



**Request for Proposals #880419-12  
Devaney Center LED Display System**

<b>Key Dates, Locations and Times</b>	
Request for Proposal Issued	August 7, 2012
Initial submission of vendor questions due	August 17, 2012
Pre-bid conference to be held at: Bob Devaney Sports Center 17 <sup>th</sup> and Court Streets Lincoln, NE. Parking is on the east side of the building on the street. Enter under the south ramp. Security will direct you to the Hospitality Room.	August 20, 2012 @ 1:30 PM Local time
Deadline for final submission of vendor questions	August 21, 2012
UNL response to vendor questions	August 23, 2012
Bids Due To: Office of University Services Procurement Services Department 1700 "Y" Street Lincoln, Nebraska 68588-0645	August 31, 2012 @ 3:00 PM Local Time

**NOTE: This is a Formal Sealed Bid.**

E-mail, Fax, or verbal proposals "cannot" be accepted and will be rejected.

Questions about the proposal process should be directed to the Procurement Services Department 402-472-2126.  
(Requests for reasonable accommodations under the Americans with Disabilities Act in order to participate in the bids process or questions about complying with the Nebraska Accessibility Policy for electronic and information technology should be directed to the ADA/504 Compliance Officer at (402) 472-8404.)

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**PROPOSAL COVER SHEET  
UNIVERSITY OF NEBRASKA-LINCOLN**

**Office of University Services  
Procurement Services Department  
1700 "Y" Street  
Lincoln, Nebraska 68588-0645**

**PROPOSAL IN RESPONSE TO RFP #880419-12  
Devaney Center LED Video Display System**

The undersigned authorized officer of the bidder firm represents that the bidder has carefully examined the specifications and conditions contained in the RFP. The bidder fully understands the type and quality of the product(s) and/or service(s) sought by the University of Nebraska-Lincoln and hereby proposes to supply such at the prices stated and in accordance with the Proposal accompanying this cover sheet.

The bidder represents and warrants that the proposal submitted is not the result of collusion with other eligible bidders, with any employee of the State or University, and no effort has been made to preclude UNL from obtaining the most advantageous response possible to this RFP.

I affirm that if I am an employee of the University of Nebraska, I have notified the buyer of my status as such and that this contract must be completed in accordance with Board of Regents Policy 6.2.1.12, Purchases Involving University Personnel.

Except where a written signature is required, please fill in the following:

ADDENDA: The bidder acknowledges its receipt of addenda and further agrees that the provisions of such addenda, as well as those of the RFP, are fully incorporated into bidder's Proposal, unless otherwise clearly stated to the contrary in the Proposal. Proposals containing exceptions to RFP provisions may not be favorably received.

The bidder acknowledges its receipt of addenda numbered \_\_through \_\_

BIDDER FIRM: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Authorized Signature

Signing Officer's Name and Title: \_\_\_\_\_

Correspondence to the bidder with respect to this RFP may be directed to:

Name \_\_\_\_\_ Phone # \_\_\_\_\_

Title \_\_\_\_\_ FAX # \_\_\_\_\_

Address \_\_\_\_\_ E-mail \_\_\_\_\_  
(STREET)  
\_\_\_\_\_  
(CITY/STATE)

UNL appreciates your consideration of this Request for Proposals and looks forward to receiving your response.

# 1. Overview

## 1.1 Introduction

The following Request for Proposal represents the minimum requirements for the LED Video Display System to be installed at the Bob Devaney Sports Center on the campus of the University of Nebraska in Lincoln, NE. Bidders responding to the RFP are asked to submit bids for the provision and complete installation of the video display system as described in this RFP. All equipment must interface seamlessly.

These specifications shall establish the design criteria and set qualifying guidelines for all equipment to be provided as part of this Request for Proposal.

Bidders responding to this RFP must provide pricing for a turnkey installation, including pricing for the provision and installation of all items necessary to provide a complete, workable and operational system and removal/disposal of the existing scoreboard display equipment. Material or equipment required for the provision and installation of such a system, not expressly addressed in this RFP, is understood to be the responsibility of the Bidder.

## 1.2 Definitions

*“Bidder” shall mean each vendor that has received the RFP and will be bidding on the project*

*“Contractor or Vendor” shall mean the vendor that has been selected to provide products or services or both to the University of Nebraska.*

*“Owner” shall mean the University of Nebraska.*

*“Display(s)” shall mean LED video display(s)*

## 1.3 Bidder Qualifications

The University of Nebraska is looking to establish a long-term partnership with a video vendor. In order to ensure that the company selected has the University of Nebraska’s long-term interests in mind the following will be required to bid, in addition to all other requirements of the RFP.

- Bidder must provide a list of a minimum of three (3) projects of similar size and scope (name of facility, photo of installation, contact name, title, address and phone number) where. The University of Nebraska selection committee will make all determinations as to whether a project is of similar size and scope. Any vendor(s) bidding/installing third party equipment shall be required to meet the above requirements in addition to all other requirements of the RFP.

## 1.4 Quote Breakdown Philosophy

Bidders must bid on the complete provision, installation and functional connection of all equipment as described in this document. All pricing submitted in response to this RFP signifies the bidder agrees to sell to the University the indicated products, in whole or in part, at the discretion of the University.

## 1.5 Complete Response

It shall be the responsibility of the bidder to ensure all specified equipment and scopes-of-work requirements described in the RFP are sufficient to ensure the University 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.

**Any exceptions to the requirements of this RFP must be specifically outlined in an exception sheet provided with the RFP and submitted with the bid proposal. If exceptions are not specifically taken and listed on this exception sheet, the requirements of this RFP shall be considered enforceable under the contract.**

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.

## 1.6 General Description

The Contractor shall provide a complete, workable and operational video display system including all labor, equipment, tools, material, engineering, supervision, licenses and bonds to design, manufacture and install fully functional large-screen video display system as per the specifications and requirements listed herein

## 1.7 Special Bidding Instructions

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

- **READ THE ENTIRE RFP CAREFULLY!** Change orders will not be allowed for bidder error in estimating the cost of the project. Bidders must research the existing structural and electrical conditions of the site prior to submitting a bid. Structural enhancements required for support of the displays, shall be solely the bidder's responsibility. It is required that bidders work with a structural engineer, licensed in the State of Nebraska, to certify complete set of shop drawings upon award of contract. All drawings and specifications shall be signed and sealed by a registered professional engineer licensed in the state of Nebraska.
- The RFP shall act as a description of the minimum display system desired by the University.
- 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.
- Bidders are "strongly encouraged" to visit the site during the pre-bid meeting or prior to submitting proposal. Lack of knowledge concerning the project requirements will not relieve the bidder of conditions submitted in response to this proposal, attached drawings, and or sketches. It is the bidder's responsibility to verify all existing conditions.

## 1.8 Rejection of Proposals

The University of Nebraska reserves the right to:

- Make all decisions regarding this proposal, including, without limitation, the right to decide whether a proposal does or does not substantially comply with the requirements of this RFP.
- Accept, reject, or negotiate modifications in any terms of bidder's proposal or any part thereof
- To reject any or all proposals received.

The University shall not be responsible for any cost incurred by any bidder in the preparation of this proposal. It must be specifically understood that this RFP does not create any obligation on the part of the University to enter into any contract or undertake any financial obligation with respect to the items referred to herein. The bidder understands that, if selected, the University reserves the right to provide its opinion publicly and privately regarding the bidder's performance, throughout the entire project.

## 1.9 Response Inclusion in Contract

This RFP and the bidder's response to this RFP shall become part of the final contract negotiated with the bidder. Requirements of the RFP must be met as part of the contract.

## **2. SCORING, ADVERTISING DISPLAY ASSEMBLIES AND CONTROL SYSTEMS INFORMATION/SPECIFICATIONS**

### **Part - 1: GENERAL**

#### **1.1 SCOPE OF WORK**

- A. The purpose of this document is to describe the scope of work and options for complete, turn-key design/build video, scoring, advertising and matrix control systems.
- B. Work under this Contract includes all labor, materials, tools, transportation services, supervision, coordination, etc., necessary to complete the installation of the Scoring, Matrix and Advertising Display Systems as described in these performance specifications and illustrated on the associated drawings. The systems shall be called the "Scoring and Matrix Display System" and the installer the "Scoreboard Installer". Any structural engineering, rigging details, and construction information provided as part of this specification and/or related documents are provided for information purposes only. The drawings included with this specification convey general system concepts. The plans may not show complete and accurate building details. The Installer is responsible for making field measurements necessary to establish exact locations, relationships, load capacities necessary for the installation of these systems.
- C. Work includes a number of separate scoring/matrix displays. Drawings should be considered to be conceptual in nature, illustrating the features and appearance of the system. It is intended that the Scoreboard Installer shall assume full responsibility for final structural engineering and enclosure architectural design, as well as construction information and coordination required in accordance with the Installer's final design of elements being provided under this contract. Scoreboard systems signal conduit/cable pathways and locker room/back of house game clock display locations are shown on the AV series drawings. Power service and signal conduit is to be provided to within 10 ft of vomitory displays as part of the base building construction. AC power for end displays is at the existing display location on each end. Extension and distribution of AC power and signal raceway from this point and within displays is the responsibility of the display installer. Any additional raceway, required by code, or to enclose cabling within public view, but not shown on the electrical or AV drawings is to be included the scoreboard installer's scope of work.
- D. Work includes all structural design and installation of supports and building attachments for all displays. Concept drawings for the end displays show the location and design intent for the structural system but do not constitute a design. Drawings describing the existing building structure and original structural design superimposed live loads are available from the Owner. Any strengthening of the existing structure required to safely support the equipment, fixtures, attachments, catwalks, ladders, stairs, etc. described in this specification shall be designed, detailed, furnished and installed under this contract. Welding or drilling of the existing main structural steel roof truss members will not be allowed. Connection to the existing main structural steel roof trusses members shall be made using clamp type connections and shall accommodate appropriate deflections of the roof truss members with respect to the seating/raker system below. . The shop drawings and structural engineering calculations submitted as part of this contract shall include justification for the safe support of the new applied loads to the existing structure either in its present configuration or with suitable structural reinforcing as necessary. These calculations shall bear the seal of a professional engineer, duly licensed in the State of Nebraska.
- E. The systems include the following major items:
1. Provision of two (2) end wall video displays with all structural provisions and enclosure as shown on the architectural drawings. Assume power and signal conduit are provided within 10 ft. of display. Distribution of power and signal cabling from this point to displays is included in this scope of work.
  2. Two (2) fixed digit volleyball/basketball scoreboards on the bulk head of floor entrance tunnels.
  3. Locker room clocks where shown on drawings and controlling electronics system.
  4. All required structure to support displays and attachments to existing building structure.

5. Camera platform floor and support structure.
6. Display system architectural enclosures, doors, catwalks, access ladders, convenience power, work lighting, etc.
7. Scoring, Scoreboard, and Matrix Control components.
8. Basketball goal shot/game clocks and controllers
9. Two (2) portable shot clocks for floor mounted use in case of failure of goal mounted clocks
10. All electrical distribution for scoreboards, video displays as required within each system at each installation point. Final electrical and electronic termination for video displays by video display vendor.
11. Power controls to allow a video displays, and to be turned off independently each other, from HuskerVision. Fixed digit displays to go dark when controllers are disconnected.
12. Coordination installation and mounting of any scoreboard mounted broadcast camera with UNL Representative during the warranty period. Assist providing signal and power cabling as requested. Cost of camera equipment, mounting hardware and cables to be by others.
13. Signal and power conduits will be a part of AV and electrical drawings. Installer is required to provide coordination services in the preparation of Electrical and AV contractor installation drawings to ensure proper conduit provisions. Extension or addition of conduit from electrical rooms to catwalk platforms or auxiliary/fascia displays is the responsibility of this contractor. Exposed cabling will not be allowed.
14. The Installer must recognize that the form of contract requires coordination with other trades and installers to provide suspension/mounting points for these devices installed by others.

F. The Contract also includes:

1. Pre-Installation meeting on site.
2. Verification of dimensions and conditions at the job site.
3. Coordination with other contractors and trades.
4. Preparation of submittal information.
5. Installation in accordance with the contract documents, manufacturer's recommendations, and all applicable code requirements.
6. Installation of video, broadcast, camera, audio cabling (power and signal) supplied by others as part of the center hung assembly traveling cable assemblies.
7. Initial tests and adjustments, written report, and documentation.
8. Instruction of operating personnel; provision of manuals.
9. Maintenance services; warranty.
10. Event attendance as outlined herein.

G. The Contract Documents are complementary and are intended to include or imply all items required for the proper execution and completion of the work. Any item of work required by the Specifications or other portion of the Contract Documents, but not shown on the drawings, or shown on the drawings but not required in the Specification, shall be provided by the Contractor without extra charge as if shown or mentioned in both.

H. The owner reserves the right to make reasonable device and equipment location changes prior to rough installation without claim for additional expense.

## 1.2 WORK SPECIFIED ELSEWHERE

- A. AC power service existing at display locations.
- B. Base building structure and architectural/structural modifications as part of the arena renovation.
- C. Broadcast cabling systems.



### 1.3 References

- A. Published specification standards, tests or recommended methods of trade, industry or governmental organizations which will apply to Work in this section where cited below:
1. American Iron and Steel Institute (AISI),
  2. American National Safety Institute (ANSI),
  3. American Society of Mechanical Engineers (ASME),
  4. American Society of Testing and Materials (ASTM),
  5. National Electrical Manufacturer's Association (NEMA),
  6. Occupational Safety and Health Administration (OHSA),
  7. Underwriters Laboratories (UL),
  8. United States Institute of Theatre Technology (USITT).
  9. UNL Facilities Standards/Guidelines.
  10. Entertainment Services and Technology Association (ESTA),
  11. Any or all local, governmental, or other applicable codes.

### 1.4 DESCRIPTION OF WORK

- A. Removal, in working condition, of existing Mitsubishi LED displays and processing equipment.
- B. Coordination with broadcast, specialty lighting/effects and sound system installers.
- C. Removal, in working condition, existing Mitsubishi displays and processing electronics and Support structure for existing displays to be removed, as required, as part of this contract scope of work.
- D. Scoring and Matrix Displays consist of the following major elements:
1. Arena End Video Displays
  2. Fixed digit game-in-progress displays
  3. Goal mounted basketball game/shot clocks
  4. Portable game/shot clocks
  5. Clock time expiration horns
  6. Locker Room/Back of House Game Clocks
  7. Display control and content management/creation systems
  8. Internal structure and enclosure
    - 1) All display internal structure and enclosures are included in this scope of work.
    - 2) All structure required to support, and access/maintain displays and connect to existing building structure is included in this scope of work.
  9. Provide power distribution for devices as noted in Part IV. Coordinate termination of devices and provide appropriate breakers/outlets for each device. Display power distribution scheme to recognize that a portion (ie; top third) of the display may be serviced from an emergency power panel, with the remainder on a non-emergency power connected panel. All required equipment and wiring required to allow the display total image to not be degraded by this configuration is to be included in this scope of work.
- E. Provide a stairs or a caged service ladder or fall restraint as appropriate to climb from the base of the end video displays to catwalk elevations per local and Federal (ie; OSHA) regulations. Equip with appropriate fall restraint and ladders at openings in the platform.
- F. Openings shall have HM doors and frames with hardware to comply with UNL Design Guidelines. Doors shall be fabricated from 0.053-inch (16 gauge) cold rolled steel sheet as required for Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 1 (Full Flush) according to ANSI/SDI A250.4 and 250.8. Frames shall be fabricated from 0.053-inch (16 gauge) cold rolled steel sheet with full profile welded mitered or coped corners. Door and frame shall be reinforced for hardware according to ANSI/SDI A250.6.
1. Hardware for each door shall consist of:
    - 1) Hinges - TA2714 4-1/2" x 4-1/2" – US26K – MK
    - 2) Storeroom Lock – 10 8204 LNL – US26D –SA

- 3) Wall Stop – 409 – US32D - RO
  2. Keying shall be provided as per Owner. Doors and frames shall be finished with an Alkyd paint system consisting of an alkyd prime coat and two top coats of semi-gloss interior alkyd paint. For further specification information refer to the Project Manual for the Devaney Center Improvements Project UNL Project No. C001P098, Sections 081113-Metal Doors and Frames, 087100-Door Hardware, and 099123-Interior Painting
- G. All control equipment to operate scoring displays will be located in the press level Scoreboard Control Room, with the ability for volleyball and basketball game operations control to be operated either from control room court side. Sports control system to provide pre-sets/overlays, etc. to allow easy conversion between sports. Connections and all cabling between displays and control equipment along with interconnection with court side control location shall be included in this installer's scope of work. Scoring software required for the following sports:
1. basketball, (NCAA, and high school)
  2. volleyball, (NCAA)
  3. wrestling (NCAA)
  4. gymnastics – interface to UNL provided meet scoring system to provide competitor listings and results
- H. Basketball Goal Shot/Game Clock Displays,
1. Three (3) two piece, transparent units with control, minimum size (digit height not less than 14") on top of backboard, secondary unit mounted on cantilever arm of goal assembly at right angles to large display (digit height not less than 10") with simultaneous shot and game clock capability. Displays to have 0.10 second resolution when dictated by game conditions. Provide three Goal Clock units, mounted to Owner provided basketball goals, along with all power, control unit plus spare control unit and control cabling required for complete system.
  2. Provide two (2) portable clock units. Anticipated to be located on the floor, on the baseline side of the basketball court. Provide cabling to allow power extension to display location and signal from the control point. Displays need not be transparent type. They should include carrying handles, support feet/stand and have shot clock digit sizes of not less than 22".
- I. Time expiration LED strips for basketball goals, including spare goal assembly, shot clocks and scorers' table.
- J. Locker Room/Back of House Game clocks – Quantity: As shown on AV drawings noted with "GC" symbol.
- K. Data input and control computer for Sports Ticker, Big Ten statistics systems, Stat Crew for each sport listed above, as well as basketball tournament stats systems and other similar services (i.e. Silent Radio, ESPN Gamecast). System to be able to receive data from outside services and update statistical data base in an automated fashion, ready for display within a pre-set graphic format without operator intervention.
1. Software vendor shall interface to any data service client wishes throughout the warranty period. Vendor may identify any limitations of this service with their response (e.g. XML, 232, or other data interfaces).
- L. Data output, compatible with character generators (e.g. Pinnacle, Inscribe, Chyron) as well as ability to provide feed to regional sports networks scoring displays (aka Fox box). Provide data output at the following locations:
1. TV truck dock cabling racks – Three separate feeds
  2. Husker Vision room
  3. Video coaching/locker rooms(s) – maximum of three.
- M. Supply all necessary loads, weights, power and other necessary design, construction and coordination for Owner's Representative to review structure for displays. This includes Licensed in the jurisdiction of the project registered structural engineer stamped calculations for all structural elements as part of this scope. Installer to be responsible for all structure required to attach displays to arena structure. The installer to submit structural attachment between display assembly, and existing arena structure for review and approval by project structural engineer.
- N. Supply complete assemblies (structure, enclosure, and finish) as shown on concept drawings for Displays, Scoreboards, Goal Clocks, enclosures for video display and ad panels included as part of this scope of work as appropriate, including Licensed in the jurisdiction of the project registered electrical and/or structural engineer

stamped calculations. Attachments to base arena structure to be reviewed and approved by the project Structural Engineer as directed by Owner's Representative.

