Pennsylvania Convention Center
Broad Street Façade Lighting Renovation

Issued For Bid 12_26_22

1. General Provisions

1.1. Project Overview

1.1.1. The Pennsylvania Convention Center (PCC) is embarking on a renovation of the controls, and a portion of the LED façade light on the Broad Street side of the building. After being put in service in 2010 the system has experienced some technical failures and PCC has decided to replace the media based linear lights and controls while keeping the electrical infrastructure and canopy lighting intact. This bid will account for an "option 1", "Alternate", and an "Alternate 2" version of the same system to compare budgets

1.2. Titles

1.2.1. The following titles are defined for the content herein

1.2.1.1. "Owner" or "End User" is The Pennsylvania Convention Center

Pennsylvania Convention Center Authority
1101 Arch St.
Pennsylvania, PA 19107
O: 215
Contact: Stephen Shepper

1.2.1.2. "EC" or "Contractor" is The electrical contractor or the party answering this bid

1.2.1.3. "System Engineer" Synapse Audio Visual Designs, LLC the firm who created this bid package

Synapse Audio Visual Designs, LLC
411 Sette Dr.
Suite N3
Paramus, NJ 07652
O: 201-576-9200
Contact: Stephen Cannella
C: 551-206-4323

1.2.1.4. "Controls Vendor" Synapse Audio Visual Designs, LLC the firm who supplied the 4/2022 rehaul of the control system and who will furnish and install the newly implemented lighting controls portion of this project

Synapse Audio Visual Designs, LLC
411 Sette Dr.
Suite N3
Paramus, NJ 07652
O: 201-576-9200
Contact: Stephen Cannella
C: 551-206-4323

1.3. General Project Provisions

1.3.1. PCC is a public venue with a dynamic schedule. On answering bid Contractor understands work may not be able to be executed in concurrent days. PCC is to provide Contractor with schedule one week in advance of work to take place each week

1.3.2. Installation shall conform to latest federal, state and local electrical and safety codes or those of other authorities having jurisdiction. Where conflicts exist, the most stringent code or regulation shall apply.

1.3.3. All materials and equipment shall be new and of the latest design or model offered for sale by the manufacturer.

1.3.4. All work is to comply with federal, state and local labor regulations and applicable union regulations

1.3.5. Where conflict exists between the contract documents and with any codes or ordinances, such codes and ordinances shall take precedence

1.3.6. Where conflict exists with electrical specifications, the higher standard or more stringent requirement shall apply

1.3.7. If additional work by the Systems Engineer is required as a direct result of deviations from approved drawings and specifications during construction, the Contractor will be liable for those additional costs that the Owner may incur

2. Scope Of Work

2.1. Option 1 – Scope of Work

2.1.1. Address concerns of live wire listed in section 3.3

2.1.2. Decommission and remove existing qty. 387 Acclaim lighting fixtures

2.1.2.1. Disposal of fixture is to be done using PCC's existing waste collection vendor. Contractor to arrange for needed container at their sole cost

2.1.3. Decommission and remove all existing Belden #9729 DMX cabling home runs that feed the existing L1 fixtures, and dispose of as needed. This will clear a path for new low voltage wires to be run in

2.1.4. Furnish and install all new low voltage wiring required in scope

2.1.5. Furnish and install LED drivers to exterior steel structure as drawn

2.1.6. Terminate CAT6 cabling into drivers

2.1.7. Furnish and install L1 fixtures to façade as drawn, and connect with factory supplied leader cables

2.1.8. Furnish any additional items, not specifically mentioned herein, to meet system requirements as specified, without claim for additional payment

2.1.9. Terminate CAT6 cables at lighting control rack into Controls Vendor supplied patch bays

2.1.10. Label all wires w/ Ptouch style cable wraps as shown on signal flow drawings and protect with clear heat shrink

2.1.11. Label interior lid of power supply with Driver ID number

2.1.12. Confirm proper operation of any existing photocell relays. Where clocks or timers may exist, set time to current time and verify proper operation

