GILL COLISEUM WOMEN'S BASKETBALL LOCKER ROOM RENOVATION

PROJECT NUMBER: 2148-19

INVITATION TO BID #2020-000492

ADDENDUM NO. 1

ISSUE DATE: August 5, 2019

CONTRACT ADMINISTRATOR:
Shoshana Shabazz, Purchasing Analyst
Construction Contracts Administration
Email: ConstructionContracts@oregonstate.edu

This Addendum is hereby issued to inform you of the following revisions and or clarifications to the above-referenced ITB and/or the Contract Documents for the Project, to the extent they have been modified herein. Any conflict or inconsistency between this Addendum and the Solicitation Document or any previous addenda will be resolved in favor of this Addendum. Bids shall conform to this Addendum. Unless specifically changed by this Addendum, all other requirements, terms and conditions of the Solicitation Document and or Contract Documents, and any previous addenda, remain unchanged and can be modified only in writing by OSU. The following changes are hereby made:

TECHNICAL SPECIFICATIONS:
Item 1   **ADD**   Stantec Oregon State University Women's Basketball Locker Room Audio Visual Systems Specification dated July 25, 2019 attached to this addendum.

END OF ADDENDUM NO. 1

OREGON STATE UNIVERSITY
WOMEN'S BASKETBALL LOCKER ROOM

AUDIO VISUAL SYSTEMS

GENERAL

The goal for the audiovisual system is to provide an integrated, reliable, scalable and sustainable audiovisual system to assist in the day-to-day needs of the Oregon State University's Women's Basketball Locker Room. The audiovisual systems intended for this remodel include equipment and infrastructure provisions for background music, high definition computer-based presentations, media playback, audio and web-based conferencing, and digital signage. It is important that these capabilities be provided in a manner which is functional but not complex in its operation, allowing for non-technical users to easily set-up and control all the functions within a given space. The basis of this report is compiled from information contained in programming discussions with the architect, owner and end-users, along with our experience from numerous other facilities of this type. The overall form of the technology used to accomplish audiovisual functionality must be engaging and attractive to the user and viewer.

There are a number of functional criteria that should be applied to designing and integrating the AV presentation technology in the facility:

- State-of-the-art proven equipment for the facilities. The systems should include the latest technology and equipment available.
- High quality systems. For example, the displays must be the highest quality available in terms of sharpness, contrast and brightness.
- High degree of reliability. These systems must perform, day in and day out, without a material degree of down time. Some systems within the project such as the mission critical visualization systems need to perform 24/7 with no system wide down time.
- Easy to operate by both technical and non-technical personnel. The interface for controlling the AV equipment should be intuitive, self-explanatory, and easily accessible to the greatest degree possible.
- Easy to care for, maintain, and upgrade. The systems should be chosen and integrated in a way that eases access and enables equipment replacement and/or augmentation.

GENERAL

The approach for the AV systems in the Women's Basketball Locker Room is to central locate all the AV equipment in one equipment cabinet located either in the room or in close vicinity to it. The equipment cabinet will require between 40-60 Amps of power and will need to have ventilation and cooling. An Audiovisual system local area network will provide audio, video and control processing and distribution throughout the facility unless noted in the room descriptions below. It all areas where CATV and digital signage is required, CATV receivers and digital signage players will be mounted in the equipment cabinet and distributed to the spaces via the AV network.

The systems shall allow for each room listed below to operate individually or be combined to operate as one large room sharing video and audio content throughout the space. It is also envisioned that the control system will be able to launch preset scenes that encompass the video and audio playback in all spaces of the space, such as a pre-game scene, practice day scene, recruiting visit scene, etc. Coordination with the university will be required to determine each scene. All programming shall remain open and the property of Oregon State University.

ROOMS / SPACES

TEAM ROOM

The audiovisual system in the Women's Basketball Locker Room's team room will allow for video and CATV viewing along with program audio and background music playback. The system shall include new cabling, amplification, processing, sources and control. Equipment will consist of two wall mounted flat panel displays along with ceiling and/or wall mounted full range loudspeakers with separate subwoofer. The systems shall allow for audio and video portable equipment to be connected via wired and wireless Bluetooth or Wi-Fi connection points. The system will also be able to send and receive audio from the other AV enabled spaces in the locker room to allow for full space audio distribution.

Each Player ID panel shall have a network based digital signage player which will be able to playback individual content or be combined with the other players to play content across all Player ID screens. CATV Viewing and audio playback from the Player ID screens is not required.

A simple control system will be located on the wall to allow for system on/off, audio and video selection and distribution, along with volume control.