- O. Colors of all exposed structure, enclosures, close-out panels, etc., to be determined during submittal process. Submit color samples to Owner for approval.
- P. Portable floor display signal and controller connections to be located within existing junction boxes (broadcast or AV). Coordinate cabling pull, panel size and panel location within enclosure with AV installer.

## **1.5 RESPONSIBILITIES AND RELATED WORK**

- A. Coordinate all work with so that a complete and functioning scoreboard assembly and related systems (fascia, game/locker/shot clocks, etc.) is achieved.
- B. Supply accessories and minor equipment items needed for a complete system, even if not specifically mentioned herein or on the drawings, without claim for additional payment.
- C. Notwithstanding any detailed information in the Contract Documents, it shall be the responsibility of the Scoreboard Installer to supply systems in full working order. The Scoreboard Installer shall be required to notify the Owner's Representative of any discrepancies in part numbers or quantities as between the Contract Documents and what would be required to fulfill these performance specifications. Failing to provide such notification, the Scoreboard Installer shall nonetheless be expected to supply items and quantities according to the intent of the Specification and Drawings, without claim for additional payment.
- D. Obtain all permits necessary for the execution of any work pertaining to the installation, or any operation by the Owner.
- E. If a conflict develops between the Contract Documents and the appropriate codes, the Scoreboard Installer shall refer to General Conditions as described below for a resolution.
- F. Coordinate control room layout with Owner's Representative, and other subcontractors installing work in the control room.
- G. The drawings included with this specification convey general system concepts. The plans do not show complete and accurate building details. The Installer is responsible for making field measurements necessary to establish exact locations, relationships, load capacities necessary for the installation of these systems.
- H. The Installer is responsible for providing all components necessary for complete and operational system. Any system changes or revisions necessary to make the system conform to the building, walls, steel, electrical services etc, shall be included at time of bid and installed without claims for additional compensation.
- I. Power is provided and at display platform on each end for video display or for shot clocks and goal lights. Power for fixed digit scoreboards and locker room clocks is provided at clock location. The Installer shall be responsible for distributing electrical power as required, including breakers. This will include necessary distribution boards, conduit and cabling as required for a complete installation. System to include ability to turn off end video displays independent from control location workstations. Scoreboard installer is responsible for distribution of feeder or branch circuits, panel boards and other distribution items from project demarcation to as shown on electrical drawings or as exists for each display.
- J. Provide, under this proposal, any D-rings, hooks, etc. as consistent with project standards and as required for cable runs levels that cannot be run in raceways shown on AV and electrical drawings. Provide any necessary cable management, vertical ladder tray, etc. in communications closets for vertical risers. Provide appropriate cable management, Wiremold, raceways within scoreboard control areas between base building cable tray, equipment racks and control locations. Fire stopping for cabling penetrating rated partitions as required by code is also included. Exposed cabling in public view will not be allowed.

- K. Coordinate work with other trades to avoid causing delays in construction schedule.
- L. Available conduit distribution for display signal/data cabling is shown on the AV series, structural and electrical drawings. If additional conduit, junction/terminal boxes/enclosures will be required notify Owner's Representative for coordination at time of proposal otherwise provide any conduit required for a complete, working, turn-key systems installation.

## 1.6 QUALITY ASSURANCE

- A. Project Prime Contractor's Qualifications: Firm experienced in the installation of systems similar in complexity to those required for this project; and meet the following requirements. Proposals may be rejected as unresponsive should the following information not be provided with proposal.
  1. At least three years experience with equipment and systems of the specified types.
  2. Experience with at least two NCAA Div 1 or NBA/NHL arena projects within the last three years unless the owner waives this requirement.
  3. Maintain a fully staffed and equipped service facility.
  4. With the bid, the potential Installer shall provide documentation that they have:
    - 1) Form of corporation.
    - 2) Adequate plant capacity and equipment to complete the work.
    - 3) Adequate regional service organization in to meet warranty response requirements for the project—4 hour phone call response, with 24 hour repair window during the season.
  5. Adequate staff to perform work on schedule proposed with commensurate technical experience. Provide key staff resumes.
  6. Suitable financial status (i.e. bonding and materials purchase capacity) to meet the obligations of the work.
  7. Provide references of three or more users for previously furnished and/or installed LED scoring displays (within the last 24 months for similar scale project).
    - 1) References should be for identical display technologies, processors, and most critically graphic user interface used to operate animation and system.
    - 2) If supplier intends to use alternative scoring supplier, references for operations at other facilities for scoring system shall also be supplied.
  8. List of structural, electrical, sound and other subcontractors intended to do the work. Subcontractors shall be appropriately state licensed in their specialty.
  9. Completed current version of AIA Contractor's Qualification form.
  10. Provide with bid, the name and relevant experience of the proposed project manager. Also provide the name and qualifications of the site superintendent.
- B. Sub-contractor requirements
  1. LED Fascia and Scoring Manufacturer's Qualifications: At least 3 years experience in the production of specified products unless approved by the UNL. Proposals may be rejected as unresponsive should the following information not be provided with proposal.
    - 1) Experience with comparable scale projects within the last three years unless the owner waives this requirement.
    - 2) With the bid, the potential manufacturer shall provide documentation that they have:
      - a) Adequate plant capacity and equipment to complete the work.
      - b) Suitable financial status (Ie; bonding and materials purchase capacity) to meet the obligations of the work.
      - c) Adequate staff to perform work on schedule proposed with commensurate technical experience.
      - d) Provide references of three or more users for previously furnished and/or installed LED Ribbon displays (within the last 36 months for similar scale project).
  2. Scoring Supplier's Qualifications: At least 3 years experience in the production of specified products unless approved by the UNL. Proposals † may be rejected as unresponsive should the following information not be provided with proposal.

- 1) Experience with comparable scale projects within the last three years unless the owner waives this requirement.
  - 2) Demonstrated ability to:
    - a) Interface with Stat Crew for all sports listed
    - b) Interface with internet hosted data bases
    - c) Ability to create, populate and maintain game statistical database locally within control system.
    - d) Provide video and character generator
  - 3) Provide feeds of stats, score and clock information to broadcasters
  3. With the bid, the potential manufacturer shall provide documentation that they have:
    - 1) Adequate plant capacity and equipment to complete the work.
    - 2) Adequate staff to perform work on schedule proposed with commensurate technical experience.
    - 3) Suitable financial status (Ie; bonding and materials purchase capacity) to meet the obligations of the work. Provide references of three or more users for previously furnished and/or installed scoring systems for the football and basketball.
- C. Contractor shall attend pre-installation meetings to coordinate with other trades as required.
- D. With proposal, provide listing with appropriate explanation regarding the status of Manufacturer's or Installer's resolved or unresolved legal disputes within the last six calendar years.
- E. With proposal, provide listing with appropriate explanation regarding any projects within the last 3 years, where the Installer or Manufacturer has failed to meet construction schedules, due Installer or Manufacturer's cause.

## 1.7 SUBMITTALS

- A. Submit all shop drawings and submittals in accordance with Project Requirements. Quantities listed herein are the minimum; in all conflicts with the General Conditions, the General Conditions shall prevail.
- B. Shop drawings and submittal data shall contain sufficient information to describe the Work to be performed. Drawings shall be executed at an appropriate scale. Submit 1 set of electronic files in Auto Cad and PDF format, and 3 hardcopy sets of drawings and submittal data; submit "3 copies of catalog data sheets neatly bound in sets. Submit all Shop Drawing information at one time; no later than 90 days after notice to proceed. Information shall include but not necessarily be limited to:
1. Elevation and Sections of all displays.
  2. Advertising Panel enclosure detailed drawings.
  3. Color options (with photographs of examples) for all fixed digit and monochrome LED displays. Include white as a color options wherever possible.
  4. Finishes of all exposed housings with finish samples.
  5. Complete drawings showing the connection of the installer supplied equipment to the structure at each different condition. Drawings to indicate nature of disassembly for storage.
  6. Complete drawings showing coordination with project structural engineer and pre-cast fabricator for all necessary structural accommodations (embeds, attachment locations, structural requirements) for integrated railing fascia display system.
  7. Complete structural drawings showing member sizes, connections, etc. Submit design calculations, bearing the Registered (licensed in the jurisdiction of the project) structural engineer's stamp for review. Review will be for design intent only and shall not be construed as approving the design analysis.
    - 1) Schematic Drawings. Provide drawings detailing inter-component and intra-component, on Scoreboard assembled components or fabricated products. Provide loads at each point of the reeved lift line system.
    - 2) Conduit and Electrical Drawings. If the system incorporates an electrical or electronic system of any type, provide detailed drawings depicting wiring routing, termination, and sizing schematic, conduit routing and sizing, etc. These drawings shall be floor plan drawings, including all walls, doors and rooms, showing exact power requirements and conduit routing for each system with

the location of all junction boxes. Provide PE stamp, licensed in the jurisdiction of the project, for all AC power drawings for work outside of display enclosures.

- a) Indicate location of all access panels. All required access panels are part of this scope of work.
  - 3) Equipment Drawings. Provide equipment mounting and location details including necessary physical dimensions, clearances, load limits, etc. These shall be floor plan drawings, including all walls, doors and rooms, showing exact locations of devices and equipment.
  - 4) Structural plan and Section Drawings. Provide drawings showing the exact location of all installed equipment on plans and/or sections such as guide wires, loft blocks, drums, motors, gear boxes etc. Describe attachment methodology for each component that connects to the building structure.
8. Fabricated Plates, Panels, or Signage Drawings. If plates, panels, or signage is required, provide complete drawings depicting dimensioned locations of components, component types, engraving or printing information, plate material and color, and bill of material
  9. Wiring diagrams. Complete, detailed wiring diagrams for all systems, based on the contract documents but including cable types, identification and color codes, and detailed wiring of connections, both at equipment and between equipment racks and wiring in conduit.
  10. Equipment. Location of all equipment in racks, consoles, mill work, enclosures or on Owner provided counter top/tables with dimensions; wire routing and cabling within housings; AC power outlets, terminal strip and UPS locations. These shall be floor plan drawings, including all walls, doors and rooms, showing exact locations of devices and equipment.
  11. Schematic drawings of any custom circuitry or equipment modifications, including connector pin-outs and component lists.
  12. A material list of all equipment to be furnished, arranged in specification order. This list shall be followed by catalog data sheets, arranged in specification order, of all equipment to be furnished. Where a data sheet shows more than one product, indicate the model being proposed with an arrow or other appropriate symbol.
  13. Proposed cable labeling technique.
  14. Samples as required in various specification paragraphs.
  15. Power consumption at 50% and 100% illumination levels for each display.
  16. Description of QA/QC procedure.
- C. Final Inspection Notification Report. Eight (8) copies of a typed, neatly prepared checkout report for each piece of equipment and the entire system shall be prepared and submitted; it shall include:
1. A complete listing of every piece of equipment including serial number, make, model and manufacturer as well as the date it was tested and by whom, the results and date re-tested (if failure occurred during any previous tests).
  2. The final report shall indicate that every device tested successfully.
  3. A performance test report indicating that the system meets all of the Installer testing requirements of Part III.
- D. Contract closeout submittals shall be required as follows:
1. Keep a complete set of drawings on the job, note any changes made during installation, and submit three (one Mylar) and one paper, corrected sets of drawings and electronic files in Auto Cad and PDF format, showing Work as installed.
  2. Provide all as-built, close out and testing information, manuals, drawings, test results, etc. in electronic form acceptable to the owner. Specification required as-built drawings, commissioning reports, manuals and electronic files to be submitted prior to acceptance testing and final payment.
  3. Submit the following data for review, prepared as indicated, at least one week prior to acceptance testing (exceptions noted):
    - 1) System Reference Manual: Furnish four (4) copies, in four (4) separate, 3- ring binders, sized to hold the material plus 50% excess, with clear vinyl pockets on cover and spine for project title. Provide tabular dividers with permanent legends for the following sections:
      - a) System Operation and Instructions. Prepare a complete and typical procedure for the operation of the equipment as a system, organized by subsystem or activity. This procedure

- should describe the operation of all system capabilities. Assume the intended reader of the manual to be technically inexperienced and unfamiliar with this facility.
- b) A list of all equipment, indicating manufacturer, model, serial number, and equipment location (i.e. rack/room number). Update following acceptance testing, if changed.
  - c) Manufacturer's Instruction Manuals for all items of equipment, incorporating or followed by manufacturer's warranty statements. For custom circuits or modifications, a description of the purpose, capabilities, and operation of each item.
  - d) A list of settings, if applicable, of all semi-fixed controls. This shall include a listing of all software settings required in all operating system areas (e.g. control panel, network, etc.) as well as project specific software programs. Update following acceptance testing. Preferred method of displaying "software" settings is with PC-captured "screen shots".
  - e) Photographically reproduced schematic wiring diagrams of the scoreboard and advertising display low and high voltage systems, based on the as-built documentation, at a reduced scale easy to handle but fully legible. Blueline (or similar diazo process) prints are not acceptable.
  - f) Maintenance Instructions, including Installer's maintenance phone number(s) and hours; maintenance schedule; description of products recommended or provided for maintenance purposes, and instructions for the proper use of these products.
  - g) A legend of acronyms and abbreviations must accompany all documentation.
  - h) Any other pertinent data generated during the Project or required for future service.
- 2) In titled ring binders sized for material below, plus 50% excess; 4 copies:
    - a) Manufacturer's Service Manuals and parts lists for all equipment. Photocopies are not acceptable. For custom circuits or modifications, complete schematics and parts lists.
    - b) As-built wiring diagrams and system block diagrams showing nominal input and output levels. (Submit within two weeks after Acceptance Testing.)
    - c) Duplicate copies of reduced-scale wiring diagrams.
  - 3) Photographically reproduced as-built wiring diagrams and overall building wiring diagrams, at a reduced scale easy to handle but fully legible. Blueline (or similar diazo process) prints are not acceptable. Mounted behind clear acetate and located with the equipment racks.

## **1.8 PROJECT CONDITIONS**

- A. Verify all conditions on the job site applicable to this work. Notify Owner's Representative in writing of discrepancies, conflicts, or omissions within three (3) days of discovery.
- B. The Scoring and Matrix Display System drawings and related AV/Architectural/Structural/Electrical drawings are intended to diagrammatically show cables, conduit, wiring, and arrangements of equipment fitting the space available without interference. If conditions exist at the job site, which make it impossible to install work as shown, Scoreboard Installer shall recommend solutions and/or submit drawings to the Owner's Representative for approval, showing how the work may be installed.

## **1.9 ACCEPTANCE TESTING**

- A. Upon completion of installation and initial tests and adjustments specified in Part 3, acceptance testing shall be performed by the Owner's Representative.
- B. Provide two persons familiar with all aspects of the system to assist the Owner's Representative during acceptance testing. At least one of the available individuals must have specialized knowledge of the computer control system operating software and function of the system.

## **1.10 MATRIX AND SCORING SYSTEMS SOFTWARE LICENSE**

### **A. INTRODUCTION**

1. All proprietary software provided for the Technical Systems shall be subject to this software license between the Contractor and the Owner as an essential element of the system as defined in the system specification and associated documents, drawings and agreement.
2. Contractor shall agree that 3rd party (e.g. manufacturer's) proprietary software provided with the system shall be subject to this agreement.
3. Contractor and owner agree that this software license is deemed to be part of, and subject to, the terms of the Agreement applicable to both parties; and shall supercede any standard manufacturer or Contractor's standard license agreement.
4. Proprietary software shall be defined to include, but not be limited to, device and system specific software and firmware designed to run on conventional computer based operating platforms as well as all micro-processor based hardware used to program, setup, or operate the system or its components.
5. For sake of this agreement, MS Windows® shall not be considered "proprietary" software, unless a non-public version of Windows® or any of its components are critical to the operation of the system in which case it shall be deemed proprietary.

### **B. LICENSE GRANT AND OWNERSHIP**

1. Contractor hereby grants to Owner a perpetual, non-exclusive, site license to all software for Customer's use in connection with the establishment, use, maintenance and modification of the system implemented by Contractor. Software shall mean executable object code of software programs and the patches, scripts, modifications, enhancements, designs, concepts or other materials that constitute the software programs necessary for the proper function and operation of the system as delivered by the Contractor and accepted by the owner.
2. Except as expressly set forth in this paragraph, Contractor shall at all times own all intellectual property rights in the software. Any and all licenses, product warranties or service contracts provided by third parties in connection with any software, hardware or other software or services provided in the system shall be delivered to Owner for the sole benefit of owner.
3. Owner may supply to Contractor or allow the Contractor to use certain proprietary information, including service marks, logos, graphics, software, documents and business information and plans that have been authored or pre-owned by Contractor. All such intellectual property shall remain the exclusive property of Owner and shall not be used by Contractor for any purposes other than those associated with delivery of the system.

### **C. COPIES, MODIFICATION, AND USE**

1. Source code shall be available to owner for a period of not less than 15 years, if necessary for use of making modifications for this installation only. This is not intended to confer rights for any other use or ownership of the source code.
2. Owner may make copies of the software for archival purposes and as required for modifications to the system. All copies and distribution of the software shall remain within the direct control of owner and its representatives.
3. Owner may make modifications to the source code version of the software, if and only if the results of all such modifications are applied solely to the system. In no way does this Software License confer any right in owner to license, sublicense, sell, or otherwise authorize the use of the software, whether in executable form, source code or otherwise, by any third parties.
4. All express or implied warranties relating to the software shall be deemed null and void in case of any modification to the software made by any party other than Contractor.
5. During the life of the system (defined as a period of not less than 10 years and not more than 15 years), the Contractor shall provide software updates in accordance with all necessary support requirements to maintain the system. This shall include a commitment to provide appropriate patches, fixes, and interface updates as necessary to maintain the operability and security of the system at a level commensurate with the original system.