2.1.13. Rewire all high voltage circuits as needed to satisfy design

2.1.13.1. Relabel subpanels to the newly built condition and provide as builts to Systems Engineer

2.1.13.2. Cap off any unused circuits in accordance with the NEC and local codes

2.2. Alternate – Scope of Work

2.2.1. Address concerns of live wire listed in section 3.3

2.2.2. Decommission and remove existing qty. 387 Acclaim lighting fixtures

2.2.2.1. Disposal of fixture is to be done using PCC's existing waste collection vendor. Contractor to arrange for needed container at their sole cost

2.2.3. Inspect Qty. 27 home runs of Belden #9729 from lighting control rack to facade. Where an existing wire shows any sign of compromise, repull the run with Belden #9729

2.2.4. Terminate Belden #9729 cabling into NEMA 4 box as shown on drawings to fixture leader cable

2.2.5. Furnish and mount transformers to back of façade

2.2.6. Furnish and install L2 fixtures to façade as drawn, and connect with factory supplied leader cables
2.2.7. Furnish any additional items, not specifically mentioned herein, to meet system requirements as specified, without claim for additional payment
2.2.8. Label all wires w/ Ptouch style cable wraps as shown on signal flow drawings and protect with clear heat shrink
2.2.9. Confirm proper operation of any existing photocell relays. Where clocks or timers may exist, set time to current time and verify proper operation
2.2.10. Rewire all high voltage circuits as needed to satisfy design
2.2.10.1. Relabel subpanels to the newly built condition and provide as builts to Systems Engineer
2.2.10.2. Cap off any unused circuits in accordance with the NEC and local codes

2.3. Alternate 2 – Scope of Work
2.3.1. Address concerns of live wire listed in section 3.3
2.3.2. Decommission and remove existing qty. 387 Acclaim lighting fixtures
2.3.2.1. Disposal of fixture is to be done using PCC's existing waste collection vendor. Contractor to arrange for needed container at their sole cost
2.3.3. Inspect Qty. 27 home runs of Belden #9729 from lighting control rack to facade. Where an existing wire shows any sign of compromise, repull the run with Belden #9729
2.3.4. Terminate Belden #9729 cabling into 4" junction box as shown on drawings to fixture leader cable
2.3.5. Furnish and install L3 fixtures to façade as drawn, and connect with factory supplied leader cables
2.3.6. Furnish any additional items, not specifically mentioned herein, to meet system requirements as specified, without claim for additional payment
2.3.7. Label all wires w/ Ptouch style cable wraps as shown on signal flow drawings and protect with clear heat shrink
2.3.8. Confirm proper operation of any existing photocell relays. Where clocks or timers may exist, set time to current time and verify proper operation
2.3.9. Rewire all high voltage circuits as needed to satisfy design
2.3.9.1. Relabel subpanels to the newly built condition and provide as builts to Systems Engineer

2.3.9.2. Cap off any unused circuits in accordance with the NEC and local codes

2.4. Controls Vendor Scope Of Work

2.4.1. Furnish and install all lighting control rack interconnect cables i.e patch cables
2.4.2. Punch down Client MDF network feed into patch bay
2.4.3. Dress wires in lighting controls rack and terminate as needed
2.4.4. Commission and address all L1 fixtures and associated power supplies
2.4.5. Commission and program all lighting control system elements
2.4.6. Train client on system operation

2.5. General Scope Provisions

2.5.1. All labor is required to be union furnished
2.5.2. All work is to be executed in a workman like fashion and shall be deemed visually acceptable by the Client and System Engineer
2.5.3. Procure and pay for all permits, licenses and inspections
2.5.4. Provide 2 men for 3 days of support labor to Controls Vendor during system commissioning and programming. During this time all lifts and site safety provisions shall remain in place
2.5.5. Provide needed personnel lifts during duration of project at Contractor's sole expense
2.5.5.1. Contractor is to protect sidewalk surface as needed from damage and rubber wheel scuff marks
2.5.5.2. Lifts are to be parked at a location of the client's choosing when not in use, and sidewalk is to be cleared of all protective materials and barriers nightly
2.5.6. Provide for traffic safety and police presence as required by local and state laws
2.5.7. Coordinate contraction schedule with PCC staff and make a project manager available for duration of contract
2.5.8. All circuits being worked on are to locked out during times where circuits might pose a danger to Contractor or PCC staff and attendees
2.5.9. Contractor to supply System Engineer with a marked-up PDF plan showing newly implemented electrical circuit distribution
2.5.10. Deliver all attic stock to Client at a time and location of the Client's choosing and transport into the facility to a location of the Client's choosing