- Video System
  - Wall mounted displays, 4K 1920 x 1080 resolution, 500nit
  - Wall mounted displays (Player ID), 16:4.5, 1920x540 resolution.
  - Wired connection plate, HDMI
  - CATV Receiver (owner furnished)
  - Network digital signage player with video wall processing and scheduling capabilities
- Audio System
  - Ceiling / wall mounted loudspeakers, full range
  - Ceiling mounted subwoofer (acoustically isolated from structure)
  - Audio Digital Signal Processor (DSP) (stand alone or shared)
  - Audio Amplifier
  - Wired audio connection plate, 1/8" Jack
  - Bluetooth audio wireless connectivity
- Control Systems
  - Control System processor (standalone or shared)

TEACHING ROOM

The upgrade to the teaching room audio visual systems included a new audio video system, including: projector, projection screen, loudspeakers, cabling, amplification, processing, sources and control to provide for video playback, presentations, and CATV along with program audio. One ceiling mounted video projector with a tabbed tensioned electric roll down projection screen will be provided, along with video connection plates in the room and at a lectern position. To ensure no video latency, video connections shall be directly connected to the projector and will not use the network based distribution. Embedded audio in these connections will need to be processed by the central DSP and be distributed to the in room speakers. Wireless connectivity will be provided as well for portable equipment or for tablets.

A simple control system will be located in the room to allow for system on/off, content selection, and volume control.

- Video System
  - Ceiling mounted video projector, 4K UHD resolution, laser illumination
  - Projection Screen, Electric, Tab-Tensioned
  - Video Processor, seamless switcher, scaler
  - Video input panels, HDMI
  - CATV Receiver (owner furnished)
- Audio System
  - Ceiling / wall mounted loudspeakers, full range
  - Ceiling mounted subwoofer (acoustically isolated from structure)
  - Audio Digital Signal Processor (DSP) (stand alone or shared)
  - Audio Amplifier
- Control Systems
  - Control System processor (standalone or shared)
  - Wall mounted or desk mounted touch panel to allow for system power on/off, source selection, volume control

LOUNGE

The audiovisual system in the lounge area is intended to be used for the general entertainment and relaxation of the team. The space shall be outfitted with a 2x2 video wall and wall / ceiling mounted loudspeakers to support multiple media presentation, CATV, program audio reinforcement and background music. Each panel of the video wall shall be able to show independent content, or a single content source when combined with the other screens. Connection plates for wired audio and video portable sources, along with connectivity for Bluetooth or Wi-Fi enabled portable devices. The system will also be able to send and receive audio from the other AV enabled spaces in the locker room to allow for full space audio distribution.

A simple control system will be located on the wall to allow for system on/off, audio and video selection and distribution, along with volume control.

It shall allow team members to view multiple cable television channels and/or portable equipment (DVD players, gaming consoles, music players, etc.) at the same time.

- Video System
  - 2x2 Video Wall, each display with 4K UHD resolution, 500nit, 1.7mm mullion.
  - Wired connection plate, HDMI
  - CATV Receivers (owner furnished)
- Audio System
  - Ceiling / wall mounted loudspeakers, full range
  - Ceiling mounted subwoofer (acoustically isolated from structure)
  - Audio Digital Signal Processor (DSP) (stand alone or shared)
  - Audio Amplifier
  - Wired audio connection plate, 1/8" Jack
  - Bluetooth audio wireless connectivity
- Control Systems
  - Control System processor (standalone or shared)
  - Secure wall mounted or desk mounted touch panel to allow for system power on/off, source selection, volume control

KITCHENETTE

The Kitchenette will allow for CATV viewing. Equipment will consist of two wall mounted flat panel displays along with ceiling mounted loudspeakers. The system will be able to receive audio and digital signage from the other AV enabled spaces in the locker room to allow for full space audio distribution.

Each Player ID panel shall have a network based digital signage player able to playback individual content or be combined with the other players to play content across all Player ID screens. CATV Viewing and audio playback from the Player ID screens is not required.

A simple control system will be located on the wall to allow for system on/off, audio and video selection and distribution, along with volume control

- Video System
  - Wall mounted displays, 1920x1080 resolution, 500nit
  - CATV Receiver (owner furnished)
- Audio System
  - Flush ceiling mounted speaker
  - Audio Digital Signal Processor (DSP) (stand alone or shared)
  - Audio Amplifier

PRE-GAME

The intent of the system in the pre-game area is to create an immersive environment of both video and audio to energize and focus the players before the game. At this time, it was decided that the video aspects of this space would be installed at a later date and that only the audio system would be functional on day one. Infrastructure to support either a flat panel display or direct view LED video should be included in the room build out along with, ceiling mounted loudspeakers and subwoofers that will provide full range audio reinforcement.