- 1) In the event that computer and or processor hard ware refinements and updates are necessary to support software updates 7 years after substantial completion, said hardware will be provided to owner at the agreed upon terms for change orders of the original contract.
  - 2) Labor shall be in accordance with change order rates of the original contract, as adjusted for inflation in accordance with project General Conditions.
6. All hardware supplied shall support software updates for a period of not less than 10 years following substantial completion.

### **1.11 WARRANTY/MAINTENANCE**

- A. Warrant labor and materials for twenty four (24) months following the date of final acceptance or the second, trouble-free, University of Nebraska women's volleyball game played in the arena, whichever is later, to be free of defects and deficiencies, and to conform to the drawings and specifications as to kind, quality, function, and characteristics. Repair or replace defects occurring in labor or materials within the Warranty period without charge.
- B. Installer and LED display manufacturer warrant that complete spare parts will be available for purchase and under an optional service agreement for a period of not less than 10 years from substantial completion.
- C. This warranty shall not void specific warranties issued by manufacturers for greater periods of time, nor shall it void any rights guaranteed to the Owner by law.
- D. Within the warranty period, Installer shall be required to answer service calls within 4 hours, and mitigate the problem within twenty-four hours.
- E. Provide alternate pricing, as requested on the Pricing Form, for a maintenance contract that would provide comparable benefits to those of the warranty described above.
- F. Preventative inspections shall occur 30 days before the beginning of the second and third seasons (one of the inspections will be occurring immediately preceding the expiration of the 2 year warranty period).
- G. Warranty to include written commitment to guarantee availability of spare parts required to maintain operation of LED displays (LED modules, screen processors, etc., not content management systems) for a period of 7 years after substantial completion.

### **1.12 OPTIONS, ALLOWANCES AND UNIT PRICING**

- A. Cost to replace two corner fixed digit display with 16 .mm RGB matrix displays, 3 ft x 6 ft.
- B. Cost to replace electronic equipment listed in section 2.6 below with the ability to display a DVD/Blu ray disc from the scoreboard control location by changing input to process to disc player as part of the display control software or via a simple, labeled hardware switch/button or electronic control of switching located in event level HuskerVision control room.
- C. Service Contract for parts only for Years 3 through 10 for the scope of work described in this specification . Pricing shall remain in effect until the end of the warranty period or until the Owner accepts or declines this service contract whichever occurs first.
  1. Requirements of service contract.

- 1) All costs for US factory parts repair or replacement shall be included.
  - 2) Following expiration of warranty period, owner will remove failed components from display (scoring or video) and ship, at owner's expense, to US repair depot.
  - 3) Installer (or installer's Supplier) shall repair or replace components and ship to owner, at installer's expense using next-day delivery for Tuesday to Saturday deliveries (at project site). Installer shall ship repair parts, within 24 hours of request of owner, prior to their receipt of failed part.
  - 4) Repair and return shipment shall be in a timely fashion to maintain display operation.
  - 5) In the event of parts failure of more than 5% of the display(s), the installer shall dispatch to the site, at installer's cost, factory technicians to assess cause, and means of returning to operation. Site visit timing shall be coordinated with owner, and in the event that adequate notice is provided (36-48 hours), shall be provided prior to stadium events where more than 50% of the facilities seating capacity is expected.
- D. Service Contract for extended warranty (parts and labor) for Years 3 through 10 for the scope of work described in this specification. Pricing shall remain in effect until the end of the warranty period or until the Owner accepts or declines this service contract whichever occurs first.
1. Requirements of service contract.
    - 1) In-season response time for each venue to be the same as for the base warranty
    - 2) All costs for US factory parts repair or replacement shall be included.
    - 3) Following expiration of warranty period, owner will remove failed components from display (scoring or video) and ship, at owner's expense, to US repair depot.
    - 4) Installer (or installer's Supplier) shall repair or replace components and ship to owner, at installer's expense using next-day delivery for Tuesday to Saturday deliveries (at project site). Installer shall ship repair parts, within 24 hours of request of owner, prior to their receipt of failed part.
    - 5) Repair and return shipment shall be in a timely fashion to maintain display operation.
    - 6) In the event of parts failure of more than 5% of the display(s) modules or power supplies during the warranty period, the installer shall dispatch to the site, at installer's cost, factory technicians to assess cause, and means of returning to operation. Site visit timing shall be coordinated with owner, and in the event that adequate notice is provided (36-48 hours), shall be provided prior to arena events where more than 50% of the facilities seating capacity is expected.
- E. Cost for annual pre-season "health check" for each display. Service to include updating of all software, verification of all control and display functions, repair (from owner spare inventory) of all displays and control equipment. The intent is, to the extent possible, bring the system up to as new operating condition and performance. Provide annual cost for each venue, guaranteed for years 3 through 10.
- F. Cost for 16 mm SMD, end wall displays
- G. Provide unit price for one (1) locker room clock, installed flush or surface mount.
- H. Cost for LED courtside table system lengths are overall.
1. H1 – 20 ft. long assembly (2 sections)
  2. H2 – 40 ft. long assembly (4 sections)
  3. H3 – 60 ft long assembly (6 sections)
- I. Deduct cost to remove the existing displays in working order. This alternate includes disposal.

**Part - 2 PRODUCTS****2.1 SPECIFIED PRODUCTS AND MANUFACTURERS**

- A. Model numbers and manufacturers included in this specification are listed solely as a standard of quality and are not meant to exclude other products and manufacturers if the proposer can establish the quality and reliability thereof, in the sole discretion of the Owner, as described below. Regardless of the length or completeness of the descriptive paragraph herein, each device shall meet all of its published manufacturer's specifications. Proposers are required to verify any such products or manufacturers continued performance is as required herein. Where two or more acceptable products are listed, the Installer may use either at his option. Listing of a specific manufacturer does not imply automatic acceptance of that company's product or submission, nor does it certify that vendor is accepted as qualified to perform work under this contract. Listing is to be considered only as an invitation to provide proposal. Where a manufacturer or vendor rather than a specific product model is listed, that manufacturer is required to meet all performance requirements outlined.
- B. Other qualified manufacturers will be considered subject to approval of technical data, samples, demonstrations and/or results of independent testing laboratory tests (if necessary to verify performance) of proposed equipment, submitted in accordance with project requirements.
1. If proposed system includes equipment other than specified model numbers, submit a list of major items and their quantities, with a one-line schematic diagram for review.
  2. Include a list of previously installed projects using proposed equipment that are similar in nature to specified system.
- C. All equipment supplied shall be new and meet the latest published specifications of that product. In the event that the product is enhanced, or improved, supply the newer product at no additional cost.
1. If product is discontinued or made obsolete due to continuing product development, replace it with manufacturers' equivalent at time of installation at no additional cost.
  2. If product is discontinued or made obsolete due to technology change, substitution will be based on fair market value of accepted and proposed products, upon approval of substitution by Owner's Representative.
- D. All materials shall fully comply with Underwriter's Laboratories or other acceptable testing agencies acceptable to local authorities with jurisdiction.
- E. Under no circumstances shall the manufacturer's name, logo, or representation be visible to the public.
- F. Suppliers invited to respond to this RFP are done so with no implication or certification that manufacturer's proposed products meet the technical requirements of this specification. Potential vendors are invited to prepare prices for more than one display/system type meeting these specifications (i.e. different pixel spacing, software provider, etc.). Suppliers invited to respond to this RFP include:
1. Prime Contractors
    - 1) ANC
    - 2) Capturion Network
    - 3) CBS/Viacom Outdoor
    - 4) Daktronics
    - 5) Titus1/Nevco Scoreboards - - Not on vendor list??
    - 6) LSI/Saco
    - 7) Mitsubishi
    - 8) Panasonic
    - 9) TS Sports
    - 10) Yesco
    - 11) As approved
  2. LED Video and Matrix Displays (installers that do not manufacture LED modules to provide name/origin of OEM supplier)
    - 1) Capturion
    - 2) Daktronics

- 3) LSI/Saco
- 4) Lighthouse
- 5) Mitsubishi
- 6) OptoTech/Viacom Outdoor
- 7) Panasonic
- 8) Yesco
- 9) As approved
3. LED Lamp Suppliers
  - 1) Cree
  - 2) Nichia
  - 3) As approved
4. Scoring control and fixed digit equipment/software:
  - 1) Daktronics
  - 2) OES
  - 3) As approved
5. Scoring, Animation/Stats Content Control Software
  - 1) ANC Visionsoft
  - 2) Click Effects Crossfire
  - 3) Daktronics Venus/Show Control
  - 4) As Approved
6. Alternate Courtside Table Structure
  - 1) EDS/Signco from Titus 1
  - 2) As approved.

## 2.2 PHYSICAL DESIGN CRITERIA

- A. General: Engineer systems to the most stringent applicable code.
- B. Seismic Loads: Subject to the Building Official's approval, seismic design shall be under the Building Code in use for this project.
- C. Recommended Minimum thicknesses, gauges and standards:
  1. All sheet metal shall have a minimum thickness of 18 gauge.
  2. Structural steel members shall have a minimum flange, web or wall thickness of 1/4 inch. Aluminum must be of size to achieve same structural capabilities.
  3. Where similar connections and members are used in other areas of the arena, every effort shall be made to detail and furnish members in a consistent and uniform manner.
- D. Enclosure and structure. The structure that is available is provided under separate contract and should be reviewed, as all additional structure, lighting, power distribution, convenience outlets, and other items for installation, operation, maintenance, and repair is this contractor's responsibility.
  1. Installer to submit complete drawings showing the connection of the Installer supplied equipment to the structure at each different condition.
  2. Installer to submit design calculations, bearing structural engineer's stamp for review. Review will be for design intent only and shall not be construed as approving the design analysis.
  3. The internal module structure, supports, attachment and anchoring members, mounting hardware shall be provided in accordance with engineering standards and governing codes.
  4. Enclosure.
    - 1) Enclosure to be shop fabricated, anodized aluminum, style and color as shown on the Owner's scoreboard concept drawings. Construction to comply with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other industry standard practice. Form exposed sheet metal work without excessive "oil-canning", buckling and tool marks with exposed edges folded back to form hem. Finish to comply with NAAMM "Metal Finishes Manual" for finish designations and application recommendations. For components which are assembled or welded in factory, apply finish after completion of fabrication.

- 2) Finishes shall match adjacent existing elements (such as building exterior metal panels), unless otherwise indicated.
  - 3) All welds shall be cleaned, primed and painted.
- E. Handrails and Railings: Provide any required handrails and railings in accordance with code requirements.
- F. Electrical
1. Provide complete power and branch circuit distribution within the enclosure from the existing demarcation point as shown on electrical drawings.
  2. Power Distribution: All panel boards or load centers provided with lighting units for power distribution to displays loads shall incorporate main breakers.
    - 1) Panel boards to be located so as not in public view.
    - 2) Provide utility power distribution as noted herein.
  3. CONCEAL CONDUIT AND DISTRIBUTION WITHIN ENCLOSURE.
  4. Provide lockable load center, breaker panels, and disconnects. Provide minimum of 8 keys per lock.
  5. All materials shall fully comply with Underwriters's Laboratories or other acceptable testing agencies acceptable to local authorities with jurisdiction.
- G. Provide natural or forced ventilation as required for operation of all components. Provide all necessary dust and dirt filtration for the ventilation system. NC level attributed to this ventilation shall be no more than NC 40 at nearest seat.
- H. Unless otherwise noted the following is the requirement for spares throughout the Scoring and Matrix system:
1. Provide 2% (or one if 2% is less than one) spare parts of lighting units, lamps, modules, fans, and elements, including cables, jigs and the like.
  2. Provide one (1) spare printed circuit card and transmit/receive interface of each type used in the system.
  3. Provide 25% spares of any air filters—after final acceptance.
  4. Provide extenders where required for service and maintenance of equipment.
  5. A freestanding testing unit to test and/or adjust individual lighting components in the interior of each rear-accessed display.
- I. Provide a single spare for each transceiver (line driver) type used by the scoring/matrix system.
- J. Service Requirements
1. All screws and nuts that are required to be removed for access to displays shall incorporate captive screw and nut type designs.
  2. A minimum of one of any specialized or custom tool required for maintenance of the display; including any specialized/custom ladders, bosun's chair, or scaffolding required to service displays for maintenance and repair.
- K. Provide primary and backup connection from each display to control system in Scoreboard Control location and other specified control locations.

### **2.3 ARENA END VIDEO DISPLAY ASSEMBLY**

- A. Arena end video display assemblies to be comprised of the following elements in accordance with drawings:
1. Video Displays
  2. Scoreboard structure, cable and access platforms/catwalks with stair (not ladder access) and any other secondary or necessary steel/structure required for complete, turn-key system.
  3. Architectural enclosures, as shown in concept drawings.
    - 1) Enclosure to hide structure and rear of display assembly from public view in accordance with architectural drawings.
    - 2) Provide an access door as required into the scoreboard enclosure.
    - 3) Scoreboard Installer shall include electrical power and on/off control to video display as part of the base proposal scope.

- B. Scoreboard structure and access platforms. Display enclosures and structure are to be included as part of the Installer's work. Provide interior work lighting on each catwalk/platform level, switched at the base of the display, interior power distribution, access mechanisms, electronic equipment and power transformer mounting, convenience outlets, and other items for required installation, operation, maintenance, and repair. This shall include, but not be limited to, the following standards:
1. Provide complete power and branch circuit distribution within the enclosure from a demarcation point at tension tie catwalk level.
  2. In addition to power distribution required by scoreboard, and items indicated in Part IV of this specification. Provide 6 utility AC power outlets (for a total of 3 circuits) at catwalk/platform locations in each end enclosure, to be established during shop drawings. Outlets to be quad type.
    - 1) Provide necessary connections for all display elements with control system from Scoreboard Control Room.

## 2.4 RGB LED VIDEO/MATRIX DISPLAYS

- A. Technical Standards:
1. The Video Display shall incorporate direct view technology; utilizing only the following technologies:
    - 1) Surface mount package, Light Emitting Diode (LED)
  2. Brightness: 16 levels of base illumination, including 0%, 25%, 75% and 100%.
  3. Brightness shall not fall below (at 100% ref white generated by external input):
    - 1) 2000 nit within first 20,000 hours of operation after acceptance.
  4. Uniformity of brightness (post calibration):
    - 1) Adjacent pixels 2.5%,
    - 2) 6% total variation across entire display, brightest to darkest pixel/module.
    - 3) Uniformity standards to apply over entire viewing angle specified with no perceptible color shift.
  5. Displays: 160° minimum horizontal angle (defined as 50% of on axis brightness) of viewing and 140° (nominal  $\pm 70^\circ$  with screen vertical) of vertical.
  6. Outdoors: 140° minimum horizontal angle (defined as 50% brightness) of viewing and 110° vertical (nominal  $\pm 60^\circ$  with screen vertical) Color temperature to remain constant over 50% brightness viewing angle range.
  7. Color temperature of display: 7,000-9,300 Kelvin. Uniformity of 250 K between adjacent pixels and 8% across the entire display. With remote set-up and control to adjustment and balance of any pixel/module in display for uniform display color temperature through 10,000 hours of use.
  8. Displays to be able to be serviced from rear of screen. Should front service be mandatory, provide maintenance procedure information for review with proposal.
  9. Flicker-less display
  10. Provide ability to show independent images on each screen.
  11. Provide redundant processors for both main video and upper video displays, with manual "A/B" switch to allow back up processor to be inserted into signal chain in event of a failure in the event that system does not offer automatic failover. In back-up mode, the ability to display independent images on each display is not required.
  12. The processors shall be configured to support the following inputs:
    - 1) Component Serial Digital input (i.e. ITU-R 601; SMPTE RP-125)
    - 2) HD-SDI input supporting all common Digital Television (DTV) Production standards (e.g. 480p; 720p, 1080I/P), ATSC.
    - 3) Processor to allow up to 4 simultaneous (not independent) images to be displayed
    - 4) Processor or associated equipment to support keying/transition functions
    - 5) Provide method of playing DVD or Blu-Ray disc or Laptop computer with DVI out without operating video production system should processor not feature HDMI, component or composite video inputs. (via HD-SDI)
    - 6) Processor to have composite, component and VGA/DVI monitor outputs
  13. Provide connections, cabling and appropriate backups from HuskerVision to board to support the following connections:
    - 1) Digital Television Production standard (e.g. 480p; 720p, 1080I/P)..

- B. Pixel resolution: 10 mm SMD physical
- C. Active Area: 13 ft x 23 ft.
- D. Video screen electronics remote control system to provide complete screen control of
  - 1. Brightness level,
  - 2. Video display power on/off, independently for each display/screen.
  - 3. Video Input Selection
  - 4. Image positioning, sizing, and scaling,
  - 5. Color level,
  - 6. Hue,
  - 7. Contrast
  - 8. Sharpness
  - 9. Remote lighting unit location testing and color display test. This pattern shall display a map that corresponds to the address of each unit's physical address.
  - 10. These controls shall be provided for all inputs to control system processor.
- E. Power control system to allow video displays facing end-stage to be turned off and on independently if desired, or display a "black" video image without the need to "lift" signal lines/patches, etc.
- F. Un-interruptible Power Supply (UPS). Provide UPS on screen processor(s), electronics, etc. that may be disrupted by momentary loss of power. UPS shall be designed to support signal processing path (not display) for 180 seconds.

## 2.5 VIDEO PROCESSOR

- A. The processor shall be configured to support HD-SDI inputs. Provide ability to display 1080P program material as derived from a SMPTE 424M stream, or other 1080P stream as acceptable to HuskerVision. It is recognized that this specification requirement is a new goal, so in the event that requirement adds a significant cost to the project, please identify a Value Engineering Proposal for standard 720/1080I inputs.
- B. Provide connections, cabling and appropriate backups from Video Replay (1A.02.09) to displays.
- C. Specific Input Configuration:
  - 1. 4 HD-SDI plus a dedicated HD-SDI alpha channel to be associated with one of the inputs
  - 2. Processor shall be able to support having 3 simultaneous sources on screen, while transitioning to 2 sources and back again without glitch, stutter, shimmer, black frames etc.
  - 3. Shall be capable of using a second input as a linear alpha key or chroma key.
  - 4. Processor VE
    - 1) If these requirements place significant cost burden on the processor, indicate savings achieved with a more limited input and/or simultaneous display configuration within the VE portion of the proposal form.
    - 2) IN the event that vendor is able to directly pixel map scoring information from Section 11141 onto displays within 11140, then the savings for this feature may be reflected in the combined scope option.
- D. Remote operation.
  - 1. Preferred method of operation will be for a processor which responds to the P2 protocol common in production switchers which allows for effects (in this case processor transitions) to be queued, run, and rewind.
  - 2. Alternate method of operation will require the processor to respond to contact closures from the production switcher to achieve the same effects. (Assume need for 8-12 contact closures to recall specific preset configurations, and then exercise the transition).

