

## **Addendum 01 dated July 21, 2017**

Additional Electrical Work included in this RFP. Please submit pricing as a separate line item. Contact Curtis Schmillen at [cschmillen@usbankstadium.com](mailto:cschmillen@usbankstadium.com) if you have any questions.

A separate walk through can be arranged if interested. Proposals due with the RFP on July 28, 2017.

### **Scope:**

#### **Lighting Controls**

Materials and Programming for hardware to consolidate control and scheduling of the following areas under a unified control system with a single point of operation:

- a. Sports lights
- b. Glow Lights
- c. Roof Lights
- d. Medtronic Sculpture
- f. Gjallarhorn
- g. Polaris sign

This system will have the capacity for control of the Vikings Ship, Premium Clubs and Douglas Controls with the addition of scope in those areas as detailed later in the quotation.

Materials and Programming to include:

- 1 ea. ERn4 Rack Mount Processor
- 2 ea. Paradigm ACP - 1 For Roof Lights, 1 for Features
- 1 ea. Paradigm Central Control Server for touch screen communications
- 2 ea. P-TS18 - 18" Touch Screen (Video Control and Command Center)
- 1 ea. P-TS7 - 7" Touch Screen (Field Entrance)
- 1 ea. MSC-4 Playback Controllers for dynamic effects on Sports Lights, Glow Lights, Medtronic Monument, Polaris Sign, Gjallahorn, Roof Lights, Vikings Ship
- 1 ea. Network Switch - Redundant Power Supply
- 6 ea. Fiber Optic Termination Box
- 1 ea. Rack and installation Hardware
- 1 ea. Single Port Gateway for Medtronic Monument
- 1 ea. Four Port Gateway for Roof Lights and Polaris
- 1 ea. Re-Build Racks upstairs. Mount new equipment in racks and provide interconnects within racks.
- 1 ea. Build Touch Screen Programming
- 1 ea. System Programming
- 1 ea. Project Management
- 1 ea. Training

Lighting Controls for Legacy Ship. This is the controls materials that were proposed to Bunting Graphics in 2016, but were not purchased to our knowledge. These items will need to be installed and wired by an electrical contractor. The costs for that labor and materials are not included in this proposal. These materials and services

required to gain control of the ship lighting are as follows:

4 ea. Pathway Connectivity 1008-6A - 6 Channel LED

Dimmer

3 ea. Large e-DIN Enclosures

3 ea. DIN Rail Power Supplies

1 ea. Pathway Connectivity 1002 Opto Splitter

1 ea. Single Port Gateway

1 ea. Insulated Enclosure for Vault equipment

2 ea. Fiber Media Converter

1 ea. Commissioning, Testing and Programming

1 ea. Freight

There is not currently a communications path from the lighting control rack to the ship vault. That communications needs to be established using existing fiber optics or new fiber optics. If existing are used a path from each terminus to the control equipment must be provided by others. The short haul path can be UTP copper. An electrical contractor will be required to install all wiring and hardware necessary for control as well as provide control wiring for any existing components such as data enablers.

Premium Club spaces communications and hardware upgrades to allow for control from the central DMX system. This involves some hardware upgrades in some clubs and programming changes in all the clubs. The intended communications path is via VLAN on the US Bank Stadium corporate network. Communications lines between local IDF rooms and lighting control racks are to be provided by other contractors and are not included in this proposal.

Club upgrades include:

FMP/Fire Club

2 ea. 4 Port Gateways

1 ea. MSC-2 Show Controller

1 ea. Programming

Need VLAN Communications on building network. Need cable installed from IDF 05.23.03 to lighting control rack in 05.23.01

Delta/Sideline Club

1 ea. 4 Port Gateway

1 ea. MSC-2 Show Controller

1 ea. Programming

Need VLAN Communications on building network. Net cable installed from IDF rack to Lighting Control Rack in IDF 01.18.06

#### Medtronic/Valhalla Club

1 ea. Programming

Need VLAN Communications on building network. need cable installed from IDF rack in room TBD to Lighting Control Rack in 02.15.02

#### Mystic Lake Club Purple

1 ea. Programming

Need VLAN Communications on building network. Need cable installed from IDF 06.39.06 to lighting control rack in 06.39.04

#### BWW/ICE Club

2 ea. 4 Port Gateways

1 ea. MSC-2 Show Controller

1 ea. Programming

Need VLAN Communications on building network. Need cable installed from IDF 05.05.04 to lighting control rack in 05.05.01

#### Hyundai/Vikings Club

1 ea. MSC-2 Show Controller

1 ea. Programming

Need VLAN Communications on building network. Need cable installed from IDF 03.05.03 to lighting control rack in 03.05.02

#### Master Control Electrical Room

Need VLAN Communications on building network. Need cable installed from IDF 07.15.10 to lighting control rack in 08.15.02

We would like the internet connection extended into the lighting control rack. The best way would be to run a second cable from IDF 07.15.10

#### Lighting Design for Bowl and Exterior Effects

Lighting Design Services to include:

The services of a professional lighting designer to set up to 10 different "Celebration" or other dynamic presets including the sports lights, ridge truss lights, glow lights, roof lights, Medtronic Monument, Gjallahorn, Legacy Ship. Existing Premium Club presets can be triggered as well, but there is no programming in this scope to alter the premium club programming.

#### Lighting Design for Premium Clubs

Additional dynamic or static programs for the premium clubs to include touchdown celebrations or other

programming. Up to six for each club.

#### Douglas System Playback from DMX

Integration to Douglas System to be able to receive up to 8 preset commands from DMX Control system. Each command is a single action ie: BLACKOUT or CONCOURSES ON. More commands can be added in groups of 8.

This pricing is for the DMX System portion of the controls only. There needs to be hardware and programming added to the Douglas panels in order to make this work. That hardware and programming is not included in this proposal. An electrical contractor will have to install our communications enclosure adjacent to a speci<sup>®</sup>ed Douglas panel, and provide a low voltage path between the panels, as well as a control power circuit. This will also require a contractor to install a Cat5E cable from the closest lighting control rack to the enclosure adjacent to the Douglas Panel. This will most likely be in the same room. This is single direction communications only. The DMX system cannot receive commands from the Douglas system in this scenario.