The system will also be able to send and receive audio from the other AV enabled spaces in the locker room to allow for full space audio distribution.

A simple control system will be located on the wall to allow for pre-game content to be played, volume control, and audio distribution.

- Audio System
  - Ceiling mounted loudspeakers, full range
  - Ceiling mounted subwoofer (acoustically isolated from structure)
  - Audio Digital Signal Processor (DSP) (stand alone or shared)
  - Wired audio connection plate, 1/8" Jack
  - Bluetooth audio wireless connectivity
  - Audio Amplifier
- Control Systems
  - Control System processor (standalone or shared)
  - Wall mounted or desk mounted touch panel to allow for system power on/off, source selection, volume control

EQUIPMENT LIST

The equipment list contained on the next page was for the Basis of Design and budgeting purposes only. Not all equipment required for the project is listed. Contractor is responsible for full design and engineering of the audiovisual systems based of the criteria listed above, the equipment list, and interviews with Oregon State University.

VIDEO / PROJECTION SYSTEMS

ITEM	MANUFACTURER	MODEL	DESCRIPTION	QTY	NOTE
V1	Samsung	QM55H	55" 4K LED Flat Panel Display	4	
V2	Samsung	PM55H	55" Professional LED Flat Panel Display	4	
V3	Samsung	SH37F	37" Wide Screen (16:4.5) LED Display	15	
V4	Digital Projection	E-Vision Laser 4K	7500 Lumen 4K Laser Projector	1	
V5	Chief	TS525TU	Large Dual Swing Arm Display Mount	4	
V6	Chief	VCMU	Heavy Duty Universal Projector Mount	1	
V7	Chief	LSMU	Large Flat Panel Thin Wall Mount	4	
V8	FSR	PWB-270	Large Wall Box for behind Displays	8	
V9	FSR	CB-22S	2'x2' CB w/2ru, Smart AC, Fan,	1	
V10	Brightsign	XT244	Networked Digital Signage Player, Requires SD Card	16	
V11	Crestron	DM-NVX-E30	4k60 4:4:4 HDR AV Encoder	11	
V12	Crestron	DM-NVX-D30	4k60 4:4:4 HDR AV Decoder	9	
V13	Crestron	AM-300	AirMedia Presentation System 300 w/DM	1	
V14	Crestron	HD-TX-101-C-E	DM Lite HDMI Extender - Transmitter	1	
V15	Draper	140025QU	Access Fit V 45" x 80" Electric Project Screen, Matte White, Quiet LVC Motor	1	
V16	OFCI	TBD-CATV Receiver	Owner Furnished CATV Receiver	8	

AUDIO SYSTEMS

ITEM	MANUFACTURER	MODEL	DESCRIPTION	QTY	NOTE
A1	QSC	AD-S10T	AcousticDesign 10" Surface Mount Speaker	10	1
A2	QSC	AD-S112SW	AcousticDesign 12" Surface Mount Subwoofer	4	
A3	QSC	Core 110F	24ch DSP w/AEC, Voip & Pots	1	
A4	QSC	CX404	250w/ch 4ch Amplifier	4	
A5	QSC	CX302V	250w/ch 2ch 70v Amplifier	1	
A6	QSC	AD-C6T	AcousticDesign 6.5" Flush Mount Speaker	2	
A9	Attero Tech	unA610-BT	AES67 Networked Audio Wall Plate - 4x2 Multi I/O with Bluetooth	4	

CONTROL SYSTEMS

ITEM	MANUFACTURER	MODEL	DESCRIPTION	QTY	NOTE
C1	Crestron	CP-3	Control Processor	1	
C2	Crestron	TSW-1060-B-S	10" Touch Panel Controller, Black	4	
C4	Cisco	SG550X-48MP	48port Ethernet Switch w/POE	1	

MISCELLANEOUS SYSTEMS

ITEM	MANUFACTURER	MODEL	DESCRIPTION	QTY	NOTE
M1	Middle Atlantic	MRK-4426AXS-Z4	41RU Slide out Rack in Steel Enclosure - Seismic Zone 4	2	
M2	Middle Atlantic	LVFD-44	Perforated front door fro MRK-44	2	
M3	Middle Atlantic	UPS-2200R-IP	2200VA/1650W UPS IP	2	
M4	AVC	Cabling1	Cables and Connectors	5	
M5	AVC	Rack Hardware1	Power strips, Rack mounts and Accessories	5	

Notes

1. Owner Supplied Contractor Installed