- E. Processor shall output a signal to video control/video replay system which represents a composite of the same “feed” which is being sent to the video display.
1. If these requirements place significant cost burden on the processor, indicate savings achieved with a more limited approach within the VE portion of the proposal form.
  2. The following formats are acceptable:
    - 1) HD-SDI (preferred)
    - 2) DVI (secondary)
    - 3) SDI
  3. If a computer is used as part of the processor—or used for remote control or any other functions of the video board—provide a complete backup computing system running in a full-time, on-line backup mode with appropriate disk mirroring.

## **2.6 ELECTRONIC CONNECTION BETWEEN SCORING, VIDEO/PRODUCTION/LOCAL SOURCE SYSTEMS AND RGB MATRIX BOARD ELECTRONIC CONNECTION BETWEEN REPLAY SYSTEM AND VIDEO BOARD.**

- A. All cable will be run in conduit and/or cable tray from the Scoreboard Control location to video display.
- B. A separate, back-up cable shall be provided.
1. Include electronics, patch panels, and/or jackfields required at Scoreboard Control Room and video display to accept and easily switch to backup cabling without changing cables at the rear of equipment. Provide a laminated drawing or graphic installed on inside of lid or adjacent to all patch panels/jack field indicating location, labeling of cables and function.
  2. Cross connecting the back-up cable shall be provided at the following locations
    - 1) At the Event Level Huskervision Control Room; system to include:
      - a) Video display processors
      - b) Cross-connecting patch panels in control room. Inputs to include::
      - c) HuskerVision feed
      - d) TV truck dock feed (for mobile vehicle video program)
      - e) Local DVD/Blu-ray player with media converter appropriate for switcher and display control system inputs.
      - f) Video Switcher to be located in display system control racks:
        - (1) TV One C2-7310
        - (2) As approved.
      - g) Audio Switcher to be located in HuskerVision racks
        - (1) TV One A2-7322
        - (2) As approved (
      - h) Program Monitor for verifying switcher input and output
        - (1) Electronics V-R102DP-HDA
        - (2) As approved
  3. System Installer is responsible for wiring to and from these patch points. In the event the installer uses fiber-optic connections—provide a cross connect and splice tray for this purpose.
  4. Spare cables to be terminated, labeled, landed on the patch bay/jack field and shown on the drawing/graphic.

## **2.7 DISPLAY CONTROL SYSTEMS**

- A. Contractor shall provide all applicable control system software updates for a period of 10 years after substantial completion at no additional cost.
- B. General Configuration
1. Computer based control system hardware shall exhibit sufficient computer processor power and speed to generate images instantly on command without lag, sputter, or stutter during recall, operation, and display.



2. Images must be able to move smoothly through the entire length of the fascia display in a continuous circle if programmed to do so. Flicker-less display for both static and moving images. Image control and distribution system to allow the display of smoothly moving images with no flicker, jerking, and “stop motion” around entire 360 degree circumference of the Venue. Processing to allow full 360 degree movement. Mirror image programming on displays is not acceptable.
3. Software packages and control electronics shall provide specified operational features. Game scoring and clock function data to be provided by Scoreboard control system.
4. System to be capable of:
  - 1) Showing GIP and stats information on any LED matrix/video display in system
  - 2) Compositing live video and GIP/Stats/Alphanumeric information on a single, video capable display
  - 3) Creation, storage and display of head shots, DVI, MOV h.264 files, AVI, JPEG, etc. files on any LED matrix/video display.
5. All control system software and messages shall be stored in non-volatile (disk) format.
6. Back-up computing and redundancy.
  - 1) Network server and centralized file storage shall incorporate fully on-line, completely redundant processing (or mirror masters), including duplicate storage devices (i.e.; RAID arrays).
  - 2) All computers, processors, and control panels shall be inter-networked.
7. Computer system shall be fully redundant with back-up, mirror processors on-line.
8. Computer System shall be able to import common computer interchange graphic file formats (e.g. MOV, AVI, TIFFs, GIFs, DVI, JPG, MJPG, etc.)
9. All distributed processing computers shall be located in physically accessible spaces (e.g. control room, riser closets). Above ceiling mounting is not acceptable.
10. System to accept trigger/contact closure signal from Venue life safety system to automatically initiate a stored message on the portions of the displays systems on emergency power. Trigger/contact closure to be brought to control system racks by others.

C. Minimum Workstation specifications.

1. Different configurations which meet these standards are acceptable. All computers in this system to be of same manufacturer, with identical specifications and features.
2. Acceptable Manufacturers: Dell, Lenovo, HP, Apple, Sony, or approved equal.
3. Processor: as required to meet specified operating performance without noticeable delays or productivity impediments.
4. Cases:
  - 1) Rack Mount
5. Memory: 6 gigabytes (minimum), expandable as required; if software requires additional memory to function, provide at no cost to owner. (In other words we do not expect to have to add memory to get processors to function correctly.)
6. Hard Disk: Multi-media class, fast access speed; capable of storing 2 seasons worth of material
7. Removable media:
  - 1) CD/ DVD±R/-R/+R/RW drive 8x DVD speed (minimum)
8. Power Supply: 350 watts (minimum)
9. Video: 64 bit graphics accelerator capable of 32 bit colors at 1920 x 1080. Refresh rate to be at least 72 Hz. Configure system to run at 1280 x 1024.
10. Monitor: 22" flat screen; active matrix, LCD (e.g. Viewsonic, LG, Samsung, Sony or Philips). Mounted on articulating arm.
11. Mouse: Three button Microsoft Intellimouse mouse.
12. USB: Two (2) front and Two (2) rear panel ports, minimum.
13. Keyboard: full size with separate numeric keypad and cursor control.
14. Keyboard, Mouse and Monitor extenders. Provide as required to support these devices at some distance from the rack mounted CPUs.
15. Computer system shall be completely tested by manufacturer prior to delivery.
16. Fast Ethernet 100/1000 Ethernet adapter
17. Provide with a 15 minute UPS (Uninterruptible Power Supply) for computer and monitor. Provide rack mount UPS for rack mounted computers.

## 18. Software:

- 1) Operating system appropriate to needs of application and control software. All updates applied.
- 2) All application and control software necessary to interface this computer to scoring system for configuration and operation.

## D. Provide the following workstations, at minimum:

- 1) Animation Controller; Primary
- 2) Animation Controller; Secondary
- 3) Primary Server
- 4) Back-up, mirroring Server, including storage, i.e.; RAID arrays.

## E. Control System configuration to include on-line redundant backup controller and server as required.

## F. Networked Functions. The following devices should be configured to be shared on a network between individual workstations should more than one workstation be required to control system:

1. Internet gateway: via network connection to complex or Venue operator's computer system
2. Internal and exterior data ports to support, at a minimum:
  - 1) Sports Ticker feed/Conference/League statistical service.
  - 2) Feed from sports scoring computer/control system.
  - 3) Feed from Venue video production system.
  - 4) Captioning device on-site or via telephone or internet based remote service.
3. Network Back-up Requirements:
  - 1) Each machine shall be able to be backed up over the network to shared storage mediums.
  - 2) storage mediums:
    - a) Long Term
      - (1) Tape drive back-up
      - (2) LTO based
      - (3) 800GB capacity (compressed)
      - (4) Integral tape changer to permit up to 6 tapes to be used.
    - 3) Back-up software
      - a) Appropriate network and client software to permit system to be backed up to (and restored from) long term storage device.
      - b) Software shall permit backup of:
        - (1) network servers
        - (2) individual workstations
      - c) Software shall be configured to run at user definable intervals.
      - d) Software shall permit full or incremental backups.

## G. Hardware Control functions

1. Brightness controls: Provide a minimum of three brightness levels for each matrix display. Base brightness levels shall be 50 to 65%, 75% and 100% of full brightness.
2. Clear ("oops") Button: Provide a special clear button in addition to the keyboard control that will immediately clear each matrix board. This will override any display in progress, and allow the operators to immediately remove any messages or animation.
3. Emergency message: Provide a special button or "soft" key on keyboard to initiate a minimum of six different stored emergency text messages of Owner's creation, on all displays capable of text.

## H. Software Control Functions and Features:

1. Character and Animation Features: All control system software and messages shall be installed on the internal hard disk drive with backup systems stored on floppy diskettes, or CD ROM.
2. Character, Animation and Symbol Generation: Generation, control and placement of any display pattern in any area of the RGB Matrix Display systems. Patterns to include pre-programmed volleyball and basketball Game-In-Progress (score, game clock, period, time outs left, team fouls, bonus/penalty, possession, game/match score) display formats. Programming should allow the operator to modify the existing display format or store and recall custom formats generated by operator. Information shall be able to be acquired

- via Sports Ticker or other third party services as identified by the team. These feeds to be interfaced directly with scoreboard control system, with automatic, real-time update capability. Contractor to coordinate interface with outside information services with the team.
3. Game in progress information to be able to be displayed on zoned segment of Lower Suite fascia display north and south ends, as well as zones created within center hung matrix displays. Display of clock must not show any delay from game clock displayed on goal clocks.
  4. Animation: Matrix animation. Refresh at a minimum of 30 frames per second. Maximum of a one second response to a control system command.
  5. Preview: Preview animations or messages on the control system monitor prior to display on RGB Matrix Displays. Maximum of a one second response to a control system command.
  6. Message formatting requirements:
    - 1) Zoning: 16 user definable display zones (separate areas for displaying information) within fascia display with the size and location determined by the operator. Provide 4 zones within each center hung advertising ring. Zones to be controlled individually, in groups, or totally at the same time, for all matrix boards, including auxiliary boards.
    - 2) Character Fonts: Upper and lower case character generation. Include a minimum of ten separate fonts, including double and single characters. In addition provide the capacity for one additional user definable font for storage and retrieval as a standard character set. Provide modification capabilities to all fonts and characters.
    - 3) Symbols: A minimum of 100 line symbols to assist in operator graphics creation. In addition provide unlimited number of user definable symbols.
    - 4) Advanced message composition, including auto centering, left and right justification. Character by character editing with the ability for font changes of existing text without text retyping.
    - 5) Bulk deletion of messages or selected deletion of individual messages or groups of messages.
    - 6) Messages shall be able to crawl or roll in predefined zones with a minimum of four separate speeds.
    - 7) Temperature, time of day and date programming.
    - 8) Clocks: Provide capability to define location, size, fonts, and format of clocks on any matrix board segment.
  7. Effects: Provide the following effects for characters, messages, symbols and animation:
    - 1) Operator control of message, including sequencing and timing.
    - 2) Continuous, seamless scrolling of selected zones of any matrix board with at least three separate speeds.
    - 3) Vertical and horizontal Venetian blind change.
    - 4) Horizontal travel with a minimum of three separate speeds.
    - 5) Vertical scroll with a minimum of three separate speeds.
    - 6) Wipe up/wipe down.
    - 7) Wipe left/wipe right.
    - 8) Wipe in a random-dot fashion.
    - 9) Expand horizontally.
    - 10) Expand vertically.
    - 11) Transitions inside special effects shall include “dissolve”, and “black hole” effects. Black hole and zoom effects to have user definable directions and origins.
  8. Control system to allow designation of “soft” keys for rapid display of standard game conditions.
  9. Security Code Access: Passwords shall be available to system users to log into and access the control of the display system.
  10. Message Display Procedure: User can develop a display “play list” that can include an unlimited number of files (messages) in a specified order, for a specified period of time, at certain times of the day. Individual files can be given time constraints so that a message can be dropped from the displayed after a given number of times.
    - 1) Playlist scheduling software for Owner designated 24/7 type displays to be loaded Owner provided computers in addition to control workstation computers provide by Contractor to allow control of displays via the Owner’s data network

- 2) Overall display control software to allow scheduled functions to be overridden with content from the Venue control workstations to allow all displays in system to provide integrated content and timing when desired.
  11. Off Line Programming: New messages, procedures, and displays can be entered and programmed into the system during the display of existing file(s) from any terminal (Network Control Systems).
  12. Internet access Message Logging and Recall:
    - 1) Control system to allow 24/7 playlist scheduling of exterior display(s) with ability to insert real time video or Venue game-in-progress information upon command.
    - 2) All displayed messages or animations shall be recorded into a Message Log. The Message Log shall be tied into the game controller and statistics memory. Any message or selected number of frames of animation can be retrieved from the Message Log and printed on the system printer.
      - a) All displayed files, messages or animations shall be recorded into traffic database (log).
      - b) At a minimum every file, message or animation in the traffic database shall provide:
        - (1) a description of the event,
        - (2) title of the message or animation,
        - (3) dates and times of display,
          - (a) date and time of first display.
          - (b) date and time of last display.
          - (c) other dates and times of display.
        - (4) duration of display, which display(s) received the message,
        - (5) Client (e.g. advertiser, agency or network) associated with message or animation.
          - (a) sub-client information related to the piece (e.g. identifying a specific advertising campaign,
          - (b) Contact information (e.g. name, phone, address, billing codes, etc.)
        - (6) Missed display (e.g. scheduled, but did not occur due to being “pre-empted” by live piece or higher priority material).
      - c) Traffic reports shall be able to be created based upon user definable fields such as:
        - (1) client,
        - (2) element (e.g. file, message, animation, etc.).
        - (3) daily, weekly, monthly, etc.
      - d) Traffic reports shall be able to be generated in MS Excel.
    - 3) Vendor shall provide the ability to host this internet log on a password protected web site specific maintained by vendor for a period of not less than 15 year as part of their base bid proposal.
    - 4) Owner shall be responsible for providing internet connection between Venue and vendor’s server.
  13. Direct Control: Provide direct access and control of game statistics from previously designated remote locations or control room, generated by the operator from both control system locations.
  14. Real Time Access: Provide access from any message console to current messages, statistics, game-in-progress and animation.
  15. Provide Owner all software updates released by Contractor for other customer use that apply to installed systems for a period of 10 years.
- I. Animation Display Packages:
1. Provide a minimum of 5 minutes of moving sports and sponsor animation sequences which are conceived to be completely custom for the Venue.
  2. Provide programming and “animation” (ie; rotating) of static graphic images and UNL/conference/sponsor designated logos. Provide no less than 60 logo displays will need to be generated in addition to custom animation listed above.
  3. All animations must be accepted by the Owner or tenant’s authorized marketing agent.
    - 1) As with all custom animations, it is expected that the review process will be iterative and that 2-3 submittals might be required to arrive at final accepted animations.
  4. Animations shall be from up two separate suppliers; selected in concert with Owner. (Note animation incentive options regarding this item).

- J. Provide the following pre-programmed display formats: statistical and timing functions. Include variations of pre-programmed displays for the support of high school, Big Ten and other events as defined by the UNL.
1. Volleyball
  2. Gymnastics
  3. Gymnastics; team, individual, and event scoring. Interface to any existing event/apparatus scoring if electronic.
  4. Basketball (separate men's and women's templates, three each)
  5. Wrestling event and individual scoring. Interface to any existing event/apparatus scoring if electronic.
  6. High school basketball
  7. High school volleyball
  8. Installer/programming sub-contractor to work on-site, with UNL staff in determining layout and content of pre-programmed displays. Each message shall be capable of being displayed on any matrix board.
  9. System to include data interface to allow game in progress information to be provided to broadcasters, without interface to display system control.
- K. External Data Control System: Provide system software related primarily to game statistics. Software shall interact with outside agency statistics (i.e.; Sports Ticker, Eias Stock ticker, Stat Crew; Big Ten, NCAA basketball, volleyball, football and wrestling stats; etc.) via modem, satellite, or internet interface by Scoring system Contractor, or manual entry by operator. Communication connection will be provided to control room under a separate contract. Provide for the system to be interfaced to broadcasters and the Video Replay System's character generator. Subscription costs for outsidess services are the responsibility of Owner and tenant.
- L. Diagnostic Software: Provided to assist the Owner in diagnosing, isolating and repairing deficiencies in the display and control system, including defective lamps.

## 2.8 GAME IN PROGRESS/STATISTICAL INFORMATION CONTROL

- A. Contractor shall provide all applicable control system software updates for a period of 10 years after substantial completion at no additional cost.
- B. General Configuration
1. Dedicated scoring/clock/statistics (possession, time outs left, etc.) shot clock control consoles for use court/ice side. Provide (2) units of each type used.
  2. To be able to deployed at press level as directed by Owner and at playing surface.
  3. Computer based control system hardware shall exhibit sufficient computer processor power and speed to generate images instantly on command. Software packages and control electronics shall provide specified operational features. Game scoring and clock functions to be controlled, when necessary from dedicated (non-desktop computer based) control console. Provide spare game function control console. Cabling for console to allow operation from each sideline.
  4. Statistics module shall support:
    - 1) Volleyball: PLYR KILLS DIGS, etc.
    - 2) NCAA gymnastics participants, results, team scoring with interface to owner scoring system
    - 3) Basketball: PLYR FLS PTS, AST, REB, Penalty/Bonus, Possession
    - 4) Indoor/outdoor Football: ON DN TOGO
    - 5) Indoor Soccer: PLYR PNLTY
    - 6) NCAA wrestling
  5. All control system software and messages shall be stored in non-volatile (disk) format.
  6. Back-up computing and redundancy.
    - 1) Network server and centralized file storage shall incorporate fully on-line, completely redundant processing (or mirror masters).
    - 2) All game scoring functions (e.g. scoring computers, control panels, etc.) shall be completely backed-up with redundant equipment (not necessarily full-time, on-line).
    - 3) All computers, processors, and control panels shall be inter-networked.
  7. Computer system shall be fully redundant with back-up, mirror processors on-line.