2.5.11. Provide 1 year warrantee from the date of acceptance on parts and labor for all elements in the Contractors scope of work
2.5.12. Contractor awarded this bid is to the be sole contractor and thus is responsible for all elements of construction and site management including laborers, site clean-up, materials disposal, barriers, etc.
2.5.13. All wiring is to be protected in conduit even in instances where the existing wiring could not be removed from the legacy conduit
2.5.14. Verify all circuits and extensions for correct connection, continuity and polarity. Absolute polarity must be maintained between all points in the system
2.5.15. High voltage and low voltage wires can not share the same conduit under any circumstances
2.5.16. Pulling spare wires is left to the Contractor's discretion. This said no allowances will be made for additional labor required to pull new cables where the first attempt was not successful
2.5.17. Splicing of cables is not permitted between terminations of specified equipment
2.5.18. Provide wire pulling lubricants and pulling tensions in accordance with the wire and cable manufacturer's recommendations
2.5.19. Provide service loops, minimum 6", at LED drivers and 2' at lighting control rack
2.5.20. All bolts and fasteners used in an exterior application but be stainless steel

2.6. Job Conditions
2.6.1. Keep the job adequately staffed at all times. Unless illness, loss of personnel or other circumstances beyond the control of the Contractor intervene, keep the same individual in charge throughout
2.6.2. Cooperate with all appropriate parties in order to achieve well-coordinated progress with the overall construction completion schedule and satisfactory final results
2.6.3. While working at height the area below must be cordoned off to protect those below

3. Existing Conditions

3.1. Existing Conditions
3.1.1. All bidding Contractors are expected to visit the site prior to making a bid. No subsequent allowance will be made due to failure to thus observe and verify conditions which may affect the work. Report to the

Systems Engineer any discrepancies among this specification and existing conditions and similarly report obvious omissions

3.1.2. At the time of this RFQ being submitted it is know to the Client and System Engineer that there is a live 120VAC wire energizing the steel façade and returning high voltage down all of the currently installed Belden DMX cables to the lighting control rack. This hazard prompted the 4/2022 pause in a new control system's implementation. It is assumed that when the existing L1 fixtures and control wires are all decommissioned this issue will remedy itself. This said addressing this concern is in the Contractor's scope upon being awarded this bid

4. Bid Submission

4.1. Bid Submittals General Provisions

4.1.1. Drawings and specifications are detailed only to the extent necessary to show design intent and signal flow. It is understood and agreed by the Contractor that the work herein described shall be complete in every detail to supply a complete working system

4.1.2. Contractors shall examine all drawings and read all divisions of this specification in order to avoid omissions and duplications and to ensure a complete job. No allowances shall be made for failure to read and understand these documents. Discrepancies between drawings and specifications or obvious omissions shall be referred to the Systems Engineer for clarification before the bid date. Where discrepancies occur and pre-bid instructions have not been obtained, the contractor agrees to abide by the System Engineer's decision.

4.1.3. Equipment not mentioned herein nor shown on drawings, but necessary to meet this requirement shall be provided without claim for additional payment

4.1.4. Bid proposals shall include all work and all equipment as specified, as well as any other equipment and materials to be used in assembling the system. Requests for clarification of specification intent shall be made, in writing, not later than ten days prior to bid date.

