion Colors)	
Dimming Capability	256 Levels	
Contrast Ratio	1,200:1+	
Dimming Capability	32 Levels	
LED Lifetime	100,000 Hours	

ALTERNATE # 1 INCREASED LED DISPLAY SIZE	SPECIFICATION	BIDDER
Line/Column Spacing	15.24	
Quantity	1	
Resolution Height	168	
Resolution Length	2784	
System Height (F)	8.4	
System Length (F)	139.2	
Power Draw Total Outfield LED Display- Max Amps based on 120/208V, 3phase		
LED Supplier	CREE	
LED Display Manufacturer	DAKTRONICS	
Brightness (nits)	7,000	
Viewing Angle - Horizontal	160	
Viewing Angle - Vertical	+25/-40	
Display Service	Front and Rear	
Refresh Rate	3840 Hz	
Video Processing	22 Bit	
Color Processing	16-Bit (281 Trillion Colors)	
Dimming Capability	256 Levels	

<b>Contrast Ratio</b>	<b>1,200:1+</b>	
<b>Dimming Capability</b>	<b>32 Levels</b>	
<b>LED Lifetime</b>	<b>100,000 Hours</b>	
***Please provide a detailed list of any specifications not met in the RFB		

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