- C. Specialty feed support (minimum provision):
1. Sports Ticker feed.
  2. Big Ten and NCAA Statistics plus any other sports tenants feeds (e.g. MISL, AF2, etc.).
  3. Feeds to network display interfaces (e.g. Fox Box, CBS and ESPN) Cabling to be run to TV truck dock cable termination racks, to video production equipment in scoreboard room. Provide distribution to at least two (2) users at the truck dock.
  4. Statistics data and NTSC video feed to Video Production System character generator (e.g. Chyron, ClickEffects, Pinnacle Systems TypeDeko).
  5. Data input standard stenography (i.e.; Stenograph, Cheetah Systems, Eclipse) equipment. Coordinate exact system and interface requirements with team after award of contract. Captioner location expected to be in control room via internet and the EEG Icap solution at venue.
- D. Minimum Workstation Requirements
1. See section 2.7.
- E. Data Network requirements:
1. Coordinate with Project and Venue IT representatives for data drops, port requirements and any special switch configuration requirements, like QoS, VLANs, etc.
- F. Back-up software
1. Appropriate network and client software to permit system to be backed up to (and restored from) long term storage device.
  2. Software shall permit backup of:
    - 1) network servers
    - 2) individual workstations
  3. Software shall be configured to run at user definable intervals.
  4. Software shall permit full or incremental backups.
- G. Provide the following pre-programmed display formats: statistical and timing functions. Include variations of pre-programmed displays for the support of basketball, soccer, lacrosse, volleyball and Venue football pre-programmed display formats (including statistical displays), or the ability to store and retrieve operator generated formats. Contractor to work with Owner and tenant's staff in determining layout and content of pre-programmed displays. Each message shall be capable of being displayed on any matrix board. System to include data interface to allow game in progress information to be provided to broadcasters, without interference to display system control.
- H. Diagnostic Software: Provided to assist the Owner in diagnosing, isolating and repairing deficiencies in the display and control system, including defective lamps.
- I. Spares: Provide one set of back-up disks of all software.
- J. All scoreboard specific software, e.g. scoring, statistics, control electronics, etc. shall be provided to the Owner with a full site license to allow deployment at Owner's discretion.

## **2.9 GAME CLOCKS, GOAL LIGHTS, AND CONTROLLERS**

- A. Goal Shot Clocks
1. Technical Standards
    - 1) Direct View, three sets of (2), two sided, translucent Fixed Digit numerical displays for the arena and (2), single sided fixed digit displays for the practice court, with minimum brightness equal to 1,200 nits. LED units to be covered with lens or overall display element cover to create seven segment digit display. Bare lighting elements are unacceptable.
    - 2) Technology: monochrome LED—white.
    - 3) 100% Solid state drivers.

- 4) A minimum of two levels of brightness: 50% to 65% and 100%.
- 5) Electrical and control cabling connections to be made with “quick disconnect” hardware to facilitate removal and replacement of damaged display
2. Display to include red LED time expiration indicator strips.
3. Mount one unit above back board, centered, set back 2” from plane of backboard glass, mount second, smaller unit on arm of goal assembly in location as dictated by the University.
4. Practice court clocks to be mounted to Owner provided goals above backboard in location identical to arena installation
5. Portable displays need not be transparent type
6. Mount one, single sided shot clock near TV truck dock cabling termination room, in location as designated by Owner or tenant or their broadcast representative. This display need not be transparent type.
7. Size: minimum as required by NCAA regulations/standards. In absence of regulations shot clock digits to be a minimum of 14” high for unit mounted above backboard, 10” for unit mounted on arm of goal assembly
8. Install clocks on Owner provided goal assemblies.
9. Quantity:
  - 1) Three (3) mounted sets of two (2) clocks each, transparent, double sided for main arena.
  - 2) One (1) singled sided shot/game clock mounted at TV truck parking dock area per Owner’s direction.
  - 3) Two (2) portable clocks for use in either main arena or practice court with associated loose power and signal cabling.
10. Control Console Quantity: (3) shot clock, (3) scoring/game clock

#### B. Locker Room/Back of House Game Clocks

1. Technical Standards
  - 1) Displays provided in locker rooms and select other locations as listed above to allow team members and officials to view game clock at all times. Clock enclosure to allow flush mounting (rather than surface mount) in wall, where architectural conditions allow. Should site conditions prevent flush mounting, provide surface mount enclosures at direction of Owners Representative.
  - 2) Display may be LED, incandescent lamp or other directly illuminated source. LCD displays are not acceptable. Control cable to each display to be home run to controller interconnect junction box.
  - 3) Digit sizes to be no less than 4 inches high
  - 4) 100% Solid state drivers.
  - 5) A minimum of two levels of brightness: 50% to 65% and 100%.
  - 6) Electrical and control cabling connections to be made with “quick disconnect” hardware to facilitate removal and replacement or removal of display
  - 7) Enclosure to allow flush mounting in wall where possible.
2. Quantity: As scheduled
3. The Standard for Matrix Display Equipment shall be:
  - 1) Daktronics TI-2028/TI-2013.
  - 2) OES
  - 3) As Approved.

#### C. Scoring Controllers.

1. Provide a minimum of three of every type of controller.

### 2.10 FIXED DIGIT DISPLAYS

#### A. Fixed digit displays

1. Technical Standards
  - 1) Direct View, Single Sided Fixed Digit numerical displays with minimum brightness equal to 1.68 watt, #656 Xenon lamps on minimum 0.75” centers.

- 2) To be configured as a seven segment “bar digit”. LED units to be covered with lens or overall display element cover. Bare lighting elements are unacceptable.
- 3) 100% Solid state drivers.
- 4) A minimum of two levels of brightness: 50% to 65% and 100%.
- 5) Electrical and control cabling connections to be made with “quick disconnect” hardware to facilitate removal and replacement of damaged display
2. Team Name Matrix – Minimum 9 characters
3. Center Hung Element sizes: as shown on drawings.
4. Alternate Announcer’s Table, construction of table to be identical in style and features to scorer’s table described above
  - 1) Size 36” maximum height, 10’ long, including pads
  - 2) Functions to include:
    - a) Team name matrix, 9 characters
    - b) Game clock
    - c) Score
    - d) Period
    - e) Time outs left
    - f) Team fouls/bonus/double bonus
    - g) Possession arrow.
5. Quantity: Four (4)
6. Display standard of quality and function
  - 1) Daktronics VB-2101
  - 2) OES
  - 3) As approved
7. Control Console to allow volleyball and basketball scoring.
  - 1) Control Console Quantity (3) (2) scoring controllers with multi-sport scoring overlays. Provide carrying case for each. Each scoring console system shall include remote clock start/stop and horn control.
  - 2) Standard of quality for Control Console:
    - a) Daktronics All Sport
    - b) OES
    - c) As approved

## 2.11 ALTERNATE ELECTRONIC COURTSIDE TABLE

- A. Scorer’s table to include following features and items
  1. LED Display to meet the performance requirements listed for video displays above.
    - 1) Pixel Spacing: 10 mm maximum
    - 2) Active Area each section: 25 in tall (64 pixels) x 114 in wide (288 pixels); minimum.
    - 3) Provide separate workstation for control of courtside table content. System to allow table display operation to be integrated with overall control system in the event that a simultaneous file initiation is required or the displays are not operated independently from the main video displays.
  2. Table structure to be portable with locking casters and padded vinyl on ends and top.
    - 1) Provide facility/team logos on pads for each end of display.
    - 2)
    - 3) to schedule for LED display size and pixel resolution.
    - 4) Sections to be configured to allow connections for seamless display image.
    - 5) Provide electrical and signal connections to “daisy chain” sections together
    - 6) Sections to physically interlock and be on locking casters and leveling feet.
    - 7) Overall depth of table assembly (counter plus display) not to exceed 32”.
    - 8) Overall height of display not to exceed 36”.
  3. Provide 24 in (minimum) counter depth.
  4. Provide 4 in. x 4 in cable trough long front edge of counter. Trough to have hinged lid.



- 1) As an alternate to a trough, provide AC power, and data distribution on “back splash” vertical surface at front of counter.
5. Provide AC power connections and data connections every 30’ in along entire length of table and interconnections for service to connect between table sections.
6. Install time expiration LED light strips on new table including routing of wiring an test functionality
7. Coordinate location of control computer/workstation and data/power disconnects at floor with owner.
  - 1) Power to access display on one location. Provide “snake” of multiple AC power circuits with “fan out” or distribution at power connection end as required. Multiple runs from “wall to display” are not acceptable.

## 2.12 GENERAL EQUIPMENT

- A. Equipment Rack(s) to be frame and panel type with a minimum of 77" high by 36" deep panel space constructed of 16-gauge cold-rolled steel. Racks to have locking rear door mounted on the frame (not the rails). Empty mounting panel spaces to be filled with blank or vent panels, in a finish to match rack. Provide end panels and top panels as required. Provide shelving as required for equipment mounting within racks. Provide rack supports as required. Provide seven rack keys of each type. Rack color to be gloss or flat black. Provide fluorescent strip light in a locally switchable fixture mounted in the top rear of each rack. Include extra set of mounting rails in each rack for rear support of panels or equipment. Verify exact rack space required.
  1. Support Equipment
    - 1) Blank Panels
    - 2) Vent Panels
    - 3) miscellaneous equipment shelving
    - 4) rack screws
    - 5) power distribution
    - 6) rack light
  - 2) Scoring and Matrix Display System Racks to be:
    - 1) Middle Atlantic MRK racks, doors, sides, and top panels. (Quantity: As required for system)
    - 2) Other manufacturers should be submitted for approval. (Quantity: As required)

## 2.13 CONTROL CABLING

- A. Installation shall include all required and operationally necessary low voltage signal, control and fiber optic cabling from Scoreboard Control locations and HuskerVision room to each display. Scoring and clock controller to be able to be used for each sideline of the arena.
- B. Provide back-up to all cabling sufficient to maintain minimum sports tenant league required displays/information (including, game clock, score, team fouls, time outs left). Back-up may be fiber or copper. Back-up cable must be separately jacketed, independent cable and not additional conductors/fiber strands within an overall jacketed assembly.

## Part - 3 EXECUTION

### 3.1 GENERAL

- A. All equipment and materials shall be new. Take care during installation to prevent scratches, dents, chips, etc.
- B. Mount equipment and enclosures plumb and square. Permanently installed equipment to be firmly and safely held in place. Design equipment supports to support loads imposed with a safety factor of at least three. Seismic bracing shall be installed on appropriate equipment where local codes require such installation.
- C. Cover edges of cable pass-through holes in chassis, racks, boxes, etc., with rubber grommets or Brady GRNY nylon grommets.
- D. Provide event, portable cabling from courtside AV junction boxes to court/ice control operating positions for interconnection and operation of scoring systems.
- E. AC Power and Grounding
  - 1. Adhere to all local and national electrical codes and standards.
- F. All engraving shall be 1/8" block sans serif characters unless noted otherwise. On dark panels or push buttons, letters shall be white; on stainless steel or brushed natural aluminum plates, or light-colored push buttons, letters shall be black.
- G. Equipment and Cable Labeling
  - 1. Provide engraved lamicoïd labels on the front and rear of active equipment mounted in racks. Mount labels in a neat, plumb and permanent manner. Embossed labels are not acceptable. Equipment labels to have at least three lines of engraving with the first line listing the general name of the device. The second line to include the schematic reference of the device. The bottom line to indicate what other devices or areas this equipment controls.
  - 2. Provide an engraved label over each user-operated control that describes the function or purpose of the control. Label size to be adjusted to fit available space.
  - 3. Engraved labels to have 1/8" high characters minimum. Labels to be black with white characters except where indicated.
  - 4. Cables and wiring to be logically, legibly and permanently labeled for easy identification. Labels on cables to be adhesive strip type covered with clear heat-shrink tubing. Factory stamped heat shrink tubing may be used in lieu of the adhesive strip style label. Hand-written or self-laminating type labels are not acceptable.
  - 5. Wiring designations to be an alpha-numeric code that is unique for each cable. Locate the cable designation at the start and end of each cable run and within 3" of the point of termination or connection. For cable runs that have intermediate splice points, the cable shall have the same designation throughout with an additional suffix to indicate each segment of the run. Actual cable designation assignments to be determined by Installer. Add cable designation codes to system schematic drawings included with Project Record Drawings.
  - 6. Label each terminal strip with a unique identification code in addition to a numerical label for each terminal. Show terminal strip codes on system schematic drawings included with Project Record Drawings.
  - 7. Provide adhesive labels on the rear of equipment where cables attach to indicate the designation of the cable connected at that point.
- H. All equipment installed with service loops whereas the equipment can be extended out of rack and unhooked from the front.

### 3.2 INSTALLER TESTS AND ADJUSTMENTS

- A. Verify the following before beginning actual tests and adjustments on the system:
1. Electronic devices are properly grounded.
  2. Powered devices have AC power from the proper circuit and hot, neutral, and ground conductors are connected correctly.
  3. Insulation and shrink tubing are present where required.
  4. Dust, debris, solder splatter, etc. is removed.
  5. Cable is dressed, routed, and labeled; connections are consistent with regard to polarity.
- B. Preparation for Acceptance, prior to final inspection:
1. Temporary facilities and utilities shall be properly disconnected, removed and disposed of off-site.
  2. All systems, equipment and devices shall be in full and proper adjustment and operation, and properly labeled and identified.
  3. All materials shall be neat, clean and unmarred and parts securely attached.
  4. All broken work, including glass, raised flooring and supports, ceiling tiles and supports, walls, doors, etc. shall be replaced or properly repaired, and debris cleaned up and discarded.
  5. All extra materials, portable equipment, and spares shall be delivered and stored at the premises as directed.
- C. RGB LED testing requirements
1. In the event that owner believes that a display does not comply with the performance criteria of the specification, the Installer shall contract with a mutually agreed on independent testing agency/consultancy to verify performance of the display or displays. Cost of this testing will be solely born by the installer. At a minimum the following must be tested:
    - 1) Overall screen brightness (peak)
    - 2) Uniformity testing
    - 3) Separate measurements (brightness and color temperature) shall be shall be made to verify uniformity at:
      - a) Peak/maximum brightness (recommended direct sunlight operating brightness).
      - b) Typical operating brightness
      - c) Evening/nighttime operating brightness
    - 2) Brightness uniformity
      - a) pixel to pixel
        - (1) intra-module
        - (2) between modules
        - (3) Sampling techniques are acceptable, provided:
          - (a) number of samples is not less than 20% of the total display's pixels.
          - (b) samples are spread throughout the screen
          - (c) Samples run width of screen
      - b) module to module
      - c) best case to worst case
    - 3) Color temperature uniformity
      - a) pixel to pixel
        - (1) intra-module
        - (2) between modules
        - (3) Sampling techniques are acceptable, provided:
          - (a) number of samples is not less than 20% of the total display's pixels.
          - (b) sample is spread throughout the screen
      - b) module to module
      - c) best case to worst case
  2. Viewing angles:
    - 1) Horizontal
    - 2) Vertical
    - 3) Defined as 50% of peak brightness, or at the point a noticeable color shift occurs.

3. Tests to be performed in accordance with manufacturer's installation and service manual on displays installed at the site, with a "normal" video signal that is injected at the control room, or at the board. Tests on display elements or modules prior to installation are not acceptable.
4. Test report shall include full documentation on test procedure, instruments employed (including model number and serial number) and copy of instrument calibration certification.

### **3.3 TEST EQUIPMENT**

- A. The Contract shall require the Installer to provide test equipment for final acceptance testing. Test equipment to be available for the entire period through final system acceptance. Prior to start of testing, provide a list to the Owner's Representative of test equipment make and model numbers that will be used.
  1. Dual-trace oscilloscope: 100 MHz bandwidth, 1 mV/cm sensitivity, TV trigger.
  2. Multimeter: Measurement range, DC to 20,000 Hz, 100 mV to 300 V, 10 ma to 10A.
  3. Television signal generator: Tektronix or equivalent approved by HuskerVision.

### **3.4 ACCEPTANCE**

- A. Upon completion of installation and initial tests and report specified in Part 3, acceptance testing shall be performed by the Owner's Representative.
- B. Acceptance testing will include operation of each major system and any other components deemed necessary. Installer will assist in this testing and provide any test equipment required specified herein. Installer shall provide at least 1 technician available for the entire testing period (day and night), to assist in tests, adjustments, and final modifications. Tools and material required to make any necessary repairs, corrections, or adjustments shall be furnished by the Installer. Testing process is estimated to take a minimum of 3 days.
- C. The following procedures will be performed on each System:
  1. Control functions shall be checked for proper operation, from controlling devices to controlled devices.
  2. Adjust, balance, and align equipment for optimum quality and to meet the manufacturer's published specifications. Establish and mark normal settings for each adjustable control with small white, adhesive dots, and record these settings, in the "System Operation and Maintenance Manual."
  3. Installed and loose equipment will be inventoried for correct quantity.
  4. Provide repeating test pattern including full red, 5 sec; numbered grid pattern, 5 sec; full blue, 5 sec; numbered grid pattern, 5 sec; full green, 5 sec; numbered grid pattern, 5 sec; full white, 5 sec; numbered grid pattern, 5 sec.
  5. Any other test on any piece of equipment or system deemed appropriate.
- D. In the event the need for further adjustment or work becomes evident during equalization and/or acceptance testing, the Installer will continue his work until the system is acceptable at no addition to the contract price. If approval is delayed because of defective equipment, or failure of equipment or installation to meet the requirements of these specifications, the Installer will pay for additional time and expenses of the Owner's Representative.
- E. The Owner's fees and costs involved in acceptance testing are not the responsibility of the Scoring and Matrix Display System Installer, except as described in Part 3 of this specification.
- F. Final acceptance will follow the successful control system operation all first season pre-season games and first two regular season games. Should play at the arena begin mid-season this period shall be a minimum of four games.
- G. In the event that the system is used prior to final acceptance, attendance in support of system usage shall not be construed as acceptance, or as event attendance.

### 3.5 DEMONSTRATIONS

- A. Provide 40 hours instruction to Owner's Representative designated personnel/facility staff on the use and operation of the System, scheduled as a minimum of ten separate sessions, by an instructor fully knowledgeable and qualified in system operation. The System Reference Manuals should be complete and on site at the time of this instruction. Coordinate schedule of demonstration with Owner's Representative.
- B. Training Schedules
1. Training should be assumed to take place on the project site, unless agreed to by the Owner.
  2. Training should be scheduled to be non-overlapping, unless agreed to by the Owner.
  3. Actual training schedule shall be by agreement with Owner. Do not assume that training will occur over 8 hour days. It is more likely that training will be scheduled in 4 to 6 hour increments; perhaps over a period of weeks (or even months).
  4. In the event that a portion of the training time is occupied in troubleshooting the equipment installation, then the training time shall be extended an equal amount of time at a time mutually agreed to with owner.
- C. The following is a general idea of the training "curriculum":
1. A general familiarization of each major device.
  2. An explanation of how the device interfaces to the rest of the system (including remote controls, data connections; timing requirements and the like).
  3. General training on operating the device.
  4. Specific training on device operation (e.g. entering statistics; how to access data retrieval sources; how to create repeatable formats and layouts, changing fonts, loading new fonts).
  5. Saving information; backing information up (including a review of the proper procedures for backing up).
  6. Basic troubleshooting
  7. Specific troubleshooting (this information may be conveyed to personnel other than the device's "operators").
  8. How to upgrade software; precautions taken while doing (e.g. backing-up existing software, don't be the first one to try the new software on game day).
- D. Additionally, be present at eight arena events utilizing the display systems as designated by the owner, to assist with operation of system (do not assume that this will be the first eight (8) events or eight (8) consecutive events).
- E. Additionally provide one (1) follow-up visit at the Owner's request prior to the end of the first year of operation. Site trip to include at least eight (8) hours on site, at Owner's direction.
- F. Any time spent troubleshooting the installation during this time, shall not count towards fulfilling this requirement.