4.1.5. No portion of this scope may be executed by a sub-contractor

4.2. Shop Drawings

4.2.1. This project requires no shop drawings

4.3. Substitutions

4.3.1. Substitutions are not permitted for this bid

4.4. Bill Of Materials

Option 1 BOM –

Qty.	Manufacturer	Model	Description
Required For Project			
387	Color Kinetics	101-000200-09	Accent Compact, RGBW (48.4 in), Translucent Lens
36	Color Kinetics	109-000200-00	PDS-400 48V, EO Power/Data Supply, Ethernet, UL
36	Color Kinetics	108-000200-00	Leader Cable, 15 m (50 ft)
Attic Stock			
10	Color Kinetics	101-000200-09	Accent Compact, RGBW (48.4 in), Translucent Lens
2	Color Kinetics	109-000200-00	PDS-400 48V, EO Power/Data Supply, Ethernet, UL
4	Color Kinetics	109-000220-00	PS-600 48V Replacement Power Supply
2	Color Kinetics	108-000200-00	Leader Cable, 15 m (50 ft)

Alternate BOM –

Qty.	Manufacturer	Model	Description
Required For Project			
387	Traxon Technologies	TU.MP.4136200	MEDIA TUBE PLUS RGBW 1196 36P DIFFUSED
27	Traxon Technologies	TU.AC.1500400	MT PLUS END CAP WITH 120Ω TERMINATOR
27	Traxon Technologies	TU.AC.1500200	MT PLUS STARTER CABLE 5-WIRE 5M ROUND
27	Traxon Technologies	HLG-320H-48	LED ENGINE 320W 48V OUTDOOR
27	Bussmann	LP-CC-7	7A Rejection Style Fuse
27	Bussmann	HEZ-AA	Inline Fuse Holder
Attic Stock			
10	Traxon Technologies	TU.MP.5145200	MEDIA TUBE PLUS RGBW 1496 45P DIFFUSED
2	Traxon Technologies	TU.AC.1500400	MT PLUS END CAP WITH 120Ω TERMINATOR
2	Traxon Technologies	TU.AC.1500200	MT PLUS STARTER CABLE 5-WIRE 5M ROUND
6	Traxon Technologies	HLG-320H-48	LED ENGINE 320W 48V OUTDOOR

13	Bussmann	LP-CC-7	7A Rejection Style Fuse
5	Bussmann	HEZ-AA	Inline Fuse Holder

Alternate 2 BOM –

Qty.	Manufacturer	Model	Description
Required For Project			
387	Acclaim Lighting	PBA-242-DTLN	MEDIA TUBE PLUS RGBW 1196 36P DIFFUSED
27	Acclaim Lighting	H6FC50	50' Feed Cable For Pixel Bar + End Cap
1	Acclaim Lighting	XMT350	DMX + RDM Addressing and Testing Tool
Attic Stock			
10	Acclaim Lighting	PBA-242-DTLN	MEDIA TUBE PLUS RGBW 1196 36P DIFFUSED
2	Acclaim Lighting	H6FC50	50' Feed Cable For Pixel Bar + End Cap

5. Guarantee and Service

5.1. Warranty

5.2. All systems and components shall be guaranteed free of defects in materials and workmanship for a period of one year (or to the length of the manufacturer's warranty if longer) from the date of acceptance and shall be repaired or replaced within forty-eight hours following report of such defects by the owner

5.3. The Contractor shall be available on call and on eight hour notice during the first month following acceptance of the system, to assist the Owner's representatives in any problems which may arise during the initial period of operation. If corrective measures on-site are required they will be performed within 12 hours of the determination of a need for a site visit

5.4. If, during the guarantee period, any component is out of service for more than seven days due to unavailability of parts or service, Contractor shall supply and install an identical new component

6. Insurance

6.1. Insurance Requirements

6.2. All equipment and materials shall be fully insured against loss or damage up until acceptance of the system by the Owner or until Owner relieves the

Contractor in writing of this responsibility, whichever is earlier, regardless of the location of the equipment. All equipment is deemed to be under the control of the Contractor until acceptance of the system by the Owner or until Owner relieves the Contractor in writing of this responsibility, whichever is earlier

6.3. On answering this bid the Contractor is to be fully insured to all state, local, and federal standards for the work being performed and will comply with the insurance regulations of the PCC