**PART - 4 - PERFORMANCE STANDARDS (PROVIDE FOR EACH DISPLAY)**

Base Proposal or Alternate Number: \_\_\_\_\_ Location: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet) Vertical \_\_\_\_\_ Feet \_\_\_\_\_ Pixels \_\_\_\_\_

Horizontal \_\_\_\_\_ Feet \_\_\_\_\_ Pixels \_\_\_\_\_

Physical Display Size (including cabinet) Vertical \_\_\_\_\_ Feet \_\_\_\_\_

Horizontal \_\_\_\_\_ Feet \_\_\_\_\_

**PHYSICAL** Pixel Pitch (not "lines") Vertical/Vertical \_\_\_\_\_ millimeters \_\_\_\_\_

Horizontal/Horizontal \_\_\_\_\_ millimeters \_\_\_\_\_

Physical Pixel Density (not "lines") \_\_\_\_\_ Pixels/sq ft \_\_\_\_\_

Virtual Pixel Pitch "claimed" pixel pitch \_\_\_\_\_ millimeters \_\_\_\_\_

Green LED Supplier \_\_\_\_\_ Red LED \_\_\_\_\_ Blue LED Supplier \_\_\_\_\_

Brightness \_\_\_\_\_ Nits \_\_\_\_\_

Brightness Level adjustment \_\_\_\_\_

Gradation Method \_\_\_\_\_

Tonal Gradation \_\_\_\_\_

Color Temperature \_\_\_\_\_ °K \_\_\_\_\_

Color Temperature adjustability \_\_\_\_\_

Viewing Angles Vertical degrees \_\_\_\_\_ Up \_\_\_\_\_ Dn \_\_\_\_\_

Horizontal degrees \_\_\_\_\_ Up \_\_\_\_\_ Dn \_\_\_\_\_

Power Consumption Average (entire display) \_\_\_\_\_

Maximum (entire display) \_\_\_\_\_

Normal Power requirements(Voltage, Service, Ø)

Include any air conditioning requirements for entire Display \_\_\_\_\_

**Entire Display Weight** (Include internal structure) \_\_\_\_\_

### **3. EVALUATION CRITERIA**

#### **3.1 Proposal Evaluation**

- Evaluation/Selection of the successful Bidder will be accomplished by a panel comprised of UNL employees. This process, which includes, but is not limited to, the following criteria, will be used to assist in the determination of the successful Bidder. The criteria are listed below in no particular order.
- The University of Nebraska reserves the right to award a contract, not based solely on cost, but in which the University of Nebraska's judgment most nearly conforms to the specifications, requirements and goals. The University of Nebraska at its sole discretion may choose to award part or all of the scope of work contained in this RFP to a single or multiple Selected Vendor(s). Furthermore, the University does not guarantee that any actual Agreement will ensue as a result of the RFP and its evaluation process.

#### **CRITERIA:**

- Ability of bidder to meet minimum requirements to bid.
- Ability, capacity and skill of the Selected Vendor(s) to perform the specified work.
- Quality and performance of previous work.
- Capability to perform work within the time specified in this RFP.
- Perceived quality of display and scoring system as determined by selection committee.
- Ability to perform service after installation along with a history of association with major electronic equipment supplier on a continuous basis.
- Price.
- Financial stability. (Financial records to be supplied upon request of University)
- Any other information as may be secured having a bearing on the decision to award the contract.

### 4. FORM OF PROPOSAL – PRODUCTS AND/OR SERVICES REQUIRED

#### 4.1 GENERAL DESCRIPTION

The following proposal section provides for the provision and installation of a Video Display System for Devaney Sports Center a complete turnkey project as detailed in these specifications. A bid bond is required with your proposal. A Performance bonds will be required post award. Pricing for the provision and installation of all scoring, messaging and large screen video display and all necessary controllers, along with all other equipment and requirements as described in these specifications. Pricing to include provision, assembly and mounting of all proposed displays as well as all required electrical, control equipment and data cable connections and disposal of existing display/equipment. Pricing shall also include costs for any and all installation, testing, training, instruction manuals, along with any licensing, engineering, bonds and all other requirements as specified in this RFP

In order to permit an orderly comparison of bid proposals received, it is requested that each Bidder use the following detailed format in submitting their proposal.

We request that **One (1) original and six (6) copies**, marked accordingly, be submitted. Failure to complete the University forms may disqualify your bid.

#### 4.2 PRICING:

**Video Display System: 10mm and all equipment and installation specified under base bid of this RFP.**

**Total System Purchase Price**      \$ \_\_\_\_\_

#### ALTERNATES:

**On following Alternates\*, Bidder to note whether they are an “add” or “deduct” to the above Total System Purchase Price.**

**Alternate 1: Section 1.12 A**      \$ \_\_\_\_\_ \*  
**Cost to replace two corner fixed digit display with 16 .mm RGB matrix displays, 3 ft x 6 ft**

**Alternate 2: Section 1.12 B**      \$ \_\_\_\_\_ \*  
**Cost to replace electronic equipment listed in section 2.6 with the ability to display a DVD/Blu ray disc from the scoreboard control location**

**Alternate 3: Section 1.12 C**      \$ \_\_\_\_\_ \*  
**Service Contract for parts only for Years 3 through 10 listed separately if different**

**Alternate 4: Section 1.12 D**      \$ \_\_\_\_\_ \*  
**Service Contract for extended warranty (parts and labor) for Years 3 through 10 listed separately if different**

**Alternate 5: Section 1.12 E**      \$ \_\_\_\_\_ \*  
**Cost for annual pre-season “health check” for each display, list years 3 through 10 separately if different**

**Alternate 6: Section 1.12 F**      \$ \_\_\_\_\_ \*  
**Cost for 16 mm SMD, end wall displays**



**Alternate 7: Section 1.12 G**

**Provide unit price for one (1) locker room clock, installed flush or surface mount**

\$ \_\_\_\_\_ \*

**Alternate 8: Section 1.12 H**

**Cost for LED courtside table system**

\$ \_\_\_\_\_ \*

**20 ft**

\$ \_\_\_\_\_ \*

**40 ft**

\$ \_\_\_\_\_ \*

**60 ft**

\$ \_\_\_\_\_ \*

**Alternate 9: Section 1.12 I**

**Deduct cost to remove the existing displays rather than remove in working order and turn over to UNL.**

\$ \_\_\_\_\_ \*



**4.4 REFERENCE LIST**

Notwithstanding the University of Nebraska System, list below references of a minimum of three (3) projects - - size and scope (**name of facility, contact name, title, address and phone number**) where bidders video display products are currently installed.

1. Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_

2. Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_

3. Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_

4. Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_

5. Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_

## SECTION 2.0: COMPONENTS OF THE PROCESS

### 2.1 Requirements--Responding to Specifications:

Each bidder responding to this RFP is expected to submit a well organized, easy-to-read, written proposal, which clearly and coherently provides the information outlined in this RFP. Answers and responses to the information required must be numbered to directly coordinate with the number of the inquiry as it appears in the RFP format presented herein.

### 2.2 Communications:

All questions concerning this RFP shall be in writing, and faxed or e-mailed by the bidder and addressed to:

Roger Spiehs  
1700 Y Street  
University of Nebraska–Lincoln  
Lincoln, Nebraska 68588-0645

Fax: (402)472-2246

E-mail: [unlprocurementservices@unl.edu](mailto:unlprocurementservices@unl.edu)

For additional information concerning bidder questions, clarifications and addenda, see Section 3.0: Proposal Submittal Requirements, item 3.

### 2.3 Critical Dates:

2.3.1 On the front cover of this RFP, a **pre-bid conference** has been indicated. All entities wishing to present a bid on this project are encouraged to attend the pre bid conference, location information as follows:

Bob Devaney Sports Center, 17<sup>th</sup> and Court Streets, Lincoln, Nebraska  
Parking is on the east side of the building on the street. Enter under the south ramp.  
Security will direct you to the Hospitality Room.

Persons planning to attend the pre-bid conference are strongly encouraged to direct any questions they have about this RFP to the attention of Roger Spiehs, such questions to be in writing and delivered by fax (402) 472-2246 or e-mail to the address listed above, as listed on the RFP cover page.

2.3.2 Proposals are due upon the date and time set forth on the cover to this RFP.

2.3.3 Any bid may be withdrawn prior to the scheduled time for the opening of bids. Unless otherwise stated in this RFP, no Proposal may be rescinded within ninety (90) days following the scheduled opening of proposals without the approval of the Director of Procurement Services.

### 2.4 Basis of Selection:

2.4.1 The award of a contract, if any, shall be made to the most responsible bidder, taking into consideration the best interest of the University. While pricing is often an important criterion, it may or may not be determinative. UNL may waive any irregularity or other requirement, which it deems does not materially affect the selection process. Factors that may be considered include, but are not limited to, clarity and responsiveness, conformity with RFP specifications, cost effectiveness, design, delivery, installation, the specific needs of the UNL community, bidder's reputation and/or past performance, quality of goods and/or services offered to UNL, technical performance, installation, and ability to expand with UNL's needs.

2.4.2 Proposals will be evaluated, and the contract, if any, awarded and performed in compliance with all relevant University of Nebraska policies.

2.4.3 The deliberations of the evaluation committee are confidential, and no representative of a bidder should directly or indirectly contact any member of the evaluation committee, or any faculty or staff member concerning this RFP, unless permission is explicitly otherwise given to the bidder by the Procurement Services Department, for the purposes of providing additional information or facilitating the evaluation. Any attempt by a bidder to contact a member of the evaluation committee or any other faculty or staff member about this RFP can lead to disqualification.

2.4.4 UNL reserves the right to request additional information from a bidder in any format which UNL deems necessary to evaluate the proposals, including formal Q & A or meetings and presentations. The evaluation may include subjective assessment of the proposal materials, including factors not listed specifically in this RFP.

2.4.5 Bidders may be required to submit samples of any item or product offered in response to this RFP. Each sample must be clearly identified by the name of the bidder, name of the manufacturer, or other information, if requested, relevant to the evaluation of the sample.

2.5 Negotiation:

UNL reserves the right to conduct discussions and negotiations with any or all respondents to this RFP, concerning any element of or response to this RFP, for the purpose of clarification and modification. Discussion and negotiation may include, but is not limited to, the scope of work, design, schedule, and price.

2.6 Notification of Award:

Upon completion of the evaluation process, the bidders will be notified in writing, or by e-mail, of the identity of the successful bidder. If for any reason, UNL and the successful bidder fail to finalize a contract, UNL reserves the right to attempt to enter into a contract with the next most responsive bidder, based on evaluation results.

2.7 Reservation of Rights; Rejection of Proposals; Non-Responsive Proposals:

UNL reserves the right to reject all proposals received and discontinue the evaluation and selection process at any time. UNL also reserves the right to resolicit proposals in response to this RFP or any amendment of this RFP. If no responsive bids are received by the UNL, UNL reserves the right to negotiate with any firm in order to substantially fulfill the RFP under such terms and conditions as UNL deems best serve its needs.

2.8 Public Information:

Bidders' names are public information at the time proposals are opened at the scheduled bid closing time. Until the successful bidder is determined and announced, UNL will treat all other elements of the proposals as confidential information, not subject to public disclosure. However, once the successful bidder is announced, then the proposals will be treated as public information, except to the extent that any bidder gives UNL specific written notice of information it believes to be proprietary, commercial, a trade secret, or otherwise confidential. Should UNL determine that such bidder-identified information is indeed proprietary or otherwise confidential, then it will not publicly disclose that portion of the proposal without the consent of the bidder, unless otherwise required by law, e.g. judicial order. As a general matter, UNL considers financial statements of privately held companies, if such are a required submission, to be proprietary. Pricing terms appearing in proposals are considered public information.

Bidder shall be chiefly responsible for providing the defense for any challenge to a decision to withhold information contained in a Proposal, based upon bidder's identification of the information as not subject to public disclosure.

2.9 Grievance:

The UNL grievance procedure can be found at the UNL Procurement Services Department web site, <http://procurement.unl.edu/policies/>

2.10 Board of Regents Approval:

In certain instances, the Bylaws and Policies of the Board of Regents of the University of Nebraska require that the Board approve the award of a contract. Bidders shall be notified if Board of Regents approval is required. In such cases, no contract or award shall be enforceable absent the Regents' approval.

## SECTION 3.0: PROPOSAL SUBMITTAL REQUIREMENTS

### 3.1 Submittals and Bid Opening:

**One (1) original and six (6) copies**, marked accordingly, of any proposal in response to this RFP must be received by UNL in the Office of University Services, Procurement Services Department, 1700 Y Street, University of Nebraska–Lincoln, Lincoln, Nebraska 68588-0645 no later than the date and time set forth on the cover of this RFP. At that time, the proposals will be opened publicly. No proposals received after the opening time will be considered. Bidders may be requested to provide an electronic copy of their proposals. All proposals submitted, along with any exhibits, addenda or modifications shall be the property of UNL.

### 3.2 Delivery of Proposal:

NOTE: This is a Formal Sealed Bid. E-mail, Fax, or verbal proposals “cannot” be accepted and will be rejected.

Each bidder is responsible for making sure their proposal is properly addressed/identified. In order to assure proper processing and receipt, your bid submittal should be returned in an envelope (or parcel) and delivered to/addressed as follows: **University of Nebraska–Lincoln, Office of University Services, Procurement Services Department, 1700 Y Street, Lincoln, NE 68588-0645** along with the applicable “**RFP Number**” and “**Title of Bid**” to which you are responding.

If you are delivering your proposal in person, it should be sealed, submitted and labeled in the above manner, and given to an authorized member of the UNL Procurement Services staff.

### 3.3 Bidder Questions, Clarifications, and Addenda Interpretation:

It is the responsibility of each bidder to become familiar with the project requirements. Lack of knowledge concerning the project requirements will not relieve bidders of the conditions required as responsive to this RFP.

Except in the course of preliminary conference open to all interested parties, should one be held, no interpretation related to the requirements of this RFP will be made verbally to any bidder by UNL. Any request for bid interpretation shall be put in writing and faxed or e-mailed by the bidder and addressed to:

Roger Spiehs  
Procurement Services  
University of Nebraska–Lincoln  
Lincoln, Nebraska 68588-0645

FAX (402) 472-2246

E-mail: [unlprocurementservices@unl.edu](mailto:unlprocurementservices@unl.edu)

In order to be given consideration, any requests for interpretation must be received by the dates indicated on the cover page. Any and all interpretations and any supplemental instructions provided by UNL shall be in the form of a written addenda to the Request for Proposal, which if issued, will be mailed, e-mailed or faxed to all known interested parties or bidders, or such other form of communication as UNL deems reasonably likely to reach interested parties; provided All bidders are responsible to check the Procurement Services website from time-to-time in order to inform themselves of any addenda to the RFP. The bidder, not UNL, is responsible to secure notification and delivery of any addenda. Failure of any bidder to receive any addenda or other information released by UNL after the initial distribution of this RFP shall not relieve the bidder from the obligations specified in addenda or other releases. All addenda shall be incorporated in the RFP to the same effect as if they were set out in the initial RFP release.

The bidders are solely responsible for providing their correct mailing addresses, email addresses, and fax numbers for any response to inquiries. UNL is not responsible for lost or undeliverable responses.

### 3.4 Cost of Preparation:

UNL will not be responsible for any costs incurred in preparation or presentation of the bidder’s proposal.

### 3.5 Bidder Qualification:

UNL may make any investigations deemed necessary or request any documentation to evaluate the ability of the bidder to perform the specifications of this RFP. The bidder shall furnish UNL with pertinent information and data upon request. UNL reserves the right in its sole discretion to reject any bid based on the facts resulting from an investigation which

indicate that a bidder: (a) is not properly qualified to carry out the obligations of any contract awarded; or (b) presents a public image not in keeping with the professional standards and reputation which UNL expects. Conditional bids will not be accepted.

### 3.6 Exceptions:

Any exceptions with respect to any requirement of this RFP must be specified in writing as part of the submitted proposal. Specific reference must be made to the paragraph numbers and other identifying criteria with respect to any exceptions proposed by the bidder. Generally, UNL will not look favorably upon the request for any exceptions. However, UNL recognizes that in certain instances, an exception may be appropriate, and therefore, will consider and reserves the right to grant exceptions when UNL deems such exceptions promote its best interests. Conditional bids will not be considered.

## **SECTION 4.0: TERMS AND CONDITIONS**

The information contained in this section is a partial listing of standard terms commonly appearing in contracts awarded by UNL. All proposals are subject to these terms, unless otherwise explicitly stated.

### **4.1 General:**

The specifications, terms, and conditions set forth in this RFP and any related award document shall be incorporated by reference, without Bidder exception, into any resulting contract between the University and the successful bidder. Any additional or different terms proposed by the successful bidder are not accepted, unless the same are expressly accepted in writing by UNL. The contract may not be changed in any way except by an instrument in writing signed by both parties. The contract cancels and supersedes any prior understandings or agreements between the parties with respect to the subject matter hereof. Failure of any party to enforce its right under the contract shall not constitute a waiver of such rights or of any other rights under the contract.

### **4.2 Termination for Cause:**

UNL may terminate the contract at any time if the successful bidder fails to carry out its terms or fails to make substantial progress toward the fulfillment of those terms. In such an event, UNL shall provide the successful bidder with a thirty (30) day written notice of the terms in breach. If after such notice, the successful bidder fails to remedy the breach within those 30 days, UNL may immediately cancel the contract.

### **4.3 Contract Assignment:**

Contracts granted pursuant to this RFP shall not be transferred or assigned without prior written consent of UNL.

### **4.4 Indemnity, General and Patent:**

The successful bidder shall indemnify and save harmless UNL and its respective officers, agents and employees from and against any and all liabilities and losses whatsoever, including without limitation, costs and expenses in connection therewith, on account of, or by reason of, injury to or death of, any person whatsoever, or loss of or damage to any property whatsoever, suffered or sustained in the case of, or in connection with, the performance of the contract, except for that liability and loss arising from the acts or omissions of UNL or its agents.

With respect to anything provided to UNL by the bidder pursuant to this RFP, the bidder shall indemnify the University and its respective officers, agents and employees against liability, including costs and attorney's fees for infringement of any United States patent, copyright, trade infringement or other intellectual property right arising out of the manufacture, delivery and use of such by UNL.

### **4.5 Governing Law; Venue:**

The laws of the State of Nebraska shall govern any contract awarded to the successful bidder. Any dispute arising under any contract awarded, which is not settled by agreement of the parties, shall be resolved in forums (except for applicable federal appellate courts) located in the State of Nebraska.

### **4.6 Force Majeure:**

Neither party to the contract shall be liable to the other for damages for any delay in performance arising out of causes beyond its reasonable control and without its fault or negligence, including without limitation: (1) fire, flood or water damage, elements of nature or other acts of God, including any of the foregoing that are harmful to electronic circuitry; (2) outbreak or escalation of hostilities, war, riots, or civil disorders in any country; (3) act or omission of the other party or any governmental authority, (4) labor disputes (whether or not the employees' demands are reasonable or within the party's power to satisfy), (5) non-performance by a third party (including any voice or data telecommunications common carrier), (6) failures or fluctuations in telephone, computer or other telecommunications equipment or lines or other equipment, (7) the real, potential, or credible threat of terrorist activity, or (8) a health emergency (e.g. serious outbreak of contagious disease such as a influenza pandemic) which in the judgment of UNL poses a serious threat to the public health. In the case of any such excusable delay, the non-performing party will be excused from performance of any affected obligation only for so long as the cause of the excusable delay prevails and such party continues to use commercially reasonable efforts to re-commence performance of its obligations as soon as possible; provided however, that the parties may mutually agree that such excusable delay is cause to cancel the contract in its entirety, in which case neither party shall be liable to the other for any further performance in relation obligations arising after cancellation.

### **4.7 Compliance with Laws and Regulations; Gramm Leach Bliley; University of Nebraska Policies:**

This contract must comply with all applicable federal, state and local laws, specifically including all laws and regulations related to the protection and security of any personal information gathered by the successful bidder, such as the Gramm Leach Bliley Act implemented at the University of Nebraska by Presidential Executive Memorandum No. 26 which



requires specific vendor contract provisions; and all other applicable policies of the University of Nebraska. Bidder agrees to indemnify UNL against any loss, cost, liability, or damage by reason of bidder's violation of any applicable law or regulation. Any successful bidder must be qualified to conduct the business necessary to the performance of the contract in the State of Nebraska throughout the duration of the contract term or any renewal thereof. The successful bidder shall obtain, at its own cost and expense, all necessary licenses, professional certifications and permits and shall assume the responsibility for and pay all applicable fees and all other taxes, which are now or may be imposed in the future by any governmental authority arising out of the conduct of bidder's business.

In addition, all work done in conjunction with the installation of this project shall meet all applicable laws, statutes, building codes and standards. Vendor agrees to indemnify the University against any loss, cost, liability, or damage by reason of vendor's violation of any applicable law, executive order or regulation. Successful Bidder shall obtain services of licensed professional engineers from all necessary disciplines involved in designing and constructing the project including, but not limited to: structural, electrical, mechanical engineering, where applicable to said project.

#### 4.8 Sexual Harassment:

State and federal law, as well as the policies of the Board of Regents of the University of Nebraska, prohibits sexual harassment of members of the UNL community. Sexual harassment includes any unwelcome sexual advance, any request for a sexual favor, or any other verbal or physical conduct of a sexual nature that is so pervasive as to create a hostile or offensive environment. UNL contractors, subcontractors and suppliers for this project are required to exercise control over their employees so as to prohibit acts of sexual harassment of UNL employees, students and other members of the UNL community. The employer of any person who UNL, in its reasonable judgment, determines has committed an act of sexual harassment agrees as a term and condition of any contract awarded hereunder to cause such person to be removed from the project site and from UNL premises and to take such other action as may be reasonably necessary to cause the sexual harassment to cease.

#### 4.9 Drug Free Workplace:

The successful bidder agrees that in the performance of this contract, neither the bidder nor any of its employees shall engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity covered by the contract. UNL reserves the right to request a copy of the bidder's Drug Free Workplace Policy. The bidder further agrees to insert a provision similar to this statement in all subcontracts or services required in response to this RFP.

#### 4.10 Weapons Policy:

Possession of dangerous weapons (concealed or unconcealed) on UNL property, on the work site, in UNL vehicles, or in personal vehicles when on UNL property shall be a violation of UNL policy. (A dangerous weapon shall include guns, knives, explosives, or any other device as determined by UNL, which in the manner used or intended is capable of producing death or bodily injury. Devices authorized by the Vice Chancellor for Business and Finance and/or provided to its employees for the purpose of carrying out work responsibilities shall not be deemed dangerous weapons for the purpose of this policy.) Violations of this policy shall make the offender subject to appropriate disciplinary action. Should UNL in its reasonable judgment determine that the bidder or its employee or agent has committed an act in violation of this policy, the bidder agrees as a term and condition of the contract awarded hereunder to cause such person and weapon to be removed from the project site and from UNL premises and to take such other action as may be reasonably necessary to ensure compliance with this weapons policy.

#### 4.11 Equal Opportunity in Procurement and Contracts, Executive Memorandum No. 21:

The University of Nebraska recognizes the importance of a strong culturally diverse business community and the positive impact that successful businesses have upon the people of the State of Nebraska. The University of Nebraska assumes a leadership role in actions that will provide business opportunities for all businesses in the State of Nebraska.

Accordingly, the University of Nebraska reaffirms its policy of providing equal opportunity to small business enterprises and to minority, disadvantaged and women owned business enterprises in all aspects of the University of Nebraska's procurement and contracting activities. This includes procurement of contracts for operational supplies and equipment, construction projects and materials, service contracts and License agreements. It is also the University of Nebraska's policy that any person or business seeking the opportunity to do business with the University of Nebraska shall not be discriminated against on the basis of race, color, religion, sex, national or ethnic origin, age, disability, marital status, or veteran status. The University of Nebraska conducts its procurement and contracting activities in a manner designed to prevent unlawful discrimination. University of Nebraska policies are consistent with applicable state and federal laws and regulations prohibiting unlawful discrimination.

**4.12 Proprietary Information; Confidential Employee Information; HIPAA; FERPA:**

It is to be expected that the parties to the contract may find it necessary to reveal certain proprietary information to each other. The contract may, when proprietary information is exchanged, include certain provisions to mutually protect against the use and disclosure of the proprietary information of each party. In the unusual circumstance that the contract should result in the sharing of employee information protected by the law or University of Nebraska policy, information protected by the Health Insurance Portability and Accountability Act, information protected by the Family Educational Rights and Privacy Act of 1974, or any other information deemed confidential and protected by the law, the parties to the contract agree to maintain the confidentiality of such information to the extent and manner required by the law and University policy.

**4.13 Subcontractors:**

The successful bidder shall not subcontract all or substantially all of any facet of the Proposal without the prior written approval of UNL. The successful bidder shall be fully responsible for the acts and omissions of its subcontractors and of the persons directly or indirectly employed by them. Every subcontractor shall be bound by the terms of any contract awarded under this RFP; provided however, that no contractual relationship shall exist between any subcontractor and UNL, unless it is evidenced in a separate contract independent of the contract with the successful bidder.

**4.14 Legislative Funding Out Clause:**

Notwithstanding any provision in the contract to the contrary, if the legislative body appropriating funds, does not allocate sufficient funds to allow UNL to make any periodic payment agreed to in the contract for any future fiscal period, UNL will not be obligated to pay the contract balance remaining at the time of the governmental funding short-fall.

**4.15 Parking:**

UNL shall not be responsible for providing parking for successful bidder's parking needs. The successful bidder and/or its employees and agents will be solely responsible for any fines resulting from parking violations occurring on UNL property. It is recommended that the successful bidder and any temporary employees contact the Parking and Transit Services at Stadium Drive Parking Garage, Lincoln, Nebraska, phone: (402) 472-1800 to obtain information regarding parking and to obtain permits.

**4.16 Building Rules and Regulations; Tobacco Use:**

Employees of the successful bidder and any subcontractors shall comply with all UNL rules and regulations pertaining to conduct in UNL's facilities. UNL reserves the right to request the removal or replacement of any bidder or subcontractor employee who fails to comply with such rules and regulations. All buildings and University owned vehicles on the UNL campus are tobacco-free. Use of tobacco products is not permitted inside any UNL facility. The successful bidder is expected to respect this tobacco-free policy and fully comply with it.

**4.17 Use of Premises:**

To the extent that any contract awarded requires the successful bidder or its employees or agents to be present on or within UNL's properties, then the bidder shall limit its presence and activities to such areas as are reasonably necessary in order to perform under the contract. The successful bidder shall take such precautions as are required to avoid damage to buildings, facilities, utilities, ground resources, trees and landscape amenities, and other properties adjacent to the bidder's activities within the scope of the contract and agrees to be responsible and/or carry out any repairs for which it is liable, as a result of its performance under the contract.

**4.18 Hazardous Waste Generated by Contractors:**

Any hazardous waste that is generated from the performance of any contract awarded shall be properly disposed of by the successful bidder in a timely fashion and in accordance with applicable hazardous waste laws and regulations. The cost for hazardous waste management and disposal is successful bidder's responsibility. Should UNL deem it prudent to dispose of any hazardous waste left on its property, as a result of the successful bidder's failure to meet its responsibilities, all costs associated with such disposal shall be deducted from any amount yet to be paid to the bidder and/or billed to the bidder. University Environmental Health Services is to be notified of all hazardous waste issues.

Any non-hazardous waste generated in the performance of this contract must be disposed of by the successful bidder. 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.

**4.19 Delivery; F.O.B.; Shipping:**

The successful bidder shall bear all costs of transportation, packing, crating, delivery, installation, storage, and service under warranty for any goods or related services, delivered pursuant to the contract. The successful bidder shall be responsible for and make delivery, including costs of delivery, cartage, temporary storage, off-loading costs, and

insurance, F.O.B. destination: Husker Harvest Days building site in Grand Island, Nebraska. Unless otherwise specified, all shipments will utilize the best commercial practice to insure safe arrival at the UNL delivery point.

#### 4.20 Quantity:

With respect to quantity of any good purchased under the contract, UNL need not accept any variation in quantity except as specified in the contract. Over-shipments may be returned to the bidder at its expense, which shall include a reasonable cost for UNL handling, or be retained by UNL at no increase in price.

#### 4.21 Inspection:

UNL may, at any time in the course of the contract, inspect and test materials and supplies being used in the performance of the contract, including at the point of manufacture. If inspection and tests are made on contractor's premises, contractor without additional charge, shall provide reasonable facilities and assistance for the safety and convenience of the testing/inspection personnel. Except as otherwise agreed in writing, all goods, equipment and supplies furnished under the contract shall be subject to final inspection and acceptance by UNL at the delivery destination.

#### 4.22 Defective Goods or Work:

UNL, notwithstanding any prior acceptance, at its option, may reject or require prompt correction (in place or elsewhere) of any goods, equipment, supplies, or other work, which are defective in material or workmanship or otherwise fail to meet the requirements of the contract. All supplies furnished under the contract shall be subject to inspection at F.O.B. destination, and successful bidder shall be given notice of any defects, other than latent defects, within a reasonable time after receipt of the goods, equipment, and supplies, along with all records of delivery. UNL may, in addition to any rights it may have by law, prepare for shipment and ship the defective goods, equipment, and supplies to the successful bidder, require the successful bidder to remove them, or direct a correction in place. The expense of any such remedy shall be borne by the successful bidder, including any excess cost.

#### 4.23 Liens:

Successful bidder warrants that it has title to any goods delivered under the contract and shall deliver same free of all liens, claims, and encumbrances.

#### 4.24 Federal, State and Local Sales Taxes; Federal Excise Taxes:

Purchases made by the University of Nebraska are exempt from the payment of State Sales and Use Taxes and Federal Excise Taxes. Certification of these exemptions will be provided to the successful bidder upon request.

#### 4.25 Ambiguities:

Should the successful bidder perceive an ambiguity in the contract, the successful bidder shall request an interpretation from UNL before proceeding. If a successful bidder fails to make such a request, failure to perform with respect to the alleged ambiguity shall not be excused.

#### 4.26 Recycling Policy:

When purchasing products, materials, or supplies for use, the University, when making such purchases shall actively pursue the purchase of products, materials, or supplies which are manufactured or produced with at least 10% post-consumer recycled materials. This policy shall not operate when it would result in the purchase of products, materials, or supplies that are of inadequate quality, not readily available or substantially higher in cost. It is the intent of the University to continually increase the percentage produced from post-consumer recycled material, and, to increase each year the types and variety of products, materials, or supplies purchased with post-consumer recycled material.

#### 4.27 Contractor Identification:

The Contractor shall cause each of its employees or any person acting on behalf of the Contractor, while providing goods/services to the University under this Agreement and working on University property, to carry identification, with photo, showing that the individual is an employee or person acting on behalf of the Contractor. A badge worn outside of clothing is appropriate for this purpose. Such identification shall be produced upon request of any University representative, in order to confirm that the Contractor's representative is authorized to be present on University property and/or performing as authorized by the Agreement. Whereas campus security is of utmost importance, failure of any Contractor representative to produce the requisite identification upon request, shall be a material breach of the Agreement and shall be cause, at the discretion of the University, for immediate termination of the Agreement. For those who commonly wear a work uniform, such uniform shall be worn while providing the services related to this Agreement in order that the University may quickly and clearly identify Contractor's service representatives when necessary. A uniform, however, does not take the place of a photo identification badge.

4.28 Legal Relationship:

The contractor shall under no circumstances be considered as an agent or employee of the University and shall have no right or authority to, in any manner, obligate the University to any person or company except as authorized in writing by the University.

4.29. Use of University Names and Logos:

The contractor shall not use any University name, sign, logo, symbol, etc. for any purpose, without the prior written approval of the University. Use of University brands generally requires licensing.

4.30. Improper Business Relationships and Conflict of Interest Prohibited:

In connection with this RFP, each bidder shall ensure that no improper, unethical, or illegal relationships, or conflict of interest exists between or among the bidders, the University and any staff and faculty, and any other party to this RFP. The University reserves the right to determine the materiality of such relationships, when discovered or disclosed, whether intended or not; and to decide whether or not bidder disqualification and/or cancellation of award shall result. Such disqualification and/or cancellation shall be at no fault or liability whatsoever to the University.

4.31. Electronic and Information Technology Accessibility:

All electronic and information technology procurements, agreements, and contracts shall comply with Section 508 of the Rehabilitation Act of 1998 as amended.

4.32. Equal Opportunity Clause Certification of Non-Segregated Facilities, Executive Order 11246:

This form is attached and shall be executed by the successful Bidder upon notice of award.

4.33. Contractor's Certificate of Insurance – (reference certificate at end of RFP) successful Bidders will be required to furnish a certificate of insurance with coverages to bodily injury/personal injury/liability coverage, property damage liability coverage, and workman's compensation coverage. This certificate must be on file prior to any commencement of work. It is absolutely necessary that "**The Board of Regents of the University of Nebraska as an additional insured**" be added to the face of the certificate for all coverage except worker's compensation. The above statement must be worded in this manner. It is also absolutely necessary that a "**Completed Operations Coverage**" must be included as part of the successful Bidders General Liability.

4.34 Bid Bond: The Proposal must be accompanied by a certified check payable to UNL, a money order payable to UNL, or a bid bond executed by the bidder as principal and a surety company approved by UNL, in the amount of 5% of the bid. Should the bidder fail or refuse to execute and deliver a contract after having been selected as the successful bidder, then the amount secured by the bid bond, money order or check shall be forfeited to UNL. Such checks, money orders, or bid bonds will be returned promptly upon execution of a contract, or if no award has been made, within ninety (90) (variable) days after the date of the opening of the bids.

4.35 Performance Bond: An Owner's Protective Bond (Performance/Labor and Materials) bond will be required from the successful bidder acceptable to the Owner in the amount of 100% of the contract. A copy of the owner's protective bond form acceptable to UNL is available upon request [or is attached].

4.32 LB403 Compliance: The successful bidder, on behalf of itself and any subcontractor to the Contract, agrees that it shall use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska pursuant to Neb. Rev. Stat. 4-108 to 4-114 as amended.

4.33. Debarment: The contractor certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in the transaction (contract), by any governmental department or agency. If the contractor cannot certify this statement, submit a written explanation for review by the university

UNIVERSITY OF NEBRASKA
EQUAL OPPORTUNITY CLAUSE AND CERTIFICATION OF
NON-SEGREGATED FACILITIES

Unless otherwise exempted by rules, regulations or orders issued under Executive Order 11246, during the performance of each order received from the Buyer:

"(1) The Contractor will not discriminate against any employee or applicant of employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. 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. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisement of employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of Sept. 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of Sept. 1965, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

"(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contractor with any of such rules, regulations or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order No. 11246 of Sept. 24, 1965 or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

"(7) The Contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 24 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

Seller certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained.

Seller agrees that a breach of this certification is a violation of the Equal Opportunity clause in this certification. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, or color or national origin, because of habit, local custom or otherwise.

During the performance of furnishing goods or services as stipulated in any purchase order, contract, or agreement whether written or verbal, the contractor agrees that the concern presented will comply with the provisions of 41 CFR 60-741.4 relating to employment of the Handicapped and 41 CFR 50-250.3 relating to employment of Disabled Veterans and Vietnam Era Veterans.

Moreover, if annual sales to the University of Nebraska exceeds \$50,000, I certify that our firm has on file an Affirmative Action Compliance Program," dated \_\_\_\_\_, or that our firm is exempt for the following reason: \_\_\_\_\_

During the performances of furnishing goods or services as stipulated in any purchase order, contract, or agreement whether written or verbal, the undersigned certifies that the concern represented will comply with the provisions of Executive Order 11246 as amended, and all rules, regulations and relevant orders of the Secretary of Labor, and will incorporate by reference in each contract and in each order which is within the scope of the regulations the clause relating to Equal Opportunity contained in 41 CFR 60-1.4, and the clauses relating to Employment of the Handicapped contained in 41 CFR 60-741.4, and Employment of Disabled and Vietnam Era Veterans, 41 CFR 50-250.3. The concern further agrees to comply with all existing federal, state and city legislation Prohibiting discrimination in all phases of its performances and certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained.

Form with fields for Firm, Address, City, State, Zip, Signature of Authorized Representative, Title, Date, and Federal I.D. #

Please Return to: University of Nebraska-Lincoln, 1700 Y Street, Lincoln, NE 68588-0645

**PREPARATION INSTRUCTIONS  
FOR CONTRACTOR'S,  
ARCHITECT'S AND/OR ENGINEER'S CERTIFICATE OF INSURANCE**

Recommended Limits of Coverage for this project are shown in the matrix below:

TYPE OF INSURANCE COVERAGE	UNIVERSITY OF NEBRASKA Required Limits of Liability (All Limits in Thousands)
GENERAL LIABILITY (5) <input type="checkbox"/> Commercial General Liability <input type="checkbox"/> Occurrence <input type="checkbox"/> Claims Made <input type="checkbox"/> Owner's & Contractor's Protective <input type="checkbox"/> General Aggregate <input type="checkbox"/> Per Project <input type="checkbox"/> Per Location	GENERAL AGGREGATE                      \$2,000 PRODUCTS - COMP/OPS AGGRE              \$2,000 PERSONAL & ADVERTISING IN EACH OCCURRENCE                          \$1,000 FIRE DAMAGE (ANY ONE FIRE)              \$ 50 MEDICAL EXPENSE (ANY ON DEDUCTIBLE)   \$ 5
ARCHITECT'S AND/OR ENGINEER'S PROFESSIONAL LIABILITY (6) <input type="checkbox"/> Claims Made <input type="checkbox"/> Project	GENERAL AGGREGATE                      \$2,000 EACH CLAIM                                  \$1,000 DEDUCTIBLE                                  \$
AUTOMOBILE LIABILITY <input type="checkbox"/> Any Auto <input type="checkbox"/> All Owned Autos <input type="checkbox"/> Scheduled Autos <input type="checkbox"/> Hired Autos <input type="checkbox"/> Non-Owned Autos <input type="checkbox"/> Garage Liability	COMBINED SINGLE LIMIT (CSL)              \$1,000 BODILY INJURY (PER PERSON)              \$ 500 BODILY INJURY (PER ACCIDENT)      \$1,000 PROPERTY DAMAGE DEDUCTIBLE              \$ 500
EXCESS LIABILITY (7) <input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other Than Umbrella Form	EACH OCCURRENCE                          \$ AGGREGATE                                  \$
<input type="checkbox"/> WORKER'S COMPENSATION	-----STATUTORY-----
<input type="checkbox"/> EMPLOYER'S LIABILITY	(EACH ACCIDENT)                          \$ 500 (DISEASE-POLICY LIMIT)                  \$ 500 (DISEASE-EACH OCCURRENCE)              \$ 500
OTHER (8) <input type="checkbox"/> Installation Floater (9) <input type="checkbox"/> Builder's Risk (10)	\$ \$ 1
The General Aggregate limit, under the Limits of Insurance, applies separately to each of your away from premises owned by or rented to you.	

(The footnotes below are for the Certificate of Insurance and Recommended Limits of Coverage matrix shown above.)

- (1) Insert name of person or agency issuing certificate. If more than one person or agency will issue certificates, each must complete a separate form. Include address and telephone number. The University requires that policy(ies) name the Board of Regents of the University of Nebraska as an additional insured with the exception of Automobile Liability, Worker's Compensation and Professional Liability Insurance.
- (2) The name, address and telephone number of the vendor being insured.
- (3) The name and address of the insuring company(ies) should be listed here and referenced by appropriate in the company letter (CL) column at the left of the form and next to the type of insurance provided.
- (4) Project Description includes Project Title; Project Number; Location; and Campus. The University will assist in providing information for this portion of the Certificate of Insurance.
- (5) Architects, Engineers and Contractors (Insured) must have their insurer complete a Commercial General Liability Coverage endorsement form to specify that the aggregate policy limit of coverage applies to the project and that form must be attached to the completed Certificate of Insurance Form.
- (6) The Architect and Engineer will provide claims made, occurrence or claims made project coverage as specified in Section II, Article 10 of the Agreement. A Claim's Made Policy will be paid by the Architect and/or Engineer vendor. If project specific coverage is required, the University will negotiate with the vendor a reimbursement for the cost of the separate professional liability insurance coverage required. Additionally, for occurrence or claims made project coverage the University will specify the duration and amount of coverage required.

(1)

(High Limits)

(Continuation of footnotes for Certificate of Insurance and Recommended Limits of Coverage)

- (7) Compliance with minimum insurance requirements may be achieved through a combination of primary and excess coverage as long as the attachment point does not fall below \$100,000 per occurrence and the general aggregate is maintained. If excess liability insurance is purchased, the Insured must indicate to which policy the coverage applies and record this information on the Certificate of Insurance.
- (8) Include other insurance policies that may be required.
- (9) The Contractor will provide and maintain an "All Peril" Installation Floater Insurance for the materials, supplies, machinery, fixtures, and equipment which will become a part of the installation, fabrication, or erection project as shown and described in the Contract Documents. Coverage under the Contractors Installation Floater should pay for direct physical loss to property while in transit; at the site of installation, fabrication, or erection, as shown and described in the Contract Documents; and in storage awaiting installation, fabrication, or erection.

The Contractor will provide Installation Floater Limits of Insurance sufficient to cover the value of the installation. The Contractor will be solely responsible for any deductible carried under their Installation Floater and any claim on materials, supplies, machinery, fixtures and equipment which will become a part of the installation, fabrication, or erection project as shown and described in the Contract Documents while in transit or in storage awaiting installation, fabrication, or erection.

Evidence of Installation Floater Insurance will be indicated by the Contractor and will be on file with the Owner prior to starting the project.

- (10) The Owner will provide and maintain an "All Peril" Builders Risk Insurance for the structure or buildings while under construction, erection, or fabrication as shown and described in the Contract Documents. The Contractor shall bear the risk and responsibility for a \$2,000 per occurrence deductible for each claim.
- (11) The certificate issuer will mail the fully executed certificate to the appropriate institution as shown below.

UNL Mailing Address  
 Facilities Management & Planning  
 University of Nebraska - Lincoln  
 1901 Y Street  
 Lincoln, Nebraska 68588-0605

UNMC Mailing Address  
 Facilities Management & Planning  
 University of Nebraska Medical Center  
 600 South 42nd Street  
 Omaha, Nebraska 68198-7100

UNO Mailing Address  
 Facilities Management & Planning  
 University of Nebraska at Omaha  
 60th and Dodge Streets  
 Omaha, Nebraska 68182-0270

UNK Mailing Address  
 Department of Facilities  
 University of Nebraska at Kearney  
 905 West 25th Street  
 Kearney, Nebraska 68849

Board of Regents Address  
 Board of Regents  
 University of Nebraska Administration  
 3835 Holdrege  
 Lincoln, Nebraska 68483-7045

- (12) The Insured must have the insurance company issue an endorsement to their policy(ies) stating that thirty days notice will be given to the Architect or Contractor before cancellation or termination. The Insurer will immediately notify the Board of Regents of the University of Nebraska of the cancellation or termination upon receipt of notification.
- (13) All Three Certificates of Insurance should be executed by an insurance agent licensed in Nebraska, an insurance Broker licensed in Nebraska, or an authorized agent of a mutual or reciprocal insurer. The actual authorized signature, title and typed name should be provided in this block. All three certificates must have an original signature, one signed original and two photocopies are not acceptable. DO NOT USE RUBBER STAMP.
- (14) THE UNIVERSITY RESERVES THE RIGHT TO REQUEST A COPY OF ANY INSURANCE POLICY ISSUED TO THE INSURED TO VERIFY COMPLIANCE WITH THIS CERTIFICATE OF INSURANCE. A COPY OF THE RECOMMENDED LIMITS OF COVERAGE MUST BE RETURNED WITH THE CERTIFICATE OF INSURANCE.

Reference: Certificate of Insurance Form

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*Facilities Planning & Management, Central Administration*  
*File: Facilities Procedures & Forms/Certificate of Insurance Preparation Instructions*  
*Date: January 2001 Revised: September 15, 2004 / April 25, 2005*

UNIVERSITY OF NEBRASKA

OWNER'S PROTECTIVE BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT we,

as Principal, hereinafter called the Principal and

as Surety, hereinafter called the Surety, are held and firmly bound unto the Board of Regents of the University of Nebraska, as Owner, in the sum of

for the payment of which sum will and truly be made, the said Principal and the said Surety, bind ourselves, our legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has executed a contract with the Owner, dated \_\_\_\_\_ for the \_\_\_\_\_

Which contract, including all contract documents, are by reference made a part hereof.

NOW THEREFORE, if the Principal shall faithfully perform such contract, and shall make payment to all laborers and mechanics for labor that shall be performed in connection therewith, and shall make payment for all material which is used in the erecting, furnishing or repairing of the building under said contract or in or about the improvement, or used in the performance of the contract, and shall make payment of all premiums for insurance required by the contract, and shall indemnify and save harmless the Owner from all cost and damage by reason of the principal's or any primary, secondary, or other classes of sub-contractor's default, or failure so to do, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

All persons who have furnished labor or material for use in the erecting, furnishing or repairing of the building under the said contract, or for use in or about the improvement, or in connection with the performance of the contract, shall have a direct right of action under this bond, subject to the Owner's priority.

Any payment or payments under the bond shall reduce its penalty to the extent of such payment or payments.

Any suit under this bond must be instituted before the expiration of five (5) years from the date on which final payment under the contract falls due.

And for value received, the Surety further agrees that no change, forbearance, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder, or to the specifications accompanying the same, shall in any way affect its obligations under this bond and it hereby waives notice of any such change, forbearance, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications, made or extended by the Owner or Principal.

The Owner and Architect shall cooperate with and assist the Surety in prosecuting its rights and claims, if any, against Principal and others by supplying testimony as to facts, books, records and documentary evidence in their possession.

In the event Principal is in default under the contract as defined therein, Surety will (a) within fifteen (15) days of determination of such default, take over and assume completion of said contract and become entitled to the payment of the balance of the contract price, or (b) pay the Owner in cash the reasonable cost of completion, less the balance of the contract price, including retained percentage. The cost of completion shall be fixed by taking bids from at least three responsible contractors, chosen by the Owner, one by the Architect, and one by the Surety. The Surety will make such payment within fifteen (15) days after the cost of completion shall have been so determined.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

ATTEST:

PRINCIPAL

Name

\_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

WITNESS

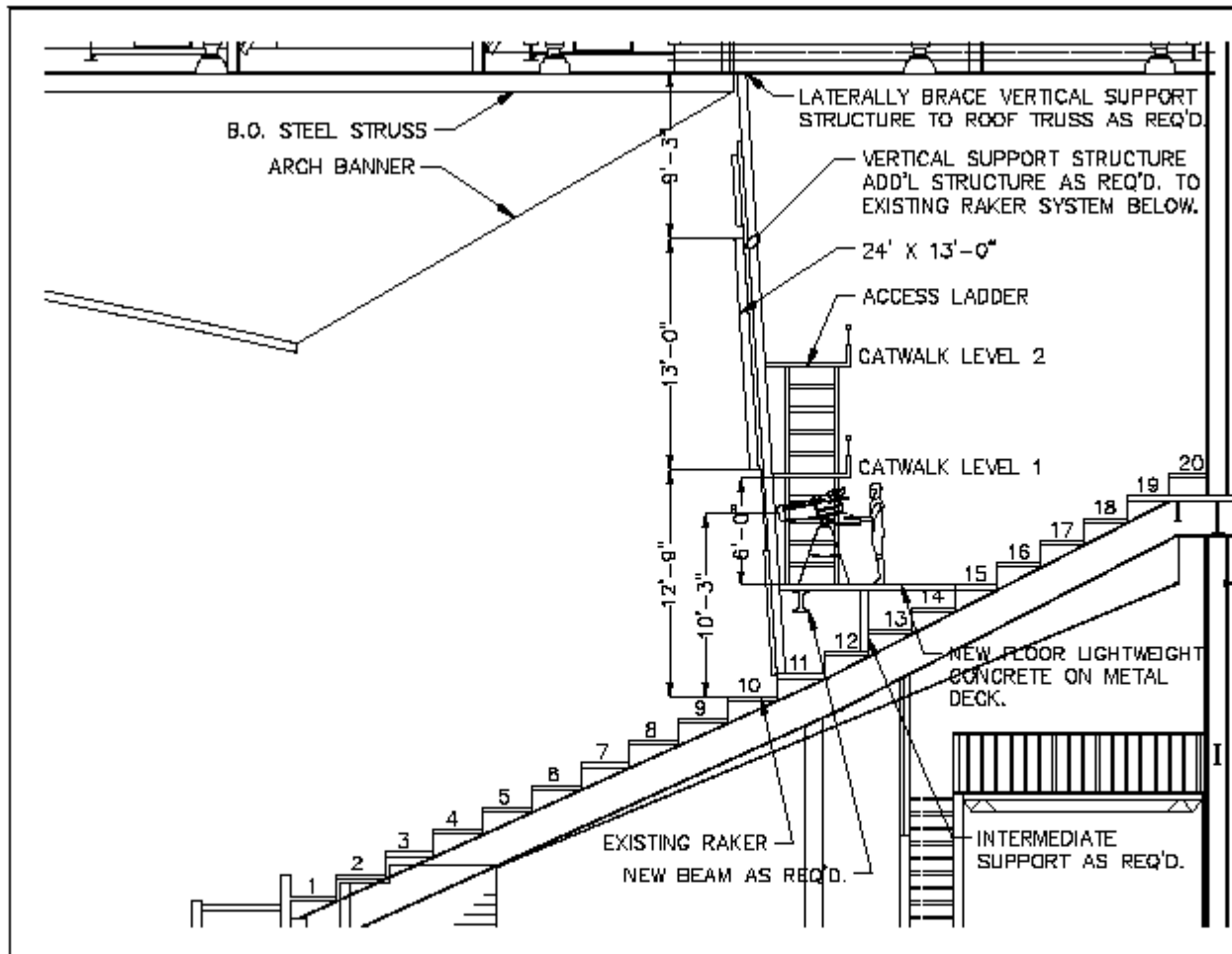
SURETY

\_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_



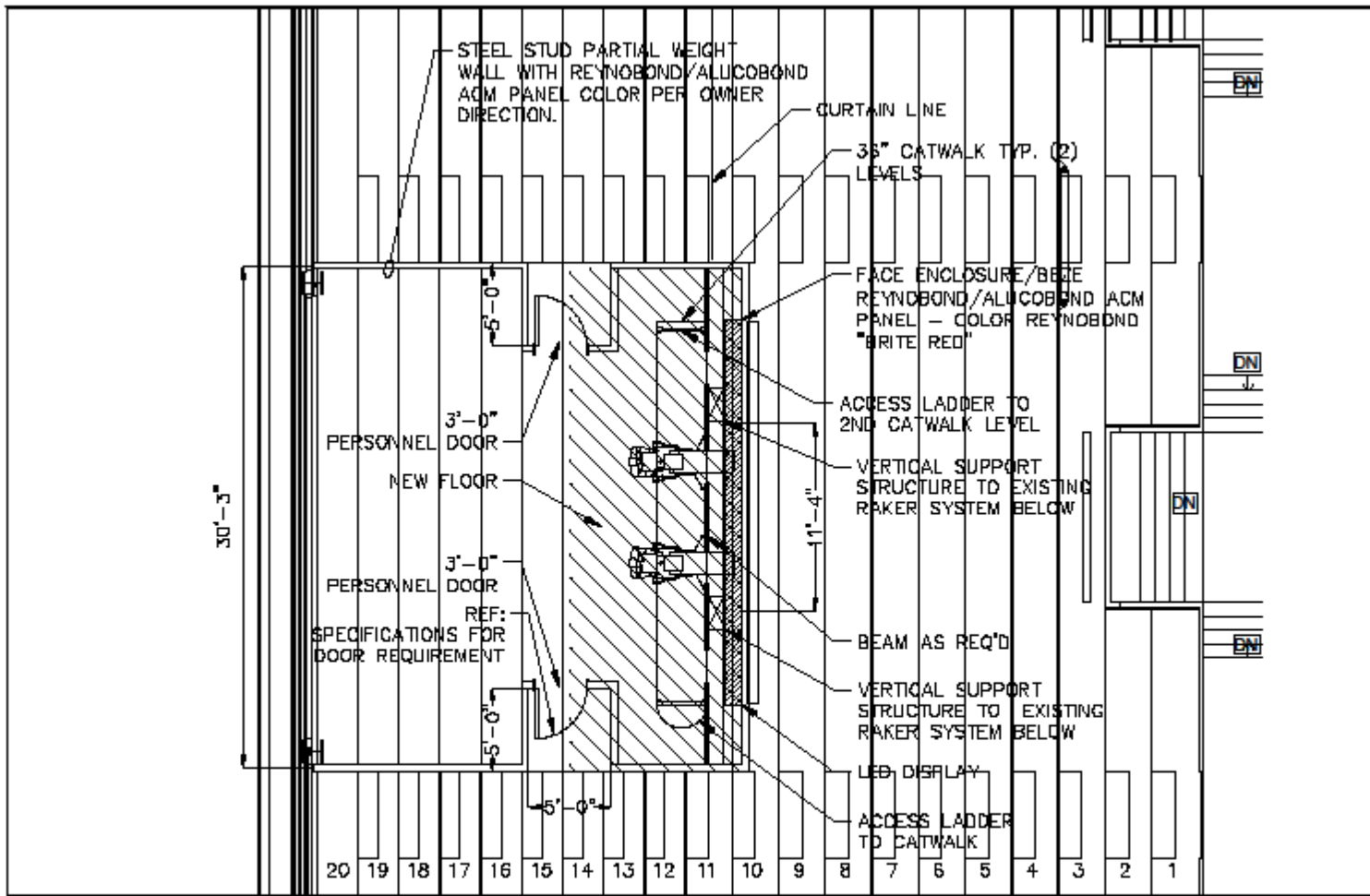


**Wrightson Johnson Haddon & Williams, Inc.**  
 Consultants in Acoustics, Sound, Noise Control, Audio Visual, Video,  
 Broadcast, Telecommunications and Theatrical Systems

4801 Spring Valley Road, Suite 117  
 Dallas, Texas 75244  
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**DEVANEY CENTER**  
 LINCOLN, NEBRASKA

DATE: 06/29/2012
DRAWN BY: JDL
CHECKED BY: JW
REFERENCE: NONE
REVISION: LED DISPLAY SUPPORT CONCEPT



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4801 Spring Valley Road Suite 117  
 Dallas, Texas 75244  
 Voice 972.934.3700  
 Fax 972.934.3720

**DEVANEY CENTER**  
 LINCOLN, NEBRASKA

DATE: 05/04/2012  
 DRAWN BY: JML  
 CHECKED BY: JW  
 REFERENCE: NONE  
 REVISION: LED SUPPORT & ENCLOSURE CONCEPT